Burnt Mountain Services Safety Manual

Introduction

At Burnt Mountain Services, safety is more than a requirement—it is the cornerstone of our culture and the foundation upon which we build our operations. This Safety Manual has been developed to align with the Occupational Safety and Health Administration (OSHA) standards outlined in CFR 1910 and CFR 1926, as well as best practices specific to our traffic control services and the diverse industries we serve in oil and gas construction, fabrication, and concrete services. It is our commitment to creating a workplace where safety is not just a priority, but a value that guides every decision and action.

Our Commitment to Zero Harm

The principle of zero harm drives everything we do. We are steadfast in our dedication to:

1. **Protecting People**: Ensuring the health, safety, and well-being of every employee, contractor, and visitor.
2. **Safeguarding the Environment**: Minimizing our environmental footprint and promoting sustainable practices.
3. **Preserving Assets**: Maintaining the integrity of our equipment, infrastructure, and resources.
4. **Upholding Our Reputation**: Demonstrating integrity and responsibility in every action to maintain the trust of our clients, employees, and community.

Achieving zero harm requires vigilance, accountability, and a shared commitment to safety excellence. Every individual at Burnt Mountain Services has a critical role in this mission.

The Four Disciplines of Safety

Safety at Burnt Mountain Services is guided by four core disciplines:

1. **Zero Harm to People, Environment, Assets, and Reputation**:
    - Every task is approached with the goal of preventing harm.

    - We adhere to strict compliance with CFR 1910 and 1926 regulations, integrating safety into every aspect of our work, from traffic control services to construction operations.
2. **Leading Measures**:
    - **Have a Plan**: Each job begins with a comprehensive safety plan that identifies and mitigates hazards. No task proceeds without a clear understanding of the associated risks and controls.
    - **Stop and Make It Right**: If something does not look or feel right, stop immediately. Everyone is empowered and obligated to pause operations, assess the situation, and implement corrective actions before continuing.
3. **Brother's Keeper Philosophy**:
    - Safety is a shared responsibility. We are our brothers' and sisters' keepers, and it is our duty to look out for one another.
    - If you see something unsafe, say something. Speak up, act, and support your colleagues to create a safer workplace for everyone.
4. **Continuous Improvement**:
    - Learning and improvement are ongoing processes. We embrace innovation, training, and feedback to enhance our safety programs continually.
    - By tracking leading and lagging indicators, we refine our practices to prevent incidents and ensure compliance with all regulatory standards.

Traffic Control Services Safety Focus

Our traffic control services demand heightened awareness and adherence to specialized safety protocols. Burnt Mountain Services ensures:

- Comprehensive training for employees in flagging operations, work zone setup, and hazard recognition.
- Use of industry-standard protective equipment, signage, and barriers to safeguard both our teams and the public.
- Compliance with the Manual on Uniform Traffic Control Devices (MUTCD) and applicable CFR standards.

Minimum Expectations

- **Safety Is Everyone's Responsibility**: Each individual is accountable for their safety and the safety of those around them.
- **No Task Is Too Urgent**: Safety must never be compromised for speed or convenience.

- **Empowered Workforce**: Every team member has the authority to stop work when safety is at risk.
- **Communication Is Key**: Open, honest, and respectful communication fosters a culture where safety concerns are addressed promptly and effectively.

Employee Resources at Your Fingertips

Burnt Mountain Services provides employees with access to an online interactive safety management system at www.bms.support. This platform offers a wide range of safety resources, including:

- Comprehensive safety procedures.
- Easily accessible safety forms.
- Permitting resources.
- Learning management systems (LMS) for continuous education and training.

This resource ensures that employees have the tools and knowledge they need to perform their tasks safely and efficiently, available on any smart device at any time.

Our Vision for Safety

Safety is not just a policy; it is a way of life. At Burnt Mountain Services, we believe that every incident is preventable and that by working together, we can achieve a record of excellence that reflects our commitment to zero harm. Through rigorous training, proactive planning, and a culture of accountability, we will continue to set the standard for safety in our industry.

This manual is your guide to upholding the values and practices that keep us safe. It is a living document, evolving as we learn, grow, and adapt to new challenges. We encourage you to engage with it, ask questions, and bring forward ideas to strengthen our safety program.

Together, we will build a legacy of safety, excellence, and trust at Burnt Mountain Services.

The Burnt Mountain Services
Commitment to Exceptional Team Safety Performance

At Burnt Mountain Services, we consider the health and safety of our employees, subcontractors, customers, and the public to be as important as productivity, profitability, product or service quality and customer satisfaction.

It is our philosophy that safety performance is a key indication of organizational excellence, therefore, safety is incorporated into our everyday business process.

The overall success of this business depends upon the individual's personal commitment to safety. The best way for the individual to achieve this commitment is by utilizing company resources in relation to their knowledge and skills to promote the well-being of themselves, their coworkers, and the best business practices of Burnt Mountain Services.

We must strive to prevent all accidents and undesirable events through the active participation of each and every employee, partner, and stakeholder.

Burnt Mountain Services subscribes to the following disciplines of safety as our foundation for maintaining an injury free workplace:

Goal: No Accidents

- Always maintain that every job can be completed safely without injury or incident.

Leading Indicators:

- Have a good plan
- Identify and mitigate the hazards
- Stop Work when something is not right or does not feel right

Performance Measurement:

- Measure the performance of every team player
- Communicate Key Performance Indicators back to the team
- Motivate team members through risk and reward

Accountability:

- Team members must hold each other accountable for producing results, regardless of the challenges. Without accountability the goal is unachievable.

At Burnt Mountain Services we will give our team clear direction, the right tools, training, and positive motivation, as a means to foster predictable results with exceptional moral and low team attrition. It is of the highest importance we empower the team to achieve their absolute best.

Chief Executive Officer
Justin Kulbacki

Purpose

The purpose of this program is to provide safe guidelines for the operation and maintenance of abrasive blasting equipment and their related components for Burnt Mountain Services (the Company).

Scope

This program covers all employees involved in abrasive blasting jobs. Whenever hazardous substances such as dusts, fumes, mists, vapors, or gases exist or are produced in the course of construction work, their concentrations shall not exceed the limits specified in the "Threshold Limit Values of Airborne Contaminants – 1970" of the American Conference of Governmental Industrial Hygienists. When ventilation is used as an engineering control method, the system shall be installed and operated according to the requirements of 1926.57 (Ventilation).

Key Responsibilities

Supervisors

- Be aware of potentially hazardous conditions that may arise during the blasting process prior to starting any blasting job and must take measures to protect employees.
- Ensure that all employees are trained on related safety topics.
- Understand the importance of regularly scheduled maintenance for continued safe operation of blast equipment. Ensure that all employees comply with this policy and all other related policies.

Blast Employees

- Be familiar with the safe operating functions of blasting equipment to be used on a job.
- Comply with all Company policies.
- Have knowledge of hazards associated with respirable silica.
- Understand they are prohibited from using compressed air for cleaning unless the pressure is reduced to less than 30 pounds per square inch and be equipped with effective chip guarding and proper PPE.

Procedure

General

Abrasives and the surface coatings on the materials blasted are shattered and pulverized during blasting operations and the dust formed will contain particles of respirable size. The composition and toxicity of the dust from these sources shall be considered in making an evaluation of the potential hazards.

Dust shall not be permitted to accumulate on the floor or on ledges outside of an abrasive blasting enclosure. Dust spills shall be cleaned up promptly. Aisles and walkways shall be kept clear of steel shot or similar abrasives which may create a slipping hazard.

Equipment Handling

Follow these guidelines when moving blasting equipment to prevent back strains and crushing injuries:

- Use a forklift, crane or other type of lifting device for transporting a blast machine; always use a lifting device when the machine contains abrasive.
- Never manually move a blast machine where abrasive has been spilled on hard surfaces or on a wet or slippery surface.
- Never attempt to manually move a blast machine containing abrasive.
- Always disconnect hoses from machines to avoid interference during moving.

Air Compressors

- Air compressors must be located in a well-ventilated area. It must be able to contain large volumes of clean, toxicant-free air. This means the compressor must be placed up wind from the blasting operation and out of the range of dust and flying abrasives.
- Due to the high pressure that air compressors create, precautions must be taken to prevent unleashing of strong forces that can cause serious bodily injury.
- Air for abrasive blasting respirators must be free of harmful quantities of dust, mists, or noxious gases and must be inspected daily, prior to use and comply with CFR 1910.134(I) (Respiratory Protection).
- Never adjust the pressure setting on a compressor above the blast equipment maximum working pressure rating. The maximum working pressure rating is indicated on the manufacturer's metal identification plate.

Blast Pot

- Position blast pots and/or compressors on level ground. Machines operate best when they sit on level surfaces.
- For communication purposes place blast pot between the compressor and the surface to be blasted. This will enable the pot tender and operator to make visual contact.
- All couplings and pipefitting on the blast pot, compressor and hoses must be airtight.
- Blast pots must be inspected daily prior to use.

Hoses and Connectors

- Couplings must have safety wires in place and be secure as required by federal safety regulations. The operator shall be responsible for ensuring that each coupling has safety wires in place.
- Whip checks must be installed at bull hose connections.
- Operator should hold onto the blast hose until the air pressure from the nozzle drops off to zero.
- Do not use hoses with soft spots.
- Never use tape to repair a blown-out hose.
- Immediately replace the hose if a blowout or leak occurs.
- Hose ends must come into contact with coupling gaskets to prevent leaks and to maintain static electricity conductivity.

Nozzles and Remote Controls

- Blast nozzles shall be bonded and grounded to prevent the buildup of static charges. Where flammable or explosive dust mixtures may be present, the abrasive blasting enclosure, the ducts, and the dust collector shall be constructed with loose panels or explosion venting areas, located on sides away from any occupied area, to provide pressure relief in case of explosion following the principles set forth in the National Fire Protection Association Explosion Venting Guide. NFPA 68-1954.
- Organic abrasives which are combustible shall be used only in automatic systems.

- Blast cleaning nozzles shall be equipped with an operating valve which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.
- All blast machines must be equipped with remote control systems to start and stop the blasting process.
- Never tape, strap, or tie down an air actuated remote-control lever or choke electric remote control switch.
- If there is the slightest delay in reaction time of the handle lever or lever lock to open, check for dust and dirt build-up around pivot pins before resuming blasting. Also, test the tension on the lever springs, and replace them immediately if they do not respond rapidly.
- Substituting component pieces with other manufacturer's parts is not allowed.
- Inspect blast nozzles for wear and cracks on the inner liner. When a nozzle orifice is worn 1/16" larger than its original size, it should be replaced.
- Check nozzles and nozzle holders for deterioration of thread form. Threads on nozzles and their companion holders must not be cross-threaded, worn or distorted.
- Hoses that are being tied and lifted to blasting operations being conducted above grade, i.e., scaffolds, shall be depressurized to prevent accidental start-up.

Operator Signals

- On the job site, voice communication is often impossible. Even shouts cannot be heard over the noise of compressors and blasting. In addition, the operator's head will be enclosed in the helmet, which blocks out sound and limits vision. For these reasons, an industry wide standard set of hand and sound signals has been developed.
- Signals may be visual hand movements, flashing light, pulls on a rope or sounds made by banging a hammer or using a horn or electric buzzer.
- Every operator must become familiar with the signals to be used on the jobsite.

Respirator Use

- A specific work-site procedure shall be developed where respirators or CE blasting hoods/helmets are required to protect the health of the operator. A respiratory protection program shall be established wherever it is necessary to use respiratory protective equipment including worksite specific procedures and elements for required respirator use. Abrasive blasting respirators shall be worn by all abrasive blasting operators under certain conditions.
- Equipment for the protection of eyes, face and body shall be supplied to the operator when the respirator design does not provide such protection and to any other personnel working in the vicinity of abrasive blasting operations. This equipment shall conform to the requirements of 1926.102 (Eye and Face Protection).
- Equipment for protection of the eyes and face shall be supplied to any other personnel working in the vicinity of abrasive blasting operations.

Environmental Controls

- Organic abrasives which are combustible shall be used only in automatic systems. Where flammable or explosive dust mixtures may be present, the construction of the equipment, including the exhaust system and all electrical wiring, shall conform to the requirements of American National Standard Installation of Blower and Exhaust Systems for Dust, Stock, and Vapor Removal or Conveying, Z33.1-1961 (NFPA 91-1961), and Subpart S of 1926.57 (Ventilation).
- The work area must be inspected for exterior electrical power lines that may endanger operators.

- Operators should use care to avoid directly blasting power lines and insulators.
- Do not blast in atmospheres that contain flammable fumes.
- Take precautions at the work site to eliminate hazardous surface obstacles that may cause tripping hazards or interfere with worker mobility.
- Adequate ventilation must be provided for employees working within enclosures.
- Never operate compressor if hoses are frozen. When winter temperatures drop below freezing, check for ice prior to pressurizing hoses.
- Provide adequate drinking water for operators, especially during summer.

Personal Protective Equipment

- Secure hoses by tying them to scaffolding or personnel platforms, when working from elevations, to prevent injury from hoses falling on other personnel working below or near blasting area.
- Before using any blasting abrasive, check the MSDS to find out the chemical composition of the abrasive material.
- Equipment for the protection of eyes, face and body shall be supplied to the operator when the respirator design does not provide such protection and to any other personnel working in the vicinity of abrasive blasting operations. This equipment shall conform to the requirements of 1926.102 (Eye and Face Protection).
- Ventilation systems and dust collectors may be necessary in enclosed conditions.
- Noise from abrasive blast nozzles can be loud enough to damage the hearing of blasters and others on the work site. Workers must not be exposed to noise levels exceeding 80 decibels as an eight-hour time weighted average (80 dBA TWA); therefore all blasters shall wear earplugs.
- Blaster must wear heavy-duty gloves and steel toe boots.
- Helmet lenses should be changed as soon as pitting or frosting takes place.

Abrasive Blasting Checklist

- An Abrasive Blasting Checklist must be completed by each blaster prior to the start of each day of abrasive blasting.
- Go to the Form tab of www.bms.support and click on the Abrasive Blasting Checklist link.

Purpose

The purpose of this program is to define the requirements for safely operating an aerial lift device.

Scope

This policy shall cover all aerial lift devices used on Burnt Mountain Services property.

Key Responsibilities

Supervisors

- Shall ensure that all aerial devices are properly operated by trained personnel.
- Shall ensure that aerial lift devices are designed and constructed in conformance with applicable requirements of the American National Standards for "Vehicle Mounted Elevating and Rotating Work Platforms" ANSI A92.2-1969, including appendix.

Employees

- Shall follow all aspects of this program.

Procedure

- Aerial lifts may be "field modified" for uses other than those intended by the manufacturer provided the modification has been certified in writing by the manufacturer or by an equivalent entity.
- Lift controls shall be tested each day prior to use to determine that such controls are in safe working conditions. Tests shall be made at the beginning of each shift during which the equipment is to be used to determine that the brakes and operating systems are in proper working condition.
- Only authorized persons shall operate an aerial lift and boom and basket.
- Load limits specified by the manufacturer shall not be exceeded.
- Aerial lifts shall have a working back-up alarm audible above the surrounding noise level or the vehicle is backed up only when an observer (spotter) signals that it is safe to do so.
- The minimum clearance between electrical lines and any part of the equipment (i.e. crane or load) shall be 10 feet for lines rated 50 kV or below.
- Employees shall always stand firmly on the floor of the basket and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.
- An approved fall restraint system shall be worn when working from an aerial lift. The fall restraint system must be attached to the boom or basket. An approved fall restraint system shall be attached to the boom or basket when working from an aerial lift and it is not permitted to be attached to adjacent poles or structures.
- All employees who operate an aerial lift device shall be trained in the safe operation of the specific device they will operate. Training must conform to all OSHA requirements.

Purpose

The purpose of this procedure is to advise Burnt Mountain Services (the Company) employees in areas where asbestos is suspected on an awareness level basis about the properties and dangers of asbestos, general guidelines and training requirements and to provide basic precautions and protections for employees to avoid exposure to asbestos containing material (ACM) or presumed asbestos containing material (PACM).

Scope

This procedure applies to Burnt Mountain Services operations where employees whose work activities may be in the vicinity of asbestos containing materials during their work activities. When work is performed on a nonowned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers/Supervisors

- Ensure owners or operators are notified of PACM.
- Prohibit employees from working until material in question is confirmed as non-asbestos or abated.
- Ensure proper employee asbestos awareness training is completed.

All Employees

- All employees are required to act in strict compliance with the requirements of this program and delay or discontinue work if there is ever an unresolved concern regarding exposure to asbestos.
- Immediately report any suspected asbestos containing material to their supervisor

Awareness Level Requirements and Information

Asbestos Exposure Control

Depending on the exposure level, the Company is required to develop and train workers on an Asbestos Exposure Controls Plan.

Background of Asbestos

The word asbestos is derived from a Greek word that means inextinguishable or indestructible. Asbestos is a naturally occurring mineral that is found throughout the world. Asbestos has several characteristics that make it desirable for many commercial uses. The fibers are extremely strong, flexible, and very resistant to heat, chemicals and corrosion. Asbestos is also an excellent insulator, and the fibers can be spun, woven, bonded into other materials, or pressed to form paper products. For these reasons and because it is relatively inexpensive asbestos has been widely used for many years and now is found in over three thousand different commercial products.

Exposure to asbestos fibers can cause serious health risks. The major risks from asbestos come from inhaling the fibers. Asbestos is composed of long silky fibers that contain hundreds of thousands of smaller fibers. These fibers can be subdivided further into microscopic filaments that will float in the air for several hours. Asbestos fibers can easily penetrate body tissues and cause disabling and fatal diseases after prolonged exposure.

Although exposure to asbestos is potentially hazardous, health risks can be minimized. In most cases the fibers are released only if the asbestos containing materials (ACM) is disturbed. Intact and undisturbed asbestos materials do not pose a health risk. The mere presence of asbestos does not mean that the health of occupants is endangered. When ACM is properly managed, release of fibers into the air is prevented or minimized, and the risk of asbestos related disease can be reduced to a negligible level. However, asbestos materials can become hazardous when they release fibers into the air due to damage, disturbance, or deterioration over time.

The ability to recognize the kinds of material that contain asbestos, knowing under what conditions they are dangerous, and understanding basic safety precautions, are all important in keeping exposure to a minimum.

Health Effects of Asbestos

The most dangerous exposure to asbestos is from inhaling airborne fibers. The body's defenses can trap and expel many of the particles. However, as the level of asbestos fibers increases many fibers bypass these defenses and become embedded in the lungs. The fibers are not broken down by the body and can remain in body tissue indefinitely. Exposure to asbestos has been shown to cause respiratory diseases such as lung cancer, asbestosis, mesothelioma and various types of cancer of the stomach and colon.

Possible Locations Where Employees May Be Exposed to Asbestos During Their Job Functions

Asbestos materials are used in the manufacture of heat-resistant clothing, automotive brake and clutch linings, and a variety of building materials including insulation, soundproofing, floor tiles, roofing felts, ceiling tiles, asbestos-cement pipe and sheet and fire-resistant drywall. Asbestos is also present in pipe and boiler insulation materials, pipeline wrap and in sprayed-on materials located on beams, in crawlspaces, and between walls.

Client owned and/or operated equipment and facilities, where surfacing material or insulation is present, must be confirmed non-asbestos before the Company employees disturb that material. Where surfacing material or insulation cannot be confirmed non-asbestos, the client or owner must test, and where necessary abate, the material before Company employees are permitted to work.

Types of Asbestos

Asbestos can be defined as friable or non-friable. Friable means that the material can be crumbled with hand pressure and is therefore likely to emit fibers. The fibrous or fluffy sprayed-on materials used for fireproofing, insulation, or sound proofing are considered to be friable and they readily release airborne fibers if disturbed.

Materials such as vinyl-asbestos floor tile or roofing felts are considered non-friable and generally do not emit airborne fibers unless subjected to sanding or sawing operations. Asbestos cement pipe or sheet can emit airborne fibers if the materials are cut, abraded or sawed, or if they are broken during demolition operations.

Identifying Asbestos

There are many substances that workers contact that may contain asbestos and have the potential to release fibers. Only rarely can asbestos in a product be determined from labeling or by consulting the manufacture. The presence of asbestos cannot be confirmed visually in many cases. The only way to positively identify asbestos is

through laboratory analysis of samples. If the presence of asbestos is suspected always assume that it is an asbestos containing material and have it analyzed.

Employees will abide by warning signs and labels and will not disturb the asbestos containing material.

Signs and labels shall identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that Asbestos Containing Material (ACM) and/or Presumed Asbestos Containing Material (PACM) will not be disturbed. The Company shall ensure that employees working in and adjacent to regulated areas comprehend the warning signs.

General Safety Precautions
The following general precautions will reduce exposure and lower the risk of asbestos related health problems:

- Drilling, sawing, or using nails on asbestos materials can release asbestos fibers and should be avoided.
- Floor tiles, ceiling tiles or adhesives that contain asbestos should never be sanded.
- Use care not to damage asbestos when moving furniture, ladders, or any other object.
- Know where asbestos is located in your work area. Use common sense when working around products that contain asbestos. Avoid touching or disturbing asbestos materials on walls, ceilings, pipes, ducts or boilers.
- All asbestos containing materials should be checked periodically for damage or deterioration. Report any damage, change in condition or loose asbestos containing material to a supervisor.
- All removal or repair work involving asbestos must be done by specially trained personnel.
- Asbestos should always be handled wet to help prevent fibers from being released. If asbestos is soaked with water or a mixture of water and liquid detergent before it is handled, the fibers are too heavy to remain suspended in the air.
- In the presence of asbestos dust above the PEL, the use of a respirator approved for asbestos work is required. A dust mask is not acceptable because asbestos fibers will pass through it.
- Dusting, sweeping, or vacuuming dry asbestos with a standard vacuum cleaner will put the fibers back into the air. A vacuum cleaner with a special high efficiency filter (HEPA) must be used to vacuum asbestos dust.
- If a HEPA vacuum is not used clean-ups must be done with a wet cloth or mop. The only exception to this would be if the moisture presents an additional hazard such as around electricity.

Remember, the mere presence of asbestos itself does not create a health hazard unless the material is disturbed and releases fibers to the atmosphere. Protect yourself and others by being aware of where asbestos is located, the dangers involved and using common sense when working around ACM.

Multiple Worksites
When working on multi-contractor worksites our employees shall be protected from exposure. If employees working adjacent to Class I asbestos jobs are exposed to asbestos due to the inadequate containment of such jobs the Company shall either remove the employees from the area until the enclosure breach is repaired or perform an initial exposure assessment.

Personnel Air Monitoring
Depending on the exposure level, the Company is required to perform air sampling.

Medical Surveillance Program
All Company employees who are exposed to asbestos at the regulated level shall be included in the Company medical surveillance program.

Respiratory Protection
The only circumstances that will necessitate Company employees using respiratory equipment for protection against asbestos is during the asbestos exposure assessment process, while confirming (via personnel monitoring) that the engineering controls and work practices designed and employed for a particular work activity are adequate to maintain exposure levels below the PEL/excursion limit. Asbestos work that requires respiratory equipment beyond the PEL should be performed by a qualified contractor.

Waste Disposal
Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of in sealed, labeled impermeable bags of greater than 6 mils thickness or other closed, labeled, impermeable containers.

Training

Asbestos awareness training is required for employees who work in areas that contain or may contain asbestos and the training is documented.

Asbestos awareness training is required for employees whose work activities may contact Asbestos Containing Material (ACM) or Presumed Asbestos Containing Material (PACM) but do not disturb the ACM or PACM during their work activities.

Training elements are to include:

- The health effects associated with asbestos exposure
- The relationship between smoking and exposure to asbestos producing lung cancer
- The quantity, location, manner of use, release, and storage of asbestos and the specific nature of operations which could result in exposure to asbestos
- The engineering controls and work practices associated with the employee's job assignment
- The specific procedures implemented to protect employees from exposure to asbestos, such as appropriate work practices, emergency and clean-up procedures and personal protective equipment to be used
- The purpose, proper use, and limitations of respirators and protective clothing, if appropriate
- The purpose and a description of the medical surveillance program
- The content of the OSHA asbestos standard, including appendices
- The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels

Subcontractors performing work shall comply with the requirements of this standard and all applicable regulatory and environmental regulatory requirements.

Purpose

To provide basic precautions and protections for employees to avoid exposure to asbestos containing material (ACM) or presumed asbestos containing material (PACM).

Scope

This program applies to all Burnt Mountain Services (the Company) employees. When work is performed on a nonowned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

- Asbestos – an incombustible, chemical-resistant, fibrous mineral used for fireproofing, electrical insulation, building materials, brake linings, and chemical filters.
- Asbestos containing material (ACM) – any material containing more than 1% asbestos.
    - Friable Asbestos - used for fireproofing, insulation, or sound proofing are considered to be friable, and they readily release airborne fibers if disturbed.
    - Non- friable Asbestos - vinyl-asbestos floor tile or roofing felts are considered non-friable and generally do not emit airborne fibers unless subjected to sanding or sawing operations.
- Class I -Asbestos work - Activities involving the removal of thermal system insulation (TSI) and surfacing asbestos containing material.
- Class II - Asbestos work - Activities involving the removal of ACM that is not TSI or surfacing material. This includes removal of asbestos-containing gaskets, packing, wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.
- Class III - Asbestos work - Includes repair and maintenance operations where ACM, including TSI and surfacing material, is likely to be disturbed to the extent that renders ACM friable or generates visible debris. Class III asbestos work is limited to cutting away small amounts of ACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of disturbed ACM exceed that which can be contained in one glove bag or waste bag measuring 60 inches in length and width.
- Class IV - Asbestos work - Includes custodial activities during which employees are involved in clean-up activities of waste and debris containing asbestos containing material.
- Competent Person - A designated Company employee who has the authority to take prompt corrective actions and has received training and certification equivalent to the EPA's Model Accreditation Plan and equivalent training as conducted by the National Asbestos Center, at the manager or supervisor level, and thereby is knowledgeable in:
    - Identifying asbestos hazards in the workplace.
    - Selecting appropriate control strategies for asbestos exposure.
    - The contents of the OSHA asbestos regulations.

- Work practices for safe asbestos removal/clean-up.

- Presumed asbestos containing material (PACM) – thermal insulation and surfacing material found in buildings constructed no later than 1980.
- Surfacing material – material that is sprayed troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members or other materials on surfaces for acoustical, fireproofing and other purposes).
- Thermal system insulation – ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Key Responsibilities

Managers/Supervisors

- Ensure owners or operators are notified of PACM.
- Prohibit Company employees from working until the material in question is confirmed as non-asbestos or abated.
- Ensure proper employee training is completed.
- Ensure that all requirements of this program are understood and followed by those working under his/her direction.
- Perform duties of the Competent Person for asbestos work.

All Employees

All employees are required to act in strict compliance with the requirements of this program and delay or discontinue work if there is ever an unresolved concern regarding exposure to asbestos.

Procedure

Health Effects

Exposure to asbestos has been shown to cause lung cancer, asbestosis, mesothelioma, and cancer of the stomach and colon. Fibrotic Scaring of the lung tissue

General

Company employees shall not work or otherwise handle asbestos containing material designated as Class I, III, IV work. Class II work is limited to removal of asbestos containing gaskets and packing materials.

All asbestos abatement work, other than the limited scope of Class II work, shall be awarded to qualified asbestos abatement contractors.

Client owned and/or operated equipment and facilities, where surfacing material or insulation is present, must be confirmed non-asbestos before Company employees disturb that material.

Where surfacing material or insulation cannot be confirmed non-asbestos, the client or owner must test, and where necessary abate, the material before Company employees are permitted to work.

Signs shall be posted, and employees will abide by warning signs and labels and will not disturb the Asbestos Containing Material.

Approved ACM or PACM Handling

The following procedures must be followed when removing gasket or packing materials (Class II asbestos work) containing or presumed to contain asbestos:

- All employees must fulfill appropriate training, respiratory protection and medical surveillance requirements to handle ACM or PACM.
- Class II asbestos work, which employees are permitted to perform, is limited to removal of asbestos gasket and packing materials, unless special training for other Class II work has been provided.
- Removal of gaskets and/or packing shall only be performed by employees that have been properly trained. When gaskets are visibly deteriorated, they are to be removed via wet methods and/or glove bagging.

Training

Employees are provided training on Asbestos. The training shall be provided prior to or at the time of the initial assignment and at least annually thereafter. The training program shall be done in a manner that the employee is able to understand and should include health effects associated with exposure to asbestos.

Training shall include:

- The ability to understand health effects associated with exposure to asbestos.
- Information on the relationship between smoking & exposure to asbestos producing lung cancer.
- The appropriate personal protective equipment (PPE) and its limitations (such as improper respirator fit) as described in the Company PPE Program and its associated training.
- The Asbestos Control Plan and any associated work practices.

A certificate of training shall be provided & maintained. Written materials relating to the employee training program will be readily available to affected employees, the assistant Secretary of Labor for Occupational Safety and Health and the director of the National Institute for Occupational Safety and Health. Training materials must be readily available upon request.

Contractors

Asbestos contractors shall be pre-screened and approved by the group responsible for contracting the work.

Contractors performing work shall comply with the requirements of this standard and all applicable OSHA and environmental regulatory requirements.

The following documents must be obtained at least 10 working days (or as soon as possible) prior to beginning the asbestos abatement work:

- Copy of the contractor's State Contractor's License (renewed annually)

- SDS for material used for the abatement process
- Copy of all asbestos Notifications (if required)
- Copies of asbestos sample analysis (if performed by contractor)

The following are required upon completion of work by the contractor (If an asbestos project completion report is provided by the contractor, these items are often a part of it.):

- Work Summary Report, including daily work summaries.
- Results of all independent third-party air sampling, including asbestos material sampling, personnel air monitoring, clearance sampling results.
- Waste Shipment Records.

Every contracted asbestos job must have assigned a competent person to monitor asbestos work and to assure compliance with all applicable regulations and requirements.

An independent third party shall be contracted to perform all required air sampling for contracted asbestos removal.

Contractors who are not involved in ACM work, but who may be inadvertently exposed to ACM on Company property are to be informed of this potential and advised on proper methods to avoid exposure.

Asbestos Exposure Control

Asbestos exposure controls are designed to eliminate or minimize an employee's exposure to airborne asbestos fibers through the use of work practices and engineering controls. Where the TWA and/or excursion limit is exceeded, a written Asbestos Exposure Control Program to reduce employee exposure shall be established and implemented to reduce employee exposure to or below the TWA and to or below the excursion limit.

Prior to initiating any asbestos work the Competent Person must perform an asbestos exposure assessment. Subsequent to the exposure assessment, the engineering controls and work practices to be employed shall be identified.

Prior to commencement of work, the affected employees shall be briefed on the engineering controls and work practices designed to reduce/maintain the exposure below TWA for the asbestos work. This briefing shall be documented and maintained with the job documentation. This shall be done except to the extent that such controls are not feasible. Some of them may be exhaust systems for hand tools, wet methods, clean-up procedures and PPE shall be used.

Wet methods will be employed for all asbestos work as a means to minimize potential airborne exposure wherever possible. ACM shall be wetted from the initiation of the maintenance or renovation operation and wetting agents shall be used continually throughout the work period to ensure that any dry ACM exposed in the course of the work is wet and remains wet until final disposal.

Wetting agents, usually a surfactant (dish soap), are generally prepared by mixing 1 to 3 ounces of wetting agent to 5 gallons of water. A Pam type cooking oil spray is also an adequate wetting agent.

Regulated Areas

Areas where asbestos abatement activities are in progress are restricted/regulated. The limit shall comply with that of the TWA and/or excursion limit. Access is limited to regulated areas.

Regulated asbestos areas shall be established with barriers, tape, OSHA approved warning signs and other physical controls when airborne concentrations of asbestos are present.

All employees who perform work in regulated areas shall be covered by this procedure. Employees who perform housekeeping activities during and after construction activities are also covered by this procedure.

If employees working immediately adjacent to a Class I asbestos jobs are exposed to asbestos due to the inadequate containment of such job, the Company shall either remove the employees from the area until the enclosure breach is repaired; or perform an initial exposure assessment pursuant to 1926.1101(f).

Personnel Air Monitoring

Monitoring shall occur to ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) in 30 minutes.

An independent/third party air sampling person shall perform all required air sampling during contractor asbestos work and provide the results to the Company Competent Person. Note: Air sampling is not required for glove bag activities that are covered under a Negative Exposure Initial Assessment.

Potential exposure to asbestos is assessed to ensure exposure does not exceed occupational exposure limits. The air quality (safety) is to be determined from breathing zone air samples. The samples shall be representative of the 8-hour TWA and 30-min. short-term exposure. Measurements are required for documentation.

Affected employees and/or their designated representatives are to be provided with the opportunity to observe asbestos exposure monitoring.

Air sampling analysis shall be performed by an American Industrial Hygiene Association (AIHA) accredited laboratory.

Where the asbestos exposure assessment (in the absence of quantitative personnel monitoring results) does not present objective, convincing data that indicates the ACM to be handled will not (under the worst circumstances) release airborne fibers, personnel air monitoring shall be performed to quantify exposure.

If personnel monitoring is considered necessary during the asbestos exposure assessment, in an effort to verify exposures would be maintained below the PEL/excursion limit, respiratory protection shall be utilized until such time that sufficient sampling results verify that respiratory protection is not required.

The Company Safety Manager is to be consulted for advice and assistance in performing personnel air sampling activities.

The number of samples necessary to be considered "representative" is dependent upon many factors and must be determined in consultation with the company Safety Manager, certified Industrial Hygienist consultant, or a third-party air sampling professional.

Affected employees shall be notified of monitoring results, which represent the employee's exposure, as soon as possible following receipt of the monitoring results.

Employees shall be notified in writing either individually or by posting at a centrally located place that is accessible to affected employees.

Once representative sampling indicates that exposure levels for that particular activity are consistently below the OSHA established permissible limit and/or excursion limit, the requirement for respiratory protection may be waived.

It is imperative that accurate personnel air sampling records are maintained in order to justify any relaxation of respiratory protection requirements.

Results of air sampling data must be maintained in the asbestos job documentation.

Medical Surveillance Program

All Company employees who for a combined total of 30 or more days per year are engaged in Class II asbestos work or who are exposed at or above the permissible exposure limit for a combined 30 days or more per year shall be included in the Company medical surveillance program.

Note: For purposes of this requirement, any day in which an employee is engaged in Class II or Class III work or a combination thereof for one hour or less and, while doing so, adheres fully to the work practices specified in this standard, shall not be counted. The medical surveillance program shall be made available according to the following schedules:

- Prior to assignment of an employee to an asbestos area where negative pressure respirators are worn.
- Where exposure to asbestos may be at or above the permissible exposure level for 30 or more days per year, or where employees are engaged in Class II asbestos work for 30 or more days per year, at least annually thereafter, as long as exposures exist.
- Asbestos medical examination must be given within ten (10) working days following the thirtieth day of exposure.
- If an examining physician determines that any of the examinations should be provided more frequently than specified, they shall be provided at the periodicity specified by the physician.

No asbestos medical examination is required when complete records of such examination, performed less than twelve months prior to commencement of asbestos work are available.

As part of the medical surveillance, the attending physician shall provide a written opinion of the results of the medical examination to the Company and the Contract Medical Surveillance Provider, who in turn will provide a copy to the affected employee within 30 days.

In accordance with OSHA regulations, once employees are no longer exposed to asbestos their inclusion in the medical surveillance program is no longer required.

Respiratory Protection and Personal Protective Equipment

The use of approved respirators shall be at no cost to the employee and will be used in conjunction with work practice controls, work operations, to reduce exposure and in emergencies.

The respirator shall be provided at no cost to the employees and shall be chosen in accordance with the Company Respiratory Protection Program and shall be approved by NIOSH. Powered, air-purifying respirators shall be available when the employees choose to use this type or the hazard assessment process requires this type, or when the respirator will provide more adequate protection. Prerequisites for use of respiratory equipment, regarding asbestos, include:

- Successfully passing a respiratory physical.
- Successfully completing annual respiratory protection training.
- Successfully passing a respirator fit test.

When working above the TWA PPE shall include, but not be limited to protective coveralls, gloves, head coverings and foot coverings, vented goggles, face shields and others based on the hazard.

Waste Disposal

Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of in sealed, labeled impermeable bags of greater than 6 mils thickness or other closed, labeled, impermeable containers.

Bags or containers shall be imprinted and clearly labeled with the following OSHA asbestos hazard warning and address:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
Burnt Mountain Services
2517 1st Ave, Greeley, CO 80631
Contractor's Name
Contractor's Address

Bags/containers shall be clearly labeled, for DOT, as: RQ, Asbestos, 9, NA2212, PG III

Containers shall have a DOT number 9 diamond label on the container if the shipping container is greater than 66 pounds. For assistance with DOT labeling requirements, contact the Company Safety Manager.

An Asbestos Waste Shipment Record shall be utilized. Check with the landfill prior to shipping to see if they require their own shipping record or use a Waste Manifest – contact the Safety Director for copies.

Asbestos shall be transported to an approved landfill that accepts asbestos. A licensed waste hauler may be used to transport the packaged ACM. Transport vehicles shall either be enclosed or covered. Do not use vehicles with compactors to transport ACM.

A shipping form shall accompany the ACM, during transport, to the landfill.

Record Keeping

All records relating to any asbestos activity shall be maintained by the Company permanently.

The following records shall be maintained:

- Exposure Assessments that are being relied upon to support a location's position that asbestos work (specific or generic) will not result in exposures above the PEL or excursion limit.
- Employee asbestos exposure records (personnel air monitoring).
- Medical Surveillance records.
- Training records.
- Shipping papers and disposal records.
- Copies of notification letters sent to Governmental agencies.
- Pre-project asbestos sampling results.
- Post-project clearance sampling results.
- Daily Work Summaries.
- Project Completion Closure Report, if provided.

Purpose

To provide basic precautions and protections for employees to avoid exposure to asbestos containing material when removing materials from pipe.

Scope

This program applies to all burnt Mountain Services (the Company) employees. When work is performed on a nonowned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers/Supervisors

- Prohibit Company employees from working until trained to this procedure.
- Ensure that all requirements of this procedure are understood and followed by those working under his/her direction.
- Perform duties of the competent person for asbestos work.

Competent Person

A competent person will make frequent and regular inspections of the project. The competent person must make frequent and regular inspections of the job site, materials, and equipment. The competent person must be capable of performing or supervising the regulated area and have authorization to take prompt corrective actions to eliminate a hazard.

All Employees

All employees are required to act in strict compliance with the requirements of this procedure and delay or discontinue work if there is ever an unresolved concern regarding exposure to asbestos.

Procedure

6 mil thick disposable polyethylene sheeting will be placed under the pipe during the duration of the asbestos coating removal project. 6 mil thick polyethylene sheeting must be placed under the pipeline at all times during coating removal to collect any debris generated.

The Company will utilize wet methods with amended water or Pam type cooking oil spray during the removal process. The Company will adequately wet the pipeline coating with an amended water solution or Pam type cooking oil spray using a low-pressure garden style sprayer or other similar device to prevent any visible dust emissions during the coating removal process.

The coating will be removed in such a fashion as not to make it friable asbestos. A utility knife or similar tool may be used to cut the coating into uniform squares. The objective of this activity is to prevent tearing or crumbling of the coating and to remove it intact in a non-friable condition.

The Company prohibits the use of high-speed abrasive disks and compressed air as a means by which to remove the coating. These work practices are prohibited by OSHA's Asbestos Construction standard and should not be performed under any circumstances as doing so greatly increases the risk of airborne asbestos fiber exposure.

The Company shall ensure the use of vacuum cleaners equipped with HEPA filters to collect all debris generated by coating removal. Vacuum cleaners equipped with HEPA filters must be used to collect all debris generated by coating removal and to decontaminate disposable clothing of workers and supervisors in the designated area upon exiting the regulated area.

Regulated Area

Site preparation shall include proper signage. In addition to establishing a perimeter around the regulated area, warning signs must be posted around the regulated area in sufficient numbers to identify the hazard.

The Company shall prohibit eating, drinking, or smoking in a regulated area. Workers within the regulated or designated area must not eat, drink or smoke. These activities must be conducted outside of these areas to prevent accidental inhalation or ingestion of airborne asbestos fibers.

All employees who perform work in regulated areas shall be covered by this procedure. Employees who perform housekeeping activities during and after construction activities are also covered by this procedure.

Respiratory Protection and Personal Protective Equipment

Proper PPE for asbestos workers must include but not be limited to respirators, full body disposable suits, safety goggles and gloves.

PPE must be worn by all who enter the regulated area. The respirator may not be required following collection of air monitoring data by a competent person which demonstrates that exposures are below OSHA's Permissible Exposure Limit. The Company must demonstrate a negative exposure assessment within the last 12 months or state asbestos containing pipe coating removal projects are and will be below the permissible exposure limit.

The respirator shall be provided at no cost to the employees and shall be chosen in accordance with the Company Respiratory Protection Program and shall be approved by NIOSH. Powered, air-purifying respirators shall be available when the employees choose to use this type or the hazard assessment process requires this type, or when the respirator will provide more adequate protection. Prerequisites for use of respiratory equipment, regarding asbestos, include:

- Successfully passing a respiratory physical.
- Successfully completing annual respiratory protection training.
- Successfully passing a respirator fit test.

Waste Disposal

Asbestos waste bags will be leak proof, airtight, puncture resistant and labeled in accordance with OSHA. The adequately wet intact coating pieces should be placed into labeled asbestos waste bags. These bags should be airtight, puncture resistant, and labeled accordingly. These bags should only be half filled and closed at the end by a "gooseneck" method and sealed with duct tape.

Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of in sealed, labeled impermeable bags of greater than 6 mils thickness or other closed, labeled, impermeable containers.

Bags or containers shall be imprinted and clearly labeled with the following OSHA asbestos hazard warning and address:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
Burnt Mountain Services
2517 1st Ave, Greeley, CO 80631
Contractor's Name
Contractor's Address

Bags/containers shall be clearly labeled, for DOT, as: RQ, Asbestos, 9, NA2212, PG III

Containers shall have a DOT number 9 diamond label on the container if the shipping container is greater than 66 pounds. For assistance with DOT labeling requirements, contact the Company Safety Manager.

Proper disposal of asbestos waste including but not limited to proper vehicle labeling and waste shipment records. Sealed, secured and labeled containers of ACM waste must be removed and transported to a pre-arranged disposal location as soon as technically feasible. Vehicles used for transport should be labeled properly during loading and unloading. A waste shipment record must be maintained.

Record Keeping

All records relating to any asbestos activity shall be maintained by the Company permanently.

The following records shall be maintained:

- Exposure Assessments that are being relied upon to support a location's position that asbestos work (specific or generic) will not result in exposures above the PEL or excursion limit.
- Employee asbestos exposure records (personnel air monitoring).
- Medical Surveillance records.
- Training records.
- Shipping papers and disposal records.
- Copies of notification letters sent to Governmental agencies.
- Pre-project asbestos sampling results.
- Post-project clearance sampling results.
- Daily Work Summaries.
- Project Completion Closure Report, if provided.

Training

Employees removing the coating (asbestos workers) will have both classroom and hands-on training from an approved training provider.

Asbestos worker training must consist of both classroom and hands-on training from an approved training provider consisting of, but not limited to the following elements: methods of recognizing asbestos, health effects of asbestos, respirator training, requirements for posting signs and hands on training for acceptable removal methods.

A certificate of training shall be provided and maintained.

Purpose

The purpose of this program is to provide procedures and guidelines to eliminate all injuries resulting from possible malfunctions, improper grounding and/or defective electrical tools. This program applies to all sites, employees and contractors and shall be used on owned premises.

Definitions

Competent Person - one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Ground Fault Circuit Interrupter - a device for the protection of personnel that functions to de-energize a circuit or portion thereof within an established period of time when a current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.

Responsibilities

Supervisors are designated as competent persons for the Assured Equipment Grounding Conductor Program and are responsible for program execution. One or more competent persons must be designated (as defined in 1926.32(f) to implement and execute the program.

Employees are responsible for following the requirements of this program, to perform visual inspections and to take defective equipment out of service.

Procedures and Guidelines to Eliminate Injuries

It is important to note that In many cases, the Company will use GFCIs in lieu of an assured grounding program.
With that being said, the following procedures and guidelines are designed to eliminate all injuries resulting from possible malfunctions, improper ground and/or defective tools.

Assured Grounding Site Program Requirement
An assured grounding conductor program must be implemented on all Burnt Mountain Services (the Company) sites covering all cord sets, receptacles which are not part of the building or structure & equipment connected by cord and plug which are available for use or used by employees.

Ground Fault Circuit Interrupters
All 120-volt, single-phase 15 and 20 ampere receptacle outlets on construction or maintenance sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground fault circuit interrupters for personnel protection.

- All hand portable electric tools and extension cords shall use a GFCI.
- Additionally, approved GFCI's shall be used for 240-Volt circuits in the same service as described above.
- GFCI's must be used on all 120 volt, single-phase 15 amp and 20 amp receptacles within 6 feet of a sink, damp areas or on installed outdoor equipment.
- The GFCI must be the first device plugged into a permanent receptacle.

- The GFCI must be tested before each use.

Assured Equipment Grounding Conductor Program
The Assured Equipment Grounding Conductor Program (AEGCP) shall cover all cord sets, receptacles not a part of the permanent wiring of a structure and equipment connected by cord and plug on all construction and maintenance sites.

This written description of the program shall be kept at the jobsite for inspection and copying by OSHA and any affected employee.

Removing Equipment
Restrictions on the use of equipment that does not meet requirements or if it is found to be defective shall be applied and enforced. Any equipment which has not met the requirements of this program shall not be available or permitted to be used in Company operations. Damaged items shall not be used until repaired.

How Often Inspection of Cords and Equipment are to be Made
Daily Visual inspections – The following shall be visually inspected before each day's use for external defects (such as deformed or missing pins or insulation damage) and for indication of possible internal damage:

- Cord sets;
- Attachment caps;
- Plug and receptacle of cord sets;
- Any equipment connected by cord and plug (with the exception of cord sets and receptacles which are fixed and not exposed to damage) such as deformed or missing plug, and
- Insulation damage
- Damaged items shall not be used until repaired or shall be discarded.

How and When Tests are Performed and What Records are Maintained
All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductors. The equipment grounding conductor shall be connected to its proper terminal.

When tests are performed:

- Before each use.
- Before equipment is returned to service following any repairs.
- Before equipment is used such as when a cord has been run over.
- At intervals not to exceed 3 months, except that cord sets and receptacles which are fixed and not exposed to damage shall be tested at intervals not exceeding 6 months.

Tests performed as required by this program shall be recorded as to the identity of each receptacle, cord set and cord and plug connected equipment that passed the test and shall indicate the last date tested or interval for which is was tested. This record shall be kept by means of logs, color coding or other effective means and shall be maintained until replaced by a more current record. These records shall be made available at the job site for inspection by the Assistant Secretary and any affected employees.

Purpose

The purpose of this program is to define work practices, administrative procedures and engineering controls to protect employees exposed to benzene concentrations above the OSHA action level. This plan shall be implemented and kept current by the Safety Manager as required to reflect the most recent exposure monitoring data.

Scope

This program covers all employees who may be exposed to benzene in the course of completing job duties. This written plan shall be made available to the Assistant Secretary, the Director, affected employees and designated employee representatives. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Burnt Mountain Services (the Company) employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Employees will be aware of provisions of site-specific contingency/emergency plans by either the Company or of a facility owner.

The Company Safety Manager will develop and implement project/task specific benzene control procedures prior to the start of activities that may include exposure to benzene. The Company will be aware of an owner's contingency plan provisions and all employees must be informed where benzene is used in host facility and aware of additional plant safety rules.

Possible locations where employees may be exposed to benzene during their job functions may include, but not limited to petroleum refining sites, tank gauging (tanks at producing, pipeline & refining operations) and field maintenance operations.

Definitions

- Action Level – means an airborne concentration of benzene of 0.5 ppm calculated as an 8-hour time-weighted average.
- Benzene – a toxic, colorless liquid or gaseous material. Benzene has an aromatic odor, is not soluble in water and is flammable.
- Employee exposure – exposure to airborne benzene that would occur if the employee were not using respiratory protective equipment.
- Health Effects – Short-term overexposure may cause irritation of eyes, nose and skin, breathlessness, irritability, euphoria, headache, dizziness or nausea. Long term effects may result in blood disorders such as leukemia and anemia.

Key Responsibilities

Manager or Designee

- Ensure personnel are aware of work that has the potential of exposure to benzene.
- Ensure individuals responsible for monitoring areas of exposure are properly trained.
- Ensure personnel receive documented medical surveillance exams.
- Ensure that emergency exams are performed if an overexposure or suspected overexposure occurs.

Supervisors

- Ensure employees have the appropriate personal protective equipment (PPE) and are properly trained in its use and care.
- Ensure employees comply with the benzene control program.

Safety Manager

- In coordination with the Manager, develop and implement project/task specific benzene control procedures prior to the start of activities that may include exposure to benzene.
- Coordinate monitoring activities, ensuring monitoring equipment is in proper working order and, as necessary, modifying the benzene control procedures to reflect exposure monitoring data.
- Maintain the benzene control program, notify management of any regulatory changes and ensure compliance with regulatory, client and corporate requirements.
- Coordinate training activities.
- Coordinate the medical surveillance program, including maintenance of medical records and administration of exams.
- Ensure fire extinguishers shall always be readily available where benzene is used/stored. Benzene liquid is highly flammable and vapors may form explosive mixtures in air. Fire extinguishers must be readily available in areas where benzene is used or stored.

Employees

- Comply with the benzene control program.
- Know where benzene is used at Company or client facilities and follow any of the additional plant safety rules required by the client.
- Comply with the medical surveillance program and attend examinations as required.
- Maintain respiratory protection equipment in good working order and notify the supervisor or Safety Representative of any problems prior to starting work.
- Review material safety data sheets or consult with the supervisor to identify any container with benzene containing material.
- Not smoke in prohibited areas where benzene is present.
- Report exposures resulting in any symptoms immediately.

Procedure

Permissible Exposure Limits

The time-weighted average limit (TWA) for benzene is:

- 8-hour TWA 1 ppm
- 12-hour TWA 0.67 ppm

The short-term exposure limit (STEL) for benzene is 5 ppm.

Regulated Areas

- The Company shall establish regulated areas wherever airborne concentration of benzene exceeds or can reasonably be expected to exceed the PEL or STEL.
- The Company will control access to regulated areas and limit access to authorized personnel.
- Safety precautions such as prohibition of smoking in areas where benzene is used/stored shall be taken. Smoking is prohibited in areas where benzene is used or stored. The following signage shall be posted in all regulated areas when the potential exists for benzene vapors to be in excess of the PEL:

DANGER – BENZENE REGULATED AREA CANCER CAUSING AGENT FLAMMABLE – NO SMOKING AUTHORIZED PERSONNEL ONLY RESPRIATOR REQUIRED

Methods of Compliance

- The benzene control program shall be written and implemented to comply with OSHA regulation 29 CFR 1910.1028 (Benzene).
- The Company shall establish and implement a written program to reduce employee exposure to or below the PEL primarily by means of engineering and work practice controls to ensure compliance with the benzene control program and federal and state requirements.

Exposure Monitoring

Exposure monitoring shall be performed for the 8-hour and 12-hour TWAs or for the 15-minute STEL exposure when:

- Regulated areas are established.
- An emergency occurs that could require a regulated area.
- A change in the production, process, control equipment, personnel or work practices may result in new or additional exposure to benzene.
- Cleanup of a spill, leak repair, or rupture occurs.
- If the monitoring required reveals employee exposure at or above the action level but at or below the TWA, the Company shall repeat the monitoring for each employee at least every year.
- If the initial monitoring reveals employee exposure to be below the action level the Company may discontinue the monitoring.
- If the monitoring reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are below the action level the Company may discontinue to monitor.

- Direct reading detection instruments (Drager CMS is recommended) will be used where benzene vapors may be present in work areas not previously monitored.
- Personal monitoring will be performed by use of vapor monitoring badges following manufacturer requirements. All samples shall be analyzed at an AIHA (American Industrial Hygiene Association) certified laboratory.

Medical Surveillance

- Baseline and annual medical exams shall be provided to employees that may work or are anticipated to participate in operations more than 10 times per year or may work in areas where benzene exposures may exceed the PEL over 30 days per year.
- The Company shall make available a medical surveillance program for employees who are or may be exposed to benzene at or above the action level 30 or more days per year; for employees who are or may be exposed to benzene at or above the PELs 10 or more days per year; for employees who have been exposed to more than 10 ppm of benzene for 30 or more days in a year prior to the effective date of the standard when employed by their current employer.
- Notification of monitoring results shall be provided to employees in writing within 15 working days of receipt of results.

Personal Protective Equipment

- PPE will be selected on the basis of its ability to prevent absorption, inhalation and ingestion.
- PPE will reflect the needs of the employee based on work conditions, amount and duration of exposure and other known environmental factors but shall contain as a minimum; boots, proper eye protection, gloves, sleeves, aprons and others as determined.
- PPE shall be provided and worn when appropriate to prevent eye contact and limit dermal exposure to liquid benzene. PPE must meet the requirements of 29 CFR 1910.133 and provided at no cost to the employees.

Respiratory Protection

- A respiratory protection program shall be established in accordance with 29 CFR 1910.134. Respiratory protection is required:
  - During the time period necessary to implement engineering controls or work practices.
  - When engineering and work practices are not feasible.
  - In emergencies.

Approved respirators shall be selected according to airborne concentrations of benzene or condition of use.

- 0 to 0.67 ppm – no respirator required.
- 0.67 to 6.7 ppm – half-mask respirator with OV cartridges.
- 6.7 to 33 ppm – full-face respirator with OV cartridges.
- Greater than 33 ppm – Due to the Company policy of not permitting SCBA no employee shall enter a space containing more than 33 ppm.

Recordkeeping

- Medical surveillance records shall be maintained for 30 years after termination of employment.
- Exposure monitoring records shall be maintained for 30 years after completion of the project.
- Exposure and medical monitoring records shall be made available to affected employees or their representatives and to OSHA upon request.

Communication of Benzene Hazards

- Signs and labels shall be posted at entrances of regulated areas.
- The benzene control program shall be updated by the Company Safety Manager.
- Project site specific contingency and emergency procedures shall be updated by the Safety Manager and made available to project staff prior to beginning work at the specific site.

Purpose

This Bloodborne Pathogen Exposure Control Plan has been established to ensure a safe and healthful working environment and act as a performance standard for all employees. This program applies to all occupational exposure to blood or other potentially infectious materials. The content of this plan complies with OSHA Standard 29 CFR 1910.1030 (Occupational Exposure to Bloodborne Pathogens).

Scope

This program addresses all occupational exposure to blood or other potentially infectious materials (examples of potentially infectious materials include bodily fluids containing hepatitis B, HIV). OSHA requires that all employers that can "reasonably anticipate exposure" of employees to infectious material prepare and implement a written exposure control plan.

Key Responsibilities

Exposure Control Officer (Company Safety Manager)
Has overall responsibility for developing and implementing the Exposure Control Procedure for all facilities.

Site Project Manager and Supervisors
Site project manager and supervisors are responsible for exposure control in their respective areas.

Employees

- Know what tasks they perform that have occupational exposure.
- Plan and conduct all operations in accordance with our work practice controls.
- Develop good personal hygiene habits.

Procedure

Training
Training shall be provided at the time of initial assignment to tasks where occupational exposure may take place, and at least annually thereafter. Annual training for all employees shall be provided within one year of their previous training. Training shall include:

- What bloodborne pathogens are; how to protect themselves from exposure
- Methods of warnings (signs, labels, etc.)
- The OSHA requirements of bloodborne pathogens
- The Hepatitis B vaccine shall be made available to all employees that have occupational exposure at no cost to the employee(s).

Biohazard Label

Availability of Procedure to Employees
All employees will have access to a copy of the exposure control plan. Access to a copy of the exposure control plan shall be provided in a reasonable time, place, and manner.

Reviews and Update of the Procedure
The procedure is reviewed annually and updated whenever we establish new functional positions within our facility that may involve exposure to biohazards.

Exposure Determination

- There are no job classifications in which some or all employees have occupational exposure to bloodborne pathogens that may result from the performance of their routine duties.
- Designated employees are trained to render first aid and basic life support. Rendering first aid or basic life support will expose employees to bloodborne pathogens and will require them to adhere to this program.
- In addition, no medical sharps or similar equipment is provided to, or used by, employees rendering first aid or basic life support.
- This exposure determination has been made without regard to the Personal Protective Equipment that may be used by employees.
- A listing of all first aid and basic life support trained employees in this work group shall be maintained at each work site and at each first aid kit.

Methods of Compliance

Universal Precautions
Under circumstances in which differential between body fluids is difficult or impossible, all body fluids will be considered potentially infectious.

Engineering Controls
Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Engineering controls should be examined and maintained or replaced on a regular schedule to ensure their effectiveness. Hand washing facilities shall be readily available at all work locations. If provision of hand washing facilities is not feasible, then an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes shall be provided by Burnt Mountain Services (the Company).

Containers for contaminated reusable sharps that our clients provide have the following characteristics: Puncture-resistant; Color-coded or labeled with a biohazard warning label; Leak-proof on the sides and bottom.

Secondary containers which are: Leak-proof; Color-coded or labeled with a biohazard warning label; Puncture-resistant, if necessary.

Work Practice Controls

- Employees shall wash their hands immediately, or as soon as feasible, after removal of potentially contaminated gloves or other personal protective equipment.
- Following any contact of body areas with blood or any other infectious materials, employees wash their hands and any other exposed skin with soap and water as soon as possible.

- Hand washing facilities shall be available. If hand washing facilities are not feasible the Company will provide either an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes.
- Contaminated needles and other contaminated sharps should not be handled if you are not AUTHORIZED or TRAINED to do so. Contaminated needles and other contaminated sharps are not bent or recapped.
- Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses is prohibited in work areas where there is potential for exposure to biohazardous materials.
- Food and drink are not kept in refrigerators, freezers, on countertops or in other storage areas where potentially infectious materials are present.
- All equipment or environmental surfaces shall be cleaned and decontaminated after contact with blood or other infectious materials.
- Specimens of blood or other potentially infectious materials must be put in leak proof bags for handling, storage, and transport.
- If outside contamination of a primary specimen container occurs, that container is placed within a second leak proof container, appropriately labeled for handling and storage.
- Bloodborne pathogens kits are located on top of first aid kits and are to be used in emergency situations by the caregivers. Once the seal is broken on the kit and any portion has been used it is not to be reused. Pathogen Kits shall be ordered and replaced promptly. Biohazard bags are identified by stickers and located in the first aid area. Contaminated supplies are to be disposed of at once.

Personal Protective Equipment

When the possibility of occupational exposure is present, PPE is to be provided at no cost to the employees such as gloves, gowns, etc. PPE shall be used unless employees temporarily declined to use it under rare circumstances. PPE shall be repaired and replaced as needed to maintain its effectiveness. All PPE shall be of the proper size and readily accessible.

Our employees adhere to the following practices when using their personal protective equipment:

- Any garments penetrated by blood or other infectious materials are removed immediately.
- All potentially contaminated personal protective equipment is removed prior to leaving the work area.
- Gloves are worn whenever employees anticipate hand contact with potentially infectious materials or when handling or touching contaminated items or surfaces.
- Disposable gloves are replaced as soon as practical after contamination or if they are torn, punctured or otherwise lose their ability to function as an "exposure barrier".
- Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.
- Any PPE exposed to bloodborne pathogens shall be disposed of properly.
- PPE shall be used unless employees temporarily declined to use PPE under rare circumstances.
- PPE should be cleaned, laundered & properly disposed of if contaminated.
- The Company will repair and replace PPE as needed to maintain its effectiveness.

Housekeeping

Our staff employs the following practices:

- All equipment and surfaces are cleaned and decontaminated after contact with blood or other potentially infectious materials.
- Protective coverings (such as plastic trash bags or wrap, aluminum foil or absorbent paper) are removed and replaced.
- All trash containers, pails, bins, and other receptacles intended for use routinely are inspected, cleaned and decontaminated as soon as possible if visibly contaminated.
- Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush, tongs, forceps, etc.).

Post-Exposure and Follow Up

Post-Exposure Evaluation & Follow-Up

If there is an incident where exposure to bloodborne pathogens occurred, we immediately focus our efforts on investigating the circumstances surrounding the exposure incident and making sure that our employees receive medical consultation and immediate treatment.

The Company Safety Manager/ Supervisor investigates every reported exposure incident and a written summary of the incident and its causes is prepared and recommendations are made for avoiding similar incidents in the future. We provide an exposed employee with the following confidential information:

- Documentation regarding the routes of exposure and circumstances under which the exposure incident occurred.
- Identification of the source individual (unless not feasible or prohibited by law).

Once these procedures have been completed, an appointment is arranged for the exposed employee with a qualified healthcare professional to discuss the employee's medical status. This includes an evaluation of any reported illnesses, as well as any recommended treatment.

Information Provided to the Healthcare Professional. We forward the following:

- A copy of the Biohazards Standard.
- A description of the exposure incident.
- Other pertinent information.

Healthcare Professional's Written Opinion

After the consultation, the healthcare professional provides our facility with a written opinion evaluating the exposed employee's situation. We, in turn, furnish a copy of this opinion to the exposed employee. The written opinion will contain only the following information:

- Whether Hepatitis B Vaccination is indicated for the employee.
- Whether the employee has received the Hepatitis B Vaccination.
- Confirmation that the employee has been informed of the results of the evaluation.

- Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which require further evaluation or treatment.
- All other findings or diagnoses will remain confidential and will not be included in the written report.

Record Keeping
All records shall be made available upon request of employees, OSHA's Assistant Secretary and the Director of OSHA for examination and copying. Medical records must have written consent of employee before released. The Company shall meet the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

The respective Human Resources representative shall maintain Bloodborne Pathogen exposure records.

Employee medical records shall be kept confidential and are not to be disclosed without the employee's written consent, except as required by 29 CFR 1910.1030 or other law.

Accurate medical records for each employee with occupational exposure must be maintained for at least the duration of employment plus 30 years and shall include at least the following:

- Employee's name, Social Security number and the Company employee number.
- Employee's Hepatitis B vaccination status, including vaccination dates.
- All results from examinations, medical testing and follow-up procedures, including all health care professional's written opinions.
- Information provided to the health care professional.
- Any Hepatitis B Vaccine Declinations.

Training records shall be maintained for 3 years from the date on which the training occurred and shall include at least the following:

- Outline of training program contents.
- Name of person conducting the training.
- Names and job titles of all persons attending the training.
- Date of training.

Labels and Signs
Biohazard warning labeling shall be used on containers of regulated waste; Sharps disposal containers; contaminated laundry bags and containers; contaminated equipment.

Information
Information provided to our employees includes:

- The Biohazards Standard itself.
- The epidemiology and symptoms of bloodborne diseases.
- The modes of transmission of bloodborne pathogens.
- Our facility's Exposure Control Procedure (and where employees can obtain a copy).
- Appropriate methods for recognizing tasks and other activities that may involve exposure.

- A review of the use and limitations of methods that will prevent or reduce exposure.
- Selection and use of personal protective equipment.
- Visual warnings of biohazards within our facility including labels, signs and "color-coded" containers.
- Information on the Hepatitis B Vaccine.
- Actions to take and persons to contact in an emergency involving potentially infectious material.
- The procedure to follow if an exposure incident occurs, including incident reporting.
- Information on the post-exposure evaluation and follow-up, including medical consultation.

Purpose:

The purpose of this program is to establish requirements for the use and handling of materials that expose employees to cadmium and/or hexavalent chromium.

Scope

This program covers all employees.

Key Responsibilities

Managers/Supervisors

- Shall ensure that all employees are aware of the proper work procedures for cadmium and hexavalent chromium.
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.
- As part of the JSA and other hazard evaluation processes, identifies and evaluates chromium or cadmium hazards and potential exposures during planning and the conduct of work.
- Reviews and approves the Task-Specific Safety Analysis.
- As necessary, quantitatively determines the presence of chromium or cadmium in materials, substrates, and other media. This may involve the collection of samples for analysis by a qualified laboratory or field testing using acceptable test methods.
- Provides results of any chromium or cadmium survey to management/supervision, along with information regarding hazard potential and control measures. As appropriate, makes recommendations to management/supervision to maintain, modify, upgrade, or downgrade controls accordingly.
- Takes prompt corrective measures (or supports any Competent Person in this role) to eliminate hazards; such as recommending to management/supervision to implement or modify engineering, administrative, work practice, and personal protection (including respiratory protection) controls.
- Conducts periodic exposure assessment.
- As appropriate, assists management/supervision in ensuring that workers have the necessary training and medical surveillance based upon the activity and hazard.
- Ensures that medical monitoring is conducted in accordance with 29 CFR 1926.1126 (for chromium) or 29 CFR 1926.1127 (for cadmium) including imposition of work restrictions where appropriate and reviewing results of medical monitoring.
- In evaluating chromium or cadmium hazards and specifying controls for a job, (a) utilizes reliable historical exposure monitoring data generated for other similar operations or activities, (b) utilizes objective data, and/or (c) plans and conducts initial monitoring to determine exposures and assess the effectiveness of hazard controls.
- Conducts initial and periodic exposure monitoring in accordance with National Institute for Occupational Safety and Health (NIOSH)/OSHA methods if lacking historical or objective data.
- Maintains effective records of jobs monitored, so that a historical database can be used to specify controls and eliminate unnecessary and redundant monitoring for future activities.
- Supports project management/supervision in responding to exposures above the PEL when workers were not adequately protected.

- As appropriate, participates in pre-job and daily worker briefings regarding task-specific chromium or cadmium hazards and controls, work practices/plans (such as JSAs), and other applicable information, including any changes that are made to controls or to the work practices or plans.

Employees

- Shall follow all requirements regarding the safe work procedures for cadmium and hexavalent chromium.

Cadmium Procedure

Compliance Program

A written compliance program shall be implemented when the PEL for cadmium is exceeded at a work site.

The following areas shall be addressed within the site compliance program and to ensure emergency plans are in place should a release of cadmium occur:

- Potential exposure determination including a description of each operation where cadmium is omitted, machinery use, material processed, controls in place, crew size, employee job responsibilities and maintenance practices.
- Air monitoring data or developing a justification for not conducting monitoring based on previous monitoring/historical data or objective data.
- Engineering controls including the specific means that will be employed to meet compliance.
- A report of technology considered in meeting the PEL.
- A detailed schedule of implementation.
- Consideration of respiratory protection.
- A documented, written plan for dealing with emergency situations involving a substantial release of cadmium.
- Work practice program.
- Other relevant information such as protective clothing, housekeeping, hygiene areas and practices (including consideration of shower facilities), consideration of medical surveillance, training and recordkeeping.

The written program will be reviewed and updated on a regular basis to reflect significant changes in the compliance status for Burnt Mountain Services (the Company).

The program shall be provided for examination and copying upon request of affected employees, their representatives or OSHA officials.

Maintenance procedures while working on ventilation systems and changing of filters will be established. Procedures shall be developed and implemented to minimize employee exposure to cadmium when maintenance of ventilation systems and changing of filters. Examples include: Proper use of PPE, use of HEPA filtered vacuums, wet sweeping or other methods to minimize the likelihood of exposure to chromium. No compressed air shall be used to remove chromium from any surface. Cleaning equipment must be handled in a manner that minimizes the reentry of chromium into the workplace.

Construction work activities that result in exposure to chromium or cadmium may include, but are not limited to, the following:

- Demolition or salvage of structures where chromium or cadmium, or materials containing chromium or cadmium, are present.
- Removal or encapsulation of materials containing chromium or cadmium.
- New construction, alteration, repair, or renovation of structures and substrates that contain chromium or cadmium.
- Installation of products containing chromium or cadmium.
- Working with/around Portland cement (in powder or dust form – chromium only).
- Torch-cutting chromium/cadmium containing paints.
- Transportation, disposal, storage, or containment of chromium or cadmium, or materials containing chromium or cadmium.
- Maintenance operations associated with construction activities.
- Welding, cutting, burning, or grinding stainless steel, chromium-/cadmium-containing alloy steel, and chromium/cadmium containing alloys.

Note!!! Exposure to chromium (especially hexavalent chromium) has also occurred when the welding rod or wire in use contains chromium.

The permissible exposure limit (PEL) for cadmium and hexavalent chromium is five (5) micrograms calculated as an 8-hour time-weighted average over a work shift. The action level (AL) of 2.5 micrograms triggers the following requirements:

- Pre-job planning includes, as needed, a thorough identification of chromium or cadmium materials. Identification may include the product name, a Material Safety Data Sheet (MSDS) with the MSDS number (if available) or a sample content analysis. Sampling data includes location, sampling method, sampling dates, laboratory identification, and analytical method.
- If documentation is not feasible or has been determined by the project engineer to be unavailable or unreliable, chromium or cadmium content sufficient to exceed the action level for chromium or cadmium is assumed.

Results of bulk sampling, calculations of potential chromium or cadmium exposure, and other data that demonstrate compliance with this practice (as well as the pertinent standards) are attached to the work package.

Where chromium or cadmium exposure above the action level is suspected, and in the absence of monitoring data, interim protective measures are established that are equal to or greater than the assumed exposure level.

Hexavalent Chromium Procedure

Welding, Cutting, and Grinding

Certain welding and cutting activities have been shown to expose the welder/cutter, and potentially helpers, to hexavalent chromium above the action level when exhaust ventilation is not used. The activities have included the following:

- Shielded metal arc welding, Gas metal arc welding
- Flux cored arc welding, Sub arc welding
- Torch cutting through chromate-containing paints, grinding chromium-containing metals.

The types of metal involved have been stainless steel, chromium-containing alloy steel, and chromium-containing nonferrous alloys. Exposure has also occurred when the welding rod or wire in use contains chromium, and exhaust ventilation is not used.

Therefore, exhaust ventilation is always prescribed as a control measure when activities with the materials mentioned above are in use unless historical personal monitoring data performed when similar materials, using similar methods, under similar environmental conditions are used shows conclusively that the welder/cutter and helper (if applicable) are not exposed above the action level without regard to respiratory protection.

Employees shall not be exposed in excess of the permissible exposure level. No employee shall be exposed in excess of the permissible exposure limit (PEL) of 5 micrograms per cubic meter of air as an 8-hour TWA.

Plasma and Air Arc Cutting and Gouging

Plasma and air arc cutting and gouging operations have been shown to expose the worker and helpers within 10 feet of the work to levels of hexavalent chromium above the permissible exposure limit (PEL) under most circumstances and conditions. Exhaust ventilation and respiratory protection (at least a half-face, tight-fitting respirator with a HEPA filter/cartridge) are always prescribed as control measures when activities with the materials mentioned above are in use; a higher level of respiratory protection may be prescribed, depending on conditions.

Note!!! Each discrete task must begin with ventilation and respiratory protection control measures in place. Respiratory protection may be downgraded only upon conclusive results of breathing zone monitoring of the employee(s) involved in each discrete task showing exposure to be less than 50 percent of the protection factor of the respirator relative to the concentration and PEL of hexavalent chromium. Respiratory protection may be eliminated only upon conclusive results of breathing-zone monitoring of the employee(s) involved in each discrete task showing exposure to be less than the PEL as an 8-hour time-weighted average.

Additional controls may also be appropriate to be in compliance with 29 CFR 1926.1126, depending on the results of evaluations of the materials to be used, environmental conditions, length of the work process/activity, etc.

Medical Surveillance

Medical surveillance must be provided to employees who are exposed above the PEL for 30 days or more per year or exposed in an emergency. Medical surveillance shall be provided when an employee experiences signs or symptoms of the adverse health effects of Hexavalent Chromium (dermatitis, asthma, bronchitis, etc.). Medical evaluations will be provided at no cost to employees. Examinations will be performed by or under the supervision of a physician or other licensed health care professional.

Hygiene

Personal hygiene is very important while working with chromium or cadmium products. To avoid accidental ingestion of chromium or cadmium, employees wash thoroughly (regardless of other controls) prior to eating, chewing, smoking, or drinking.

Practices

The company Management/supervision supported by safety professional(s), the medical contractor and training providers conduct the following basic steps to control exposure to chromium or cadmium:

- Determine the types of projects, activities, and operations that could involve chromium or cadmium, or chromium or cadmium-containing materials. For those jobs, conduct hazard identification as part of the work design, planning, and control process.
- If chromium or cadmium materials are involved, ensure that project safety (for chromium) or a competent person (for cadmium) conducts a hazard evaluation to determine the potential exposure and to recommend initial controls.
- Develop and implement a Task-Specific Safety when exposure is or is likely to be above the PEL. The JSA (or equal) addresses the scope of work activities; provides initial exposure assessment; and prescribes exposure controls, air-monitoring requirements, work practices, personal protective equipment and additional information as required.
- Incorporate recommendations from project safety for chromium or cadmium hazard control measures into any JSA and work control documents.

Exposure Monitoring

Periodic monitoring shall be conducted at least every 6 months if initial monitoring shows employee exposure. Air monitoring will be performed at the beginning of each job task. If exposure monitoring results indicate exposure is above the PEL, a written notification must be included with the corrective action being taken to reduce exposure to or below the PEL.

- Notify each affected employee, in writing, of the results of monitoring within five (5) working days.
- Air monitoring for chromium or cadmium may be waived provided the following conditions are met:
    - Monitoring has been performed in the last 12 months.
    - Data from historical monitoring originates from work operations that closely resemble the planned work operations.
    - Workplace and environmental conditions (such as indoors or outdoors, temperature, wind speed, ventilation, and space configuration) are similar to those when the monitoring was performed.
    - The processes, types of material, control methods and work practices are similar.
    - Justification for waving initial monitoring shall be included in the Task-Specific Safety Analysis or equal. Employees involved are briefed regarding the existence of such data.

Surveillance

Medical surveillance shall be provided when an employee experiences signs or symptoms of the adverse health effects of Hexavalent Chromium (dermatitis, asthma, bronchitis, etc.). Medical evaluations will be provided at no cost to employees. Examinations will be performed by or under the supervision of a physician or other licensed health care professional.

Changing and Hygiene Facilities Are Provided for Decontamination

The Company must provide change rooms for decontamination and ensure facilities prevent cross-contamination. Washing facilities shall be readily accessible for removing chromium from the skin. Workers must wash their hands and face or any other potentially exposed skin before eating, drinking or smoking.

Regulated Areas

Regulated areas shall be established when exposure to an employee is or is expected to be in excess of the PEL. Regulated areas shall be marked with warning signs to alert employees and access is restricted to “authorized persons”.

Controls

The Company is responsible for implementing effective engineering and work practice controls if the exposure level is above the permissible limit. Engineering and work practice controls should be provided to reduce exposure to the lowest feasible level. If employees can demonstrate that such controls are not feasible, the Company shall use engineering/work controls to reduce employee exposure to the lowest levels achievable, and shall supplement them by the use of respiratory protection.

Recordkeeping

The Company is required to maintain and make available an accurate record of all employee exposure monitoring, medical surveillance and training records.

Respiratory Protection is Required & PPE

Respirators must be used when engineering controls and work practices cannot reduce employee exposure, during work operations where engineering controls and work practices are not feasible, and emergencies.

Respirators shall be provided in accordance with 1910.134 (Respiratory Protection) (see the Company Respiratory Protection Program). Specific requirements contained within 1926.1127 (Cadmium) regarding respiratory protection shall also be followed including:

- Providing employees with full face piece respirators when they experience eye irritation.
- Providing HEPA filters for powered and non-powered air-purifying respirators.
- Providing a powered air-purifying respirator instead of a negative-pressure respirator when an employee entitled to a respirator chooses to use this type of respirator and such a respirator will provide adequate protection to the employee.

PPE is provided to employees. PPE must be provided when there is a hazard from skin or eye contact. Gloves, aprons, coveralls, goggles, foot covers etc. Contaminated PPE will be removed at the end of the work shift. Employer must clean, launder, repair and replace protective clothing as needed.

Housekeeping

Surfaces shall be maintained as free as practicable of accumulation of chromium.

All spills and releases of chromium shall be cleaned promptly. Methods of cleaning include HEPA filtered vacuums, dry or wet sweeping, shoveling or other methods to minimize exposure.

No compressed air shall be used to remove chromium from any surface unless the compressed air is used in conjunction with a ventilation system designed to capture the dust cloud created by the compressed air or no alternative method is feasible.

Cleaning equipment must be handled in a manner that minimizes the reentry of chromium into the workplace.

Training of Employees

The Company shall provide appropriate types of training for employees who are potentially exposed to chromium or cadmium prior to their initial assignment and annually thereafter. The Company will ensure employee participation and maintain a record of the training contents. This training includes:

- Hazard communication training for potentially exposed employees.
- Chromium hazards, control methods and medical surveillance.
- Training specified by the applicable chromium or cadmium standard for workers exposed at the action level for any one day, or who are exposed to chromium or cadmium compounds that are skin irritants.
- Respirator training if respirators are to be used.
- Provide information to workers regarding task-specific chromium or cadmium hazards and control methods, the JSA, work practices, medical surveillance and other applicable information, including any changes that are made to these controls.
- Provide training annually, as appropriate, to workers who continue to have exposure to chromium or cadmium at or above the action level on any one day.
- All training will be recorded and include the identity of the employee trained, the signature of the person who conducted the training and the date of the training.
- Training records must be kept for one year.

Purpose

The purpose of this program is to address control measures to protect Burnt Mountain Services (the Company) employees from stress or injuries when working in cold temperatures.

Scope

Each Company worksite shall implement a site-specific cold weather/cold stress hazard assessment and have the control plan approved by the Company Safety Manager.

Responsibilities

Safety Manager

- identify and conduct an assessment of tasks and occupations where there is the potential for cold stress.
- implement and/or provide controls (engineering, administrative or personal protective equipment) to minimize cold stress.
- provide training and education regarding cold stress, including early signs and symptoms of cold-related exposure.

Worker Responsibilities

- adhere to all control measures or work procedures that have been designed and implemented to reduce exposure to conditions that could cause cold stress.
- leave cold environments if signs or symptoms of cold-related stress appear.
- wear all the required cold temperature clothing and PPE.
- immediately report any signs or symptoms of cold-related stress

Cold Temperature Procedures

Health Effects of Cold Stress

Warning signs of hypothermia can include complaints of nausea, fatigue, dizziness, irritability or euphoria. Workers can also experience pain in their extremities (hands, feet, ears, etc.), and severe shivering. Workers should be moved to a heated shelter and seek medical advice when appropriate.

Hazard Assessment

An assessment will be conducted by the Safety Manager to identify the types of jobs or employees who are at risk of cold exposure. Jobs that are at risk for cold exposure include, but are not limited to: airport ground personnel, auto repair and refueling, cold storage, construction and demolition, ice making, logging, mining, oil and gas drilling, pulp and paper, railroad and trucking, snow and trash removal, utility repair and warehousing. The assessment must also consider employees who work inside but have to go outside for any portion of the shift to either perform work or to travel to transportation departure or arrival points.

Facilities

- Regularly used walkways and travel ways shall be sanded, salted or cleared of snow and ice as soon as practicable.

- Employees will be informed of the dangers associated with working around unstable snow and ice build-ups. All employees will be informed of the dangers and destructive potential caused by unstable snow build-up, sharp icicles, ice dams and know how to prevent incidents caused by them.
- When dangerous overhead build-ups of snow or ice are present barricades will be used to prevent staff from walking or driving into potential fall zones.

Clothing, PPE, and Supplies

Proper cold weather protection must be worn by employees when working in cold, wet, and windy conditions. Protective clothing is the most important way to avoid cold stress. The type of fabric also makes a difference.

Cotton loses its insulation value when it becomes wet. Wool, silk, and most synthetics, on the other hand, retain their insulation even when wet. The following are recommendations for working in cold environments:

- Wear at least three layers of clothing. An inner layer of wool, silk or synthetic to wick moisture away from the body – a middle layer of wool or synthetic to provide Insulation even when hot - an outer wind and rain protection layer that allows some ventilation to prevent overheating.
- Wear a hat or hood. Up to 40% of body heat can be lost when the head is left exposed.
- Keep a change of dry clothing available in case work clothes become wet.
- With the exception of the wicking layer do not wear tight clothing. Loose clothing allows bettor ventilation of heat away from the body.
- Do not underestimate the wetting effects of perspiration. Oftentimes wicking and venting of the body's sweat and heat are more important than protecting from rain or snow.
- Wear insulated boots or other footwear. Felt-lined, rubber bottomed, leather-topped boots with removable felt insoles are best suited for heavy work in cold since leather is porous, allowing the boots to "breathe" and let perspiration evaporate.
- Liner socks made from polypropylene will help keep feet dry and warmer by wicking sweat away from the skin. Always wear the right thickness of socks for your boots.
- In extremely cold conditions, where face protection is used, eye protection must be separated from the nose and mouth to prevent exhaled moisture from fogging and frosting eye shields or glasses.
- Clothing must be dry. Moisture should be kept off clothes by removing snow prior to entering heated shelters.

Cold weather supplies will be regularly inspected and restocked when necessary by the Company. Regular inspections of cold weather supplies such as hand warmers, jackets, shovels, etc. will be carried out to ensure that supplies are always in stock.

Preventative Controls That Are Implemented to Avoid Cold Induced Injuries

- Workers will be under constant protective observation by a co-worker or supervisor. The Company will implement a "Buddy System" to ensure that no employee is working alone in cold work environments.
- Some preventive measures include drinking plenty of liquids, avoiding caffeine and alcohol.
- It is easy to become dehydrated in cold weather. If possible, heavy work should be scheduled during the warmer parts of the day.
- Take breaks out of the cold.
- Try to work in pairs to keep an eye on each other and watch for signs of cold stress.
- Avoid fatigue since energy is needed to keep muscles warm.
- Take frequent breaks and consume warm, high calorie food such as pasta to maintain energy reserves.

- If a worker exposed to cold shows signs or reports symptoms of cold stress or injury the worker must be removed from further exposure and treated by an appropriate first aid attendant, if available, or a physician.
- For continuous work in temperatures below the freezing point, heated warming shelters such as tents, cabins or rest rooms should be available. The work should be paced to avoid excessive sweating. If such work is necessary, proper rest periods in a warm area should be allowed and employees should change into dry clothes.
- New employees should be given enough time to get acclimatized to cold and protective clothing before assuming a full workload.
- For work below the freezing point, metal handles and bars should be covered by thermal insulating material. Also, machines and tools should be designed so that they can be operated without having to remove mittens or gloves.

Training

The Company employees who are required to work in cold weather conditions will receive initial and annual training regarding the health effects of cold exposure and proper rewarming procedures, recognition of and first aid for frostbite and hypothermia, required protective clothing, proper use of warming shelters, the buddy system, maintaining communications, vehicle breakdown procedures and proper eating and drinking habits for working in the cold.

Health Effects

Where employees are exposed to work conditions that may present a hazard because of excessive cold, the Company shall ensure that a competent person provides training to ensure the employees are familiar with the signs and symptoms of cold weather induced health problems such as hypothermia, frostbite, and trench foot. Training will include:

- Hypothermia occurs when body heat is lost faster than it can be replaced. When the core body temperature drops below the normal 98.6°F to around 95°F the onset of symptoms normally begins. The person may begin to shiver and stomp their feet in order to generate heat. Workers may lose coordination, have slurred speech and fumble with items in their hand. The skin will likely be pale and cold.

- Frostbite occurs when tile skin actually freezes and loses water. In severe cases, amputation of the frostbitten area may be required. While frostbite usually occurs when the temperatures are 30°F or lower, wind chill factors can allow frostbite to occur in above freezing temperatures. Frostbite typically affects the extremities, particularly the feet and hands. The affected body part will be cold, tingling, stinging, or aching followed by numbness. Skin color tums red, then purple, then white and is cold to tile touch. There may be blisters in severe cases.

- Trench Foot or immersion foot is caused by having feet immersed in cold water at temperatures above freezing for long periods of time. It is similar to frostbite but considered less severe. Symptoms usually consist of tingling, itching or a burning sensation. Blisters may be present.

Workers and supervisors involved with work in cold environments should be informed about symptoms of adverse effect exposure to cold, proper clothing habits, safe work practices, physical fitness requirements for work in cold,

and emergency procedures in case of cold injury. While working in cold, a buddy system should be used. Look out for one another and be alert for the symptoms of hypothermia.

First Aid Training

Employees will be trained to administer proper first aid treatment for cold-induced injuries or illnesses. All Company employees who are required to perform work in cold conditions will be knowledgeable of how to administer first aid treatment for cold-induced injuries or illnesses.

All training shall be documented.

Purpose:

The purpose of this program is to prevent injury from failing or failure of compressed gas cylinders and to establish requirements for handling, lifting, and storing compressed gas cylinders safely AT BURNT Mountain Services (the Company).

Scope

This program covers all employees and contractors who handle, transport and/or use compressed gas cylinders.

Key Responsibilities

Managers/Supervisors

- Shall ensure that all employees are aware of the proper handling, storage and use requirements for compressed gas cylinders.
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.

Employees

- Shall follow all requirements regarding the safe handling, storage, and use of compressed gas cylinders.

Procedure

General

Cylinders shall not be accepted, stored, or used if evidence of denting, bulging, pitting, cuts, neck or valve damage is observed. If damage is observed:

- The cylinder must be taken out of service.
- The cylinder's owner shall be notified to remove the cylinder from the premises.
- If owned, the cylinder shall be de-pressured and inspected as required by this program.

Cylinder Identification

Gas identification shall be stenciled or stamped on the cylinder or a label used. No compressed gas cylinder shall be accepted for use that does not legibly identify its content by name.

Handling

Valve caps must be secured onto each cylinder before moving or storage.

Secure the cylinder in a blanket when being lifted by mechanical means. Slings, ropes, or electromagnets are prohibited to be used for lifting compressed gas cylinders.

The preferred means to move compressed gas cylinders is with a cart, carrier or with a helper.

Compressed gas cylinders must not be allowed to strike each other.

When a cylinder cap cannot be removed by hand the cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor.

Storing
All cylinders must be secured upright in a safe, dry, well-ventilated area that limits corrosion and deterioration.

- Cylinders must be secured by means that will prevent the cylinder from falling.
- When securing the cylinder, the restraints shall not be attached to electrical conduit or process piping.

Empty and non-empty cylinders shall be stored separately. All stored cylinders shall be capped.

Oxygen cylinders must be stored a minimum of 20 feet from combustible gas cylinders or areas where there may be open flame or arcing. Cylinders may also be stored where the oxygen is separated from combustible gas cylinders by a 5 foot or higher wall with a fire resistance rating of 30 minutes.

Storage areas for full and empty cylinders must be designated and labeled. Cylinders should be stored in assigned places away from elevators, stairs, or gangways.

Use
Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt, and solvents. Only tools provided by the supplier should be used to open and close cylinder valves.

Never force or modify connections.

Only regulators and gauges shall be used within their designated ratings.

The use of a pressure-reducing regulator is required at the cylinder unless the total system is designed for the maximum cylinder pressure.

Valves must be closed when cylinders are not in use.

Cylinders shall not be used as rollers or supports.

Cylinders shall not be placed where they can come in contact with electrical circuits.

Cylinders must be protected from sparks, slag, or flame from welding, burning or cutting operations.

Empty cylinders must be returned to designated storage areas as soon as possible after use.

Inspection of Compressed Gas Cylinders
Managers shall determine that compressed gas cylinders under their control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance

with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962. Some elements include, but are not limited to:

- Hoses and connections should be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.
- These owned cylinders shall be visually inspected prior to charging, before each use, and at least annually.
- All inspections and testing must be documented.

High Pressure Cylinders are those cylinders marked for service pressures of 900 psi and greater.

- High pressure cylinders shall be taken out of service and submitted for re-qualification testing when any of the following conditions are identified by visual inspection.
- Cuts, dings, gouges, dents bulges, pitting, neck damage or evidence of exposure to fire.
- The cylinders shall be inspected and retested according to the requirements stated in 49 CFR 180.205 and .209.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Low Pressure Cylinders are those cylinders marked for service pressures of less than 900 psi.

- Low pressure cylinders fall into two categories, those requiring requalification and those that do not require re-qualification.
- Low pressure cylinders that do not require re-qualification shall be taken out of service and condemned when any of the following conditions are identified during inspection:
- The tare weight of the cylinder is less than 90% of the stamped-on weight of the cylinder.
- Observed pitting, dents, cuts, bulging, gouges, or evidence of exposure to fire.
- Low pressure cylinders subject to re-qualification shall be taken out of service, inspected and retested when visual inspection identifies any of the following conditions: dents, bulges, pitting or neck damage.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Leaking Cylinders

Leaking cylinders should be moved promptly to an isolated, well-ventilated area, away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier and ask for response instructions.

Transportation

Cylinders must be transported in a vertical secured position using a cylinder basket or cart and must not be rolled. Regulators should be removed, and cylinders capped before movement. Cylinders should not be dropped or permitted to strike violently, and protective caps are not used to lift cylinders.

Empty Cylinder Marking

Cylinders should be marked as "MT" and dated when empty. Never mix gases in a cylinder and only professionals should refill cylinders. Empty cylinders must be handled as carefully as when filled.

Engineering Controls

Engineering controls such as emergency shutoff switches, gas cabinets and flow restrictors should be used wherever possible to control hazards. Emergency eyewash facilities should be present where corrosive gases or materials are used.

Purpose

The purpose of this program is to ensure the safety of all employees and contractors working for Burnt Mountain Services (the Company) and to comply with all regulations and host clients that pertain to confined spaces.

Scope

This program covers all employees and other workers that may be involved in confined space entry. When work is performed on a non-owned or operated site, the operator's program shall take precedence. This document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Acceptable entry conditions - the conditions that must exist in a confined space to allow entry and to ensure that employees involved with a confined space entry can safely enter into and work within the space.

Attendant - an individual stationed outside one or more Confined spaces who monitors the authorized Entrants and who performs all Attendant's duties assigned in the Company Confined Spaces Program. Attendants must have sufficiently completed and fully understand the Confined Space training and is approved by the HSE Manager to work in a confined space as an Attendant.

Authorized Entrant - an individual who is authorized by the Company to enter a confined space. Entrants must have sufficiently completed and fully understand the Confined Space training and is approved by the HSE Manager to work in a confined space as an Authorized Entrant.

Blanking or Blinding - the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Company - Burnt Mountain Services.

Company - a company other than Burnt mountain Services.

Confined Space

- A space that is large enough and so configured that an employee can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- Is not designed for continuous occupancy.

Double block and bleed - the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Emergency - any occurrence (including any failure of hazard control or monitoring equipment) or an event internal or external to the confined space that could endanger Entrants.

Engulfment - the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Entry - the action by which a person passes through an opening into a confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the Entrant's body breaks the plane of an opening into the space.

Entry permit – means the written or printed document that is provided by the Company to allow and control entry into a confined space that contains the information specified in this program.

Entry Supervisor - the person responsible for determining if acceptable entry conditions are present at a confined space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

- Entry Supervisors must have sufficiently completed and fully understand the Confined Space training and is approved by the HSE Manager to work in a confined space.
- An Entry Supervisor also may serve as an Attendant or as an authorized Entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of Entry Supervisor may be passed from one individual to another during the course of an entry operation.
- The Entry Supervisor is responsible for testing and monitoring the atmosphere conditions.

Hazardous atmosphere - an atmosphere that may expose employees to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a confined space), injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL), (0% is normal).
- Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent, (20.9 % is normal).
- Any other atmospheric condition that is immediately dangerous to life or health. (Ex.-H2S 10%, 0% is normal).
- Note: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Hot work permit - the written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

Immediately dangerous to life or health (IDLH) - any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a confined space.

- Note: Some materials -- hydrogen fluoride gas and cadmium vapor, for example -- may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be “immediately dangerous to life or health”.

Inerting - the displacement of the atmosphere in a permit space by a non-combustible gas (such as nitrogen) to such an extent that the resulting atmosphere is non-combustible. This procedure produces an IDLH oxygen deficient atmosphere.

Isolation - the process by which a confined space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line Breaking - the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Non-Permit Confined Space - A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen deficient atmosphere - an atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen enriched atmosphere - an atmosphere containing more than 23.5 percent oxygen by volume.

Permit-Required Confined Space - a confined space that has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing an Entrant.
- Has an internal configuration such that an Entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
- Contains any other recognized serious safety or health hazard.

Permit system - the employer's written procedure for preparing and issuing permits for entry and for returning the confined space to service following termination of entry.

Prohibited condition - any condition in a confined space that is not allowed by the permit during the period when entry is authorized.

Rescue service - the personnel designated to rescue employees from Permit-Required Confined Spaces.

Retrieval system - the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from confined spaces.

Testing - the process by which the hazards that may confront Entrants of a confined space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

Responsibilities

Managers/Supervisor

- Shall ensure that all employees have been trained and fully understand the requirements of this program.
- Shall provide the necessary equipment to comply with these requirements and ensure that all employees are trained in its use.
- Shall ensure that all confined space assessments have been conducted and documented.
- Shall ensure that provisions and procedures are in place for the protection of employees from external hazards including but not limited to pedestrians, vehicles and other barriers and by use of the pre-entry checklist verifying that conditions in the permit space are acceptable for entry during its duration.
- Shall ensure that all Permit-Required Confined Spaces permits are posted.
- Shall ensure an annual review of the program including all entry permits issued that during that annual period.
- Shall ensure that confined spaces are identified properly as either a Non-Permit Confined Space or a Permit-Required Confined Space.
- Shall ensure that all confined spaces that have been identified as “no entry” have signs that state, “DANGER- DO NOT ENTER”.
- Shall ensure signs have been posted at all Permit-Required Confined Space areas that state, “DANGER – PERMIT ENTRY CONFINED SPACE” along with the proper warning word such as “ASPHYXIANT, FLAMMABILITY or TOXIC HAZARD”
- Shall file all permits at the area offices for review. Permits shall be kept on file for one year.

Affected Employee

- Shall attend Confined Space Entry training commensurate with their duties and when duties change as required.
- Shall comply with all aspects of this program.
- Authorized Entrants, Attendants and Entry Supervisors may be any Company employee that is authorized by management to work in a confined space setting and that has been trained and is proficient in the understanding of program requirements.

Authorized Entry Supervisor Duties

- Shall have a tailgate safety meeting, with all workers to be involved in the confined space entry and review the job to be performed and what safety concerns may be present.
- Shall confirm that all isolation, Lock/out and Tag/outs have been completed prior to entry into a confined space.
- Shall ensure that the requirements of this program are followed and maintained.
- Shall test all atmosphere conditions prior to entry and shall complete and maintain the confined space permit form and have it accessible for review on the job site at all times.
- Shall notify the Company supervisor of entry into a confined space and notify the supervisor of any changes that may occur during an entry.
- If the confined space poses a hazard that cannot be eliminated, the Entry Supervisor must arrange for a rescue services.
- If the confined space poses no hazards to the Entrants, the Entry Supervisor can reclassify the confined space to a Non-Permit Confined Space.
- A stand-by rescue team is not required to be on site for Non-Permit Confined Space entries.

Authorized Attendant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants.
- Continuously maintains communication and an accurate count of authorized Entrants in the confined space and ensures that the means used to identify authorized Entrants, and accurately identifies who is in the confined space.
- Remains outside the confined space during entry operations until relieved by another Attendant.
- The Company has procedures to be used by a single attendant monitoring several confined spaces during an emergency. If more than one confined space is to be monitored by a single attendant, the program must include the means and procedures that will be used in order to enable the attendant to respond to emergencies in one or more permit spaces that he/she is monitoring without distraction from all responsibilities. This will include radio communications with emergency responders or other methods of summoning aid, directing entrants to leave the confined spaces, etc. The procedures shall be on the confined space permit.
- Monitors activities inside and outside the confined space to determine if it is safe for Entrants to remain in the space and orders the authorized Entrants to evacuate the confined space immediately under any of the following conditions:
    - If the Attendant detects a prohibited condition;
    - If the Attendant detects the behavioral effects of hazard exposure in an authorized Entrant;
    - If the Attendant detects a situation outside the space that could endanger the authorized Entrants;
    - If the Attendant cannot effectively and safely perform all the duties required.
- Summon rescue and other emergency services as soon as the Attendant determines that authorized Entrants may need assistance to escape from confined space hazards.
- Takes the following actions when unauthorized persons approach or enter a confined space while entry is underway:
    - Warn the unauthorized persons that they must stay away from the confined space;
    - Advise the unauthorized persons to exit the confined space immediately, if they have entered the space;
    - Inform the authorized Entrants and the Entry Supervisor if unauthorized persons have entered the confined space.
- Performs no duties that might interfere with the Attendant's primary duty to monitor and protect the authorized Entrants.
- Authorized Attendants shall not monitor more than one confined space at a time.

Authorized Entrant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- Uses appropriate personal protective equipment properly, e.g., face and eye protection, and other forms of barrier protection such as gloves aprons, coveralls, and breathing equipment;
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants;
- Shall witness and verify calibrated air monitoring data and if approved, sign off, before entry is made.
- Is entitled to request additional monitoring at any time.
- Maintain communication with the Attendants to enable the Attendant to monitor the Entrants status as well as to alert the Entrant to evacuate if needed; and

- Exit from confined spaces as soon as possible when ordered by an Attendant or Entry Supervisor, when the Entrant recognizes the warning signs or symptoms of an exposure exists, or when a prohibited condition exists, or when an alarm is activated.

Procedure

Non-Permit Confined Space Entry

If testing of the confined space atmosphere is within acceptable limits without the use of forced air ventilation and the space is properly isolated, the space can be entered by following the requirements for Level I confined space entry.

- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Entrants shall review and sign the confined space permit.

Employees may enter and work in the confined space as long as LEL, O2, and toxicity hazards remain at safe levels.

- Complete the Company Confined Space Entry Permit to document that there are no confined space hazards. Make this certification available to all personnel entering the space.
- A trained Attendant must always be outside the confined space. The Attendant must monitor the authorized Entrants for the duration of the entry operation.

Exception: The Attendant requirements for Level I confined space entry may be exempted, if the job assessment is performed and has determined that there are no inherent dangers to allow single person entry.

- This provision is intended to permit field operations to enter crankcases, shallow valve boxes, cellars, excavations, etc. without an Attendant being present and all other aspects of the entry permit complied with.
- When there are changes in the use and configuration of a confined space that might increase the hazards to the Entrants (e.g., using epoxy coating on a tank floor, welding, painting, etc.), re-evaluate the space. If necessary, reclassify the space as a Permit-Required Confined Space.
- Continuously monitor the confined space atmosphere to ensure that it is still safe.
- The space must not contain a hazardous atmosphere while personnel are inside.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
- Re-evaluate the space to determine how the hazardous atmosphere developed.
- The Entry Supervisor shall cancel the entry permit.
- Take action to protect personnel before any subsequent activity to re-enter the space takes place.
- Reissue the Company Confined Space Entry Permit before allowing Entrants to re-enter the space.
- If necessary, reclassify the space as a Permit-Required Confined Space.
- Ensure that vehicle or other equipment exhaust does not enter the space.

Permit-Required Confined Space Entry

If the space is properly isolated and results of air monitoring are above acceptable parameters without local exhaust ventilation in operation, classify the entry as a Permit-Required Confined Space.

- Complete the Company Confined Space Entry Permit before proceeding with work in a Permit-Required Confined Space.
- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.

- Entrants shall review and sign the confined space permit.
- At least one trained Attendant must always be outside the Permit-Required Confined Space.
- The Attendant must monitor the authorized Entrants for the duration of the entry operation.
- Only authorized Entrants may enter a Permit-Required Confined Space.
- All Entrants must sign in and out on the entry permit when entering and leaving a Permit-Required Confined Space.
- The back of the permit or a sign-in sheet must be used for this purpose.
- Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited.
- Conditions must be continuously monitored where Entrants are working to determine that acceptable conditions are maintained during entry.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
    - The Entry Supervisor shall cancel the entry permit.
    - Re-evaluate the space to determine how the hazardous atmosphere developed.
    - Take action to protect personnel before any subsequent activity to re-enter the space takes place.
    - Re-issue the Company Confined Space Entry Permit before allowing Entrants to re-enter the space.
    - Employees or their representatives are entitled to request additional monitoring at any time.
- The permit must be terminated when the entry operations are complete or when permit conditions change (i.e., hazardous air monitoring results are noted, unsafe behaviors are observed, etc.).
- The minimum rescue equipment required for Permit-Required Confined Space entry is covered in the Rescue & Emergency section of this program.
- Permit-Required Confined Space entry operations will be reviewed when the Company believes that the requirements of this confined space program may not adequately protect personnel.
- If deficiencies are found in the program, the program will be revised, and personnel will be trained in the new revisions before subsequent entries are authorized.

Pre-Job Planning and Space Preparation

The Entry Supervisor must determine that the confined space is properly isolated by blinding, disconnecting, and/or by following local Lockout/Tagout procedures.

The Entry Supervisor must discuss with all Entrants the hazards of the space, communication methods and emergency procedures during the confined space entry.

Eliminate any condition making it unsafe to open the equipment to atmosphere.

Promptly guard the opening to prevent an accidental fall through the opening and to protect each employee working in the space from foreign objects entering the space.

If applicable, wash, steam, ventilate or degas the confined space to properly free it of possible contaminants. Vent vapors to a safe location.

Do not allow unauthorized personnel to enter a confined space. Barricade and/or guard all confined spaces to prevent entry of unauthorized Entrants.

If performing hot work in the confined space, precautions must be taken consistent with the Company Hot Work Permit procedure.

Ensure that vehicle or other equipment exhaust does not enter the space.

Pre-Entry Safety Meeting
The Entry Supervisor must declare when the confined space is ready for entry.

The Entry Supervisor shall hold a pre-entry safety meeting to discuss all requirements and procedures with all authorized Entrant(s) and Attendant(s) involved with the entry. He/she will discuss other concerns such as previous contents, vessel coating, PPE required etc., during this meeting.

The Entry Supervisor must coordinate entry operations when employees of more than one company are working simultaneously in the confined space. This coordination is necessary so that one company's work does not endanger the employees of another company.

Equipment
Check all work equipment to ensure that it has the proper safety features and is approved for the locations where it will be used. The Entry Supervisor shall ensure that all equipment is properly maintained in a safe condition and that Entrants use the equipment properly.

The following equipment must be considered and may be required when entering a confined space:

- Atmospheric Testing and Monitoring Equipment.
- Barriers, Shields, and Signs – Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited. Any signs used must state "Danger – Permit Entry Confined Space" along with the proper warning word such as "Asphyxiant, Flammability or Toxic Hazard". All barricades must be capable of preventing a person from inadvertently walking into or kicking an object into the space.
- Communications Equipment – Only use intrinsically safe equipment in areas where a hazardous atmosphere may exist. Use a communication system that will keep the Attendant in constant, direct communication with the Entrant(s) working in the confined space. Also, use a communication system that allows the Attendant to summon help from rescue or emergency services.
- Entry and Exit Equipment – (For example: ladders may be needed for safe entry and exit).
- Lighting Equipment – Needed for safe entry, work within the space and exit. Lighting equipment used in the confined space must be certified safe for the location.
- Portable electric lighting used in wet and/or other conductive locations (drums, tanks, vessels) must be operated at 12 volts or less. 120-volt lights may be used if protected by a ground-fault circuit interrupter.
- Personal Protective Equipment – Ensure that personnel wear the required personal protective equipment. For respiratory protection requirements, refer to the Respiratory Protection Program.
- Rescue and Emergency Equipment – Except if provided by outside rescue services.
- The Attendants must also have an approved first aid kit.
- Vacuum Trucks – When used, trucks must be properly grounded or bonded to prevent static sparks.
- Ventilating Equipment – Local exhaust air movers used to obtain acceptable atmospheric entry conditions (e.g., Copus air movers).
- Other – Any other equipment necessary for safe entry into and rescue from permit required confined spaces.

Air Monitoring

- Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Monitoring of the space must inform the entrants of the potential hazards and results and they must participate in the permit review and signing.
- The air shall be periodically test while continuous ventilation is applied.
- Any employee who enters the space, or that employee's authorized representative, shall be provided an opportunity to observe the pre-entry testing required by this paragraph.
- Employees or their representatives are entitled to request additional air monitoring at any time.

Ventilation

Continuous forced air ventilation must be used and tested as follows:

- An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;
- The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space;
- The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.
- The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee who enters the space, or that employee's authorized representative, shall be provided with an opportunity to observe the periodic testing and may request additional monitoring at any time.
- If a hazardous atmosphere is detected during entry each employee shall leave the space immediately and the space shall be evaluated to determine how the hazardous atmosphere developed; and measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

Multiple Employer Procedure

In order not to endanger the employees of any other employer, the Entry Supervisor shall:

- Verify that all contractor employees have been trained in confined space and that all contractor employees fully understand the Company procedures pertaining to Confined Space.
- Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section.
- Apprise the contractor of the elements, including the hazards identified and the employees experience with the space, that make the space in question a permit space.
- Inform the contractor of any precautions or procedures that the Company has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.
- Coordinate entry operations with the contractor, when both Company personnel and contractor personnel are working in or near confined spaces.
- Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in confined spaces during entry operations.
- In addition to complying with the confined space requirements that apply to all employees; each contractor, who is retained to perform permit space entry operations, shall:
    - Obtain any available information regarding confined space hazards and entry operations from the Company Entry Supervisor.

- Coordinate entry operations with the Company Entry Supervisor, when both Company personnel and contractor personnel are working in or near permit spaces.
- Inform the Company of the confined space program that the contractor will follow and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation.

Rescue and Emergency Services

General

Rescue services must be on-site for immediately dangerous to life and health (IDLH) conditions while work is being performed. Rescue services must be either:

- Provided by the host facility,
- Provided by an outside service which is given an opportunity to examine the entry site, practice rescue and decline as appropriate, or
- Provided by Company by selecting a rescue team that is equipped and trained to perform the needed rescue services.
- The Attendant shall order the other Entrants not to move the injured nor allow untrained or unauthorized workers into the space that are not trained to handle a confined space rescue.
- Safety Data Sheet's for substances that an injured Entrant was exposed to must be provided to the medical facility treating the injured worker.

Permit-Required Confined Space Rescue:

- When the Attendant becomes aware of the need for rescue, the Attendant shall immediately summon the onsite rescue team by the agreed upon communication method, verbally, radio or cell phone, without leaving the vicinity of the confined space.
- The Attendant shall prevent unauthorized personnel from attempting a rescue.
- After the rescue team has been notified, the Attendant shall alert the Entry Supervisor of the emergency via the same communication methods.
- The preferred means of providing rescue service is through the use of a qualified outside rescue service vendor (client host). The outside rescue service vendor must be:
    - Informed of the hazards that they may confront during a rescue;
    - Provided access to the Permit-Required Confined Space to examine the entry site, practice rescue, and decline as appropriate.
    - Access to the space allows the rescue service and local supervision to jointly develop appropriate rescue plans.
    - If the host operator is designated to provide rescue services for the Company, the agreement of services must be included in the contract for the job.
- If Company employees are to perform Permit-Required Confined Space rescues, they must be:
    - Provided and trained in the use of the proper personal protective equipment necessary to make the rescue;
    - Provided PPE at no cost.
    - Trained to perform the assigned duties;
    - Required to practice making rescues at least once every 12 months;
    - Trained in basic first aid and CPR.

- A minimum of one member of the rescue team must hold a current certification in first aid and CPR.

Non-entry Rescue

- To facilitate non-entry rescue, an Entrant must be attached to a retrieval system whenever he/she enters a Permit-Required Confined Space with a vertical depth of more than 5 feet.
- The retrieval equipment is not required if it will increase the overall risk of the entry, e.g., creating an entanglement hazard, or will not contribute to the rescue of the Entrant.
- Each Entrant shall use a full body harness equipped with a "D" ring located between the shoulders or above the head.
- Wristlets may be used instead of the full body harness, if the use of the full body harness is not feasible or creates a greater hazard *and* that using wristlets is the safest and most effective alternative.
- The retrieval line must be attached to the "D" ring and the other end of the retrieval line attached to a retrieval device or fixed point located outside the space so that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

Issuance/Reviewing of Permit

Only when all pre-entry requirements are satisfied, the Entry Supervisor shall issue a completed and signed confined space permit. The confined space permit is valid for one shift.

In the event of any unauthorized entry, employee complaints, a hazard not covered by the permit, the occurrence of an injury or near miss the entry permit shall be cancelled and a review shall be conducted to provide employee protection and for revising the program prior to authorizing subsequent entries.

An annual review of this program, using the cancelled permits retained within 1 year after each entry shall be conducted by the HSE Manager to revise the program as necessary, to ensure that employees are protected. If no confined space entries were performed during a 12-month period, no review is necessary.

Termination and Closing or Cancelling of Permits

The Entry Supervisor shall terminate the confined space permit, at the end of the job operation, at the end of the shift or when the Entry Supervisor or Attendant determine that conditions in or near the confined space have changed and is hazardous to the Entrants.

The Entry Supervisor shall, at the conclusion of entry operation, close out the permit.

Training

Training shall be provided so that all employees whose work is regulated by this program acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them.

Training shall be provided to each affected employee, before the employee is first assigned duties under this program, if a new hazard has been created or special deviations have occurred and before there is a change in assigned duties.

The employee shall be retrained:

- Whenever there is a change in confined space operations that presents a hazard about which an employee has not previously been trained.

- Whenever the supervisor has reason to believe either that there are deviations from the permit space entry procedures required by this section or that there are inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required by this program and shall introduce new or revised procedures, as necessary.

The supervisor shall certify that the training required by this program has been accomplished.

- The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training.
- The certification shall be available for inspection by employees, their authorized representatives, management, clients and the safety department.

Confined Space Entry Permit

The Confined Space Entry Permit can be found at the Company safety support center in the Permits tab located at www.bms.support.

Purpose

The purpose of this program is to ensure that we verify our subcontractor's competencies, establish oversight methods and monitoring of their work in order to ensure safe and environmentally compliant work is performed at all times.

Scope

This program applies to all Burnt Mountain Services (the Company) locations that use subcontractors.

General Requirements

The use of subcontractors must be pre-approved by the Company in accordance with our Subcontractor Management Plan and this program. Subcontractors will be pre-qualified by reviewing their safety programs, safety training documents and safety statistics.

Subcontractor Relations Requirements

Competency Requirements

Subcontractors must be competent and capable of performing their assigned duties in a safe and environmentally sound manner. A verification process must be conducted to ensure that on-site subcontractors are competent and capable of performing their assigned duties in a safe and environmentally sound manner. The Company manager hiring any subcontractor is accountable for verifying the written preapproval of the subcontractor per the Subcontractor Management Plan prior to any work being performed by the subcontractor. This includes a review of the subcontractor's safety history, safety program, insurance, etc.

Subcontractors must have the appropriate licenses, registrations, and insurance to complete their work. A verification process must be completed to ensure that on-site subcontractors have the appropriate licenses, registrations, and insurance to complete their work. The scope of work for the subcontractor will include a list of documentation required to meet regulatory and client requirements appropriate to the subcontracted work. The Company manager hiring any subcontractor is accountable for obtaining, verifying, and keeping copies of all required and appropriate documentation prior to any work being allowed to start by the subcontractor.

Communications Requirements

Prior to the start of work, the Company and any subcontractor will establish clear lines of communication that includes an effective reporting relationship. The aim of this process is to improve HSE performance by facilitating the interface of Company activities with those of the client, other contractors, and subcontractors. Pre-work or project kickoff meetings shall be held before work starts and be documented to ensure the subcontractor is completely aware of the reporting and communications requirements between the Company, its client, and the subcontractor.

Prior to the start of work the Company and any subcontractor must and will define clear roles and responsibilities. Aligning the various interests and areas of responsibility requires good working relationships between the client, contractors, and subcontractors. This is particularly true if the subcontractor activities are difficult to monitor (e.g.

distributed work groups, remote locations, transportation). The roles and responsibilities of the Company, its client and the subcontractor will be included and documented in the pre-work meeting held prior to work starting.

Emergency Planning

Prior to the start of work, the Company, and any subcontractor will establish an emergency action plan. Prior to the start of work, the Company, and any subcontractor will communicate the emergency response procedures and capabilities. The Company should contact all subcontractors to ensure their roles in emergency response plans are known. Subcontractors must follow emergency planning requirements for any Company client location.

Oversight

An appropriate level of oversight and monitoring must and will be put in place to verify subcontractor performance for the life of the contract. The Company should periodically review the HSE performance of all subcontractors and verify compliance with regulatory and work-specific requirements, safety key performance indicators and other agreed upon requirements.

The Company and each subcontractor shall meet no less than every 3 months and at the end of the project to formally evaluate the subcontractor's regulatory and work-specific compliance and performance. The meeting shall be documented and if the client wishes to attend an invitation will be sent to the appropriate client representative.

In addition, subcontractors are required to follow or implement the work practices and systems described below while performing work at the Company or client worksites:

- Attend all safety orientations, included in any pre-job meeting or kick-off meeting provided by the Company or client prior to any work beginning.
- Monitor its employees for substance abuse and report nonconformities to the Company.
- Be included in Company tailgate safety meetings, job safety analysis or hazard assessments and on-the-job safety inspections.
- Perform a pre-job safety inspection that includes equipment.
- Report all injuries, spills, property damage incidents and near misses.
- Comply with Company and client safety and environment rules, policies, guidelines, or procedures.
- Implement Company safety practices and processes as applicable.
- Clean up and restore the worksite after the job is over.
- Ensure compliance with regulations at all times.

Purpose

The purpose of this program is to outline the procedures for safe operations and the training requirements regarding crane and lifting devices.

Scope

This program applies to all Burnt Mountain Services (the Company) employees who operate overhead cranes, hoists, and rigging equipment in the scope of their job duties and assignments. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers and Supervisors

- For ensuring only trained personnel operate the equipment.
- Establish and maintain a daily, monthly, and annual inspection program.
- Establish a recordkeeping log for safety checks, maintenance, and repairs.
- Are responsible to ensure that employees and contractors are trained and qualified on the proper operations and have been trained in rigging safety by a competent person. Modifications or additions which affect the safe operation of the equipment may only be made with the manufacturer's written approval.
- Are responsible to see that all provisions of this program are followed and that rigging inspections are performed, and the equipment is in safe operating condition.

Employees

- Personnel are responsible for visually checking the equipment they are using and reporting any observable wear, needed repairs or damage to their supervisor. They shall also report all equipment malfunctions immediately.
- Employees are responsible for following the requirements of this program.

Procedure

Operating controls shall be plainly marked to indicate the direction of travel.

All manufacturer procedures applicable to the operational function of equipment must be complied with. All manufacturer procedures applicable to the operational functions of equipment, including its use with attachments, must be complied with.

Procedures applicable to the operation of the equipment be readily available in the cab at all times. The operator shall have access to procedures applicable to the operation of the equipment. Procedures include rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions, and operator's manual.

Operator Qualification

Operators must be determined to be qualified before they are permitted to operate any crane. Only those employees qualified by training or experience shall be allowed to operate equipment and machinery. As of November 10th, 2017, employers must ensure operators are qualified/certified by one of the following methods:

- Certification by an accredited crane operator testing organization
- Qualification by an audited employer program
- Qualification by the U.S. military
- Licensing by a government entity

Load Chart

Each hoist shall have a legible load chart showing the rated capacity in all permitted working positions and configurations of use, manufactures name, model, serial number and year of manufacture or shipment date permanently marked or noted clearly, permanently posted on the equipment, weatherproofed and conspicuous on the equipment and shall be kept legible at all times. The load chart will be issued to the equipment operator, who must have it available at all times when operating the equipment.

Modifying Equipment

Modifications or additions that may affect the capacity or safe operation of the equipment must not be made without written approval from the manufacturer or approval from a registered professional engineer. The manufacturer must approve all modifications/additions in writing. A registered professional engineer must be qualified with respect to the equipment involved and must ensure the original safety factor of the equipment is not reduced.

Prior to Lifting

Cranes must not be used unless ground conditions are able to support the equipment and any supporting materials per the manufacturer's specifications. Equipment must not be assembled or used unless ground conditions are firm, drained, and graded to a sufficient extent so that, in conjunction (if necessary) with the use of supporting materials, the equipment manufacturer’s specifications for adequate support and degree of level of the equipment are met.

All loads shall be hooked or slung under the direction of a competent employee.

Prior to operating any equipment, the operator must be familiar with all recent entries in its logbook.

The operator must carry proof of training.

Before the start of each shift or use an operator uses a crane or hoist, the operator must inspect the crane or hoist was inspected for that work shift, and the control and safety devices were tested for that work shift to detect any defect, malfunction, or hazardous condition. All safety devices must be in proper working order before operation begins. Safety devices are required to be on all equipment and must be in proper working order before operations begin. If any of the devices are not in proper working order the equipment must be taken out of service and operations must not resume until the device is working properly again. Examples of safety devices may include crane level indicator, boom stops, jib stops, foot pedal brake locks, horns, etc.

A fire extinguisher must be immediately available in the cab of each crane or other hoisting equipment.

The operator has the authority to stop and refuse to handle loads whenever there is a safety concern. Whenever there is a safety concern, the operator must have the authority to stop and refuse to handle loads until a qualified person has determined that safety has been assured.

When the operator of a crane or hoist does not have a clear and unobstructed view of the boom, jib, load line, load hook and load throughout the whole range of the hoisting operation, the operator must act only on the directions of a qualified, designated signaler who has a clear view of the things the operator cannot see. The operator of the crane or hoist must stop the operation of the equipment on receiving a stop signal from any person.

Operators of hoisting equipment shall disregard signals from anyone except designated signal persons but in an emergency other employees may give a stop signal.

Where the design of a crane is such that the boom may fall over backward, positive boom stops shall be installed in accordance with the manufacturer's instructions.

No employee shall ride or be permitted to ride on loads, hooks or similar equipment unless specifically authorized by his or her supervisor.

Marking Boundaries

The Company must address safety measures to be used when the equipment has the potential to strike and injure an employee or pinch/crush an employee against any other object. The Company identifies hazard areas by marking the boundaries of the crane swing radius with warning lines, railings, or similar barriers. Employees or other persons are not allowed within the barrier when operations are taking place. The crane will immediately be required to stop movement if someone enters the swing radius area.

Overhead Power Lines

A pre-operation hazard assessment will be performed to identify the work zone and determine if any part of the equipment could reach closer than 20 feet to a power line. The work zone shall be identified by demarcating boundaries with devices such as flag and/or range limiting devices or defining the work zone as 360 degrees around the equipment up to the maximum working radius. The hazard assessment must determine if any part of the equipment could get closer than 20 feet to a power line.

The Company will ensure measures must be taken if determined that any part of the equipment, load line or load could get closer than 20 feet to a power line. If it is determined that any part of the equipment, load line or load could get closer than 20 feet to a power line then at least one of the following measures must be taken:

- Ensure the power lines have been deenergized and visibly grounded.
- Ensure no part of the equipment, load line or load gets closer than 20 feet to the power line.
- Determine the line's voltage and minimum approach distance permitted in Table A below.

TABLE A—MINIMUM CLEARANCE DISTANCES

Voltage (nominal, kV, alternating current)	**Minimum Clearance Distance** (feet)
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1,000	45
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

Note: The value that follows "to" is up to and includes that value. For example, over 50 to 200 means up to and including 200kV.

Assembling/Disassembling Equipment

The manufacturer instructions and prohibitions must be followed when assembling and/or disassembling equipment. The manufacturer's procedures and prohibitions must be complied with when assembling and disassembling equipment.

A competent and qualified person must direct the assembly/disassembly of equipment. The Company will ensure the assembly/disassembly of equipment must be directed by a competent and qualified person.

Handling the Load

Size of Load

The rated capacity of a crane or hoist must not be exceeded, except for rated load test. The working load shall not be exceeded and shall be determined by the original manufacturer of the equipment, a registered professional engineer, or other persons whose qualifications are acceptable to local regulatory requirements.

Attaching the Load

- The load shall be attached to the hook by means of slings or other suitable and effective means which shall be properly rigged to ensure the safe handling of the load.
- Chain and rope slings shall be free of kinks or twists before use.
- Baskets, tubs, skips or similar containers used for hoisting bulk materials shall be loaded so as not to exceed their safe carrying capacity.
- The hoist rope shall not be wrapped around the load.
- The load shall not be moved without checking the balance and the brakes. Brakes are checked by raising the load a few inches and applying the brakes.

Load Lifting Manual

Safe lifting procedures can be found in the Lifting Handbook located in the operations office as designated for each work site by the Manager.

Safe Lifting

- If the operator of a lifting device has any doubts as to the safety of employees in the vicinity of the lift, the operator must not move any equipment or load until the operator is assured that the working conditions are safe. He or she shall report the circumstances to his or her supervisor who then shall be responsible for determining the action to be taken.
- Loads will be carried as close to the grade as possible and tag lines shall be rigged as necessary to control swinging of the load.
- Prior to moving a load ensure that the travel path of the load is free and clear of any undesirable obstructions.
- A suspended load shall not be left unattended by an employee.
- Ensure all employees who may be affected by the lift are aware of the hazards and are adequately protected.
- The Company must ensure that work is arranged, if it is reasonably practicable, so that a load does not pass over employees. An operator of a lifting device must not pass the load on the device over employees unless no other practical alternative exists in the circumstances and the employees are effectively warned of the danger by an audible alarm or other effective means. The operator of a lifting device that is travelling with a load must ensure that the load is positioned as close to the ground or grade as possible.
- A person working at a workplace must not stand or pass beneath a suspended load unless the employee has been effectively warned of the danger and the operator of the lifting device knows the employee is under the suspended load.
- Release the load only after the stability of the load has been verified and loads shall be safely landed and supported before unhooking.

If a hoist or crane is designed to be operated with outriggers or other stabilizing devices The Company shall ensure:

- The outriggers or other stabilizing devices are used in accordance with manufacturer's instructions.
- Are set on a solid footing or pad.
- Have their controls if any readily accessible to the operator and in a suitable position for safe operation.
- The area around the outriggers or other stabilizing devices is kept free of obstruction.
- There is a proper minimum clearance between any moving part of the crane and any obstacle near the base of the hoist or crane.
- Where there is a danger of an employee being trapped or crushed by any moving part of the crane when the crane swings, the area around the base of the crane is barricaded to restrict the entry of employees.

Logbook Procedure

The logbook will be readily available at all times to the operator and to another employee concerned with the maintenance and safe operation of the equipment. The operator shall be responsible for recording defects, operating difficulties, the need for maintenance and all maintenance and alteration work performed. If the customer requests, they shall be given a copy of the logbook.

The logbook for the equipment at a project shall include the greater of the immediately preceding twelve months or the period the crane or similar hoisting device is on the project.

When not being operated the logbook will be located in the operations office as designated for each work site by the Manager.

All logbook entries shall, on a regular basis, be signed by the person who performs the inspection, maintenance or calibration and review.

The logbook will include the following information:

- The date and time any work was performed on the hoist.
- Length of time in lifting service including hours of service.
- All defects and deficiencies and when they were detected.
- Details on all inspections, examinations, calibrations, checks and tests.
- Repairs or modifications performed or maintenance history.
- The record of certification.
- Details on any incident that may affect the safe operation of the equipment.

Inspections

Each crane and hoist must be inspected and maintained at a frequency and to the extent required to ensure that every component is capable of carrying out its original design function with an adequate margin of safety and is maintained in good working order. Inspections shall also be conducted at regular intervals as recommended by the manufacturer and by law.

Records of inspection and maintenance must be kept by the equipment operator and other persons inspecting and maintaining the equipment, for the following types of lifting equipment:

- A crane or hoist with a rated capacity of 900kg (2200 lbs.) or more
- A crane or hoist used to support an employee
- A tower crane
- A mobile crane, boom truck or sign truck
- A side boom tractor or pipe layer
- A construction material hoist
- A chimney hoist

The following inspections shall occur at the indicated frequency:

New Equipment

Before being placed in service, new hoisting equipment, or hoisting equipment which has had modifications in the design or has undergone major repairs, shall be inspected and proof tested under the direction of a competent person who shall give the written warranty of the safe capacity of the equipment.

Daily

A visual inspection of the equipment will be conducted by a competent person prior to each shift. A competent person must conduct a visual inspection of equipment prior to each shift. The inspection must consist of observation for apparent deficiencies. Some inspection items shall include control mechanisms, pressurized lines, hooks and latches, wire rope, electrical apparatus, tires (when used), and ground conditions. The manufacturer's guidelines shall be followed.

The following will be tested at the beginning of each shift by the competent operator:

- Limit switches
- Brakes
- Circuit breakers
- Other safety devices

Any defects found during inspection or use of a crane or hoist must be recorded in the inspection and maintenance record system and be reported immediately to the supervisor, who must determine the course of action to be taken. If a defect affects the safe operation of the crane or hoist, the equipment must not be used until the defect has been remedied.

Monthly

The Company will ensure monthly inspections of equipment by a competent person are documented. Equipment must be inspected monthly by a competent person. The manufacturer's guidelines shall be followed. The inspection must be documented. Documentation must include the following:

- items checked,
- results of inspection,
- name and signature of the inspector.

Documentation must be retained for 3 months. (Documented monthly inspection is not required if the daily inspection is documented and records are retained for 3 months).

Any defects must be corrected before the crane is used. The report must be dated and signed by the person performing the inspection.

Yearly

Once each year a more detailed inspection must be made of all hoisting equipment at each facility. After completing the annual inspection, a report must be completed and signed by the person performing the inspection and the report will be returned promptly to the Safety Manager.

Rigging

All rigging work shall be assembled, used, maintained, and dismantled under the direct supervision of a competent and qualified employees trained in safe rigging practices, in accordance with manufacturer's specifications and with the code of signals authorized by local regulatory guidelines for controlling hoisting operations.

Rigging Breaking Strength and Load Rating

The safe working-load on ropes, chains, slings, and fittings shall not exceed the safe working-load recommended by the manufacturer.

Rigging fittings must be marked with the manufacturer's identification, product identifier and the working load limit (WLL) or sufficient information to readily determine the WLL. The WLL of existing fittings not identified must be determined by a qualified person, marked on the fitting and such fittings must be removed from service by January 1, 2001.

Rigging shall not be subjected to a load of more than 10 percent of the breaking strength of the weakest part of the rigging, if an employee is being raised or lowered 20 percent of the ultimate breaking strength of the weakest

part of the rigging, and if the rigging is fatigue rated and an employee is not being raised or lowered the maximum load must not exceed 25 percent of the ultimate breaking strength.

The Company may use a dedicated rigging assembly designed and certified for a particular lift or project by a professional engineer, but the dedicated rigging assembly must be re-rated before it is used for another lift or project.

The maximum load rating of the rigging, as determined by the rigging manufacturer or a professional engineer must be legibly and conspicuously marked on the rigging. If it is not practicable to mark the rigging the maximum load rating of the rigging must be available to the employees at the work site.

Rigging Inspection and Rejection Criteria

All Company rigging equipment to be used during a work shift is to be inspected thoroughly prior to each period of continuous use to ensure the rigging is functional and safe. All deteriorated or defective equipment will be immediately removed from service if it doesn't meet the below inspection requirements or rejection criteria.

Slings

- A wire rope sling with a swaged or poured socket or a pressed fitting must be permanently identified with its working load limit, the angle upon which the WLL is based and the name or mark of the sling manufacturer.
- An alloy steel chain sling must be permanently identified with the size, the manufacturer's grade and the WLL, the length and number of legs, and the name or mark of the sling manufacturer.
- Synthetic fiber web slings must be permanently identified with the manufacturer's name or mark, manufacturer's code or stock number, working load limits for the types of hitches permitted, and type of synthetic web material or be removed from service if any of these requirements are not met.
- A sling shall be permanently removed from service if it is damaged or worn.
- All slings are to be clearly labeled to indicate the slings maximum load or the slings maximum load is made readily available to employees.
- A sling must be stored to prevent damage when not in use.
- When a sling is applied to a sharp edge of a load, the edge or the sling must be protected to prevent damage to the sling.

Hooks

- A worn or damaged hook must be permanently removed from service and the Company shall not require or permit an employee to use a hook that is worn, damaged, deformed, cracked or otherwise defective or where the throat opening has been increased or the tip has been bent more than 10% out of plane from the hook body, or any dimension of the hook has been decreased by 10% or any damage exceeds any criteria specified by the manufacturer.
- All hooks shall be clearly labeled with the maximum load of the hook in a location where an employee using the hook can easily see the rating or the hook's maximum load is made readily available to employees.
- A hook will have a safety latch, mousing, or shackle if the hook could cause injury if it is dislodged while in use.

All devices shall be visually inspected prior to use and removed from service for any of the following conditions:

- Nylon slings with:
  - Abnormal wear.
  - Torn stitching.
  - Broken or cut fibers.
  - Discoloration or deterioration.

- Wire rope slings with:
  - Kinking, crushing, bird caging, or other distortions.
  - Evidence of heat damage.
  - Cracks, deformation, or worn end attachments.
  - Hooks opened more than 10% at the throat.
  - Hooks twisted sideways more than 10 degrees from the plane of the unbent hook.

- Alloy steel chain slings with:
  - Cracked, bent, or elongated links or components.
  - Cracked hooks.
  - Shackles, eye bolts, turnbuckles, or other components that are damaged or deformed.

Operational Procedures

- Rigging shall not be subjected to loads more than outlined in legislative requirements. The Company will ensure the maximum load rating of the rigging is available to the employees at the work site.
- Wire rope, alloy steel chain, synthetic fiber rope, metal mesh slings, and synthetic fiber slings shall meet the requirements of ASME Standard B30.9-2006, Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks and Slings (or current version). Below-the-hook lifting devices, other than slings shall meet the requirements of ASME Standard B30.20-2006, Below the Hook Lifting Devices (or current version).
- Loads to be unhooked by an employee must be safely landed and supported before the rigging is detached.
- The determination of the working load limit (WLL) of a sling assembly must ensure that the WLL of any individual component of the assembly is not exceeded.
- All slings used to hoist a load and the slings fittings and attachments must be in compliance with legislated standards and capable of supporting at least 10 times the load to which the slings fittings, and attachments may be subjected where they are used to support an employee, and at least five times the maximum load to which they may be subjected in any other case.
- No shackles shall be subjected to a load greater than the maximum load indicated on the shackle, and all shackle pins are installed to prevent accidental withdrawal, and a bolt is never used in the place of a properly fitted shackle pin.
- All hooks shall have a safety latch, mousing, or shackle if the hook could cause injury if it is dislodged while in use.
- Where an employee may be endangered by the rotation or motion of a load during hoisting one or more tag lines must be used to control the rotation or motion of the load and the tag lines will be of sufficient length to protect the employees from any overhead hazard and the tag lines are not removed from the load until the load is securely landed.

Rigging a Load

- Determine the weight of the load - do not guess.
- Determine the proper size for slings and components.
- Do not use manila rope for rigging.
- Ensure that shackle pins and shouldered eyebolts are installed in accordance with the manufacturer's recommendations.
- Ensure that ordinary (shoulderless) eyebolts are threaded to at least 1.5 times the bolt diameter.
- Use safety hoist rings (swivel eyes) as a preferred substitute for eye bolts wherever possible.
- Pad sharp edges to protect slings.
- Remember that machinery foundations or angle-iron edges may not feel sharp to the touch but could cut into rigging when under several tons of load.
- Wood, tire rubber, or other pliable materials may be suitable for padding.
- Do not use slings, eyebolts, shackles, or hooks that have been cut, welded, or brazed.
- Install wire-rope clips with the base only on the live end and the U-bolt only on the dead end.
- Follow the manufacturer's recommendations for the spacing for each specific wire size.
- Determine the center of gravity and balance the load before moving it.
- Initially lift the load only a few inches to test the rigging and balance.

Signaling

A signal person must be provided if the operator's view is obstructed, if site specific safety concerns require it, or if the operator determines that it is necessary. A signal person must be provided for the following situations:

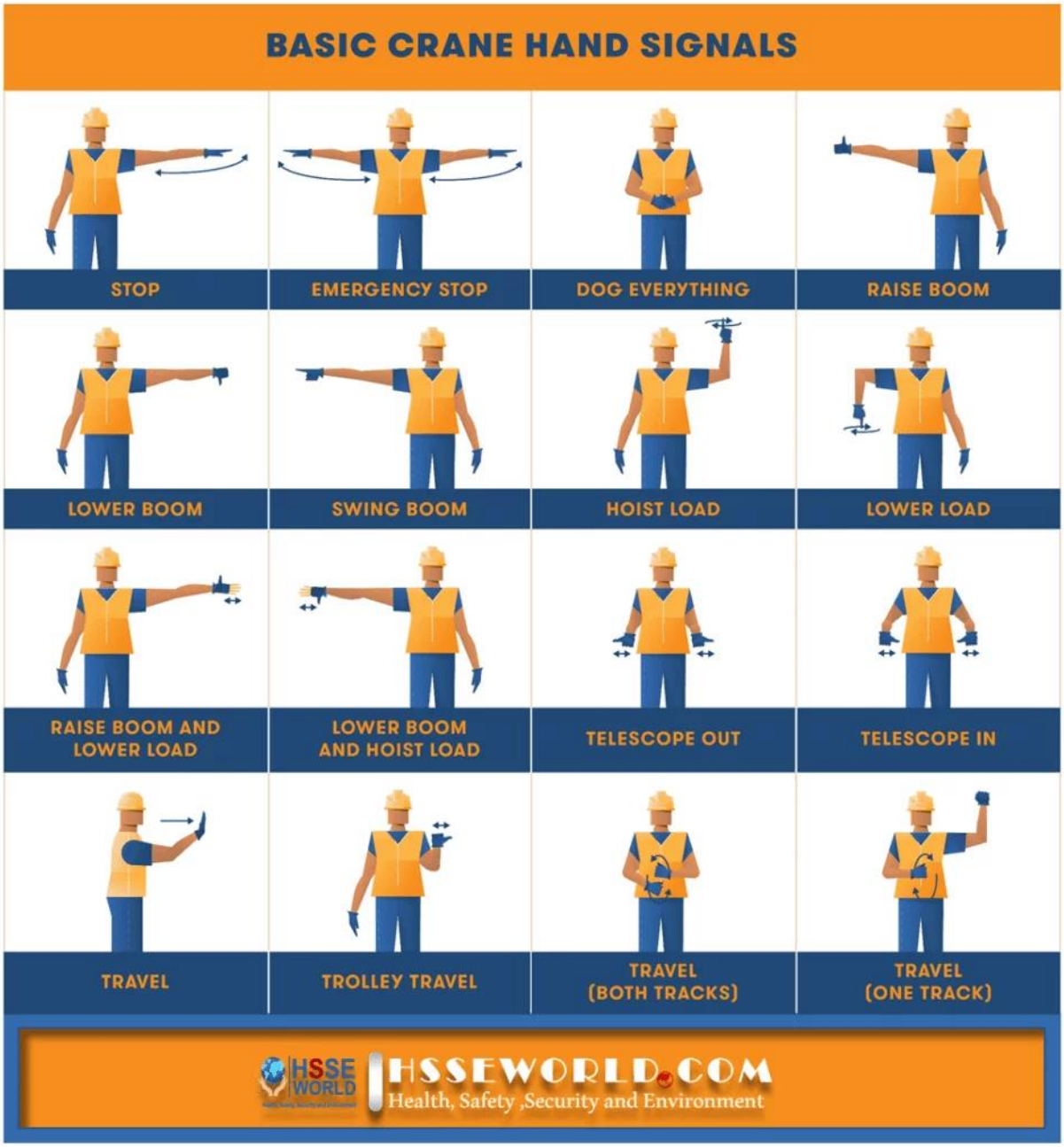
- The point of operation is not in full view of the operator,
- The view is obstructed when the equipment is traveling, or
- The operator or the person handling the load determines it is necessary due to site specific concerns.

Signals to the operator shall be in accordance with the standard hand. Specific requirements include:

- Each movement of equipment shall be proceeded by distinctive signals clearly discernible to all employees endangered by the movement and clearly distinguishable by the operator of the equipment controlled, and a signal which is not understood clearly by the operator of equipment shall be acted upon by him or her as though it were a stop signal.
- An employee shall not cause a signal to be given for the movement of equipment unless he or she has ensured that he or she and all employees within the area for which he or she is responsible are not endangered by the movement.
- Only a designated employee shall cause a signal to be given for the movement of equipment, but employees may cause a stop signal to be given and this signal shall be obeyed promptly and without question.
- An employee designated to direct the movement of equipment shall not be otherwise occupied while the equipment is in motion and he or she shall be prepared to signal to stop during the motion.
- A signaling device that functions unreliably or in a way that might constitute a hazard to an employee shall be removed from service immediately.
- Signals shall be discernible or audible at all times.
- Some special operations may require addition to or modification of the basic signals.

- For all such cases, these special signals shall be agreed upon and thoroughly understood by both the person giving the signals and the operator and shall not be in conflict with the standard signals.

STANDARD HAND SIGNALS



Training:

Training shall include:

- Documentation of employee, date of training and subject matter, including method used to test knowledge of material.
- No employee shall operate cranes or equipment covered by this program until training has been complete and management has approved and designated him or her as a qualified operator.

Purpose

The purpose of this program is to establish a firm but fair disciplinary action policy to enforce the safety system.

Scope

This document is applicable to all employees.

Responsibilities

It is the responsibility of each and every person employed by Burnt Mountain Services (the Company) to work in a safe and efficient manner. The safety system provides guidelines and procedures to help ensure that safe work practices are observed. In the event that any employee violates provisions of the Company safety system or works in a manner that threatens his own health and safety or the health and safety of the employees around him, he will be subject to disciplinary action, up to and including termination of employment.

The safety manager, operations managers, supervisors, and foremen hold positions responsible for enforcing the safety system and for issuing disciplinary action as required by this section of the safety manual.

The Company is committed to safety and senior management holds all supervisory staff responsible and accountable for safety within their respective areas.

Physical inspections by the Company officials or insurance representatives shall occur. Company officials must conduct periodic inspections of work areas to ensure compliance with safety rules and policies.

Requirements

Safety is a core value and a condition of employment at the Company. The following actions constitute a safety violation:

- Not following verbal or written safety procedures, guideline or rules of the Company or our clients
- Horse play, failure to wear required PPE, and or abuse of PPE
- Being under the influence of drugs or alcohol during work
- Brandishing or making weapons visible on the job site
- Failure to report incidents or injuries
- Attempted or actual physical force to cause injury, threatening statements or other actions to cause another employee to feel they are not safe, or they are at risk of injury.

Procedure

The following procedures will be following after issuing a safety violation notice:

- The first offense will result in a verbal warning. The employee will be met with and informed that he or she is being issued a verbal warning and informed of the infraction, rule or procedure that was violated and the corrective action to be taken. Proper procedure will be discussed to clarify the situation and allow the employee to correct his behavior. The person making this verbal warning will inform the operations

manager of his branch that this warning has been issued so the operations manager may make a written record of the warning.

- The second offense will result in a written reprimand and additional training. The reprimand will be written on the standard Safety Reprimand form (see below) and will describe the unsafe activity or behavior that needs correction. Refer to the section of the safety program that was violated (when applicable). The employee receiving the reprimand has the right to submit a written rebuttal to the reprimand. The employee must sign the reprimand. The reprimand and any rebuttal will become a part of the employee's employment records.
- The third offense will result in another written reprimand (using the standard form) and punitive layoff, the duration of which will be decided at the time of the disciplinary action and is to be weighed by the severity of the offense. Again, the employee may submit a written rebuttal to the reprimand. The employee must sign the reprimand. The reprimand and any rebuttal will become a part of the employee's employment records.
- The fourth offense may result in the termination of the offending employee.

The above actions are to be placed against a sliding twelve month scale. If an employee receives a reprimand on January 1 and commits his fourth offense on or before December 31st of the same year, he is terminated. The employee does not have to commit the same violation each time to receive further reprimands. He could receive a verbal reprimand for smoking in a no smoking area on his first offense and get a written reprimand for his second offense which might be a forklift violation and yet another for failing to use proper personal protective equipment. He will be terminated upon his fourth offense in the last twelve months.

In the case of serious safety violations such as by-passing guarding or other unsafe activities that put the violator or other employees at serious risk of injury, the manager may move the violator directly to the second or third warning level. If the violator's actions put him or others at risk of death or dismemberment the manager has the option to terminate him with no further warning.

Safety Reprimand Form

Date: _____ Reprimand # ____

Issued To: _____

Signature: _____

Issued By: _____

Signature: _____

Violation (Describe in Detail):

Follow up Training: _____

Presented by: _____

Date of Training: _____

Trainee Signature: _____

Purpose

This program is written to be in compliance with local regulatory requirements and provide directives to managers, supervisors, and employees about their responsibilities in the operations and management of Burnt Mountain Services (the Company) vehicle safety.

Key Responsibilities

Safety Manager

- The designated Safety Manager is responsible for developing and maintaining the program and related procedures. These procedures are kept in the designated safety manager's office.

Site Manager

- Responsible for the implementation and maintenance of the program for their site and ensuring all assets are made available for compliance with the plan.

Employees

- All shall be familiar with this procedure and the local workplace vehicle safety program.
- Follow all requirements, report unsafe conditions, and follow all posted requirements.
- Only authorized employees will drive a motor vehicle in the course and scope of work or operate a Company owned vehicle.
- The driver of a Company vehicle will have a valid and current license to operate the vehicle. Drivers will be appropriately assessed, licensed and trained to operate the vehicle they have been authorized to operate.
- Authorized drivers are not allowed to operate a motor vehicle while under the influence of alcohol, illegal drugs, certain medications, prescription or over-the counter medications that might impair their driving skills.

Vehicle and Transportation Related

Driving Safety

- No passengers shall be on trucks used to deliver goods.
- Backing is prohibited whenever practicable. Where backing is required, drivers, when parking, should make every effort to park the vehicle in a manner that allows the first move when leaving the parking space to be forward.
- Drivers must have either a reversing alarm, use a spotter or walk around the truck/trailer prior to backing.
- Passenger compartments are to be free from loose objects that might endanger passengers in the event of an incident. Any vehicle with non-segregated storage shall be equipped with a cargo net or equivalent to separate the storage area.
- Vehicles (light vehicles, heavy vehicles and trailers) may not be modified without the endorsement of the manufacturer.
- Signs, stickers or labels are to be fitted in such a manner that they do not obstruct the driver's vision or impede the driver's use of any controls.

Reporting of Traffic Violations and Vehicle Accidents - Authorized drivers will report any collision or traffic violation that occurs on Company time to the Safety Manager.

Safe Driver Behaviors/Practices:

- Authorized drivers will follow all Company Safe Driver Behaviors/Practices.
- Obey all federal and local driving laws or regulations as well as requirements of clients;
- Immediately report any restriction or change to their driving privileges to the supervisor.
- Driver and all passengers must wear seatbelts. Seatbelts shall be worn by all occupants at all times whenever a vehicle is in motion.
- Defensive drivers continually assess conditions and hazards and remain prepared for any challenge that may approach them.
- When speaking with a passenger, always keep your eyes on the road.
- Both hands on the wheel.
- Use of cell phones, hands-free cell phones, manipulating radios or other equipment which may cause distraction while driving any vehicle is prohibited. Vehicle must be safely parked prior to using a cell phone or 2-way radio.
- Drivers shall not exceed the posted speed limit.
- Drivers shall maintain a safe distance between other vehicles.
- Slow down around construction, large vehicles, wildlife, fog, rain, snow, or anything else that adds a hazard to your driving.
- Alcohol or illegal drugs are not allowed in a Company vehicle at any time.

Drivers are to be prepared before leaving:

- Perform 360 walk around – report new damage.
- Check windshield for cracks that could interfere with vision.
- Inspect for vehicle damage and immediately report any damage to the supervisor if not previously observed.
- Make sure dirt or snow is removed from lights on all sides of the vehicle.
- Brush or clean off snow or ice on all windows to ensure complete vision.
- Check fuel level to be certain the destination can be reached.
- Check to ensure the license plates and inspection tag on vehicle are current.
- Ensure that there is a first aid kit and inspected fire extinguisher in the Company vehicle.
- Ensure the driver is rested and alert for driving.
- Employees are not to perform repairs or maintenance other than routine fluid additions.

Vehicle Requirements

- Vehicles shall be maintained in safe working order.
- Vehicles are of the correct size and designed for intended use. The vehicle shall be fit for the purpose.
- Tires, including spares if full size, are to be of same type, profile and tread pattern, except when the vehicle or tire Manufacturer recommends a different type for certain axles.
- Tire type and pattern is to be recommended by the vehicle or tire manufacturer for use on the vehicle in the area of operation.

- Vehicles are to be fitted with a spare wheel and changing equipment to safely change a wheel, or a suitable alternative.
- All seats are to be fitted with headrests
- All light duty vehicles (including buses) are to be equipped with an adjustable left, right and central rear view mirrors
- Loads shall be secured and within the manufacturer and legal limits and shall not exceed the manufacturer's specifications and legal limits for the vehicle.
- All vehicles are to be equipped with a multipurpose fire extinguisher with a capacity of at least 0.9 kg/2 lb. The fire extinguisher shall be securely mounted on a bracket and located so that it is easily accessible in an emergency without becoming a hazard in case of an incident.
- All light vehicles shall be equipped with a securely stowed first aid kit.
- All drivers of light vehicles shall carry a high visibility jacket for use in case of emergency stops.
- All light duty vehicles carry a minimum of one collapsible hazard warning triangle.
- Rollover protection will be installed in any vehicle to address high risk environments. The rollover protection engineered will conform to recognized regulatory standard and industry preferred practices.
- All light equipment vehicles shall be outfitted with two red high-intensity lights located as high, as far apart, and as far back as practical, wired to the headlight switch, but also with an override switch, if permitted by local regulations.

Transportation

If workers are required to travel in a worker transportation vehicle the driver must ensure that reasonable measures are taken to evaluate road, weather and traffic conditions to ensure the safe transit of the workers.

The operator of a worker transportation vehicle must ensure that the worker transportation vehicle has been inspected by a qualified person before first use on a work shift.

Seated workers must wear seat belts while being transported in a vehicle equipped with seat belts.

A worker must not ride in a vehicle in a standing position, unless protected from being thrown off balance.

A worker must not ride in a vehicle with any part of the body outside the vehicle unless essential to the work process and then only if the worker is adequately restrained.

Materials, goods, tools or equipment carried in a portion or compartment of a vehicle in which workers are riding must be located and secured to prevent injury to the operator or workers.

Any enclosed portion or compartment of a vehicle in which workers are transported must have:

- effective ventilation, independent of doors, providing clean air,
- adequate lighting and means for heating and cooling,
- an effective means of communication between the operator and passengers, and
- more than one means of exit.

Traffic Control

The Company shall develop, in writing, and implement a traffic protection plan for its workers at a worksite if any of them may be exposed to a hazard from vehicular or pedestrian traffic that may endanger the safety of any worker. It shall include the following control measures:

- Effective means of traffic control shall be provided whenever the unregulated movement of vehicular traffic constitutes a hazard to workers.
- Traffic control shall include barricades and cones as the primary control and, where required, signs, flagmen or other techniques and devices made necessary by the prevailing circumstances.
- Operations or equipment, encroaching on the traveled way, shall be protected by barricades and cones as the primary control and, where required other effective devices.
- The Company must train workers in the traffic control safe work procedures.
- The Company will ensure that before a worker is designated as a flag person, the worker is trained in the safe work procedures for the safe control of traffic operations and wears the appropriate high visibility outer clothing and/or equipment.
- If a worker at a project on a highway may be endangered by vehicular traffic unrelated to the project, the project shall make use of as many measures as necessary to adequately protect the worker.
- A worker who is required to set up or remove traffic control measures on a roadway or a shoulder of a roadway shall be a competent worker, shall be equipped with the appropriate high visibility apparel, shall not perform any other work while setting up or removing the measures and shall be given adequate written and oral instructions in a language that he or she understands, with respect to setting up or removing the measures.

ATV Vehicles

If a Company work site utilizes ATV vehicles, the following shall apply:

- If the manufacturer has not set limits for operation of the ATV on sloping ground, 5% is the maximum allowable slope unless the Company has developed and implemented written safe work procedures appropriate for any steeper slope on which the equipment is to be used.
- The Company must ensure that each ATV operator is properly licensed and trained in the safe operation of the vehicle. The training program for an ATV operator must cover:
    - the operator's pre-trip inspection,
    - use of personal protective apparel,
    - operating skills according to the ATV manufacturer's instructions,
    - basic mechanical requirements, and
    - loading and unloading the vehicle, if this is a job requirement.
- An ATV operator and any passenger on an ATV must wear approved eye and hearing protection as required by local regulatory requirements and the Company PPE Program. An ATV operator and any passenger on an ATV must wear clothing suitable for the environmental conditions and when necessary to protect against the hazards presented at the worksite, suitable gloves and clothing which covers the ankles and legs and the arms to the wrists and appropriate footwear.
- The Company requires that approved helmets shall be worn by the operator and passenger.
- Loading and unloading of an ATV onto or off a carrier vehicle must be done in a safe manner. If ramps are used when loading or unloading an ATV they must be placed at a suitable angle, be sufficiently wide and have a surface finish which provides an adequate grip for the ATV's tires.

Purpose

The purpose of this program is to prevent injury to personnel due to dropped objects.

Scope

The operator's program shall take precedence; however, this document covers employees and contractors on owned premises, or when an operator's program doesn't exist or is less stringent.

Responsibilities

The Safety Manager shall administer the Dropped Objects Plan.

Supervisors and Managers shall ensure the purchase, use and storage of designated at height tools and equipment is accomplished.

Employees shall understand the Dropped Objects Plan and follow its guidelines and report any unsafe work condition or need for at height equipment.

General

The following general recommendations should be observed when using tools / equipment at height:

- Tools and portable equipment used at height shall be adequately secured to either the user or the workplace.
- Tools used at height shall have a lanyard attachment point that does not compromise the tool's effectiveness.
- All tools, lanyards and attachment points shall be inspected prior to use and prior to their return to the Tools at Height Toolkit, to ensure they are fit for purpose.
- Do not modify any tools or equipment.
- At height tools shall be used for all tasks where there is the potential for tools to drop more than 6 feet.
- Any deviation from recommended best practice shall be undertaken through a documented MOC (management of change) procedure.
- All personnel working at height and / or using at height compliant tools shall be adequately trained.
- If any tool or equipment is dropped, or if the retention system failed such that there was potential for the tool or equipment to drop, it must be reported immediately.
- While work at height is ongoing, the drop zone below the worksite shall be barricaded off and signage used.
- Provide netting on guardrails (toe board - midrail) on elevated platforms (including aerial lifts) and scaffolds where the potential for falling objects exists.
- Secure all materials stored on elevated work platforms and during material transport.

Tool Specifics

The following recommendations relate to specific tools and tool types used at height:

- Multi-part tools shall have systems to prevent separation (e.g. sockets must be locked onto extension bars, knuckles, ratchets and breaker bars; it must be impossible to remove jaws from shifters or pliers etc.).
- All hammers shall have steel or steel composite shafts, non-slip handles and a head locking mechanism to prevent separation of the head from the shaft.
- Cold chisels and associated hand protecting guards shall have retention in place for both chisel and guard.
- The use of flogging spanners shall be subject to a specific risk assessment.
- Sockets, extensions and ratchets etc. should be pin locked.
- Any equipment or tool exceeding 5kg in weight shall be subject to the recommendations for Heavy Tools and Equipment.

Lanyards and Attachment Points

The following represents best practice for lanyards and attachment points:

- All tooling used at height shall be lanyard attached to the tool bag, the equipment loop on the harness or the workplace. As such, tooling should be manufactured and supplied with tested and certified lanyard attachment points.
- The lanyard attachment point on the tool must still enable the tool to be used effectively.
- The length of lanyard wire should be appropriate to the unhindered function of the tool, and the tool and wire shall have been tested and proven to withstand a drop of double the lanyard length.
- All lanyards should be fitted with carabineers.
- All wire lanyard terminations should be designed to avoid potential hand injury due to protruding wire tails.
- The lanyard attachment points on tools should be manufactured in such a way that they cannot be removed.

Heavy Tools and Equipment (Over 10 Pounds)

When using heavy tools at height, weighing 10 pounds or more, the following should be observed:

- The use of heavy tools and hand-held machinery at height must be specifically risk assessed.
- All heavy tools and hand-held machines used at height must be secured against falling when in use and while being transported.
- If a heavy tool or item of equipment has fallen and a lanyard has arrested the fall, both the lanyard and the tool / equipment shall be removed from service until they can be fully inspected and confirmed as fit for purpose.
- Securing points for tools and machines must be in place above the work site and the securing device must be as taut as possible.
- The design of heavy tools and equipment should physically preclude the use of small and medium carabineers to prevent overloading the carabineer.

Power Tools

The following recommendations relate to the safe use of power tools at height:

- For electrically powered tools, the power supply cable must be secured to prevent excessive strain being placed on internal conductors.
- For pneumatic tools the air hose must be secured to prevent strain on the fittings at either end.
- Any retention that is fitted to power tools shall never be solely secured to the power cable or air hose.
- Sockets, extensions and ratchets etc. should be pin locked to power tools (electric and pneumatic) to prevent accidental release and battery powered tools should have an attachment to lock the battery in place.
- Power tools must have a lanyard with a load rating appropriate to the weight of the tool and the attachments.

At Height Designated Tool Storage

The following represents best practice for at height designated tool storage:

- When not in use, "at height" designated tools must be kept in a secure At Height Tool Storage Facility.
- Tools should be stored in such a manner that a simple visual inspection can highlight any discrepancies or omissions in the tool box inventory, e.g. drawn outlines of tools or cut foam inserts.
- The At Height Tool Storage Facility shall have a detailed inventory and should be kept locked when not in use.
- When any at height tools are in use, a “tools aloft” sign and barricades shall be used to prevent employees from entering.
- One person per shift should be designated as responsible for the At Height Tool Storage Facility; to serve as key holder and custodian of the At Height Tools Register. The responsible person will log all tools in and out on the At Height Tools Register.
- In addition to the tools, the At Height Tool Storage Facility shall be equipped with sufficient numbers of load rated tool lanyards, special belts for fastening tools and bags and sufficient numbers of tool bags with internal fastening devices.

Tool Bags, Pouches and Belts

The following guidelines should be observed to ensure the safe and effective use of tool bags, pouches, and belts at height:

- Tools shall be taken aloft in some form of kit bag. The kit bag shall be attached to the user and leave both hands free.
- Tools are to be attached to the kit bag (not merely put in it).
- Carrying pouches shall always be used for radios and any other portable equipment with no dedicated attachment point.
- The locks on carrying pouches should have a double securing mechanism to guard against unintentional opening.
- Belts with snap fasteners are not recommended.
- Tool lanyards shall be used between the tools and belt or bag.

Training

- All appropriate personnel shall be trained on the Dropped Objects Plan.

Purpose

The purpose of the Electrical Safety program is to set forth procedures for the safe use of electrical equipment, tools, and appliances at Burnt mountain Services (the Company).

Scope

This program applies to all Company employees, temporary employees, and contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Affected Personnel - Personnel who normally use and work with electrical equipment, tools, and appliances, but who do not make repairs or perform lock out/tag out procedures.

Appliances - Electrical devices not normally associated with commercial or industrial equipment such as air conditioners, computers, printers, copiers, coffee pots, microwave ovens, toasters, etc.

Circuit Breaker - A device designed to open and close a circuit by non-automatic means and to open the circuit automatically on a predetermined overcurrent without injury to itself when properly applied within its rating.

Disconnecting Means - A device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply.

Disconnecting Switch - A mechanical switching device used for isolating a circuit or equipment from a source of power.

Double Insulated Tool - Tools designed of non-conductive materials that do not require a grounded, three wire plug.

Ground - Connected to earth or some conducting body that serves in place of the earth.

Grounded Conductor - A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.

Ground Fault Circuit Interrupter (GFCI) - A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds some predetermined value that is less than that required to operate the over current protective device of the supply circuit. In many cases, the Company will use GFCIs in lieu of an assured grounding program.

Insulated - A conductor encased within material of composition and thickness that is recognized as electrical insulation.

Premises Wiring - That interior and exterior wiring, including power, lighting, control, and signal circuit wiring together with all its associated hardware, fittings, and wiring devices, both permanently and temporarily installed, which extends from the load end of the service drop, or load end of the service lateral conductors to the outlet (s). Such wiring does not include wiring internal to appliances, fixtures, motors, controllers, motor control centers, and similar equipment.

Qualified Person - One that has been trained in the repair, construction and operation of electrical equipment and the hazards involved.

Strain Relief - A mechanical device that prevents force from being transmitted to the connections or terminals of a cable or extension cord.

Class l Locations - Are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

> Class 1 Division 1 - Is a location (a) in which hazardous concentrations of flammable gases or vapors may exist under normal operating conditions; or (b) in which hazardous concentrations of such gases or vapors may exist frequently because of repairs or maintenance operations or because of leakage; or (c) in which a breakdown or faulty operation or equipment or processes might release hazardous concentrations of flammable gases or vapors, and might also cause simultaneous failure of electrical equipment.
>
> Class 1 Division 2 - Is a location (a) in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the hazardous liquid, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in of abnormal operation of equipment or (b) in which hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation, and which might become hazardous through failure or abnormal operations of the ventilating equipment; or (c) that is adjacent to a Class 1, Division 1 location, and to which hazardous concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided.

Class II locations - Class II locations are those that are hazardous because of the presence of combustible dust. Class II locations include the following:

> Class II, Division 1 - A Class II, Division 1 location is a location (a) in which combustible dust is or may be in suspension in the air under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures; or (b) where mechanical failure or abnormal operation of machinery or equipment might cause such explosive or ignitable mixtures to be produced, and might also provide a source of ignition through simultaneous failure of electric equipment, operation of protection devices, or from other causes, or (c) in which combustible dusts of an electrically conductive nature may be present.
>
> *NOTE*: This classification may include areas of areas where metal dusts and powders are produced or processed, and other similar locations that contain dust producing machinery and equipment (except where the equipment is dust-tight or vented to the outside).

- These areas would have combustible dust in the air, under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures.
- Combustible dusts that are electrically nonconductive include dusts produced in the handling and processing produce combustible dusts when processed or handled.
- Dusts containing magnesium or aluminum are particularly hazardous and the use of extreme caution is necessary to avoid ignition and explosion.

Class II, Division 2 - A Class II, Division 2 location is a location in which: (a) combustible dust will not normally be in suspension in the air in quantities sufficient to produce explosive or ignitable mixtures, and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus; or (b) dust may be in suspension in the air as a result of infrequent malfunctioning of handling or processing equipment, and dust accumulations resulting there from may be ignitable by abnormal operation or failure of electrical equipment or other apparatus.

NOTE: This classification includes locations where dangerous concentrations of suspended dust would not be likely but where dust accumulations might form on or in the vicinity of electric equipment. These areas may contain equipment from which appreciable quantities of dust would escape under abnormal operating conditions or be adjacent to a Class II Division 1 location, as described above, into which an explosive or ignitable concentration of dust may be put into suspension under abnormal operating conditions.

Responsibilities

Managers/Supervisor/Employees

- The HSE Manager will develop electrical safety programs and procedures in accordance with OSHA requirements and/or as indicated by events and circumstances.
- Operations Managers and Supervisors are responsible for ensuring that only qualified employees and or qualified contractors perform electrical repairs or installations.
- Operations Managers are also responsible for ensuring all applicable electrical safety programs are implemented and maintained at their locations.
- Employees are responsible to use electrical equipment, tools, and appliances according to this program, for attending required training sessions when directed to do so and to report unsafe conditions to their supervisor immediately.
- Electrical work may only be performed by qualified persons. Only qualified persons may work on electric circuit parts or equipment that have not been deenergized. Such persons shall be familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools.

Safe Work Practices to Prevent Electric Shock

Safe work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized.

Inspections

- Electrical equipment, tools, and appliances must be inspected prior to each use.
- The use of a hard fixed GFCI or a portable GFCI adapter shall be used with all portable hand tools, electric extension cords, drop lights and all 110-volt equipment.
- Faulty equipment, tools, or appliances shall be removed from service immediately and tagged “Out of Service”, dated, and signed by the employee applying the tag.

Repairs

- Only Qualified Personnel, who have been authorized by the department supervisor or manager, may make repairs to supply cords on electrical tools and to extension cords.
- The names of employees authorized to make repairs will be posted in the workplace.
- Only certified electricians shall be allowed to make repairs to electrical equipment and wiring systems.
- The supervisor obtaining the services of a certified electrician is responsible for verifying the electrician’s credentials.
- Employees shall not enter spaces containing exposed energized parts unless qualified and proper illumination exists to enable employees to work safely.
- If employees are subject to handle long dimensional conductor objects (ducts or pipes), steps for safe work practices shall be employed to ensure the safety of workers.

Extension Cords

- Use only three-wire, grounded, extension cords and cables that conform to a hard service rating of 14 amperes or higher, and grounding of the tools or equipment being supplied.
- Only commercial or industrial rated-grounded extension cords may be used in shops and outdoors.
- Cords for use other than indoor appliances must have a rating of at least 14 amps.
- Cords must have suitable strain relief provisions at both the plug and the receptacle ends.
- Work lamps (drop light) used to power electrical tools must have a 3 wire, grounded outlet, unless powering insulated tools.
- Adapters that allow three wire, grounded prongs, connected to two wire non-grounded outlets are strictly prohibited.
- Cords must have a service rating for hard or extra-hard service and have S, AJ, ST, SO, SJO, SJT, STO, or SJTO printed on the cord.
- Cords may not be run through doorways, under mats or carpets, across walkways or aisles, concealed behind walls, ceilings, or floors, or run through holes in walls, or anywhere where they can become a tripping hazard.
- High current equipment or appliances should be plugged directly into a wall outlet whenever possible.
    - All extension cords shall be plugged into one of the following:
    - A GFCI outlet;
    - A GFCI built into the cord;
    - A GFCI adapter used between the wall outlet and cord plug.
- All extension cords and or electrical cords shall be inspected daily or before each use, for breaks, plug condition and ground lugs, possible internal breaks, and any other damage. If damage is found, the extension cord or electrical cord shall be removed from service and repaired or replaced.

- Extension cords shall not be used on a compressor skid to operate heat tapes or any other type of equipment on a temporary basis. Heat tapes or other equipment shall be hard wired per applicable electrical codes.

Outlets

- Outlets connected to circuits with different voltages must use a design such that the attachment plugs on the circuits are not interchangeable.

Multiple Outlet Boxes

- Multiple outlet boxes must be plugged into a wall receptacle.
- Multiple outlet boxes must not be used to provide power to microwave ovens, toasters, space heaters, hot plates, coffeepots, or other high-current loads.

Double Insulated Tools

- Double insulated tools must have the factory label intact indicating the tool has been approved to be used without a three-wire grounded supply cord connection.
- Double insulated tools must not be altered in any way, which would negate the factory rating.

Switches, circuit breakers, and disconnects

- All electrical equipment and tools must have an on and off switch and may not be turned on or off by plugging or unplugging the supply cord at the power outlet.
- Circuit breaker panel boxes and disconnects must be labeled with the voltage rating.
- Each breaker within a breaker panel must be labeled for the service it provides.
- Disconnect switches providing power for individual equipment must be labeled accordingly.

Portable Ladders

- Only approved, non-conductive ladders may be used when working near or with electrical equipment, which includes changing light bulbs.
- Ladders must be either constructed of wood or fiberglass.
- Portable ladders shall have non-conductive side rails.
- Wood ladders should not be painted, which can hide defects, except with clear lacquer.
- When using ladders, they shall be free from any moisture, oils, and grease.

Overhead Lines

- When working near overhead lines, a clearance distance of 10' must be maintained or the lines will be de-energized and grounded. The lines shall be deenergized and grounded or other protective measures shall be provided before work is started.
- When working near overhead lines, unqualified persons must maintain a clearance distance of 10 feet. When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he or she may contact cannot come closer to any unguarded, energized overhead line than the following distances:
    - For voltages to ground 50kV or below - 10 feet (305 cm);
    - For voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV.

- Vehicles and/or mechanical equipment must maintain a clearance distance of 10 feet (or greater) from energized overhead lines. Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage.
- When possible, power lines shall be de-energized and grounded or other protective measures shall be provided before work is started.
- The minimum approach distance to energized high power voltages lines for unqualified employees is 10 feet.
- Minimum approach distance for qualified employees shall be followed per 29 CFR 1910.333(c)(3)(i) Qualified – Table S5 Selection and Use of Work Practices - Approach Distances for Qualified Employees – Alternating Current). Approach distances are 10' for 50kV plus 4" for every additional 10kV.

Confined or Enclosed Work Spaces

- When an employee works in a confined or enclosed space that contains exposed energized parts, the employee shall isolate the energy source and turn off the source and lock and tag out the energy source (Only qualified electricians can work on an exposed energy source).
- Insulating shields/barriers are used where necessary. Protective shields, protective barriers, or insulating materials as necessary shall be provided.

Enclosures, Breaker Panels, Illumination and Distribution Rooms

- A clear working space must be maintained in the front, back and on each side of all electrical enclosures and around electrical equipment for safe operation and to permit access for maintenance and alteration.
- A minimum of two-foot working floor space in front of panels and enclosures shall be painted yellow.
- Proper illumination before employees are permitted to enter work areas containing exposed energized parts. Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.
- Housekeeping in distribution rooms must receive high priority to provide a safe working and walking area in front of panels and to keep combustible materials to the minimum required to perform maintenance operations.
- All enclosures and distribution rooms must have "Danger: High Voltage – Authorized Personnel Only" posted on the front panel and on entrance doors.
- Flammable materials are strictly prohibited inside distribution rooms (Boxes, rags, cleaning fluids, etc.)

Lock Out/Tag Out

- Lockout/Tagout is used before performing electrical work. While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.
- No work shall be performed on or near exposed energized parts. This applies to work performed on exposed live parts (involving either direct contact or by means of tools or materials) or near enough to them for employees to be exposed to any hazard they present.
- If any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.
- Conductors and parts of electrical equipment that have been deenergized but have not been locked or tagged out shall be treated as live parts.

- Only authorized personnel may perform lock out/tag out work on electrical equipment and will follow the Company's Control of Hazardous Energy – Lock out/Tag Out Program.
- Authorized personnel will be trained in lock out/tag out procedures.
- Affected personnel will be notified when lock out/tag out activities are being performed in their work area.

Contractors

- Only approved, certified, electrical contractors may perform construction and service work on Company or client property.
- It is the Manager/Supervisors responsibility to verify the contractor's certification.

Fire Extinguishers

- Approved fire extinguishers must be provided near electrical breaker panels and distribution centers.
- Water type extinguishers shall not be located closer than 50 feet from electrical equipment.

Electric Shock-CPR

- If someone is discovered that has received an electric shock and is unconscious, first check to see if their body is in contact with an electrical circuit. Do not touch a person until you are sure there is no contact with an electrical circuit.
- When it is safe to contact the victim, begin CPR if the person's heart has stopped or they are not breathing.
- Call for help immediately.

Electric Welders

- A disconnecting means shall be provided in the supply circuit for each motor-generator arc welder, and for each AC transformer and DC rectifier arc welder which is not equipped with a disconnect mounted as an integral part of the welder.
- A switch or circuit breaker shall be provided by which each resistance welder and its control equipment can be isolated from the supply circuit. The ampere rating of this disconnecting means may not be less than the supply conductor ampacity.

Equipment Grounding

- All gas compressors, air compressors, separators, vessels, etc. shall be grounded by means of using a lug and ground strap, nominal in size to a ½" bolt or larger, attached to a ground rod six feet or longer.
- Equipment bonding jumpers shall be of copper or another corrosion-resistance material.
- The transfer of hazardous or flammable material from a metal or plastic container with a flash point of 100 degrees F or less shall have a ground strap from the container and attached to the skid or a ground rod placed in the ground.

Assured Grounding

OSHA requires that employers shall use either ground fault circuit interrupters (GFCI) or an assured equipment grounding conductor program to protect personnel from electrical shock while working.

- In many if not all cases, the Company will use GFCIs in lieu of an assured grounding program.

Ground Fault Circuit Interrupters

All 120-volt, single-phase 15 and 20 ampere receptacle outlets on construction or maintenance sites, which are not part of the permanent wiring of the building or structure, and which are in use by employees, shall have approved ground fault circuit interrupters for personnel protection.

- All hand portable electric tools and extension cords shall use a GFCI.
- Additionally, approved GFCI's shall be used for 240-Volt circuits in the same service as described above.
- GFCI's must be used on all 120 volt, single-phase 15-amp and 20-amp receptacles within 6 feet of a sink, damp areas or on installed outdoor equipment.
- The GFCI must be the first device plugged into a permanent receptacle.
- The GFCI must be tested before each use.

Training

All employees are provided Electrical Awareness training.

Employees who face the risk of electric shock but who are not qualified persons shall be trained and familiar with electrically related safety practices. All employees shall be trained in safety related work practices and clearance distances that pertain to their respective job assignments.

Qualified employees must adhere to the approach distances in Table S5 of CFR 1910.333 (below).

Voltage Range (phase to phase)	Minimum Approach Distance
Over 300V, not over 750V	1 ft. 0 in. (30.5 cm).
Over 750V, not over 2kV	1 ft. 6 in. (46 cm).
Over 2kV, not over 15kV	2 ft. 0 in. (61 cm).
Over 15kV, not over 37kV	3 ft. 0 in. (91 cm).
Over 37kV, not over 87.5kV	3 ft. 6 in. (107 cm).
Over 87.5kV, not over 121kV	4 ft. 0 in. (122 cm).
Over 121kV, not over 140kV	4 ft. 6 in. (137 cm).

Personal Protective Equipment & Safeguards for Personnel Protection

- Conductive apparel shall not be worn unless it is rendered non-conductive by covering, wrapping or other insulating means. Conductive items of jewelry or clothing shall not be worn unless they are rendered non-conductive by covering, wrapping or other insulating means.
- Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed.
- Equipment shall be maintained in a safe, reliable condition. Such protective equipment shall be periodically inspected and/or tested.
- If the insulating capability of protective equipment may be subject to damage during use, the insulating material shall be protected. (An example might be an outer covering of leather used for the protection of rubber insulating material.)
- Employees shall wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with exposed energized parts.

- Employees shall wear protective equipment for the eyes or face wherever there is danger of injury to the eyes or face from electric arcs or flashes or from flying objects resulting from electrical explosion.
- Each employee shall use insulated tools or handling equipment if they might make contact with conductors or parts. The program shall state that if the insulating capability of insulated tools or handling equipment is subject to damage, the insulating material shall be protected.
- Ropes and handlines used near exposed energized parts shall be nonconductive.
- Protective shields, protective barriers, or insulating materials shall be used to protect each employee from shock, burns, or other electrically related injuries while that employee is working near exposed energized parts. When normally enclosed live parts are exposed for maintenance or repair, they shall be guarded to protect unqualified persons from contact with the live parts.
- Alerting techniques used to warn and protect employees from hazards which could cause injury due to electric shock, burns or failure of electric equipment parts can take the form of safety signs and tags, barricades & attendants).

Purpose

Each Burnt Mountain Services (the Company) location shall have a written Emergency Action Plan (EAP), appropriate to the hazards of the workplace, in order to respond to an emergency that may require rescue or evacuation.

Each Emergency Action Plan shall be prepared to reflect all known probable emergency conditions which may arise from within the workplace and from adjacent workplaces, the minimum of which will include fire or other emergencies.

The emergency action plan must be available for all employees to review. An emergency action plan must be in writing, kept in the workplace and available to employees for review. However, if a site has 10 or fewer employees the plan may be communicated orally to employees.

Emergency Response Planning

Emergency Action Plans for each project with more than 10 employees shall be developed using the Company Emergency Action Planner located in the EAP tab at the Company Safety Support Center located at www.bms.support. Completed plans shall be established, implemented, reviewed, maintained and updated on a regular basis in conjunction with:

- Client emergency services department requirements.
- Company safety staff and management.
- The requirement to ensure the plan is up to date to reflect current circumstances at the workplace.

The plan shall be reviewed with the workers on the job and when conditions warrant.

Reviewing the Emergency Action Plan with Employees
A review of the emergency action plan should occur with employees:

- When the plan is developed, or the employee is assigned initially to a job.
- When the employee's responsibilities under the plan change.
- When the plan is changed.

Procedures for Emergency Evacuation Planning

The emergency action plan must include procedures for emergency evacuation. An emergency action plan must include, at a minimum, procedures for emergency evacuation, including type of evacuation and exit route assignments.

The individual site evacuation procedure shall be appropriate to the site specific risks and must be developed and implemented to:

- Notify staff, including the first aid attendant, of the nature and location of the emergency,
- Evacuate employees safely and procedures to account for all employees after evacuation,
- Check and confirm the safe evacuation of all employees,
- Notify the fire department or other emergency responders, and

- Notify adjacent workplaces or residences which may be affected if the risk of exposure to a substance extends beyond the workplace. Notification of the public must be in conformity with the requirements of other jurisdictions, including provincial and municipal agencies.

List of Potential Emergencies

An emergency action plan must include, at a minimum, procedures for reporting a fire or other emergency.

Each location shall conduct a risk assessment for hazards posed by potential hazardous substances from accidental release, fire or other such emergencies that could cause an evacuation or rescue. The EAP should list the potential emergencies for Company operations. Procedures for each of these potential emergencies shall be contained within the Emergency Action Plan. Examples include:

- Fire
- Gas Leaks/Chemical Spills
- Bomb Threats
- Medical Emergencies
- Explosion
- Workplace Violence

Guidance Procedures for Potential Emergencies

Fire

- Warn others in the immediate area. Notify the appropriate emergency response personnel by phone or radio and pull the nearest fire alarm if present.
- If nearby staff have been trained, and it is safe to do so, fight the fire using a portable fire extinguisher. Remember, if in doubt get out.
- Evacuate the premises via the nearest exit and proceed to the nearest Emergency Assembly Area.
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

Gas Leaks/Chemical Spills - Upon smelling or noticing a gas leak or unusual vapors, or a chemical spill:

- Pull fire alarm (if present) or sound warning and evacuate the premises via the nearest exit
- Proceed to the Emergency Assembly Area
- Contact local emergency response personnel by phone or radio
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

If employees are required to control a release of a hazardous substance, to perform cleanup of a spill, or to carry out testing before re-entry, the Company must first provide:

- Adequate written safe work procedures and documented training.
- Appropriate personal protective equipment which is readily available to employees and is adequately maintained, and
- Material or equipment necessary for the control and disposal of the hazardous substance.

Bomb Threats

- If a threat is received by phone, mail or other means, get as much information as possible.

- If the threat is received by phone, try to keep the person on the line for as long as possible. Do not hang up the phone, even after the call has been terminated.
- Contact local emergency response personnel by phone or radio.
- If a suspicious device is identified, evacuate the immediate area and notify local emergency response personnel.

Medical Emergencies

- Call for assistance by phone or radio. Give the exact location and details of the medical emergency.
- If qualified, provide basic first aid, and keep the person comfortable. Do not move the person. Do not leave him/her unattended.
- Arrange for emergency medical transportation based on the medical planning portion of the site's Emergency Action Plan.

Explosions

- Get down on the floor, take shelter under tables or desks, and protect your face and head against flying glass and debris.
- Once it is safe to do so, evacuate the premises via the nearest exit and proceed to the nearest Emergency Assembly Area.
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

Workplace Violence

- Notify security immediately by phone or radio and report the occurrence.
- Do NOT attempt to physically intervene. Protect yourself first at all costs.

Alarms & Emergency Communication

Each Emergency Action Plan shall contain methods to address alarms and communications in case of an emergency.

Alarm System

A system must be in place to alert employees. The alarm system shall be distinctive and recognizable as a signal to evacuate the work area or perform actions designated under the emergency action plan. For sites with 10 or fewer employees in a particular workplace, direct voice communication is an acceptable procedure for sounding the alarm provided all employees can hear the alarm. Each Emergency Response plan will describe how to activate an alarm and what to do after either activating or hearing an alarm.

Personnel responding to any alarm shall avoid complacency. Every alarm should be treated as an actual incident until proven otherwise. Treating and responding to alarms as a routine happening can result in injuries, fatalities and destruction of property.

Rescue and Evacuation Procedures

Procedures for Rescue and Medical Services

Each site Emergency Action Plan shall address who performs recue services when required. It is the position of Burnt Mountain Services that all rescue and medical duties are performed by client emergency responders or local governmental responders.

Procedure for Evacuation

Preparation for Evacuation

Each site Emergency Action Plan shall contain a procedure for evacuation if required.

The Company designated Emergency Coordinator will maintain an active list of all Company and contract emergency responders.

Critical Plant Operations Personnel

Staff designated to remain in the facility to shut down or supervise critical operations or equipment will be specifically trained and authorized by management to perform their duties before any evacuation may occur.

Evacuation Drills

Evacuation drills shall be conducted at least annually. Before conducting an evacuation drill a pre-drill assessment of the evacuation routes and assembly points shall be conducted. The pre-drill assessment is intended to verify that all egress components (stairs, doors, etc.) are in proper order and that occupants can use them safely.

Coordination Within a Facility

Emergency training and drills should also be coordinated within a Company facility so that key staff are involved in the planning process and are aware of their responsibilities in an emergency as well as during the drill.

Facility management also needs to be informed of the potential for an interruption in productivity and business operations. Alternatives for the continuity of critical operations need to be considered.

Procedures to Account for All Employees After Evacuation

The emergency action plan must include procedures to account for all employees after the evacuation. Each muster or assembly point will have a blank roster for evacuees to enter their name. All completed rosters will be gathered and checked against a master list of employees assigned or checked in at the facility to verify all employees are accounted for.

Emergency Evacuation Notification and Routes

In the event of an emergency the Emergency Coordinator makes the following decisions and ensures the appropriate key steps are taken:

- Advise all personnel of the emergency.
- Activate the emergency notification sequence to alert the appropriate responders and initiate emergency notification as appropriate.
- Evacuate all persons to the identified assembly area(s) and account for everyone including visitors and clients.

All personnel will proceed to the primary safe area immediately located at the identified emergency assembly area for their location.

- When the evacuation alarm sounds, stop work immediately, and conduct a sweep of the area. Ask everyone to leave the premises immediately and proceed to the identified emergency muster area(s).
- If you encounter smoke or flames, leave that section immediately, finish your sweep and evacuate the building/area by activating fire alarm. Remember, if in doubt get out.
- If anyone refuses to leave, note their name and location, and advise the emergency services personnel.
- Meet emergency services personnel and advise them of your sweep or an area of smoke or flame that you were unable to check. Assist with head count and evacuation if required.
- Ensure that everyone stays at the emergency assembly area until the Emergency Coordinator has given an all clear.

Evacuation or Drill Evaluation

Following an evacuation or drill a response review shall be conducted and documented by the Company Emergency Coordinator and lessons learned should be shared with the appropriate responders and staff.

Purpose

The purpose of this program is to provide fall protection procedures to prevent injury to employees while performing work assignments at elevated levels.

Qualifications of the Person or Position That Prepares Plans
Any changes to this Fall Protection Program must be approved by the Safety Manager, who is designated the Qualified Person to prepare plans for specified work sites. This is based on training received in fall protection planning and has demonstrated skills and knowledge in the preparation of fall programs, plans and the hazards involved.

Scope

This policy applies to all Burnt Mountain Services (the Company) employees who work at levels that exceed 6 feet in height where guardrails or nets are not utilized. This includes work near and around excavations. Guardrails, safety nets, or personal fall arrest systems shall be used where feasible. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

"Anchorage" means a secure point of attachment for lifelines, lanyards or deceleration devices.

"Body belt (safety belt)" means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

"Body harness" means straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

"Buckle" means any device for holding the body belt or body harness closed around the employee's body.

"Carabineer" - see Snaphook

"Connector" means a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

"Deceleration device" means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

"Deceleration distance" means the additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

"Equivalent" means alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

"Failure" means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

"Free fall" means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

"Free fall distance" means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

"Guardrail system" means a barrier erected to prevent employees from falling to lower levels.

"Infeasible" means that it is impossible to perform the inspection work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.

"Lanyard" means a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

"Leading edge" means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

"Lifeline" means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

"Lower levels" means those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

"Personal fall arrest system" means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

"Positioning device system" means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

"Rope grab" means a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

"Safety Nets...Safety nets shall be provided when workplaces are higher than 25 feet above ground or water surfaces or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines or safety belts are impractical.

> Nets shall extend 8 feet beyond the edge of the work surface where employees are exposed and shall be installed as close under the work surface as practical but in no case more than 25 feet below the work surface. Nets shall be positioned in a manner to prevent the user from coming into contact with below surfaces or structures. Proper clearance positioning of nets shall be determined by impact load testing. Work procedures shall not begin until nets are in place and have been properly tested.
>
> New nets shall meet accepted performance standards of 17,500 foot pounds minimum impact resistance as determined and certified by the manufacturers and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5000 pounds.

"Self-retracting lifeline/lanyard" means a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

"Snaphook" means a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types: (1) The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or (2) The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.

"Unprotected sides and edges" means any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches (1.0 m) high.

"Walking/working surface" means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

"Work area" means that portion of a walking/working surface where job duties are being performed.

Drawing of Components

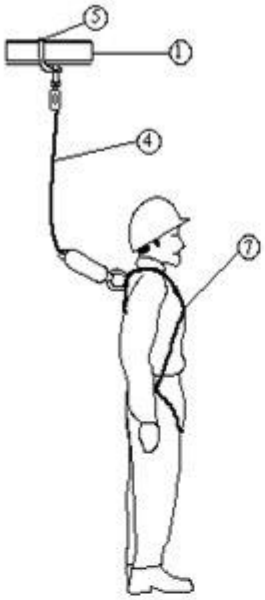


Figure A

1. Tie-off Point
2. Lifeline
3. Rope Grab
4. Shock Absorbing Lanyard
5. Cross-Arm Strap
6. Retractable Lifeline
7. Full-Body Harness
8. Restraining Belt
9. Restraining Lanyard
10. Carabineer

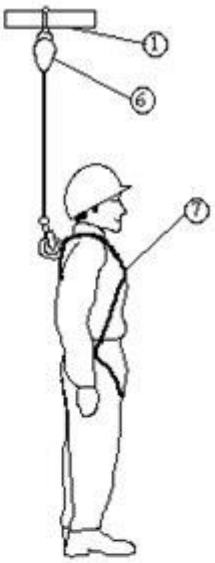


Figure B

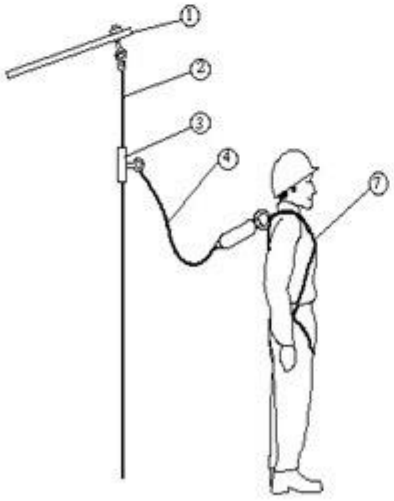


Figure C

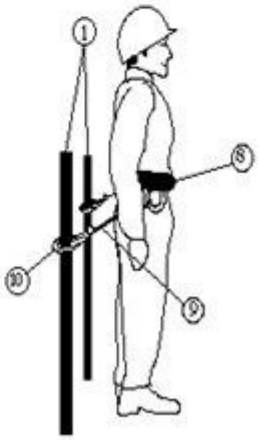


Figure D

Responsibilities

Operations Manager

It is the responsibility of the local operations manager (designated competent person) to implement this Fall Protection Program. Continual observational safety checks of work operations and the enforcement of the safety policy and procedures shall be regularly enforced. All jobs shall be pre-planned prior to the start of work.

Supervisor

The Supervisor shall ensure that all persons assigned to work at elevated levels, exceeding 6 feet in height or more above lower level and where guardrails or nets are not utilized, be protected by personal fall protection equipment.

- Supervisors shall make exposure determinations and shall discuss with their employees the extent to which scaffolds, ladders or vehicle mounted work platforms can be used.
- Ensure that fall protection equipment is available and in safe working condition.
- Provide for emergency rescue in the event of a fall. Pre-plan the job to ensure that employees have been properly trained in the use, limitations, inspections and rescue procedures and that training records are on file.

Employees

Employees shall ensure they have and use the fall protection equipment as required by this program and:

- Understand the potential hazards of working at elevated levels as well as gaining access to and from the work location.
- Understand the use and limitations of such equipment.
- Pre-plan the job with his/her supervisor to agree that the job can be done safely.
- Inspect such equipment before each use and to report defective equipment immediately to their supervisor.

Procedure

Fall protection is required whenever employees are potentially exposed to falls from heights of six feet or greater to lower levels. This includes work near and around excavations. Use of guard rails, safety net, or personal fall arrest systems should be used when the standard methods of protection are not feasible or a greater hazard would be created.

Industry or Regulatory Standards

Fall protection equipment meets industry or regulatory standards. Fall protection equipment meets the requirements of applicable ANSI Z 359.1, ASTM or OSHA requirements. When purchasing equipment and raw materials for use in fall protection systems all applicable ANSI and ASTM requirements should be met.

Minimum Standards
Fall protection must be provided to employees working at heights that exceed applicable regulatory thresholds.

The Height at Which Fall Protection is Required
Fall protection is required whenever employees are potentially exposed to falls from heights that exceed applicable regulatory thresholds. Guard rails, safety nets or personal or fall arrest systems should be used. Some applicable regulatory thresholds may include:

- General Industry 1910.23(b) - Protection for wall openings and holes. Every wall opening from which there is a drop of more than 4 feet shall be guarded.
- Construction Industry 1926.501(b)(1) - Unprotected sides and edges. Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.
- Marine Terminals 1917.112(b)(1) - Guardrails shall be provided at locations where employees are exposed to floor or wall openings or waterside edges, including bridges or gangway-like structures leading to pilings or vessel mooring or berthing installations, which present a hazard of falling more than 4 feet (1.22 m) or into the water.
- Shipyard Industry 1915.73(d) - When employees are exposed to unguarded edges of decks, platforms, flats, and similar flat surfaces, more than 5 feet above a solid surface, the edges shall be guarded by adequate guardrails.
- Steel Erection 1926.760(a)(1) - Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6 m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

The following are minimum standards for Company employee personal fall protection systems:

- All D-rings must be a minimum of 2¼ inches (inside diameter).
- All snap hooks shall not allow pressure to be applied to the gate in the opening direction.
- No pelican hooks on lanyards should be used as a primary connection.
- Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.
- Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- D-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds.
- D-rings and snap hooks shall be proof-tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or taking permanent deformation.
- Snap hooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snap hook. Only a locking type snap hook designed and used to prevent disengagement of the snap hook by the contact of the snap hook keeper by the connected member shall be used.
- Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds. Where vertical lifelines are used, each employee shall be attached to a separate lifeline.

- Lifelines shall be protected against being cut or abraded.
- Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet or less, rip stitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two and under the supervision of a qualified person.
- Systems used by an employee having a combined person and tool weight in excess of 310 pounds shall be modified to provide proper protection for such heavier loads.
- The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head, except when climbing.
- Body harnesses and components shall be used only for employee protection and not to hoist materials.
- Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
- Provide for prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.
- Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
- Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists unless prior approval is obtained from a competent person.
- If and when a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

Stopping a Fall

The arresting force on an employee stopped by a fall shall be limited to a maximum arresting force of 1,800 pounds when wearing a body harness.

The fall arrest system shall be rigged such that an employee can neither free fall more than 6 feet, nor contact any lower level.

The fall arrest system shall bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.

The fall arrest system shall have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.

Protection From Falling Objects

When employees are required to work in the near vicinity of others working with materials, tools, or equipment at elevated levels, Barricades around the immediate area of the overhead work shall be erected to prohibit employees from entering the barricaded area.

Employees performing work at elevated levels shall keep tools, materials, and equipment away from the edge to keep potential objects from falling over the side. Where practical, tools, etc. shall be secured with rope, wire, etc. to keep them from falling.

Portable Ladders
Three point climbing is required while ascending/descending ladders. While on ladders, both hands and one foot, or both feet and one hand shall always be in contact with the ladder.

Tools required to perform a task shall be transported by a mechanical carrier such as a tag line, suspended bucket or tool belt.

- Tools shall not be carried by hand while climbing.
- Hands must be free to grip the ladder.
- Tools shall not be carried in clothing pockets.
- Tools shall be pulled up to the job site only after reaching the area of work.

When work is to be performed from straight/extension ladders, fall protection shall be utilized when heights exceed 6 feet.

Straight ladders shall be tied off at the top to prevent them from moving. A second person shall steady the ladder at the base while it is being tied off at the top by another employee. Do not tie off fall protection equipment to the ladder.

Storage
A dedicated storage area shall be provided for the storage of fall protection equipment and all components. The storage area shall keep the equipment clean, dry, and free from oils, chemicals, paints, and excessive heat.

Inspections
Fall protection equipment shall be inspected before each use for wear, damage, other deterioration, or other defects.

Elevated Personnel Platforms
Work performed, regardless of the nature of the work, from personnel platforms raised by forklifts, cranes, scissor lifts, etc., shall require the use of a full body harness and shall be connected to the platform.

Prompt Rescue of an Employee in the Event of a Fall
The Company will provide for prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.

The pre-planning stage prior to the beginning of each elevated work assignment shall be evaluated by the supervisor to provide rescue of employees involved in a fall.

Fall Protection Plan
This option is available only to employees engaged in leading edge work who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment. The fall protection plan shall conform to the following provisions:

- The fall protection plan shall be prepared by a qualified supervisor and developed specifically for the site where the leading edge work is being performed.
- The fall protection plan shall document the reasons why the use of conventional fall protection systems (guardrail systems, personal fall arrest systems, or safety net systems) are infeasible or why their use would create a greater hazard.
- The fall protection plan shall identify each location where conventional fall Protection methods cannot be used.
- These locations shall then be classified as controlled access zones.

Site Specific Fall Protection Plan
A site specific Fall Protection plan is developed by a qualified person. The fall protection plan shall be prepared by a qualified person for the specified work site.

Controlled Access Zones
When used to control access to areas where leading edge or other operations are taking place the controlled access zone shall be defined by a control line or by any other means that restricts access.

When control lines are used, they shall be erected not less than 6 feet (1.8 m) nor more than 25 feet (7.7 m) from the unprotected or leading edge.

The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.

The control line shall be connected on each side to a guardrail system or wall.

- Control lines shall consist of ropes, wires, tapes, or equivalent materials.
- Each line shall be flagged or otherwise clearly marked at not more than 6-foot (1.8 m) intervals with high-visibility material.
- Each line shall be rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches (1 m) from the walking/working surface and its highest point is not more than 45 inches (1.3 m).
- Each line shall have a minimum breaking strength of 200 pounds.

Only employees engaged in the related work shall be permitted in the controlled access zone.

Safety Monitoring System
When the use of conventional fall protection equipment is deemed infeasible or the use of this equipment creates a greater hazard a Fall Protection Plan which includes a safety monitoring system shall be implemented by the supervisor.

Supervisors shall designate a competent person to monitor the safety of other employees. The competent person shall be assigned to:

- Recognize fall hazards;
- Warn employees if they are unaware of fall hazard or are acting in an unsafe manner;
- Be on the same working surface and in visual contact of working employees;
- Stay close enough for verbal communication; and

- Not have other assignments that would take his/her attention from the monitoring function.

Incidents Involving a Fall are Investigated
Incident investigations shall be conducted to evaluate the fall protection plan for potential updates to practices, procedures or training in order to prevent reoccurrence.

Changes to the fall protection program shall be implemented if deemed appropriate from incident corrective actions.

Training

Employees are provided training on fall protection. A training program shall be provided for each employee who might be exposed to fall hazards. Training shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to follow to minimize these hazards.

The employee will be trained in the use and operation of fall arrest systems, inspections and maintenance procedures.

Retraining is performed as necessary. Retraining shall be provided when the following are noted:

- Deficiencies in training,
- Workplace changes
- When fall protection equipment is modified.

Fall protection training is documented. Written certification records showing participants, training dates and signatures of instructors must be maintained.

Training records shall be retained in the corporate office.

FALL PROTECTION SYSTEM INSPECTION FORM

INSPECTED BY (Designated Competent Person)	**DATE**
AREA	**CRAFT**

BODY HARNESS

All parts of body harness and attachments are to be checked for excessive wear and damage. **Y symbol is for YES or OK.** **N symbol is for NO or REPLACE. Any N means immediate destruction of harness or lanyard.** **Body harness to be inspected monthly and report is to be turned in to Safety Department. User to visually inspect prior to each use.**		**Harness Webbing**	**All Stitching**	**Rivets and Eyelets**	**D-rings & Buckle**	**Body Pad (if applicable)**	**Lanyard**	**Carabineer**	**Fall Warning Tag Intact**	**No Cuts, Corrosion, Burning**	**Overall Condition**
EMPLOYEE NAME	**HARNESS SERIAL #**										

FALL PROTECTION SYSTEMS

SYSTEM	**LOCATION**	**Yes**	***No or Repair* (Take Out of Service)**	**Comments**
Vertical Lifeline				
Horizontal Lifeline				
Warning Lines				
Guard Rails				
Retractable Lanyards				
Hole Covers				
Positioning Devices				

Purpose

The purpose of this program is to provide fire extinguisher procedures to ensure equipment is operable and employees have the knowledge to safely operate in case of a fire incident.

Scope

Applies to all Burnt Mountain Services (the Company) employees and all Company locations.

Responsibilities

The Safety Manager is responsible for developing procedures for the use and care of fire extinguishers and for developing a training program for the proper use of these devices. The Manager is responsible for implementing fire extinguisher training at his location. The shop foremen are responsible for enforcing the provisions of this section of the safety manual. All employees are responsible for following these provisions.

Procedure

Selection and Distribution

Portable fire extinguishers shall be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of the hazard which would affect their use. Fire extinguishers used by this Company are for four classes of fires:

- Class A Fire Extinguishers. Use on ordinary combustibles or fibrous material, such as wood, paper, cloth, rubber, and some plastics. Travel distance for employees to any extinguisher is 75 feet (22.9 m) or less.

- Class B Fire Extinguishers. Use on flammable or combustible liquids such as gasoline, kerosene, paint, paint thinners and propane. Travel distance from the Class B hazard area to any extinguisher is 50 feet (15.2 m) or less.

- Class C Fire Extinguishers. Use on energized electrical equipment, such as appliances, switches, panel boxes and power tools. Travel distance from the Class C hazard area to any extinguishing agent is 50 feet (15.2 m) or less.

- Class D Fire Extinguishers. Use on combustible metals, such as magnesium, titanium, potassium, and sodium. Travel distance from the combustible metal working area to any extinguishing agent is 75 feet (22.9 m) or less.

Labeling Of Fire Extinguishers

Fire extinguishers are to be mounted in easily accessible locations that are indicated by a sign that reads "Fire Extinguisher". Fire extinguishers are to be located so that no employee will ever be more than 75 feet from an extinguisher. No equipment, boxes or product may be placed (even temporarily) in the way of a fire extinguisher. Each fire extinguisher will be assigned a unique number.

Maintenance

All fire extinguishers shall be mounted no higher and no lower than four (4) feet from the floor. All fire extinguishers shall be maintained as follows:

- Fully charged and in operable condition
- Clean and free of defects
- Readily accessible at all times

Inspection, Maintenance and Testing

All fire extinguishers are to be visually inspected by Company employees monthly. All fire extinguishers are to receive an annual maintenance check by certified personnel from a fire extinguisher dealer. Fire extinguishers are to be inspected and re-charged by certified personnel after any use.

Any fire extinguisher that shows a loss of pressure during the monthly inspection will be inspected and re-charged by certified personnel. Completed fire extinguisher inspection logs will be maintained in the safety files and become a part of the safety records. They are to be maintained for 5 years.

Use

In the event of a fire, one employee will get the nearest fire extinguisher and use it to attempt to put the fire out. All other employees in the immediate area will prepare to evacuate if needed. All other employees in the building need to be advised that a fire is in progress.

The employee attempting to extinguish the fire will break the safety seal on the handle and pull the pin. He will then aim his extinguisher at the base of the fire and discharge it with a sweeping motion from side to side; continuing until the fire is out or the extinguisher is emptied.

Remember that a standard fire extinguisher will be emptied in about 10 to 15 seconds. If the fire is not out when the extinguisher has been completely discharged, the employees must evacuate the area.

Training and Education

The purpose of this section is to establish training procedures which are necessary for the proper use and understanding of a fire extinguisher and incipient stage fire fighting. Training will occur prior to initial assignment and at least annually thereafter.

All Company employees will complete the Fore Extinguisher training on an annual basis.

Training Outline

- General principles of a fire
- Hazards employed with an incipient stage fire(s)
- When to "back off' (evacuate) of an incipient stage fire(s)
- General fire principles of a fire extinguisher
- Hazards employed with the use a fire extinguisher
- Use of a fire extinguisher

Retraining

Retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary. Retraining shall be provided for all authorized and affected employees whenever there is:

- An annual basis or
- A change in job assignment or
- The Company has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of fire extinguishers or fire prevention procedures.

Training Documentation

- All training will be documented.
- Documentation will consist of; as a minimum, the employee's name, the trainer's name, the date of the training, and an outline of training provided.

Purpose

The purpose of this program is to establish the minimum first aid supplies, equipment, and actions to properly respond to injuries.

Scope

This program is applicable to all Burnt Mountain Services (the Company) employees while engaged in work at company facilities and/or facilities operated by others.

Responsibilities

- It is the responsibility of the site manager to ensure that first aid kits are provided and maintained.
- All employees are responsible for using first aid materials in a safe and responsible manner.
- The HSE Manager is responsible for corresponding with the Red Cross or an equivalent to keep employee training levels current.

Requirements

Planning

The site manager will:

- Ensure that a minimum of one employee, with a valid certificate, shall be present to render first aid at all times work is being performed if medical assistance is not available within 3-4 minutes.
- Ensure that provisions shall have been made prior to commencement of a project for prompt medical attention, including transportation, in case of serious injury.
- Ensure adequate first aid supplies and equipment are easily accessible when required.
- Ensure that in areas where 911 is not available, the telephone numbers of the physicians, hospitals, or ambulances to be used shall be conspicuously posted.

Medical Response

All minor first aid is to be self-rendered. Because of the risks presented by certain bloodborne pathogens, no one is allowed to tend the minor injuries of another.

In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first aid shall be available at the worksite to render first aid. A valid certificate in first-aid training must be obtained from the U.S. Bureau of Mines, the American Red Cross or equivalent training that can be verified by documentary evidence.

Employees authorized to render first aid will always observe universal precautions. (Universal Precautions means that the aid giver treats all bodily fluids as if they were contaminated).

If 911 is not available refer to the list of posted phone numbers for prearranged medical response providers. All Company authorized first responders shall have a cell phone as a means of communication; otherwise, handheld radios or telephones shall be used as a means of communication.

Supplies and Equipment

First aid supplies shall be easily accessible when required. Always follow the manufacturer's instructions when using the materials in the first aid kit.

All Company first aid kits contain appropriate items determined to be adequate for the environment in which they are used and if on a construction site are stored in a weatherproof container with individual contents sealed from the manufacturer for each type of item.

The Company is responsible for ensuring the availability of adequate first aid supplies and to periodically reassess the availability of supplies and to adjust its inventories. First Aid kits are to be inspected:

- On the first working day of each week to verify that they are fully stocked and that no expiration dates have been exceeded, and
- Before being sent out to each job, and
- Replace any items that have exceeded their expiration dates or that have been depleted.

Where the eyes or body of any person may be exposed to injurious corrosive materials, a safety shower and/or eye wash (suitable facilities) or other suitable facilities shall be provided within the work area. Ensure expiration dates are checked and water used in storage devices is sanitized.

An assessment of the material or materials used shall be performed to determine the type flushing/drenching equipment required. At client job sites, portable or temporary stations must be established prior to the use of corrosive materials.

Transportation

Based on the first responder's assessment of the injuries involved, decide whether the injured requires to be taken directly to a hospital's emergency room, occupational medicine provider or administer first aid on location.

Examples of serious injuries that result in the injured being transported to a medical provider are those resulting in severe blood loss, possible permanent disfigurement, head trauma, spinal injuries, internal injuries, and loss of consciousness. Keep in mind that the needs and wellbeing of the injured are the first priority.

Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulance service shall be provided.

Choices to consider include private automobile, company vehicle, helicopter, crew boat, EMS vehicles including medi-vac helicopters, or any other transportation that can provide safe transportation to the hospital or doctor's office in order to provide medical attention to the injured in the quickest manner without any additional complications or injuries to the injured employee.

Transportation needs must be preplanned and coordinated with the transportation provider prior to an incident requiring such service.

Training

Volunteers or selected employees are trained by the American Red Cross or equivalent in CPR and first aid. Each of these trained and certified employees are equipped with protective gloves and other required paraphernalia.

Purpose

The purpose of this program is to establish requirements for the safe operation and use of Forklifts.

Scope

This program applies to all Burnt Mountain Services employees (the company) who operate a Powered Industrial Truck in the scope of their job duties and assignments. When work is performed on a non-owned or operated site. This document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Authorized Employee – A person, at least 18 years of age and who has completed the company's required safety training for the safe operations of forklifts.

Forklift (Powered Industrial Truck) – Any mechanical device used for the movement of supplies, material or finished product that is powered by an electric motor or an internal combustion engine.

Key Responsibilities

Manager/Supervisor

- Shall ensure that each powered forklift operator is competent to operate a forklift safely, as demonstrated by the successful completion of the training and evaluation program.
- Shall ensure that all forklifts are inspected before each shift and all repairs are made before the forklift is operated.

Employees

- Shall be current on applicable training.
- Operate forklift in accordance with the forklift standards and manufacture requirements.
- Inspect forklift at the start of shift and remove from service if defects are found until they are corrected.
- Operate forklift in a safe manner.

Procedure

General

All approved forklifts shall have a manufactures identification plate attached showing all specifications of the forklift and that the forklift is accepted by a nationally recognized testing laboratory.

Modifications and additions that affect capacity and safe operation shall not be performed without the manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed to reflect the modification or addition.

If the forklift is equipped with front-end attachments other than factory installed attachments, the supervisor shall ensure that the forklift is marked to identify the attachments and show the approximate weight of the forklift and attachment combination at maximum elevation with load laterally centered.

The operator shall see that all nameplates and markings are in place and are maintained in a legible condition.

All forklifts shall be equipped with safety seat belts. All forklifts shall be equipped with a horn, backup alarm, beacon light, headlights, and taillight.

Safety Guards
Forklifts shall be fitted with an overhead rollover cage, as per the manufacturer's specifications.

If the type of load presents a hazard to the operator, the forklift shall be equipped with a vertical load backrest extension, as per manufactures specifications.

Training
Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, and written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee) and evaluation of the operator's performance in the workplace.

All operator training and evaluation shall be conducted by authorized persons who have the knowledge, documented training, and experience to train powered industrial truck operators and evaluate their competence.

Each operator is required to be re-evaluated every three years.

Training shall include the following topics, except in topics for locations where they are not applicable to safe operation of the truck due to type of equipment or facility conditions.

1. Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate,
2. Differences between the truck and the automobile,
3. Truck controls and instrumentation: where they are located, what they do, and how they work,
4. Engine or motor operation,
5. Steering and maneuvering,
6. Visibility (including restrictions due to loading),
7. Fork and attachment adaptation, operation, and use limitations,
8. Vehicle capacity,
9. Vehicle stability,
10. Any vehicle inspection and maintenance that the operator will be required to perform,
11. Refueling and/or charging and recharging of batteries,
12. Operating limitations,
13. Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicles that the employee is being trained to operate,
14. Surface conditions where the vehicle will be operated,
15. Composition of loads to be carried and load stability,
16. Load manipulation, stacking, and unstacking,

17. Pedestrian traffic in areas where the vehicle will be operated,
18. Narrow aisles and other restricted places where the vehicle will be operated,
19. Hazardous (classified) locations where the vehicle will be operated,
20. Ramps and other sloped surfaces that could affect the vehicle's stability,
21. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust,
22. Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation, and
23. The requirements of CFR 1910.178 (Powered Industrial Trucks).

Mandatory refresher training shall be provided when unsafe operations are observed, after an incident, if operating a different vehicle type, changes in conditions or any time the Company feels an operator requires refresher training.

Certification

Only trained and certified operators, including supervisors, are allowed to operate the device (this includes refresher training requirements).

The trainer shall certify in writing that each operator has been trained and evaluated as required.

The certification shall include the name of the operator, the date of the training, the date of the evaluation and the identity of the person(s) performing the training and/or evaluation.

Operations

General

- All operators shall wear a safety seat belt when operating a forklift.
- Forklifts shall not be driven up to anyone standing in front of a bench or other fixed object.
- No person shall be allowed to stand or pass under the elevated portion of any forklift, whether loaded or empty.
- Unauthorized personnel shall not be permitted to operate forklifts.
- No riders or passengers are permitted.
- It is prohibited for arms or legs to be placed between the uprights of the mast or outside the running lines of the forklift.
- When a forklift is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set.
- Wheels shall be blocked if the forklift is parked on an incline.
- A forklift is unattended when the operator is 25 ft. or more away from the vehicle, which remains in view, or whenever the operator leaves the forklift, and it is not in view.
- When the operator of a forklift is dismounted and within 25 ft. of the forklift still in view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, platform, or freight car.

- Forklifts shall not be used for opening or closing freight doors.
- Brakes shall be set, and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading.
- Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor.
- The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.
- There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.
- An overhead guard (cages) shall be used as protection against falling objects.
- An overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- Fire aisles, access to stairways, and fire equipment shall be kept clear.

Traveling

- The operator shall slow down and sound the horn at cross isles and other locations where vision is obstructed.
- If the load being carried obstructs forward view, the operator shall be required to travel with the load trailing.
- The operator shall be required to look in the direction of and keep a clear view of the path of travel.
- Grades shall be ascended or descended slowly.
- When ascending or descending grades in excess of 10 percent, loaded forklifts shall be driven with the load upgrade.
- On all grades the load and load engaging means shall be tilted back if applicable and raised only as far as necessary to clear the road surface.
- Under all travel conditions the forklift shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Stunt driving and horseplay are prohibited.
- The operator shall slow down for wet and slippery floors.
- Dock board or bridge plates shall be properly secured before they are driven over.
- Dock board or bridge plates shall be driven over carefully and slowly, and their rated capacity never exceeded.
- While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion.
- Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

Loading

- Only stable or safely arranged loads shall be handled.

- Caution shall be exercised when handling off-center loads, which cannot be centered.
- Only loads within the rated capacity of the forklift shall be handled.
- Forklifts equipped with attachments shall be operated as partially loaded forklifts when not handling a load.
- A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.
- Extreme care shall be used when tilting the load forward or backward, particularly when high tiering.
- Tilting forward with load engaging means elevated shall be prohibited except to pick up a load.
- An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack.
- When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

Operation of the Truck

- If at any time a forklift is found to be in need of repair, defective, or in any way unsafe, the forklift shall be taken out of service until it has been restored to safe operating condition.
- Fuel tanks shall not be filled while the engine is running.
- The spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- When fueling with Liquefied Petroleum Gas (LPG), precautions and handling requirements set forth in the "Safe Handling of LPG" program shall be followed.
- No forklift shall be operated with a leak in the fuel system.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.
- Operator must verify trailer chocks, supports, and dock plates are secured prior to loading/unloading.

Maintenance and Inspection of Forklifts

- Only authorized personnel shall perform maintenance and make repairs.
- Those repairs to the fuel and ignition systems of forklifts, which involve fire hazards, shall be conducted only in locations designated for such repairs.
- Forklifts in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- Only parts equivalent with those used in the original design shall replace all parts of any forklift requiring replacement parts.
- Forklifts shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts.
- Additional counter weighting of fork trucks shall not be done unless approved by the truck manufacturer.
- Forklifts shall be inspected daily by the operator before being placed in service and shall not be placed in service if the inspection shows any condition adversely affecting the safety of the forklift.

- Inspections shall be made at least daily – prior to each shift. (visual – non documented) Inspection items shall be posted on each forklift. Operators must ensure the vehicle is safe prior to operating.
- Where forklifts are used on a round-the-clock basis, they shall be inspected before each shift.
- Defects when found shall be immediately reported to the supervisor and corrected before operating the forklift.
- When the temperature of any part of any forklift is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the forklift shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Forklifts shall be kept in a clean condition, free of lint, excess oil, and grease.
- Noncombustible agents, where at all possible, shall be used for cleaning trucks.
- Low flash point (below 100 degrees F.) solvents shall not be used.
- High flash point (at or above 100 degrees F.) solvents may be used if precautions regarding toxicity, ventilation, and fire hazard are mitigated with the agent or solvent used.

Purpose

The purpose of this program is to ensure the safe use of hazardous chemical substances and to comply with the requirements of OSHA HCS 2012.

Introduction

In 2012, OSHA revised the Hazard Communication Standard (HCS) to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). As a result, this Hazard Communication Program (HCP) has been revised to comply with the requirements of the OSHA HCS 2012.

It spells out how Burnt Mountain Services (the Company) will inventory chemicals stored and used, and obtain and use Safety Data Sheets, maintain labels on chemical substances and train employees about the hazards of chemicals they are likely to encounter on the job.

Preparation of this program indicates our continuing commitment to safety among our employees in all of our locations.

- Each facility is expected to follow this program and maintain its work areas in accordance with these requirements.
- Employees, their designated representatives, and government officials must be provided with copies of this program upon request.
- In addition to the program, other information required as part of our hazard communication effort is available to workers upon request.
- Asking to see this information is an employee's right.
- Using this information is part of our shared commitment to a safe, healthy workplace.

Scope

This program is applicable to all Company employees who may be exposed to hazardous chemical substances. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Responsibilities

The Company has a written Hazard Communication program. A written hazard communication program shall be developed, implemented, and maintained at each workplace that describes how labels and other forms of warning, safety data sheets, and employee information will be met.

Safety Manager or Designee

The Safety Manager, or designee, is responsible for administering the hazard communication program. This person is also responsible for:

- Reviewing the potential hazards and safe use of chemicals.
- Maintaining a list of all hazardous chemicals and a master file of SDSs.
- Ensuring that all containers are labeled, tagged, or marked properly.

- Providing new-hire and annual training for employees.
- Maintaining training records.
- Identifying hazardous chemicals used in nonroutine tasks and assessing their risks.
- Informing outside contractors who are performing work on Company property about potential hazards.
- Reviewing the effectiveness of the hazard communication program and making sure that the program satisfies the requirements of all applicable federal, state, or local hazard communication requirements.

Employees

- Employees are responsible for following the requirements in the Hazard Communication Program.
- Any employee who transfers any material from one container to another is responsible for labeling the new container with all required information.
- All employees are responsible for learning the requirements of this section and for applying them to their daily work routine.
- Identifying hazards before starting a job.
- Reading container labels and SDSs.
- Notifying the supervisor of torn, damaged, or illegible labels or of unlabeled containers.
- Using controls and/or personal protective equipment provided by the Company to minimize exposure.
- Following Company instructions and warnings pertaining to chemical handling and usage
- Properly caring for personal protective equipment, including proper use, routine care and cleaning, storage, and replacement.
- Knowing and understanding the consequences associated with not following Company policy concerning the safe handling and use of chemicals.
- Participating in Company training.

Procedure

List of Hazardous Chemicals

An inventory/list of hazardous chemicals is maintained. An inventory of all hazardous chemicals used by the Company should be maintained. Each chemical on the list should have the same name as shown on its corresponding Safety Data Sheet (SDS).

The Hazardous Chemical List is updated as necessary and at least annually by the Safety Manager or their designee. The Hazardous Chemical List must be available for review upon request.

Safety Data Sheets (SDS)

Safety Data Sheets (SDS) are obtained for all hazardous chemicals. Chemical manufacturers are responsible for developing SDSs. The Company shall have a SDS for each chemical used.

The purchasing of any potentially hazardous chemical products from any supplier that does not provide an appropriate Safety Data Sheet in a timely fashion is prohibited.

Safety Data Sheets (SDS) are readily available to employees. SDSs shall be maintained and readily accessible in each work area. SDSs can be maintained at the primary work site. However, they should be available in case of an emergency. SDS must be made available, upon request, to employees, their designated representatives, the Assistant Secretary, and the Director.

The Safety Data Sheet must be kept in the SDS library for as long as the chemical is used by the facility.

Electronic access (telephone, fax, internet, etc.) may be used to acquire and maintain SDS libraries and archives.

The Manager is responsible for seeing that the Chemical Inventory List inventory is maintained, is current and is complete. He/she will review the Chemical Inventory List at least annually. When a hazardous material has been permanently removed from the workplace, its SDS is to be removed from the Chemical Inventory List.

SDS' for hazardous materials to which Company employees have been exposed must be maintained after the employee leaves the employment of the Company.

Methods to be Used to Inform Employees of the Hazards of Non-Routine Tasks
The methods that the Company will use to inform employees of the hazards of non-routine tasks (i.e., the cleaning of reactor vessels, etc.) and the hazards associated with chemicals contained in unlabeled pipes in their work areas include:

- Conducting a Job Hazard Assessment (JSA).
- Employees will be advised of methods and special precautions, PPE and the hazards associated with chemicals and the hazards associated with chemicals contained in unlabeled pipes in their work areas.
- In the unlikely event that such tasks are required, the supervisor, or designee, will provide a SDS for the involved chemical.

The Use and Care of Labels and Other Forms of Warning
Containers of hazardous chemicals are labeled. Container labels should contain the following information:

- Product identifier
- Signal word
- Hazard statement
- Pictogram(s)
- Precautionary statement(s), and
- Name, address and telephone number of the chemical manufacturer, importer, or other responsible party.

The Manager will ensure that all hazardous chemicals used or stored in the facility are properly labeled.

Damaged labels or labels with incomplete information shall be reported immediately.

Workplace labels or other forms of warning will be legible, in English and prominently displayed on the container or readily available in the work area throughout each work shift.

If employees speak languages other than English, the information in the other language(s) may be added to the material presented as long as the information is presented in English as well.

The Company will use the GHS labeling system for secondary containers.

Portable containers into which hazardous chemicals are transferred from labeled containers and that are intended for the immediate use of the employee who performs the transfer do not require a label.

If the portable container will be used by more than one employee or used over the course of more than one shift, the container must be labeled.

Received from vendors that are not properly labeled must be rejected.

Pictograms and Hazards

Health Hazard  • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	**Flame**  • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	**Exclamation Mark**  • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder  • Gases Under Pressure	**Corrosion**  • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals	**Exploding Bomb**  • Explosives • Self-Reactives • Organic Peroxides
Flame Over Circle  • Oxidizers	**Environment** (Non-Mandatory)  • Aquatic Toxicity	**Skull and Crossbones**  • Acute Toxicity (fatal or toxic)

Example Label

Multi-Employer Job Sites and/or Multi Work Site
Chemical information is provided to employees on multiple worksites or multiple employer worksites.

The following specific methods for providing other employer information concerning hazardous chemicals at job sites, methods of providing SDS sheets, methods of precautionary measures to be taken and methods of providing information on labeling systems:

Multi-Work Sites
Where employees must travel between work places during a work shift (multi job sites), the written program may be kept at a primary job site. If there is no primary, then the program should be sent with employees.

Multi-Employer Job Sites
A pre-job briefing shall be conducted with the contractor prior to the initiation of work on the site.

- During this pre-job briefing, contractors shall notify the Company and present current copies of Safety Data Sheets and label information for every hazardous chemical brought on-site.
- The Company shall notify and provide the required SDS and label information for all hazardous chemicals the contractor may encounter on the job.
- The facilities labeling system and any precautionary measures to be taken by the contractor during normal conditions and emergencies shall be addressed.
- By providing such information to other employers, the Company does not assume any obligations that other employers have for the safety of their employees.

Training

Employees are provided with information and training on the hazardous chemicals they may be exposed to. Employees shall be provided with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

Additional training will be provided whenever a new chemical hazard is introduced into the work area. To reinforce the importance of handling chemicals properly when performing new or non-routine tasks supervisors will conduct supplementary training as needed.

Formal training will be conducted by facility employees or individuals who are knowledgeable in the Hazard Communication program.

The Hazard Communication Program documented training shall, as a minimum, include:

- Requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 (General Industry) or 29 CFR 1926.59 (Construction Industry).
- Operations in the work area where hazardous chemicals are present.
- Location and availability of the hazard communication program, chemical inventory list and SDSs.
- Methods and observations used to detect the presence or release of a hazardous chemical in the work area, such as monitoring devices, visual appearance or odor of hazardous chemicals when being released.
- Explanation of the labels received on shipped containers.
- Explanation of the workplace labeling system.
- Explanation of the SDS, including order of information and how employees can obtain and use the appropriate hazard information.

The Manager shall ensure records of employee training are maintained.

Implementation Requirement

Per OSHA Requirements

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers
June 1, 2015* December 1, 2015	Compliance with all modified provisions of this final rule, except: The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period to the effective completion dates noted above	May comply with either 29 CFR 1910.1200 (the final standard), or the current standard, or both	Chemical manufacturers, importers, distributors, and employers

Purpose

This program is designed to reduce the risk of work-related heat illnesses.

Scope

This procedure applies to all Burnt Mountain Services (the Company) employees performing work in excessively hot environments.

Definitions

"Acclimatization" means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

"Heat Illness" means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

"Preventative recovery period" means a period of time to recover from the heat in order to prevent heat illness.

"Shade" means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

Requirements

All managers and supervisors are responsible for implementing and maintaining the Heat Illness Program in their work areas.

Provision of Water
Employees shall have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift.

Access to Shade
Employees will be provided with access to shade. Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling. Such access to shade shall be permitted at all times. See definition of “Shade”.

Control Measures
Each work location involved in working in hot environments shall implement measures that must be in place to control the effects of environmental factors that can contribute to heat related illnesses. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

Physical factors that can contribute to heat related illness shall be taken into consideration before performing a task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, clothing color, weight, and breathability.

Supervisors must ensure personal factors that contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat-related illness occurring. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, prior heat-related illness, etc.

Each work site shall develop site specific procedures but shall include the minimum:

- Bring at least 2 quarts per employee at the start of the shift and the supervisors/designated persons will monitor water containers every 30 minutes, and employees are encouraged to report to supervisor/designated person low levels or dirty water.
- Supervisors will provide frequent reminders to employees to drink frequently.
- Every morning there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift during hot weather.
- Place water containers as close as possible to the workers.
- When drinking water levels within a container drop below 50%, the water shall be replenished immediately, or water levels should not fall below the point that will allow for adequate water during the time necessary to effect replenishment.
- Disposable/single use drinking cups will be provided to employees or provisions will be made to issue employees their own cups each day.
- Supervisors will set up an adequate number of umbrellas, canopies, or other portable devices at the start of the shift and will relocate them to be closer to the crew, as needed.
- Non-agricultural employers can use other cooling measures if they demonstrate that these methods are as effective as shade.
- Working hours will be modified to work during the cooler hours of the day, when possible.
- When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.
- Supervisors will continuously check all employees and stay alert to the presence of heat related symptoms.
- Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called and check that these are functional at the worksite prior to each shift.
- Every morning, workers will be reminded about address and directions to the worksite to inform medical responders and emergency procedures.
- All newly hired workers will be assigned a buddy or experienced coworker to ensure that they understand the training and follow the Company procedures.

Training

Training in the following topics shall be provided to all supervisory and non-supervisory employees:

- The environmental and personal risk factors for heat illness

- The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot, and employees are likely to be sweating more than usual in the performance of their duties
- The importance of acclimatization
- The different types of heat illness and the common signs and symptoms of heat illness
- The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms, or signs of heat illness in themselves, or in co-workers
- Company procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary
- Company procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider
- Company procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders

Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in heat. Supervisors will be trained in the Company heat illness emergency response procedures to prevent heat illness and procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

Communication for employees shall be in a form readily understandable by all affected employees.

The Company shall ensure all contractors, subcontractors, staffing companies, etc. employees (including temporary) working outdoors have been trained in heat illness prevention.

Purpose

The purpose of this program is to establish minimum requirements for site specific H2S safety, which will enhance safety in the occupational setting where hydrogen sulfide is present or is recognized as being potentially present.

Scope

This program sets forth accepted practices for Hydrogen Sulfide (H2S). This program applies to all employees of Burnt Mountain Services (the Company), temporary employees, and any subcontractors working for the Company. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

- Contingency Plan - a site-specific written document that provides an organized plan for alerting and protecting the public within an area of exposure following the accidental release of all potentially hazardous atmospheric concentrations of hydrogen sulfide.
- Exposure Level - permissible exposure level of hydrogen sulfide is 10 PPM for an 8-hour, time weighted average.
- Gas Detector Instrument - An instrument/detector to measure levels of H2S. Instruments may be electronically or manually operated.
- Hydrogen Sulfide (H2S) - is an extremely deadly, toxic gas that in its pure state is colorless and is heavier than air. Additionally:
    - It is the second most toxic gas known to man, ranking behind hydrogen cyanide and ahead of carbon monoxide.
    - It has the odor of rotten eggs at low concentrations.
    - In higher concentrations rapidly paralyze the olfactory nerves (sense of smell).
    - Is soluble in water and is flammable and poses a definite threat of explosion.
- Parts Per Million (PPM) - parts of vapor or gas per million parts of contaminated air by volume.
- Personal H2S Monitor - An electronic instrument worn on the person that is set to alarm at 10 PPM of H2S.
- Possible Locations of Where May Be Exposed to H2S During Their Job Functions – While clients are required to notify the Company of known H2S locations the majority of the time H2S can be located in drilling operations, recycled drilling mud, blowouts, water from sour crude wells, blowouts, tank gauging (tanks at producing pipeline and refining operations), during routine field maintenance involving hydrocarbons, tank batteries and wells.
- Venting - the process of discharging a material to the atmosphere through a series of piping and/or venting devices, to facilitate the proper and safe dispersion of toxic materials and to minimize personnel exposure.

Key Responsibilities

Managers and Supervisors

- Shall ensure all employees who are to be assigned to work at locations where hydrogen sulfide is known to be present, or suspected to be present in any concentration, have been trained in hydrogen sulfide safety.
- To ensure employees have been medically approved to wear respirators and trained on the safe use of respirators, including a respirator fit test in accordance with the Company's Respiratory Protection Program.
- To ensure employees have been trained and familiar with personal H2S monitors and gas detection instruments.
- To have been provided with the client's safety procedures.
- To ensure the necessary respiratory equipment to perform the work safely is available.
- That each employee has been provided with a copy of this program.

Employees

- Employees are responsible to comply with this program.

Procedure

Characteristics of Hydrogen Sulfide

The characteristics of hydrogen sulfide include: being toxic, colorless, with the odor or rotten eggs at low concentrations, is soluble in water and is flammable:

- Toxicity – See table below. Hydrogen sulfide is a very dangerous and deadly gas - it is colorless and heavier than air. It can accumulate in low places and in small concentrations. Exposure to certain concentrations of H2S can cause serious injury or death.
- Color - H2S is colorless – you can't see it.
- Odor – it has a strong, pungent, somewhat distasteful odor similar to rotten eggs. In higher concentrations, it can deaden the sense of smell (olfactory nerve). Do Not Rely On Smell To Detect H2s – Rely Strictly On Instruments Designed To Measure Concentrations Of H2S.
- Solubility – H2S mixes with water.
- Flammability – H2S is an explosive gas.
- Toxic By Products – H2S presence can create sulfur dioxide which can ignite without warning

Toxic Effects of Hydrogen Sulfide

CONCENTRATION	PHYSICAL EFFECT
.01 PPM	Can smell odor.
10 PPM	Obvious and unpleasant odor. Beginning eye irritation. ANSI permissible exposure level for 8 hours (enforced by OSHA).
100 PPM	Immediately Dangerous to life or Health (IDLH) Kills smell in 3-15 minutes; may sting eyes and throat. May cause coughing and drowsiness. Possible delayed death within 48 hours.

200 PPM	Kills smell shortly, stings eyes and throat. Respiratory irritation. Death after 1-2 hours exposure.
500 PPM	Dizziness; breathing ceases in a few minutes. Need prompt rescue breathing (CPR). Self-rescue impossible because of loss of muscle control.
700 PPM	Unconscious quickly; death will result if not rescued promptly. 1000 PPM Unconscious at once, followed by death within minutes.

Health Effect of Exposure to Hydrogen Sulfide
Some basic health effects of H2s can include eye irritations, effects nerve centers of the brain which control breathing.

General Requirements
The Company should have a written confined space program per 29 CFR 1910.146 and employees must be aware of site specific contingency/emergency plans and owners contingency plan provisions.

Each person entering a H2S designated location, regardless of the concentration, shall wear a personal H2S monitor that is set to alarm at 10 PPM and shall carry a 5-minute escape pack with them at all times. When the alarms sound the employees must either evacuate the area or don the SCBA's or airline respirators. Employees must evacuate the area, don SCBA's or airline respirators upon sounding of H2S alarm.

When work requires opening any equipment on location that has the potential of releasing concentrations of H2S at 100 PPM or higher, two or more H2S trained persons shall be present and follow these procedures prior to and during the opening of the equipment:

- Each person entering the H2S location shall don a personal H2S monitor prior to entry.
- A tailgate meeting will be held with everyone on location to discuss the work plan, the responsibilities of each person and the site specific contingency plan.
- Each person shall have either a self-contained breathing apparatus (SCBA) or a supplied airline respirator equipped with a 5-minute escape pack, and shall be worn when opening the equipment to the surrounding atmosphere.
- At least one person (per two workers), equipped with a SCBA will act as a stand-by person and may not participate in the work being performed until the atmosphere has been tested and found to have no H2S present in quantities over 10 PPM. The stand-by person shall be stationed up wind, within 100 feet and in clear view of the workers.
- If an operator or other third party provides the stand-by person, it will be the responsibility of the Company manager/supervisor in charge to verify that the person has been H2S, CPR, and First Aid trained, and that they have been provided the proper respiratory equipment.
    - Only Company employees may wear Company respirator equipment.
    - If Company employees use client or other third party equipment, the equipment must be inspected to ensure it is safe to use and meets Company requirements.
- After the equipment has been locked and tagged out (per Company Lockout/Tagout Program), opened, and the H2S concentration has been cleared to less than 10 PPM, the stand-by person will no longer be required. Work may then be performed without respiratory equipment, except for the required 5-minute escape pack.

Safe Work Procedures

- Maintain compliance with permit requirements of the Company and any requirements by the client.
- Verify that proper safety equipment is available, functioning properly and is utilized.
- Check and remain aware of wind conditions and direction.
- Perform a thorough check of the downwind area prior to the start of any potentially hazardous work activity.
- Check for other personnel and ignition sources.
- Ventilate work areas by venting and purging lines and vessels prior to beginning any work activities.
- Keep all non-essential personnel away from work areas.
- Immediately vacate the area when any H2S monitor sounds and do not re-enter without proper respiratory protection.

Required Equipment

The following equipment shall be provided and used as required by this program:

- Methods of detecting H2S by the use of fixed or portable monitors and will alarm at the appropriate permissible exposure limits of 20 PPM for 1910 or 10 PPM for 1926. Personal or area monitors that alarm when PEL exceeds the preset level of 20 PPM for OSHA 1910 or 10 PPM for OSHA 1926 requirements.
- Portable H2S gas testing instrument, either electronic or manual pump operated, capable of testing the suspected concentrations of H2S in the system.
- Each testing instrument must be capable of testing the suspected concentrations of H2S by using the manufacturer's recommended calibrated tube or other means of measuring the concentration of gas.
- Testing instruments shall be calibrated periodically according to the manufacturer's recommendation, and at least annually.
- Calibration kits with regulator for calibrating the personal monitor.
- Calibration gas cylinder for testing the personal monitor.
- Approved self-contained breathing apparatus or airline respirator with escape SCBA should be used with H2S with a 5-minute escape pack, and shall be worn when opening the equipment to the surrounding atmosphere.
- At least one person (per two workers), equipped with a SCBA will act as a stand-by person and may not participate in the work being performed until the atmosphere has been tested and found to have no H2S present in quantities over 10 PPM. The stand-by person shall be stationed up wind, within 100 feet and in clear view of the workers.
- If an operator or other third party provides the stand-by person, it will be the responsibility of the Company manager/supervisor in charge to verify that the person has been H2S, CPR, and First Aid trained, and that they have been provided the proper respiratory equipment.
    - Only Company employees may wear Company respirator equipment.
    - If Company employees use client or other third party equipment, the equipment must be inspected to ensure it is safe to use and meets COMPANY's requirements.
- Respirator wearers requiring corrective eyewear will be fitted with spectacle kits according to the respirator manufacturer, at no expense to the employee.
- Respirators and their components, including all fittings of hoses, shall not be interchanged, which if done, would violate the approval rating of said respirator or related equipment.

Medical

Each employee shall have completed a medical evaluation by a physician or licensed health care professional to determine the employee's ability to wear a respirator as required by the Company Respiratory Protection Program.

Each employee will successfully complete the medical questionnaire and examination before being allowed to be fit tested with a respirator.

Training

Employees required to work on H2S locations will be trained. Training shall consist of:

- Physical and chemical properties of H2S
- Sources of H2S
- Human physiology
- Signs and symptoms of H2S exposure, acute and chronic toxicity
- Symptomatology of H2S exposure
- Medical evaluation
- Work procedures
- Personal protective equipment required working around H2S
- Use of contingency plans and emergency response
- Burning, flaring, and venting of H2S
- State and federal regulatory requirement
- H2S release dispersion models
- Rescue techniques, first aid, and post exposure evaluation
- Use, care, and calibration of personal monitors and gas detection instruments
- Respirator inspections and record keeping

Each respirator wearer will complete Respiratory Protection training and a Respirator Fit Test, after being given a medical clearance and before entering any H2S location.

Employees and other personnel visiting H2S locations who will not be involved in the work shall be briefed on the following prior to entering:

- Site-specific sources of H2S
- Health hazards of H2S
- Routes of egress
- Emergency assembly areas
- Applicable alarm signals and
- How to respond in the event of an emergency.

Rescue

Each employee, when working alone in a H2S designated area, shall plan and become familiar with self-escape procedures to include being aware of wind direction and obstacles to avoid when exiting the work area.

Employees working under the buddy system shall pre-plan an emergency rescue and/or evacuation procedure prior to commencing work, and arrange for periodic communications with his/her supervisor, and document the discussion on each employee’s service report.

Respirator Inspections
Respirators will be inspected by the employee before each use and at least monthly.

The inspection will include the respirator face piece, hose, harness, 5minute escape pack cylinder and all other components of the air supply systems used.

Monthly inspections will be documented as per Company Respiratory Protection Program, and will be kept on file at the local office for review during safety audits.

Monitors and Gas Detector Calibration
Each personal H2S monitor shall be calibrated at least monthly and the results recorded on the calibration log.

Those monitors that do not require calibrating shall be bump checked with calibration gas to test alarms, monthly or prior to use if not used routinely.

Purpose

The purpose of this program is to have effective procedures for reporting incidents to follow OSHA requirements.

Responsibilities

Individual responsibilities for reporting incidents to OSHA must be pre-determined and assigned prior to incidents.

Safety Manager

- Ensures incidents are reported to OSHA as required by regulation.

Site Manager and Supervisors

- Ensures incidents are reported to the Safety Manager.

Employees

- Immediately report any actual or suspected injury, job related illness, spill, or damage to any property to their immediate supervisor. If their immediate supervisor is not available, the employee is then to immediately notify the project manager.

Procedure

Incident Reporting Matrix

The Incident Reporting Matrix identifies, based on type of incident, who within corporate management shall be verbally notified and when. It also specifies which type of report from the field shall be completed based on the type of incident.

INCIDENT NOTIFICATION MATRIX

TYPE OF INCIDENT	WHO TO NOTIFY VERBALLY	WHEN	INCIDENT REPORT FORM
Minor First Aid	Safety Manager, Project Manager, Client If Required	ASAP	Yes
In-patient Hospitalization Amputation Loss of an Eye	President then Safety Manager, OSHA	Within 24 hours to OSHA	Yes
Fatality	President, then Safety Manager, OSHA	Within 8 hours to OSHA	Yes
Workman's Comp	Workman's Comp Carrier	1 business day	Employer's Report of Injury

OSHA defines "in-patient hospitalization" as a formal admission to the in-patient service of a hospital or clinic for care or treatment. Treatment in an emergency room only is not reportable.

OSHA defines "amputation" as the traumatic loss of all or part of a limb or other external body part. This would include fingertip amputations with or without bone loss; medical amputations resulting from irreparable damage; and amputations of body parts that have since been reattached. If and when there is a health care professional's diagnosis available, Burnt Mountain Services (the Company) should rely on that diagnosis. An occupational physician diagnosis is considered more authoritative than a non-occupational caregiver.

Main Guidelines of OSHA Reporting

OSHA is notified within 8 hours of a work-related fatality. Within eight (8) hours after the death of any employee as a result of a work-related incident, the Company must report the fatality to the Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

All work-related incidents involving severe injuries are reported to OSHA within 24 hours. Within twenty-four (24) hours after the in-patient hospitalization of one or more employees or an employee's amputation or an employee's loss of an eye, as a result of a work-related incident, the Company must report the in-patient hospitalization, amputation, or loss of an eye to OSHA.

How severe injuries and/or fatalities are reported to OSHA - the Company must report severe injuries and/or fatalities using one of the following methods:

- by telephone or in person to the OSHA Area Office that is nearest to the site of the incident,
- by telephone to the OSHA toll-free central telephone number, 1-800-321-OSHA (1-800-321-6742),
- or by electronic submission using the reporting application located on OSHA's public web site at www.osha.gov.

Initial Identification/Assessment of Evidence

Initial identification of evidence immediately following the incident could include a listing of people, equipment, and materials involved and a recording of environmental factors such as weather, illumination, temperature, noise, ventilation, etc.

Collection/Preservation and Security of Evidence

Evidence such as people, positions of equipment, parts, and papers must be preserved, secured, and collected through notes, photographs, witness statements, flagging, and impoundment of documents and equipment. Everything shall be dated.

Witness Interviews and Statements

Witness interviews and statements must be collected. Locating witnesses, ensuring unbiased testimony, obtaining appropriate interview locations, and use of trained interviewers should be detailed. The need for follow-up interviews should also be addressed. All items shall be dated.

The final incident investigation report consists of findings with critical factors, evidence, corrective actions, responsible parties, and timelines for corrective action completion.

Preparation of the Written Incident Report

Written incident reports will be prepared and a detailed narrative statement concerning the events. The format of the narrative report may include an introduction, methodology, summary of the incident, Incident Review Team member names, narrative of the event, findings, and recommendations. Photographs, witness statements, drawings, etc. should be included.

The supervisor takes the below steps following an injury incident.

- Provide emergency assistance, as needed, and qualified for
- Secure the area as quickly as possible to retain area in the same condition at the time of the incident
- Notify management by phone per the Incident Notification Matrix
- Identify potential witnesses
- Use investigation tools, as needed (camera, drawings, video, etc.)
- Tag out for evidence any equipment that was involved
- Interview witnesses (including the effected employee) and obtain written, signed statements and email/fax to the Company Safety Manager
- Implement any immediate corrective actions needed

Training

The Company shall train personnel in their responsibilities for incident reporting. Training requirements relative to incident reporting are described below:

- Training frequency will be based on the specific area of responsibility but shall not exceed once every two years.
- Training requirements relative to incident investigation and reporting shall include:
  - Awareness
  - First Responder Responsibilities
  - The Initial Investigation at the Accident Scene
  - Managing the Accident Investigation

Purpose

The purpose of this program is to establish procedures for affixing appropriate lockout/tagout equipment to energy isolating devices and to otherwise disable machines or equipment to prevent unexpected energization, start up or release of stored energy to prevent injury or incident.

Scope

This program covers the servicing and maintenance of machines and equipment where the unexpected energization or startup of the machine or equipment, or the release of stored energy could cause an incident. This program establishes minimum performance requirements for the control of such hazardous energy. When work is performed on a nonowned or operated site, the operator's program shall take precedence, however, this document covers Burnt Mountain Services (the Company) employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Affected employee - An employee whose job requires them to operate or use a machine or equipment on which servicing and maintenance is being performed under lockout/tagout, or whose job requires the employee to work in an area in which such servicing or maintenance is being performed.

Authorized employee - A person that performs lockout/tagout procedures on machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes authorized when that employee's duties include performing servicing or maintenance covered under this program.

Capable of being locked out - An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Energized - Connected to an energy source or containing residual or stored energy.

Energy isolating device - A mechanical device that physically prevents the transmission or release of energy including, but not limited to, the following:

- A manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors and no pole can be operated independently, a line valve, a block and any similar device used to block or isolate energy.
- Push buttons, selector switches and other control circuit type devices are not isolating devices.

Lockout - The placement of a lockout device on an energy isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device - A device that utilizes a positive means, such as either a key or combination type lock, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Normal operation - The utilization of a machine or equipment to perform its intended operation.

Potential Energy Sources - Any source of gas, electrical, mechanical, hydraulic, pneumatic, chemical, gravity, steam, thermal, tension or other energy sources.

Servicing and/or maintenance - Workplace activities such as constructing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines and equipment, where the employee may be exposed to an unexpected energization or startup of the equipment or release of a hazardous energy source.

Setting up - Any work performed to prepare a machine or equipment for performing its normal operation.

Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until tagout device is removed.

Key Responsibilities

Managers and Supervisors

- Responsible to control and enforce this plan and to see that all their employees and contractors that are affected by lockout/tagout procedures, have the knowledge and understanding required for safe application, usage, and removal of all energy controls and devices.
- Ensure employees are trained and comply with the requirements of this program.

Employees

- Employees who are affected by this program are required to attend training on an annual basis.
- Are required to follow the provisions of this program.

Procedure

General

Only an authorized employee or employees performing the servicing or maintenance shall perform lockout or tagout.

Devices

Lockout Device - If an energy source can be locked out a device that utilizes a lock to hold an energy isolating device in a safe position shall be used. Each site shall have the same type of lock as specified by the Company.

Tagout Device – If an energy source cannot be locked out with a lockout device, then a tagout device shall be used. Tagout devices are a warning only level of protection and shall be weather and chemical resistant, standardized in color with clear written warning of hazardous energy, i.e. Do Not Operate, Do Not Start, Do Not Energize, etc. Each site shall have the same style of tags specified by the Company.

Specific Energy Control Procedures

Each manager or supervisor is responsible for developing specific step-by-step shutdown and startup procedures for a particular machine or piece of equipment in their respective area.

- A written, step-by-step isolation procedure for shutdown and startup shall be prepared for each type of machine or piece of equipment.
- This procedure shall include:
    - Equipment number if assigned.
    - Equipment location.
    - Energy Source(s) (i.e. electrical, hydraulic, gas pressure, etc.)
    - Location of isolating controls (i.e. breaker switches, valves, etc.)
    - Quantity of isolating controls
    - Quantity of locks required to isolate the equipment
    - Other hardware required to isolate the equipment (i.e. chains, valve covers, blocks, etc.)
    - List any residual energy required to be dissipated before work begins.

Specific Sequence for Application of Energy Control

1. Notification

Authorized employees must notify all other affected employees of the application and removal of lockout/tagout devices. Notification shall be given before the controls are applied and before they are removed from the machine or equipment.

2. Preparation for Shutdown

Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled and the methods or means to control the energy.

3. Machine or Equipment Shutdown

The machine or equipment shall be turned off or shutdown using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.

4. Machine or Equipment Isolation

All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.

5. Lockout/Tagout Devices and Application

- Each authorized employee shall have the proper number of locks and devices to be able to perform proper lockout/tagout procedures for machines or equipment that they may be working on.

- Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.
- Lockout and tagout devices shall include the name of the individual placing device. Devices shall indicate the identity of the employee applying the device.
- Lockout devices shall be affixed in a manner to hold the energy isolating devices in a safe or off position.
- Tagout devices shall be affixed in a manner that will clearly indicate the operation or movement of isolating devices from the safe or off position.
- Tagout devices used with energy isolating devices with the capability of being locked out shall be fastened at the same point at which the lock would have been attached. If a tag cannot be directly attached to the energy isolation device it shall be located as close as safely as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.
- Each energy source shall be locked out completely isolating the equipment.
- Isolating machines or equipment shall include, but are not limited to:
    - Pumps, compressors, generators, electric distribution, storage tanks, etc.
    - Each type of equipment to be isolated shall have specific procedures for isolation, i.e. for compressors: suction, discharge, power, starting, fuel, dumps shall be closed, locked, and tagged out properly. The blow-down valve shall be opened, locked, and tagged out properly. (NOTE): If compressor has a side stream hooked up, the side stream shall be closed, locked, and tagged out properly.

6. Stored Energy and the Possibility of Reaccumulation

Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe.

If there is a possibility of re-accumulation of stored energy, verification of isolation shall be continued until the servicing or maintenance operation is completed, or until the possibility of such accumulation no longer exists.

7. Verification of Isolation

Prior to starting work on machines or equipment that have been locked or tagged out, the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished.

Procedures for Handling Multiple Groups of Workers Involved in a Group Lockout

A crew of authorized employees may use a group lockout or tagout device. This will afford the group of employees a level of protection equal to that provided by a personal lockout or tagout device. Procedures include:

- A tailgate meeting shall be conducted to review the lockout procedures and other information as required for safe work to continue – all crafts and effected departments shall be involved.
- An authorized employee will isolate the equipment and ascertain the exposure status of individual group members.
- All workers will then place their individual locks on the device's group lockout or tagout device after they have verified the procedure.
- An authorized employee has primary responsibility for a set number of employees working under the protection of a group lockout or tagout device. The authorized employee should ascertain the exposure status of individual group members. Each Company employee or contractor shall attach a personal lockout or tagout device to the group's device while he/she is working and then removes it when finished.

- During shift change or personnel changes, there are specific procedures to ensure the continuity of lockout or tagout procedures. These include:
    - In the event shift or personnel changes occur during maintenance and/or repair activities, the designated Company employee in charge shall take the necessary steps to maintain the continuity of the lockout/tagout protection. This includes maintaining that all provisions in this procedure are adhered to and the transfer of lockout/tagout devices between authorized employees is accomplished.
    - No work shall be allowed to proceed following personnel or shift change unless these requirements are met. The job supervisor must observe that all personnel or shift change locks or tags are properly transferred during the process.
    - Before the last outgoing person is allowed to leave, they must remove their lock (or warning tag) and the incoming worker shall affix their lock or (warning tag) to prevent the lock out device or tag warning device from ever not being locked or warning if a lock out device is not practicable.
    - This also applies to all group lockout tagout situations.
    - This also applies to all contract personnel working on Company or client projects.
    - If any outgoing person leaves the site and their lock/tag is still attached, then follow Removal of Locks guidelines below.

Release from Lockout/Tagout

When servicing or maintenance is completed or when Lockout / Tagout devices must be temporarily removed, the equipment requires testing and the machine or equipment is ready for testing or to return to normal operating conditions, the following steps shall be taken, in this order:

- Check the machine or equipment and the immediate area surrounding the machine or equipment to ensure that all nonessential items such as tools have been removed and that the machine or equipment components are operationally intact.
- Check the work area to ensure that all personnel have been safely positioned or removed from the area.
- Remove the Lockout/Tagout device
- Energize and proceed with testing
- Deenergize and reapply control methods including Lockout / Tagout devices
- Document the procedure by use of the completed isolation log and provide to supervisor for filing.

Removal of Locks

The authorized employee who applied the lock shall be the one to remove their lock. However, after all work has been completed, certain conditions may arise which prohibit this person from being present to remove the lock.

The following procedures shall be followed to allow for the removal of a lock that another person has applied:

- Every effort shall be made to contact the authorized employee who applied the lock to obtain the key(s).
- If the key(s) cannot be made available, the employee who requests removal of the lock shall contact their supervisor.
- The supervisor shall verify that every effort was made to contact the original authorized employee who applied the lock and to obtain the key(s).
- The employee removing the lock shall note on the Service Report that the “lock(s) were removed with permission by supervisor.”

- All reasonable efforts will be made by the supervisor to notify that employee their lock has been removed, ensuring that the authorized employee has this knowledge before they return to work.
- If the equipment is client owned, the supervisor or employee requesting to remove the lock(s) shall contact the client to get the lock removed. Clients must remove their lock(s).
- NOTE: Company employees shall not remove any client locks.

Contractors
Contractors performing lockout procedures on Company property shall comply with this procedure. Contractors shall supply their own locks. the Company shall initially lockout the Company machines and equipment before the contractor will be allowed to apply their own lock in addition to the Company's device.

Periodic Inspections of the Energy Control Procedure
Periodic inspections of the energy control procedure are conducted and documented at least annually to ensure procedures and requirements are being followed. Periodic inspections of the energy control procedure must be conducted at least annually to ensure that the procedure is being followed.

The Company Safety Manager or their designee performs the inspection (it must be someone other than those actually using the lockout/tagout in progress). The inspector will produce a certified review of the inspection including date, equipment, employees, and the inspection shall be documented. They will verify that:

- Each authorized and/or affected employee has been trained as required.
- Any new equipment added has specific lockout procedures developed and documented.
- Current procedures are adequate for performing complete isolation of equipment and resulting in a zero-energy state.
- A copy of the audit shall be maintained on file at the manager's/supervisor's office.

EMPLOYEE TRAINING

The training must include recognition of hazardous energy sources, type, and magnitude of energy available, methods and means necessary for energy isolation and control.

Each authorized employee shall receive adequate training.

All affected employees are instructed in the purpose and use of the energy control procedure.

Any other employees whose work operations are or may be in an area where energy control procedures may be utilized are instructed in the purpose and use of the energy control procedure.

Additional training includes:

- The purpose and use of energy control procedures.
- When tagout systems are used, employees shall also be trained in the following limitations of tags:
    - Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.

- When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated in any way.
- Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
- Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
- Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
- Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

Retraining

Retraining shall be conducted whenever a periodic inspection reveals, or whenever the Company has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

Retraining is required when there is a change in job assignments, in machines, a change in the energy control procedures, or a new hazard is introduced.

The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

Training Documentation

The Company shall certify that employee training has been accomplished and is being kept up to date. All training and/or retraining must be documented, signed, and certified.

SPECIFIC EQUIPMENT LOCKOUT PROCEDURES

Department_____

Equipment No._____

Energy Source_____

Procedure for Shutdown and Isolation:

(List number of steps required to isolate machine or equipment - write N/A on lines not used or add additional steps if necessary)

STEP NO.

1._____
2._____
3._____
4._____
5._____
6._____
7._____
8._____
9._____
10._____

Additional Information:_____
_____
_____
_____

Prepared By:_____ Date:_____

(This procedure to be communicated to all authorized and affected employees and kept on file at location of machine or equipment)

SAMPLE TAG


DANGER
DO NOT OPERATE
This Lock/Tag may only be removed by:
Name: _____
Date: _____
White letters in a Red oval
Field of Red and White diagonal stripes

ISOLATION LOG

Date of Isolation:

Description of Work:

List of Equipment out of Service:

Necessary Requirements of Clear Isolation:

Authorized Employee Signature: _____

Person Continuing Work Signature: _____

Locks/Tags for GROUP LOCKOUT or Multiple Locks/Tags

Lock # or Tag	Date Installed	Date Removed	Print Name (for Group Lockout)	Signature

(If additional space is needed, please attach an additional page)

ANNUAL AUDIT OF THE CONTROL OF HAZARDOUS ENERGY PROGRAM

I certify that an audit of the Company "Control of Hazardous Energy" Program was conducted, and that each employee has been trained in the recognition and procedures to lockout equipment they may be required to work on or may be affected by.

I further acknowledge that the current procedure is adequate to safely lockout equipment in this department for servicing and maintenance.

Department: _____

Manager (or representative): _____

Date: _____

Original to file: _____

Purpose

Burnt Mountain Services (the Company) is committed to providing a safe and healthy working environment for all employees. Musculoskeletal disorders (MSD) account for a majority of reported injuries and we must minimize the risk and incidence of MSDs. To achieve this goal, the Company requires each worksite to establish and maintain a MSD, Lifting and Handling Loads Program with the following elements:

- Ongoing training of management, supervisors, and employees (including new hires) on MSD awareness hazards and control measures
- Training of specialized staff (designated Company Representative, JHSC members) on MSD hazard assessment and control measures
- Tracking of MSD statistics
- MSD hazard identification and assessment (see MSD Hazard Identification form)
- Control of MSD hazards through the application of engineering and/or administrative controls
- Proactively integrating ergonomics principles into workplace design and work techniques
- A realization that personal protective equipment may only be used as a substitute for engineering or administrative controls if it is used in circumstances in which those controls are not practicable.

Key Responsibilities

Company Safety Manager
Develops local Lifting and Handling Loads Programs for all worksites in accordance with this procedure and ensures all employees are aware of the requirements of the local Lifting and Handling Loads Program.

- Communicate, promote, and support the MSD, Lifting and Handling Loads Program.
- Conduct MSD training sessions and/or provide MSD training materials.
- Maintain records of MSD training that they provide in a manner that supports accuracy and ease of access for monitoring purposes.
- Monitor corrective actions taken as identified on incident reports.
- Support supervisors and the worksite JHSC in the Lifting and Handling Loads Program process.
- Assist in the investigation of MSD incidents to address injury hazards.
- Bring to the attention of Company management any MSD hazards identified during their investigations, audits, or inspections.
- Ensure distribution and awareness of MSD Hazard Identification Forms.
- Provide input into purchasing specifications for new tools, equipment and furniture as needed to reduce MSD hazards.
- Provide input into the development of safe work procedures to reduce MSD hazards.

Worksite Manager
Responsible for the implementation and maintenance of the Lifting and Handling Loads Program for their facility and ensuring all assets are made available for compliance with the procedure. He or she will also:

- Ensure that all worksite departments implement and maintain the provisions of the Lifting and Handling Loads Program.
- Manual lifting equipment such as dollies, hand trucks, lift-assist devices, jacks, carts, hoists must be provided for employees. Other engineering controls such as conveyors, lift tables, and workstation design should be considered.
- Use of provided manual lifting equipment by employees must be enforced.

Employees

- Shall attend all MSD related training for the task they are performing.
- Practice MSD prevention strategies as per MSD training.
- Comply with safe work procedures.
- Correctly use the equipment provided by the Company, according to manufacturers' recommendations.
- Report to the supervisor any unsafe acts, unsafe tasks, unsafe conditions or equipment problems that create MSD hazards.
- Report any MSD incidents to the supervisor and cooperate in the investigation process.

Procedure

Worksite Assessment
Before manual lifting is performed, a hazard assessment must be completed. The assessment must consider size, bulk, and weight of the object(s), if mechanical lifting equipment is required, if two-man lift is required, whether vision is obscured while carrying and the walking surface and path where the object is to be carried. The assessment shall also include:

- Use of the MSD Hazard Identification form contained within this procedure
- Physical Demands
    - Neck Back Shoulder Wrist
    - Hand
    - Knee Ankle/
    - Feet
- Force Required and Working Distance
    - Do employees push, pull, lift, lower, or carry objects that are too heavy or require too much force; away from the center of the body or in a jerky or twisting manner?
- Work Postures
    - Is the back curved too much or in a stooped position?

  - Is the back twisted during movements?
  - Is the neck bent or twisted?
  - Are the arms away from the body?
  - Are the wrists flexed, extended, or pinched positions?
- Repetitive Use of Similar Muscles
  - Do employees perform movements over and over in the same way?
- Static Muscle Use and Duration
  - Do employees hold any of the above work postures for > 20 sec.?
  - Stand for long periods with their knees locked?
  - Stand in one position without moving or stretching?
- Contact Stress
  - Do employees put localized pressure on any part of their body?
- Workspace Layout and Conditions
  - Are there working heights, reaches in workspace, equipment, tool design, storage conditions, etc., that cause or contribute to employees experiencing any of the physical demands risk factors?
  - Also consider seating, floor surfaces, the characteristics of objects handled, including size and shape, load condition and weight distribution, and container as well as tool and equipment handles.
- Organization of Work
  - Are there work processes, monotonous job tasks, work recovery cycles, task variability, work rate, machine paced tasks or peak activity demands that cause or contribute to rushing, frustration, fatigue, or other visible signs of stress?
- Environmental Conditions
  - Are employees exposed to poor lighting, vibration, cold or hot air/wind/water?

Work Controls

The Company must implement control measures to eliminate, minimize or reduce, so far as is reasonably practicable, the risk of musculoskeletal injury to the worker.

Handling Heavy or Awkward Loads
The Company will take all practicable means to adapt the heavy or awkward loads to facilitate lifting, holding, or transporting by workers or to otherwise minimize the manual handling required. Those include:

- Where use of lifting equipment is impractical or not possible, two-man lifts must be used.
- All loads carried on handcarts shall be secured.
- All awkward type loads shall be secured to prevent tippage.
- Additional methods include:

- reducing the weight of the load by dividing it into two or more manageable loads
- increasing the weight of the load so that no worker can handle it and therefore mechanical assistance is required
- reducing the capacity of the container
- providing hand holds
- team lift the object with two or more workers
- improve the layout of the work process to minimize the need to move materials
- reorganize the work method(s) to eliminate or reduce repeated handling of the same object
- rotate workers to jobs with light or no manual handling
- use mobile storage racks to avoid unnecessary loading and unloading.

Incidents and Injuries
If an employee reports symptoms of a MSI, the Company will:

- Musculoskeletal injuries caused by improper lifting must be investigated and documented. Incorporation of investigation findings into work procedures must be accomplished to prevent future injuries.
- Injuries must be recorded and reported as required by 29 CFR Part 1904.

Review & Updating Lifting and Handling Loads Program

- Supervision must periodically evaluate work areas and employees' work techniques to assess the potential for and prevention of injuries. New operations should be evaluated to engineer out hazards before work processes are implemented.

Training

The Company shall ensure that a worker who may be exposed to the possibility of musculoskeletal injury is trained in specific measures to eliminate or reduce that possibility. The training shall include:

- General principles of ergonomics,
- Recognition of hazards and injuries,
- Procedures for reporting hazardous conditions, and
- Methods and procedures for early reporting of injuries.

Additionally, job specific training will be given on safe lifting and work practices, hazards, and controls.

Purpose

The purpose of this Medical Surveillance Program is to ensure the health and safety of employees by identifying and mitigating occupational health risks through regular medical examinations and monitoring, in compliance with OSHA standards for both the General Industry (29 CFR 1910) and Construction Industry (29 CFR 1926).

Scope

This program applies to all employees who are exposed to hazardous substances, noise, respirable crystalline silica, asbestos, lead, or any other regulated substances or conditions as specified by OSHA. It covers the requirements for both General Industry and Construction Industry operations.

Key Responsibilities

- **Program Administrator**: The Program Administrator is responsible for implementing, managing, and maintaining the Medical Surveillance Program. This includes scheduling medical examinations, ensuring compliance with OSHA standards, and maintaining accurate records.
- **Supervisors/Managers**: Supervisors and managers are responsible for identifying employees who require medical surveillance, ensuring their participation, and coordinating with the Program Administrator.
- **Employees**: Employees are responsible for participating in scheduled medical examinations, reporting any symptoms or conditions that may be work-related, and complying with all program requirements.

Medical Surveillance Requirements

A. General Industry (29 CFR 1910)

1. **Respiratory Protection (1910.134)**:
   - Medical evaluations must be provided to employees required to wear respirators.
   - A physician or other licensed healthcare professional (PLHCP) must assess the employee's ability to wear a respirator through a medical questionnaire and/or examination.
2. **Hazardous Waste Operations and Emergency Response (HAZWOPER) (1910.120)**:
   - Medical surveillance is required for employees exposed to hazardous substances or engaged in emergency response operations.
   - Baseline, periodic, and termination medical examinations must be conducted.
3. **Asbestos (1910.1001)**:
   - Medical surveillance is required for employees exposed to asbestos above the permissible exposure limit (PEL).
   - Initial, periodic, and exit medical examinations must be provided.
4. **Lead (1910.1025)**:
   - Medical surveillance is required for employees exposed to lead at or above the action level.

- Baseline, periodic, and exit medical examinations are mandatory.

5. **Benzene (1910.1028)**:
   - Medical surveillance is required for employees exposed to benzene at or above the action level.
   - Initial, periodic, and termination examinations are required.
6. **Other Specific Substances**:
   - Medical surveillance may be required for employees exposed to other hazardous substances such as formaldehyde, ethylene oxide, and chromium (VI).

B. Construction Industry (29 CFR 1926)

1. **Respiratory Protection (1926.103)**:
   - Medical evaluations must be provided to employees required to wear respirators.
   - Evaluation includes a medical questionnaire and/or physical examination conducted by a PLHCP.
2. **Asbestos (1926.1101)**:
   - Medical surveillance is required for employees exposed to asbestos above the PEL.
   - Medical examinations must be provided prior to assignment, annually, and at termination.
3. **Lead (1926.62)**:
   - Medical surveillance is required for employees exposed to lead at or above the action level.
   - Baseline, periodic, and termination examinations must be provided.
4. **Silica (1926.1153)**:
   - Medical surveillance is required for employees exposed to respirable crystalline silica at or above the action level.
   - Initial, periodic (every three years), and termination medical examinations must be provided.
5. **Noise (1926.52 and 1926.101)**:
   - Hearing conservation programs must include medical surveillance for employees exposed to noise at or above the action level.
   - Audiometric testing must be conducted annually.
6. **Hazardous Waste Operations and Emergency Response (HAZWOPER) (1926.65)**:
   - Medical surveillance is required for employees involved in hazardous waste operations or emergency response.
   - Baseline, periodic, and exit medical examinations must be provided.

Medical Examinations and Procedures

- **Initial/Baseline Examination**: A comprehensive health evaluation must be conducted before the employee starts working in a position that requires medical surveillance.
- **Periodic Examinations**: Ongoing health monitoring must be conducted at regular intervals as

specified by OSHA standards (e.g., annually or every three years).

- **Exit Examination**: A final medical examination must be conducted when an employee leaves a position that required medical surveillance.
- **Additional Examinations**: Supplemental examinations may be required if an employee shows symptoms related to occupational exposure, experiences an incident, or if recommended by the PLHCP.

Recordkeeping

- **Medical Records**: All medical examination results and related records must be maintained for the duration of employment plus 30 years, as required by OSHA (29 CFR 1910.1020).
- **Access to Records**: Employees have the right to access their medical records upon request.
- **Confidentiality**: All medical records are confidential and must be stored securely to protect employee privacy.

Training and Communication

- **Training**: Employees covered by the Medical Surveillance Program must receive training on the potential health risks associated with their job tasks, the purpose of medical surveillance, and their rights under OSHA regulations.
- **Communication**: Information regarding the Medical Surveillance Program must be communicated to all affected employees, and they must be informed of any updates or changes to the program.

Program Evaluation and Review

- **Annual Review**: The Program Administrator must review the Medical Surveillance Program annually to ensure compliance with OSHA standards and effectiveness in protecting employee health.
- **Continuous Improvement**: Recommendations for program improvements must be implemented promptly to address any identified deficiencies or emerging health risks.

Compliance and Enforcement

- **Compliance**: Strict adherence to this program is mandatory for all employees. Non-compliance may result in disciplinary action, up to and including termination.
- **OSHA Inspections**: The company will cooperate fully with OSHA inspections related to medical surveillance and provide all requested documentation and access.

Purpose

The purpose of this program is to prevent exposure to naturally occurring radioactive materials (NORM) when NORM is present. Different types of radionuclides that may be present can include thorium, radium or radon.

Scope

The operator's program shall take precedence; however, this document covers employees and contractors who enter contaminated vessels or work on contaminated equipment which has been determined to contain levels of technologically enhanced naturally occurring radioactive material (TENORM) and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

NORM – Naturally Occurring Radioactive Material – radioactive isotopes that occur naturally in the environment.

TENORM – Technologically Enhanced Naturally Occurring Radioactive Material - naturally occurring radioactive materials that have been concentrated or exposed to the environment through human activity.

Responsibilities

The NORM program shall be administered by the Safety Manager. The responsibilities of the NORM program administrator shall be:

- To inform the organization of changes in NORM requirements.
- Administer and maintain the written NORM program.
- To ensure the safety of operating personnel by providing guidance and direction.

Supervision shall obtain information regarding the presence of TENORM in the workplace; ensure employees are fully trained in the hazards present, work procedure, safety precautions, and PPE.

Employees shall understand the hazards, work procedure, safety precautions, use of PPE and be able to perform required actions safely.

Requirement

General

General Statement regarding the origination of NORM

Radiation naturally occurs in our environment from mainly two sources: cosmic rays external to the earth and radioactive materials found in the earth's crust. Low level radioactive scale can be produced in the course of some oil and gas operations. Oil and gas production moves NORM to the surface where it accumulates and is classified as technologically enhanced naturally occurring radioactive material (TENORM). NORM deposits may be found in piping, brine and sand filters, saltwater disposal injection wells and equipment, headers, vessels, pumps and to a lesser extent compressor cylinders, bottles, and piping. Produced water can contain radium 226 and 228 that may precipitate as scale in knockouts and scrubbers. In the gas stream, Radon gas decays to Lead-210, then to Bismuth-

210, Polonium-210, and finally to stable Lead-206. Radon decay elements may occur as a film on the inner surface of inlet lines and compressor components.

Supervision shall receive information from the client regarding TENORM contamination in the facility where work shall commence.

If TENORM is detected and the quantity is sufficient to cause exposure, the work group and the safety department shall develop a specific work-site procedure to control exposure. Work procedures shall contain applicable requirements for time, distance, shielding and decontamination. In addition, the elements and safety precautions listed below shall be contained and followed:

- Where exposures may occur.
- Different types of radionuclides may be present.
- Contaminated equipment that is to be opened will be removed from service, vented, and left idle for a minimum of four hours before work begins.
- Personnel must use time, distance and shielding protection methods.
- Personnel must use proper personal protective equipment (PPE) when entering contaminated vessels or when direct contact with TENORM contamination is possible. If the work creates contaminated dusts, respiratory protection consisting of a half-mask respirator with radioactive particle, or HEPA cartridges, or self-contained breathing apparatus (SCBA).
- Personnel must thoroughly wash their hands and face upon work completion and before eating, drinking chewing gum/tobacco, or smoking. These activities are prohibited within the work area when TENORM work is being performed.
- The number of personnel working in the TENORM areas shall be restricted.
- Contaminated surfaces shall be handled in a wet state.
- Contaminated equipment and personal protection must be disposed of in accordance with approved waste disposal procedures.

Testing

When the presence of TENORM is suspected and the client has not tested, the safety department shall be contacted to arrange testing through a third-party Industrial Hygienist. Analysis of exposure shall be made through the Safety Department in conjunction with an Occupational Health Physicist. Levels will be compared against known existing rates as provided by the host client or owner of the equipment.

Training

Each employee who will work in a TENORM area shall be trained before exposure to TENORM contamination and shall receive refresher training at least annually. Training in TENORM shall follow the lesson plan below:

- Section 1: Introduction: Radioactive Matter
- Objective: To provide information about particles of matter and their relationship to radioactive isotopes.
    - Radiation and Radioactivity Hazards
    - Types of Radiation
      Alpha and beta (origin/hazard/protection from)
      Gamma and x-ray (origin/hazard/protection from)

- Section 2: How To Protect Yourself and Others
- Objective: To relate time, distance, and shielding as methods of reducing radiation exposure.
    - Control of Radiation Exposure
      External exposure - time, distance, and shielding
      Internal exposure - modes of entry into the body
      Biological Effects of Exposure to the Human Body
      Direct effect
      Indirect effect
      Factors that determine what a given dose will cause
      Exposure risks to plant/field personnel

- Section 3: Naturally Occurring Radioactive Material (N.O.R.M.) and Technologically Enhanced Naturally Occurring Radioactive Material (TENORM)
- Objectives:
    - To help the student understand NORM and TENORM
    - To learn Isolation procedures
    - Naturally Occurring Radioactive Material and locations where it can be found
    - The decay scheme of Uranium
    - Discussion on U-238 and its daughter isotopes
    - Technologically Enhanced Naturally Occurring Radioactive Material
      Where and how TENORM occurs
      Hazard identification and protection
    - Isolation Procedures
      Radiation Areas
      Contaminated Equipment
      Storage, Transport and Disposal

- Section 4: Safe Worksite Procedures
- Objective: To teach proper safe protocol before, during, and after the job.
    - Pre-job procedures
      Safety Equipment
      Pre-job safety meeting
      Pre-job checklists
    - During Work
      Safety Procedures (HEPA filters on respirators and limitations)
    - Post-job safety
      Safety Procedures
      Personal/Worker Surveys
      Decontaminating articles - How to properly clean
      Survey and cleaning of the worksite
    - Normal and Emergency Actions and Situations
      Safety Procedures
      Isolation and notification

Purpose

The purpose of this program is to set forth procedures for safe work being performed on or near overhead lines by Burnt Mountain Services (the Company) employees.

Scope

This program applies to all Company employees, temporary employees, and contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Requirements

Before Working on Poles

Before employees are allowed to climb or perform work on poles or towers the structures are capable of sustaining the additional or unbalanced stresses. Before elevated structures, such as poles or towers, are subjected to such stresses as climbing or the installation or removal of equipment, the Company shall ascertain that the structures are capable of sustaining the additional or unbalanced stresses. If the pole or other structure cannot withstand the loads which will be imposed, it shall be braced or otherwise supported so as to prevent failure.

Electrical Personal Protective Equipment

Employees will wear electrical protective equipment or use insulated devices when a pole is set, moved, or removed near an exposed energized conductor. When a pole is set, moved, or removed near an exposed energized overhead conductor, the Company shall ensure that each employee wears electrical protective equipment or uses insulated devices when handling the pole and that no employee contacts the pole with insulated parts of his or her body.

- Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed.
- Equipment shall be maintained in a safe, reliable condition. Such protective equipment shall be periodically inspected and/or tested.
- If the insulating capability of protective equipment may be subject to damage during use, the insulating material shall be protected. (An example might be an outer covering of leather used for the protection of rubber insulating material.)
- Employees shall wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with exposed energized parts.
- Employees shall wear protective equipment for the eyes or face wherever there is danger of injury to the eyes or face from electric arcs or flashes or from flying objects resulting from electrical explosion.
- Each employee shall use insulated tools or handling equipment if they might make contact with conductors or parts. The program shall state that if the insulating capability of insulated tools or handling equipment is subject to damage, the insulating material shall be protected.
- Ropes and handlines used near exposed energized parts shall be nonconductive.

- Protective shields, protective barriers, or insulating materials shall be used to protect each employee from shock, burns, or other electrically related injuries while that employee is working near exposed energized parts. When normally enclosed live parts are exposed for maintenance or repair, they shall be guarded to protect unqualified persons from contact with the live parts.
- Alerting techniques used to warn and protect employees from hazards which could cause injury due to electric shock, burns or failure of electric equipment parts can take the form of safety signs and tags, barricades & attendants).

Protection of Employees from Falling into Pole Holes Which Poles Are to be Placed
To protect employees from falling into pole holes, the holes shall be attended by employees or physically guarded whenever anyone is working nearby.

Tension Stringing and Other Methods
Tension stringing, barriers or other equivalent measures will be used to minimize the possibility of contact with energized power lines or equipment during installation or removal. The Company shall use the tension stringing method, barriers, or other equivalent measures to minimize the possibility that conductors and cables being installed or removed will contact energized power lines or equipment.

Reel Handling Equipment
Reel handling equipment, including pulling and tensioning devices, shall be in safe operating condition, shall be leveled and aligned.

Load Ratings
Load ratings of stringing lines, pulling lines, conductor grips, load-bearing hardware, and accessories, rigging, and hoists may not be exceeded.

Adverse Weather
Work will not be performed if adverse weather conditions make the work unsafe. Work may not be performed when adverse weather conditions would make the work hazardous even after the work practices required by this section are employed.

Signalling
A signal person must be utilized when operating equipment near an overhead line if the operator's view is obstructed. A signal person responsible for giving signals to the operator of equipment or machinery must have an unobstructed view of the operator, signal the operator when the equipment or machinery being operated may come into contact with the electrical line and make all reasonable efforts to notify persons who are not required to be engaged in the work that they are prohibited from entering the worksite, and prevent persons, other than the operator, from touching the equipment or machinery until it is safe to do so.

When it is not possible for the signal person and the operator of the equipment or machinery to have an unobstructed view of each other, the Company must ensure that the signal person and the operator of the equipment or machinery are provided with a suitable means of communication or a person is posted in a location where he or she can see both the signal person and the equipment or machinery, and relays all signals between the signal person and the operator.

Training

- Live line bare-hand work is not allowed to be performed by Company employees.
- Employees will receive training on the contents of this procedure before performing any work on or near overhead lines.
- The Company must train workers who may perform work or operate equipment or machinery near overhead electrical lines.
- Training shall be documented and retained.

Purpose

The purpose of the Personal Protective Equipment section is to set forth the procedures for the use, care, and maintenance of personal protective equipment required to be used by employees for the prevention of injuries.

Scope

Applies to all Burnt Mountain Services (the Company) employees. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

HSE Manager

- Assists in the selection of appropriate PPE. If a task exposes an employee to hazards which cannot be eliminated through engineering or administrative controls, the HSE Manager assists the supervisor and project manager to identify and select PPE suitable for the specific task performed, conditions present, and frequency and duration of exposure. Employees need to give feedback to the supervisor about the fit, comfort, and suitability of the PPE being selected. Employees are provided reasons for selection of PPE.
- Assists supervisor and site managers in assuring all PPE obtained meets regulatory and this procedure's requirements.
- Ensures a certified hazard assessment is completed. The hazard assessment must indicate a determination if hazards are present or are likely to be present, which necessitate the use of PPE. The certifier's name, signature, date(s) should be present on the assessment documents. Sources of hazards include, but are not limited to: hazards from impact/motion, high/low temperatures, chemicals, materials, radiation, falling objects, sharp objects, rolling or pinching objects, electrical hazards, and workplace layout. Certifies in writing the tasks evaluated, hazards found and PPE required to protect employees against hazards and ensures exposed employees are made aware of hazards and required PPE before they are assigned to the hazardous task. Certificate shall include certifier's name, signature, dates and identification of assessment documents.

Managers and Supervisors

- Supervisors and managers shall regularly monitor employees for correct use and care of PPE, and obtain follow-up training if required to ensure each employee has adequate skill, knowledge, and ability to use PPE.
- Supervisors and managers shall enforce PPE safety rules following the guidance of the Company progressive disciplinary procedures and ensure Required PPE Poster is posted properly.

Employees

- Complying with the correct use and care of PPE.
- Reporting changes in exposure to hazardous conditions that might require a follow-up assessment of the task for PPE.
- Reporting and replacing defective or damaged PPE, which shall not be used.

- Wearing of required PPE is a condition of employment.

Procedure

General
PPE is maintained in a sanitary or clean condition. Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, must be provided, used and maintained in a sanitary and reliable condition.

The Company is responsible for employee-owned equipment. Where employees provide their own protective equipment, the Company must assure its adequacy, including proper maintenance and sanitation of such equipment.

Employee owned equipment is NOT permitted, except for safety toe footwear and prescription safety glasses. The Company is still responsible for the assurance of its adequacy, maintenance and sanitation of those two items.

All PPE issued shall be at no cost to the employee. All employees will know and follow the procedures outlined in this Program.

Eye Protection
Employees must use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids or chemical gases or vapors. Eye and Face PPE must comply with ANSI Standard Z87.1-2003 (Z87+), *Occupational and Educational Personal Eye and Face Protective Devices.*

Safety Glasses
Safety glasses, with side shields, that meet ANSI Z-87.1-2003 standards with "high Impact lenses" are required to be worn by all employees, subcontractors, and visitors while on Company property, at all times, as described below:

- At field locations, in shops and warehouses, except in approved, designated, striped safety zones.
- In all yard work zones or by everyone when in the vicinity of loading or unloading equipment, performing mechanic or maintenance work, test stand operations, operating equipment such as forklifts, welding, or any type of work which has the potential to inflict an eye injury.
- In any office, restroom, or any other building while performing any type of work where a potential eye injury may be present.
- Visitors will be provided with visitor glasses. In the absence of approved prescription safety glasses, "Over the glass" type safety glasses or goggles, must be worn over the nonsafety glasses until approved prescription safety glasses are obtained.
- Workers assisting welders must wear absorbent safety glasses that protect the wearer from ultra-violet (UV) and/or infrared rays (IR).
- Dark shaded lens (sunglasses) darker than a # 1 shade is prohibited to be worn indoors unless welding or assisting a welder.
- A doctor must support "exceptions for medical reasons" in writing to exempt safety eyewear requirements.
- Safety glasses are not required:
    - Inside offices.

- Parking lots when traveling from vehicles to and from office buildings by way of main doors that do not pass through shops.

Goggles

- Chemical splash proof goggles shall be worn when handling or mixing liquid chemicals, solvents, paints, etc., and/or as recommended on the Material Safety Data Sheet of the material being handled.
- Dust proof goggles shall be worn when blowing equipment down with air or while performing other jobs where safety glasses are not adequate to prevent airborne particles from entering the openings around the lenses and side shields.

Face Shields

- Full face shields shall be worn over safety glasses when operating hand held or stationery grinders with abrasive or wire wheels, while chipping paint or concrete or, performing jobs where there is the potential for flying objects striking the face and safety glasses or goggles would not provide adequate protection.

Head Protection

Employees must wear protective helmets when working in areas where there is a potential for injury to the head from employee initiated impact or impact from falling or other moving objects. Helmets must comply with ANSI Standard Z89.1-1997 Class E, *American National Standard for Industrial Head Protection* for Type II head protection or be equally effective.

- Employees must wear protective helmets when working in areas where there is a potential for injury to the head from falling objects.
- Hardhats are to be worn at all field, shop and warehouse locations, or where deemed necessary as per each location's PPE Hazard Assessment.
- Hardhats will not be altered in any way.
- Do not paint or apply unauthorized stickers, name plates, etc.
- Do not drill, cut, bend, or apply heat.
- Do not alter the suspension system.
- Hardhats will be inspected by the employee regularly for cracks, chips, scratches, signs of heat exposure (sun cracks), etc.
- Defective hardhats will be replaced immediately.
- Hardhats shall not be placed in rear windows of vehicles where they will be exposed to the sun or become projectiles during an accident.
- A supply of hardhats must be made available to visitors.
- The Company shall provide hardhats.
- Employees will be trained in the use, care and maintenance of head protection equipment.

Hearing Protection

Hearing protection is required to be worn by all employees, subcontractors, and visitors while in posted "High Noise" areas. Refer to the Company Hearing Conservation Program for more information.

Warning signs will be posted in areas known or suspected to have noise levels exceeding 85 dBA either constantly or intermittently.

When signs are not posted, employees shall wear hearing protection when noise caused by machinery, tools, etc., prevents normal conversations to be heard clearly.

Rule of thumb: If you have to yell to be heard, hearing protection is required

Types

- Molded Inserts (ear plugs)
- Canal Caps (head band type)
- Muff, either headband or hard hat mounted Earmuffs and earplugs shall be provided to the employee in sizes and configurations that will be comfortable to the employee.

Care and Maintenance

- Inspect hearing protection prior to each use.
- Hearing protection must be kept clean to prevent ear infections.
- Most earplugs used today are disposable and must be discarded when they become dirty, greasy, or cracked.
- Earmuffs that have deteriorated foam inserts, cracked seals or are defective must be replaced.

Fit

- Due to individual differences, not everyone can wear the same type of hearing protection. A variety of styles may have to be tried before one is found to be comfortable and provide adequate protection.
- Employees shall be instructed how to obtain the proper fit.

Hand Protection

Gloves

- Gloves are required to be worn when performing work, which may expose the hands to extreme temperatures, cuts and abrasions, or exposure to chemicals.
- Welding: Welding gloves made of leather or other heat resistant materials shall be worn when performing arc welding or oxy/gas cutting.
- Chemical: Impervious (chemical resistant) gloves shall be worn when handling chemicals that specify gloves as personal protection equipment when handling.
- Refer to the specific chemical's Material Safety Data Sheet for the correct glove type.
- Persons assigned to working with chemicals, i.e., solvent vats, shall be issued their own individual gloves for hygiene purposes.
- Leather: Leather gloves should be worn when working with sharp materials or when handling rigging equipment.
- Cloth: Cloth gloves should be worn when handling objects or materials, which could cause blisters, splinters, cuts, etc.
- Heat Resistant: Heat resistant gloves shall be worn when handling hot bearings, races, or other materials or objects that have been heated beyond ambient temperatures.
- Insulated: Insulated gloves shall be worn to prevent frostbite in extreme cold climates.
- Glove Inspections
    - Gloves shall be inspected before each use for holes, tears, and worn areas.

- Chemical gloves shall be periodically air tested for pinholes by twisting the cuff tightly, apply low air pressure to expand the glove, and then submersing in water to check for bubbles.
- Defective gloves shall be discarded immediately. Exception: machinists are exempted from wearing gloves while working with rotating machinery.

Foot Protection

Safety footwear shall be worn by all employees with regularly assigned duties at field locations, in shops and warehouses.

- Office workers and visitors who enter these areas on an infrequent basis will not be required to wear foot protection provided they stay clear of the work being performed.
- If required to be in the close proximity of the work, the work will be stopped while visiting the area or safety footwear will be worn.
- Shops, Field Locations, Warehouses and Parts Departments: Leather or equivalent boots, either lace up or pull up, shall be worn.
- The boot must provide ankle protection and have soles designed to protect from punctures with defined heels for climbing ladders.
- Metatarsal guards will be worn when duties present a hazard of equipment or material crushing the foot.
- All safety footwear must meet ANSI Z41-1999 standards.
- Client locations may require safety footwear to be worn by everyone; check with the local supervisor for client requirements before visiting field locations.

Fall Protection

Personal fall protection is required when performing certain elevated jobs in excess of six feet. Consult the Company Fall Protection Program.

Electrical Protection

Consult the Company Electrical Safety Program.

Worksite Hazard Assessment

A written hazard assessment shall be performed. During the hazard assessment a determination if hazards are present or are likely to be present, this necessitates the use of PPE. The following sample hazard sources will be identified:

- High or low temperatures; Chemical exposures (use MSDS for guidance)
- Flying particles, molten metal or other eye, face, or skin hazards
- Falling objects or potential for dropping objects; employee falling from a height of 6’ or more
- Sharp objects; Rolling or pinching that could crush the hands or feet;
- Electrical hazards

Where these hazards could cause injury to employees, personal protective equipment must be selected to substantially eliminate the injury potential. Employees will be notified for the selection and reason.

The results of this assessment shall be communicated to each affected employee and kept at the local office.

Proper Fitting or Sizing of PPE

Consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection. Continued wearing of the device is more likely if it fits the wearer comfortably. Protective devices are generally available in a variety of sizes. Care should be taken to ensure that the right size is selected.

Defective Equipment is Not Used

Procedures must be in place to ensure defective or damaged PPE is not used. PPE that is in disrepair must be discarded or removed from service until repaired.

Monitoring

Supervisors and site managers monitor worksite tasks for changes in, or the introduction of new hazards. If new hazards are discovered, they advise the HSE Manager who then conducts a hazard assessment for appropriate PPE. The HSE Manager monitors the effectiveness of the PPE Procedure and makes recommendations to management to improve the procedure.

Training on the Use of PPE

Training should be given to employees concerning when to wear PPE, what PPE should be worn, how to put on and take off and adjust PPE. The limitations of the PPE and its use, care, and maintenance should also be included in the training.

Retraining on the Use of PPE

Each affected employee must demonstrate an understanding of training received and the ability to use PPE properly. When there is a reason to believe that any employee who has been trained does not have the required understanding and skill or there are changes in the workplace, the employee must be retrained.

PPE Training is Documented

Training shall be documented and records kept at the local office. The training certification shall include:

- Name of employee(s) trained;
- The dates of training; and
- The training content.

Burnt Mountain Services PPE Hazard Assessment Certification Form

Name of work place: Burnt Mountain Services
Work place address: 19240 Hwy 85, Platteville, CO 80651
Work area/s: All Company locations

Conducted by: Don Harding
Date of Assessment: 12/12/2023
Title: HSE Manager
Signature: Don Harding

EYES

Work activities, such as:	Work-related exposure to:	PPE
Abrasive Blasting	Airborne dust	Safety glasses
Grinding	Small particles/ flying debris	Spoggels or face shield
Drilling	Flying particles	Safety glasses
Welding	UV burn to eyes	Welding helmet
Torch cutting	Molten metal/ UV burn to eyes	Deep shade goggles

HEAD

Work activities, such as:	Work-related exposure to:	PPE
Working under overhead falling object hazards	Falling objects	Hard Hat

HANDS

Work activities, such as:	Work-related exposure to:	PPE
Normal construction work	Cuts and scrapes	Leather gloves
Cutting	Punctures	Leather gloves
Welding	Burns	Leather Gloves
Working with tools	Punctures, Cuts	Appropriate gloves
Working with sharp objects	Punctures, Cuts	Appropriate gloves
Working with hot or cold objects	Burnes/ frostbite	Appropriate gloves
Working with chemicals	Frostbite, skin absorption	Hand protection as per SDS

Working with electricity	Shock	Non-conductive gloves/ clothing
Cleaning body fluids	Bloodborne pathogens type illnesses	As per the Bloodborne Pathogens Procedure

FEET		
Work activities, such as:	**Work-related exposure to:**	**PPE**
Normal oil and gas activities/ work	Crushes, punctures, caught between	Appropriate safety shoes

BODY/SKIN		
Work activities, such as:	**Work-related exposure to:**	**PPE**
Normal construction work	Cuts, scrapes, contact, weather exposure(s), fire, explosions	Long sleeve (FR) clothing as appropriate for exposure(s). Jeans (not shorts)
Cutting	Punctures and cuts	Wear pants (No shorts)
Welding	Burns	Appropriate clothing
Working with tools	Cuts, lacerations, burns	Appropriate body protection
Working with power tools/rotating equipment	Snags, catches, contact	Appropriate work clothing (not loose)
Working with hot or cold objects	Burnes, frostbite	FR Clothing, winter clothing
Working with chemicals	Chemical contact or absorption	Protective clothing as per SDS
Working with electricity	Shock	Non-conductive clothing as per Company Electrical procedures
Working w/ flammable liquids or gas	Explosions or fire	FR clothing
Working in weather over 90 degrees	Heat related illness	Light weight FR clothing (conditional)
	Sunburn	Sunscreen (optional)

BODY WHOLE		
Work activities, such as:	**Work-related exposure to:**	**PPE**
Normal construction work	Cuts, scrapes, contact, weather exposure(s), fire, explosions	Long sleeve (FR) clothing as appropriate for exposure(s). Jeans (not shorts)

Working w/ flammable liquids or gas	Explosions or fire	Light breathable clothing (unless atmosphere LEL is IDLH)
Working in weather over 90 degrees	Heat related illness	

LUNGS/ RESPIRATORY SYSTEM		
Work activities, such as:	**Work-related exposure to:**	**PPE**
Work around poisonous gas	Poisonous gas exposure	Appropriate respiratory protection
Work in dusty environment	Dust	Appropriate respiratory protection
Working with chemicals	Depends	Follow SDS PPE requirements
Cutting	Depends	Appropriate respiratory protection
Grinding	Dust	Appropriate respiratory protection
Sanding	Dust	Appropriate respiratory protection
Burning	Smoke	Appropriate respiratory protection
Venting	Air contaminants	Appropriate respiratory protection

EARS/ HEARING		
Work activities, such as:	**Work-related exposure to:**	**PPE**
Generators	Excessive loud noises	Hearing protection
Motors	Excessive loud noises	Hearing protection
Grinding	Excessive loud noises	Hearing protection
Pneumatic equipment	Excessive loud noises	Hearing protection
High pressure gas flow	Excessive loud noises	Hearing protection

The purpose of Process Safety Management is to prevent or minimize consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals in various industries such as refineries, gas plants, etc.
Burnt Mountain Services (the Company) is required to recognize and participate as a contract employer at client locations with PSM Programs in place. The Company as a contractor has certain obligations to fulfill in order to comply with established PSM programs. Contract employer responsibilities are as follows:

- The Company has a responsibility (as the contractor) to train all employees necessary to perform their job. The Company shall ensure that each contract employee is trained in the work practices necessary to safely perform his/her job.
- The Company (the contract employer) shall ensure that each contract employee is instructed in the known potential fire, explosion or toxic release hazards related to his/her job and the process and the applicable provisions of the emergency action plan. The Company shall ensure that each contract employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process, and the applicable provisions of the emergency action plan.
- Training shall be documented. Records which contain the identity of the contract employee, the date of training and the means used to verify that the employee understood the training must be maintained.
- Employee Evaluation Program – All employees will be evaluated to ensure the required training, participation, and knowledge of the client's PSM requirements are completed and documented.
- The Company shall ensure that each contract employee follows the safety rules of the facility including the safe work practices required with 1910.119(f)(4).
- The Company shall advise the host employer of any unique hazards presented by the contract employer's work, or of any hazards found by the contract employer's work.
- Trade secret information and confidentiality of trade secret information - All contract employers must respect the confidentiality of trade secret information when the process safety information is released to them.

Process Safety Information
Company employees shall participate in all as directed client PSM requirements, including:

- Employee Participation;
- Process Hazards Analysis (PHA)
- Training /Employee Evaluation
- Pre-Startup Safety Review (PSSR)
- Hot Work Permits
- Incident Investigation
- Compliance Audits
- Process Safety Information (PSI)
- Operating Procedures
- Contractors
- Mechanical Integrity
- Management of Change (MOC)
- Emergency Planning and Response
- Trade Secrets

Company Duties
The host employer's safe work practices must be followed during operation such as lockout/tagout, confined space entry, opening process equipment or piping and control over entrance to facility. Company employees shall abide by the host employers safe work practices during operations such as lockout/tagout, confined space entry, opening process equipment or piping and controls over entrance to facility.

To comply with 1910.119(f)(4), Company employees are required to complete all required documentation for any permit-required activities.

Hot work permits and hot work shall not be performed until hot work permit is obtained from the employer. Contract employees shall not perform hot work until a hot work permit is obtained from the host employer. The permit shall document that the fire prevention and protection requirements have been implemented prior to beginning the hot work operations.

In the event the Company becomes the sole operator of a facility, the existing PSM Program for that facility may be amended and adopted or, in the absence of a PSM Program, an assessment will be required prior to assuming operating responsibilities.

Reporting Incidents and Near Misses

Company employees must immediately report all accidents, injuries and near misses. An incident investigation shall be initiated within 48 hours. Resolutions and corrective actions must be documented and maintained for 5 years.

Purpose

It is the intention of Burnt Mountain Services (the Company) to provide a respirator protection program that meets or exceeds all federal standards. The Company will attempt to engineer potential harmful vapors and oxygen deficient atmosphere exposure hazards out of the work environment. If engineering control measures are not feasible or during emergency situations with high exposure, then respirators shall be provided which are applicable and suitable for purpose intended.

Scope

This program applies to all Company projects and operations. Employees potentially exposed to airborne contaminants must wear respiratory protection. Respirators are to be used when engineering control measures are not feasible or during emergency situations with high exposure. Respirators shall be provided which are applicable and suitable for purposes intended.

Respiratory Program Administrator

A program administrator has been designated. Overall responsibility for the respiratory protection program is assigned to the Company Safety Manager in order to ensure that specific requirements are followed.

The Administrator must be knowledgeable of the complexity of the program, able to conduct evaluations and have the proper training.

This assignment is made, however, with the understanding that individual supervisors will have to implement and enforce major portions of the program. It is understood that the Program Administrator will report performance problems to the appropriate manager for resolution. The person who will have responsibility for administering all the aspects of this program will be the Project Manager or their designee.

The responsibilities of the Program Administrator will include, but are not limited to:

- Conducting an annual written evaluation of the program. The program evaluation should be completed no later than December 31, of each year.
- Ensuring an adequate supply of respirators, cartridges, and repair/replacement parts. The Program Administrator may delegate this duty but will retain overall responsibility. The person(s) to whom this duty has been delegated is the Project Manager and/or Field Supervisor.
- Respiratory protective equipment must be selected based on respiratory hazards. Hazards must be identified, and NIOSH certified respirators must be selected and provided based on those hazards and factors affecting performance.
- Ensuring that all respirator users have been trained in the use, selection and limitations of the type of respirators they will be using prior to the first time the respirator must be used. While the duty of conducting the training may be delegated, the Program Administrator retains final responsibility for seeing that all employees are appropriately trained.
- Ensuring that all respirator users have been medically evaluated and found fit to use the type of respirators that will be required in their job. The medical evaluation must be completed before an employee can use a respirator.

- Ensuring that all respirator users are fit-tested at least annually and more often if other federal requirements apply.
- Ensuring that respirators are individually issued, are cleaned and sanitized on a regular basis, and respirators are stored in a clean and accessible location. This duty may also be delegated but the Program Administrator retains final responsibility for seeing that it is done.
- Ensuring that respirators are selected based on the hazard that will be encountered. This program describes the basic respirators that will be used at this site and the tasks for which they will be required. In special circumstances, the Program Administrator will contact the corporate health and safety staff for guidance in selecting the correct respirator.
- Ensuring that employee exposure is monitored to assure correct respirator type is used. Exposure monitoring may be delegated to others; however, the Program Administrator has final responsibility of monitoring completion and to request assistance when necessary.
- Ensuring an employee must leave the area if a vapor/gas breakthrough, changes in breathing resistance, and/or leakage of the facepiece occur. Employees must leave the respirator use area if they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.
- Ensuring that the elements of the Respiratory Protection Program for the selection, use, cleaning/maintenance, storage and fit testing of respirators are followed.
- Ensuring that respirator parts are not exchanged between brands of respirators.
- Ensuring medical evaluations, respirators and required training are provided at no cost to the employee.

Medical Evaluation Requirements

General

A medical evaluation must be completed before an employee can use a respirator. The medical evaluation must be confidential, during normal working hours, convenient, understandable and the employee should be allowed to discuss the results with the PLHCP.

The Company may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

Medical Evaluation Procedures

The Company shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire. The medical evaluation shall obtain the information requested by the Medical Questionnaire in the Forms section (or equivalent).

The medical evaluation prior to fit-testing will be confidential, conducted during normal working hours, be at a convenient time and location, be understandable and the employee will be given a chance to discuss the results with the PLHCP.

Supplemental Information for the PLHCP

The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:

- The type and weight of the respirator to be used by the employee;
- The duration and frequency of respirator use (including use for rescue and escape);

- The expected physical work effort;
- Additional protective clothing and equipment to be worn; and
- Temperature and humidity extremes that may be encountered.

The Company shall provide the PLHCP with a copy of the Company Respiratory Protection Program.

Note: When the Company replaces a PLHCP, the Company must ensure that the new PLHCP obtains this information, either by providing the documents directly to the PLHCP or having the documents transferred from the former PLHCP to the new PLHCP. However, OSHA does not expect employers to have employees medically re-evaluated solely because a new PLHCP has been selected.

Medical Determination
In determining the employee's ability to use a respirator, the Company shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
- The need, if any, for follow-up medical evaluations; and
- A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

All recommendations are to be sent to the Company's Safety Manager.

Additional Medical Evaluations
At a minimum, the Company shall provide additional medical evaluations that comply with the requirements of this program if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator;
- A PLHCP, supervisor, or the respirator Program Administrator informs the Company that an employee needs to be re-evaluated;
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee re-evaluation; or
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Work Site Procedures

Each work site where respirators are required to protect the health of the worker shall have work site procedures that follow the guidelines of this program. Specific procedures may also be required by our client which will be followed. The following areas shall be included:

- Identification of specific hazard requiring respiratory protection
- The selection of the appropriate respiratory protection equipment based on the specific hazard and concentration levels, characteristics, etc. Specific brand and models of respiratory equipment to be used shall be identified in the procedures.

- Verification that each user of respiratory protection is qualified (medical approval, current fit test, annual training and demonstrates competency.

Respirator Selection Criteria

The Company provides respiratory equipment to employees at no cost to the employee.

The selection of the respiratory equipment is based on the hazards the employee is exposed to. The Company shall:

- Perform hazard identification,
- Select and provide respirators based on those hazards and factors affecting performance,
- Establish brands and models to be used, and
- Estimate exposures and contaminant information.

Hazard Identification
Due to the many varied work locations, the Company's identification of respiratory hazards will be contained in the various work site specific safety plans/JSAs/JHAs. However, common respiratory hazards that will be encountered include:

- Dust
- Fumes
- Gases
- Chemical particles
- Oxygen Deficiency

Characteristics of Hazardous Operation or Process
- Hot operations: welding, chemical reactions, soldering, melting, melding and burning
- Liquid operations: painting, degreasing, dipping, spraying, brushing, coating, etching, cleaning, pickling, plating, mixing, galvanizing and chemical reactions
- Solid operations: pouring, mixing, separations, extraction, crushing, conveying, loading, bagging and demolition.
- Pressurized spraying: cleaning parts, applying pesticides, degreasing, sand blasting and painting
- Shaping operations: cutting, grinding, filing, milling, melding, sawing and drilling

Gaseous Contaminants
- Inert gases (helium, argon, etc.), which do not metabolize in the body but displace air to produce an oxygen deficiency.
- Acid gases (SO_2, H_2S, HCl, etc.) which are acids or produce acids by reaction with water.
- Alkaline gases (NH_3, etc.), which are alkalies or produce alkalies by reaction with water.
- Organic gases (butane, acetone, etc.), which exist as true gases or vapors from organic liquids.
- Organometallic gases (tetraethyl lead, organo-phosphates, etc.), which have metals attached to organic groups.

Particulate contaminants
- Dusts are mechanically generated solid particulates (0.5 to 10µm)

- Fumes are solid condensation particles of small diameter (0.1 to 1.0 µm)
- Mists are liquid particulate matter (5 to 100 µm)
- Smoke is chemically generated particulates (solid and liquid) of organic origins (0.01 to 0.3 µm)

Selection of Respirator
The following factors shall be taken into account when selecting the proper respirator:

Concentration and Type of Contaminant
The concentration and type of contaminant will determine the model and type of respirator and cartridges/filters or filters to be used. The concentration is based on a sampling of the atmosphere.

Location of Hazardous Area
(Confined Space, nearby contaminants, etc.)

Worker Activity
(Extreme heat, cold, welding hood requirement, etc.)

Types of Respirators

Air-purifying respirators can be either full-face or half masks with mechanical or chemical cartridges to filter dusts, mists, fumes, vapors or gases.

Powered air-purifying respirators use a blower to pass the contaminated air through a filter. The purified air is then delivered into a mask or hood. They filter dusts, mists, fumes, vapors and gases, just like ordinary air-purifying respirators.

Air-purifying respirators cannot be used in oxygen-deficient atmospheres, which can result when another gas displaces the oxygen or consumption of oxygen by a chemical reaction occurs. Oxygen levels below 19.5% require either a source of supplied air or supplied-air respirator protection. Levels below 16% are considered to be unsafe and could cause death. To determine the proper cartridge for air-purifying respirators contact the Company Safety Manager or a qualified on-site safety representative of the client. You should also consult the Safety Data Sheet for the substance that needs to be filtered.

All cartridges are assigned a color designating the type of contaminant they will filter:

White:	Acid gas
Black:	Organic vapors
Green:	Ammonia gas
Yellow:	Acid gas and organic vapors
Purple:	Radioactive materials
Orange:	Dust, fumes, and mists
Olive:	Other gases and vapors

Once the wearer of the respirator can detect an odor, irritation, or taste of the contaminant, the cartridge should be replaced. All cartridges and/or filters shall be changed at the beginning of each shift.

Supplied-air respirators provide the highest level of protection against highly toxic and unknown materials. Supplied air refers to self-contained breathing apparatuses (SCBAs) and air-line respirators. SCBAs have a limited air supply that is carried by the user, allowing for good mobility and fewer restrictions than air-line respirators.

Air-line respirators have an air hose that is connected to a fresh air supply from a central source. The source can be from a compressed air cylinder or air compressor that provides at least Grade D breathing air.

Emergency Escape Breathing Apparatuses (EEBAs) provide oxygen for 5, 10 or 15 minutes depending on the unit. These are for emergency situations in which an employee must escape from environments immediately dangerous to life or health (IDLH).

SCBA (Self Contained Breathing Apparatus)
The Company does NOT allow employees to work in an Immediately Dangerous to Life and Health (IDLH) environment.

In order to maintain the NIOSH/MSHA approval of any respirator, mixing parts from other respirator manufacturers is prohibited. This includes airline hoses, valves, gaskets, cartridges, etc. For example, do not use North cartridges or valve gaskets with an MSA product.

Brand and Models
The Company will make note of the specific brand and model of respirator it is using in the Company Qualitative Respiratory Fit Test Record Sheet. Only the noted brand of respirator should be used in compliance with the conditions of the certification of its Respiratory Protection Program (fit testing model, no mixing of different manufacturer parts, cartridges, filters, etc.).

The specific model will be based on the hazard, concentration of contaminant, oxygen level, work environment and type of work being performed. To aid in the selection process the following will be used to identify the proper North respiratory equipment for the work being performed and hazard that is present.

- NIOSH Pocket Guide to Chemicals
- North Cartridge Selection Guide
- North Respirator Selection Guide

Estimate of Exposures and Contaminant Information
- No employee shall enter an IDLH environment.
- Normal oxygen levels shall be maintained.
- No employee shall be exposed to an atmosphere containing concentrations that would exceed the STEL or PEL for the identified atmospheric hazard.

Respirator Fit Testing

Users of respiratory protective equipment must be fit tested. Employees are required to pass qualitative fit test (QLFT) or quantitative fit test (QNFT) before initial use, if a different respirator is used, and annually thereafter.

Before an employee may be required to use any respirator with a negative or positive pressure tight-fitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. This section specifies the kinds of fit tests allowed, the procedures for conducting them, and how the results of the fit tests must be used.

All respirator users are fit-tested at least annually and more often if other federal requirements apply.

Supplied Air Respirators are required to be fit tested as well.

The Company shall ensure that employees using a tight-fitting face piece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT) as stated in this program.

The Company shall ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model or make) is used, and at least annually thereafter.

The Company shall conduct an additional fit test whenever the employee reports, or the Company's PLHCP, supervisor, or Program Administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

If after passing a QLFT or QNFT, the employee subsequently notifies the Company Program Administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator face piece and to be retested.

The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in this section.

QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less. Half face air filtering respirators may be fit tested with irritant smoke while full face air filtering respirators require Portacount fit testing.

If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half face pieces, or equal to or greater than 500 for tight-fitting full-face pieces, the QNFT has been passed with that respirator.

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator face piece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator face piece.

Quantitative fit testing of these respirators shall be accomplished by modifying the face piece to allow sampling inside the face piece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate face piece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the face piece.

Any modifications to the respirator face piece for fit testing shall be completely removed, and the face piece restored to NIOSH-approved configuration, before that face piece can be used in the workplace.

Fit Test Procedures

The requirements in this section apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator sizes so that the respirator is acceptable to, and correctly fits, the user.

Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.

The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

The test subject shall be instructed to hold each chosen face piece up to the face and eliminate those that obviously do not give an acceptable fit.

The more acceptable face pieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the following points:

- If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.
- Position of the mask on the nose
- Room for eye protection
- Room to talk
- Position of mask on face and cheeks

The following criteria shall be used to help determine the adequacy of the respirator fit:

- Chin properly placed;
- Adequate strap tension, not overly tightened;
- Fit across nose bridge;
- Respirator of proper size to span distance from nose to chin;
- Tendency of respirator to slip;
- Self-observation in mirror to evaluate fit and respirator position.

Use the Fit Test form.

User Seal Check

Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. The test subject shall conduct a user seal check, either the negative or positive pressure seal checks described below:

Positive Pressure Check

Close off the exhalation valve and exhale gently into the face piece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the face piece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

Negative Pressure Check

Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the face piece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the face piece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

The test shall not be conducted if there is any hair growth between the skin and the face piece sealing surface, such as stubble beard growth, beard, moustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed, including glasses.

If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

Test Exercises

Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. If due to medical or health conditions the employee cannot perform the test exercises the fit test shall not be performed and the employee not allowed to use a respirator until all elements of the fit test can be achieved.

The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

The following test exercises are to be performed for all fit testing methods prescribed in this procedure:

- Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.
- Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.
- Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
- Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
- Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject shall read from the Rainbow Passage

Rainbow Passage

> "When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow." Continue to read for one minute.

- Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)
- Jogging in place. The test subject shall jog in place being careful to be aware of their surroundings.
- Normal breathing. Same as exercise (1).

Qualitative Fit Test (QLFT) Protocols

General

The Company shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order. The Company shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

Irritant Smoke (Stannic Chloride) Protocol

This qualitative fit test uses a person's response to the irritating chemicals released in the ``smoke'' produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

General Requirements and Precautions. The respirator to be tested shall be equipped with high efficiency particulate air (HEPA) or P100 series filter(s).

Only stannic chloride smoke tubes shall be used for this protocol. No form of test enclosure or hood for the test subject shall be used.

The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Care shall be taken when performing the sensitivity screening checks that determine whether the test subject can detect irritant smoke to use only the minimum amount of smoke necessary to elicit a response from the test subject.

The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

- The test operator shall break both ends of a ventilation smoke tube containing stannic chloride and attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute, or an aspirator squeeze bulb. The test operator shall cover the other end of the smoke tube with a short piece of tubing to prevent potential injury from the jagged end of the smoke tube.
- The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is performed.
- The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall *carefully direct a small amount* of the irritant smoke in the test subject's direction to determine that he/she can detect it.

Irritant Smoke Fit Test Procedure

- The person being fit tested shall don the respirator without assistance, and perform the required user seal check(s).
- The test subject shall be instructed to keep his/her eyes closed if wearing a half face respirator.
- The test operator shall direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the face piece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.
- If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.
- The exercises identified in the Test Exercises of this procedure shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.
- If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire sensitivity check and fit test procedure.
- Each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation) shall be given a second sensitivity screening check, with the smoke from the same smoke tube used during the fit test, once the respirator has been removed, to determine whether he/she still reacts to the smoke. Failure to evoke a response shall void the fit test.

- If a response is produced during this second sensitivity check, then the fit test is passed. The glass tube shall be disposed of properly.

Quantitative Fit Test (QNFT) Protocols

Using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a face piece to quantify the respirator have been demonstrated to be acceptable to OSHA.

The Company shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

The Company shall ensure that QNFT equipment is kept clean and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

Portacount Fit Test Requirements

- Check the respirator to make sure the respirator is fitted with a high-efficiency filter and that the sampling probe and line are properly attached to the face piece.
- Instruct the person to be tested to don the respirator for five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This individual shall already have been trained on how to wear the respirator properly.
- Check the following conditions for the adequacy of the respirator fit: Chin properly placed; Adequate strap tension, not overly tightened; Fit across nose bridge; Respirator of proper size to span distance from nose to chin; Tendency of the respirator to slip; Self-observation in a mirror to evaluate fit and respirator position.
- Have the person wearing the respirator do a user seal check. If leakage is detected, determine the cause. If leakage is from a poorly fitting face piece, try another size of the same model respirator, or another model of respirator.
- Follow the manufacturer's instructions for operating the Portacount and proceed with the test.
- The test subject shall be instructed to perform the exercises in the Test Exercises section of this procedure.
- After the test exercises, the test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried.

Portacount Test Instrument

The Portacount will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Pass or Fail message will indicate whether or not the test was successful. If the test was a Pass, the fit test is over.

Since the pass or fail criterion of the Portacount is user programmable, the test operator shall ensure that the pass or fail criterion meets the requirements for minimum respirator performance.

A record of the test needs to be sent to the Safety Manager and kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style, and size of respirator used; and date tested.

Use, Maintenance and Care of Respirators

This section requires The Company to provide for the use, cleaning and disinfecting, storage, inspection, and repair of respirators used by employees. OSHA Appendix B - Respirator Cleaning Procedures (Mandatory) shall be followed.

Use

- The effective facial seal of respiratory protective equipment is vital. Anything that can affect the seal must be prohibited and include facial hair, glasses, etc. Respirators with tight-fitting facepieces shall not be worn by employees who have facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function.
- Each time a respirator is put on a positive and negative pressure check shall be performed.

Cleaning and Storage Requirements

Respirators are properly cleaned and stored. Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition. All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

The respirators shall be cleaned and disinfected at the following intervals:

- Respirators issued for the exclusive use of an employee shall be cleaned and disinfected by the employee as often as necessary to be maintained in a sanitary condition,
- Respirators used in fit testing and training shall be cleaned and disinfected after each use by the Safety Manager or designated person.
- Each individual who is assigned a cartridge respirator is responsible for seeing that the respirator is cleaned, inspected and properly stored.

Cleaning Procedures

- Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- Wash components in warm water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- Rinse components thoroughly in clean, warm, preferably running water. Drain.
- When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in commercially available cleansers of equivalent disinfectant quality. Another alternative is to use wipes containing alcohol that are intended for use with respirators.
- Rinse components thoroughly in clean, warm, preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- Components should be hand-dried with a clean lint-free cloth or air dried. Reassemble face piece, replacing filters, cartridges, and canisters where necessary. Test the respirator to ensure that all components work properly.

Storage and Inspection

- Respiratory equipment shall be stored in a manner to protect it from damage, contamination, temperature extreme, etc.
- Respiratory equipment intended for emergency use shall be stored in an area that is readily accessible and be clearly marked.

The Company shall ensure that respirators are inspected as follows:

- Respirators are inspected before use. All respirators used in routine situations shall be inspected before each use and during cleaning.
- All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations and shall be checked for proper function before and after each use; and emergency escape-only respirators shall be inspected before being carried into the workplace for use.
- A check by the employee of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
- A check of elastomeric parts for pliability and signs of deterioration.

Breathing Air Quality and Use

The Company shall ensure that compressed air accords with the following specifications:

- Compressed breathing air shall meet at least the requirements for Type 1-Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
    - Oxygen content (v/v) of 19.5-23.5%;
    - Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
    - Carbon monoxide (CO) content of 10 ppm or less;
    - Carbon dioxide content of 1,000 ppm or less; and
    - Lack of noticeable odor.

- The Company shall ensure that oxygen is not used in compressed air units.
- The Company shall ensure that oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.
- The Company shall ensure that cylinders used to supply breathing air to respirators meet DOT requirements and that:
    - Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178);
    - Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Type 1--Grade D breathing air; and
    - The moisture content in the cylinder does not exceed a dew point of -50 deg. F (-45.6 deg. C) at 1 atmosphere pressure.

- The Company shall ensure that compressors used to supply breathing air to respirators are constructed and situated so as to:
    - Prevent entry of contaminated air into the air-supply system;

- Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg. C) below the ambient temperature;
- Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer's instructions.

- Have a tag containing the most recent change date and the signature of the person authorized by the Company to perform the change. The tag shall be maintained at the compressor.
- For compressors that are not oil-lubricated, the Company shall ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.
- For oil-lubricated compressors, the Company shall use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.
- The Company shall ensure that breathing air couplings are incompatible with outlets for nonrespirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.

Repairs

The Company shall ensure that respirators that fail an inspection or are otherwise found to be defective are immediately removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

- Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator;
- Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and

Voluntary Use

If an employee chooses to voluntarily wear a respirator when not required by this Program (contaminants do not meet protection standards, odors, etc.) they will be advised of the following in their training:

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for employees.

However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the employee. Sometimes, employees may wear respirators to avoid exposure to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

- Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator’s limitations.
- Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies

respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

- Do not wear your respirator in atmospheres containing contaminants which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
- Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Workplace Monitoring

A program of monitoring potential employee exposures has been implemented through the corporate health and safety department. Project personnel may also be assigned with the task of conducting air monitoring. Direct-reading instruments will also be used in the characterization of potential exposures. All the data collected is used to determine the appropriateness of the respiratory equipment.

Recordkeeping

The Company will establish and retain written information regarding medical evaluations, fit testing and the respirator program. Records of medical evaluations required by this section must be retained and made available in accordance with 29 CFR 1910.1020. The Company shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.

Records will be kept confidentially and maintained on file in the Company corporate office by the Safety Manager.

Program Evaluation

The Company shall conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

The Company shall regularly consult employees required to use respirators to assess the employees' views on this program's effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed and verified include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance); Appropriate respirator selection for the hazards to which the employee is exposed;
- Proper respirator use under the workplace conditions the employee encounters; and
- Proper respirator maintenance.

Training

Employees are provided with training in Respiratory Protection. Training shall address employee knowledge of respirators, fit, use, limitations, emergency situations, wearing, fit checks, maintenance and storage, medical signs and symptoms of effective use and general requirements of the OSHA standard. The training must be provided before requiring the employee to use the respirator.

Retraining
Retraining shall be administered annually, and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete;
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

Company Qualitative Respiratory Fit Test Record Sheet

Note: Employee Must Have Completed Respiratory Protection Training and Passed Airway Exam Prior To Fit Testing

Test Date: _____

Employee Name: _____ **SS#** _____

Test Agent: Irritant Smoke (Stannic Chloride)

Respirator Identification:

Model: North 7700 Series Half Mask Size (circle one): Small Medium Large
Manufacturer: North Safety Products Approval No: 42 CFR 84
Additional Information: Respirator must be equipped with North HEPA filters

Fit Test Protocol (Test Subject Initials indicate steps were performed):

___ TOLD TO KEEP EYES CLOSED DURING SMOKE EXPOSURE

___Test subject smelled irritant smoke before fit test
___Protocol reviewed before fit test
___Shown how to wear respirator
___Mirror available for use by subject
___Must wear PPE (hard hat, etc.) if needed
___Wore respirator 5 minutes before fit test
___Test subject did not have hair in fitting area
___Performed positive pressure & negative fit check successfully after seating respirator

Fit Test Steps (1 minute each except Grimace = 15 seconds)

___ Breath normally
___ Nod up and down
___ Jog in place
___ Breathe deeply
___ Talking (Read Rainbow Passage)
___ Breath normally
___ Turned head side to side
___ Grimace

"When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow".

Fit Test Results: _____ Pass _____ Fail
Test Subject Signature: _____ Date: _____

Examiner's Name: _____ Examiner's Signature: _____ Date: _____

Purpose

It is the goal of Burnt Mountain Services (the Company) to return employees to meaningful, productive temporary employment following injury or illness until their health care provider releases them to full duty.

The return-to-work program provides opportunities for any employee who sustains a compensable injury during the course and scope of employment to safely return to work. If the employee is not capable of returning to full duty, the return-to-work program provides opportunities for the employee to perform a temporary assignment, either modified or alternative duty as defined below.

Scope

This procedure applies to all Company projects and operations.

Key Responsibilities

Supervisors

- Shall ensure that all injuries are promptly reported and carefully supervise employees who are in a return-to-work classification.

Employees

- Shall report all injuries immediately.
- Shall follow all aspects of this program.

Procedure

Definitions

- Lost Time - Time spent away from work beyond the day of injury at the direction of the treating health care provider as a result of a compensable injury sustained in the course and scope of employment. The term does not include time worked on a temporary assignment.
- Full Duty - Performance of all duties and tasks of the position for which the employee is employed. Full duty entails performing all essential and non-essential functions of the employee's regular job.
- Temporary Assignment - Performance of a temporary job assignment intended to return an injured employee to work at less than his or her full duties when a serious injury or serious medical condition prevents the employee from working full duty. Temporary assignments are limited to six months at the same pay, beyond six months; the program will be reviewed with the assistance of Company management to determine the next best course of action. Temporary assignments shall be referred to as modified duty and alternative duty.
- Modified Duty - Modified duty allows the employee to return to employment in his/her regular job and perform all of the essential functions of the position and those nonessential duties and tasks that are within the capabilities of the employee, given the restrictions imposed by the treating health care provider. Modified duty is a temporary arrangement until the injured employee can resume full duty. If

during the course of the modified duty assignment or after six (6) months, whichever is sooner, it is determined that the employee has permanent restrictions, the program will be reviewed with the assistance of Company management to determine the next best course of action.

- Alternative Duty - Alternative duty allows the employee to temporarily perform the essential functions of a job and other nonessential duties and tasks, within the restrictions prescribed by the treating health care provider, other than the position for which the individual is employed (regular full-time position). Such alternative duty may be physically located in the same employing department or in a hosting department. Alternative duty is a temporary arrangement until the injured employee can resume full activities of his/her regular job or until an alternate duty position is no longer needed.
- Hosting Department – This is the department that has a temporary assignment position available but not necessarily the employee's department.

General Requirements

The Company provides modified work opportunities to injured employees, whenever practicable. Modified work should be offered, wherever possible, to employees who are unable to return to their regular duties following a workplace injury or illness. The benefits of offering modified duty include, but are not limited to, reduced workers compensation costs, improved employee retention, enhanced employee morale, reduction in lost time days, and a strengthening of the company's relationship with its employees. Modified work should be meaningful to the employee and the Company, and consistent with work restrictions outlined by the treatment provider.

If the health care provider states that the employee cannot perform any temporary assignments/modified duties, the Company may challenge the decision depending on the injury and request independent medical information from a more authoritative occupational care provider.

Employee Reporting Responsibilities

An employee who is a candidate or participant in a modified or alternative duty temporary job assignment under the Safe Return to Work program is responsible for reporting to the workers compensation carrier any employment or income earned while performing modified or alternative duty if required by the workers compensation carrier.

An employee participating in the safe Return to Work program must provide his/her supervisor with medical documentation accounting for all absences due to the injury/illness within one day of any absence from work or face disciplinary action.

Non-Retaliation

Retaliation against an individual for in good faith filing a request or making a claim under this or related policies, for instituting or causing to be instituted any proceeding under local regulatory guidelines or federal anti-discrimination or anti-retaliation laws, for testifying in an investigation or proceeding, or for otherwise opposing discriminatory or retaliatory actions or practices will not be tolerated. Retaliation by any Company employee is a violation of this policy. Nothing in this procedure should be interpreted as not requiring an individual to report suspected acts of discrimination or retaliation to the individual he or she believes is engaging in discriminatory or retaliatory conduct.

Prohibited Actions

This return-to-work program shall not be applied to any situation or circumstance in a manner that retaliates or discriminates on the basis of race, color, sex, age, national origin, religion, or disability.

Return to Work Coordination

The Company Safety Manager or designated person will assist Site Managers/ supervisors with return-to-work activities/ plans for individuals who have sustained a compensable injury or illness during the course and scope of employment.

Medical Records for Injured Employees Must be Kept Confidential

Medical records should be kept by the employer strictly on a need-to-know basis. The records should be kept in a locked file.

All Documentation Related to an Incident is Maintained by the Company

The Company should maintain written records of incident details. This will help the Company recall information about the circumstances of the incident at a later time, and will demonstrate due diligence. Incident investigation records should be maintained. Records should be kept of communications with the injured employee regarding modified work. Workers compensation and medical records, where applicable, should also be maintained.

How Local Health Care Providers Are Made Aware That the Company Provides Modified Work to Employees Who Are Unable to Perform Their Regular Duties

- Local health care providers should be advised that the Company provides modified work to injured employees, whenever practicable. This may be accomplished proactively by making arrangements with clinics that specialize in occupational health, and recommending injured employees seek treatment there. If/when this is not practicable, a standard letter should be drafted that outlines the company's modified work opportunities. Injured employees should take this letter with them when they visit their health care provider.
- The Company will provide a copy of the employee's regular job description to accompany a Physicians Report (provided by physician) to be completed by the health care provider following any initial report of injury. When the medical status form is returned, it will be determined whether the employee can perform the essential functions of his/her job.
- Modified work provided to injured employees must be consistent with restrictions provided by the health care provider. The Company must ensure that the modified work being offered is consistent with the medical restrictions listed by the health care provider. Workers must ensure that changes in the scope of the modified work must adhere to the medical restrictions. Modified work is temporary and should be managed with the goal of returning the individual to full-time work as soon as deemed medically fit.
- The employee's health care provider must review and certify that the employee can perform the essential functions defined in a modified (temporary assignment) job description. If the health care provider changes the temporary assignment position description, the employing/hosting department must determine if the change is acceptable. The health care provider must approve any changes proposed by the hosting department.

- The physician's restrictions are provided to those required to ensure that the restrictions are followed. Supervisors must be made aware of the restrictions to ensure the modified work meets the physician's orders.
- If the medical provider states that the employee can return to work with work restrictions, the Company will notify the employee via a temporary assignment offer of employment (see form). If the employee fails to report to work on the indicted start date the workers compensation company is to be immediately notified and the employee may be subject to discipline for failure to return to work.
- The employee must obtain a Physicians Report that outlines any work restrictions within one working day following each visit to his/her health care provider.
- If the health care provider states that the employee cannot perform any temporary assignments/modified duties, the Company may challenge the decision depending on the injury and request independent medical information.

Temporary Assignment / Modified Work Procedures
Physical demands are assessed for modified duty jobs to ensure they can be performed safely by injured employees.

A list of jobs available to be performed for employees on modified duty should be maintained. All jobs should be assessed to determine which jobs can be performed by persons working under specific restrictions. It is recommended that a Physical Demands Analysis (PDA) be prepared for each of these jobs to ensure workers are placed accordingly.

Training

Employees are informed of the Company Safe Return to Work program.

Employees may be informed by communicating the Company Safe Return to Work policy via a safety meeting or toolbox talk, reviewing the policy as part of the new employee orientation, and/or posting the policy in a conspicuous location, etc.

TEMPORARY ASSIGNMENT OFFER OF EMPLOYMENT

CERTIFIED MAIL, RECEIPT REQUIRED

Date:

(Employee name and mailing address)

Dear _____:

We have been informed that Dr. _____ has released you to return to modified duty with restrictions as outlined in the attached Physicians Report dated _____. We are pleased to offer you the following temporary modified work assignment that we believe is within those restrictions.

To do this assignment, you will be required to (*describe physical and time requirements*):

You will be working at _____ and have the following work schedule: _____ through _____ from _____ to _____.

You will be paid $ _____ per _____. Please be assured that we are sympathetic to your injury, and we will only assign tasks consistent with your physical abilities, knowledge, and skills. Your supervisor will work with you to ensure that you receive the proper training necessary to do this work.

The duration of this assignment will be _____ weeks. At the end of this period, we will review additional needs to determine if an extension can be made, or if other suitable work is available.

This offer will remain open for five days from your receipt of this letter. If we do not hear from you within five workdays, we will assume you have refused this offer. If your injury is covered by workers' compensation Insurance, refusal of this job offer may impact your Temporary Income Benefit payments.

We are looking forward to your return. If you have any questions regarding this offer, please contact me at _____. In addition, please return this letter with the appropriate area below completed.

Sincerely,
(Signature and Title)

I accept / refuse (circle one) the above offer of employment.

Signed: _____ Date:_____

Purpose

The purpose of this program is to prevent injuries due to falls from elevated work areas and ensure employees and contractors are able to inspect scaffolding materials and erected scaffolds.

Scope

This program is applicable at every work area where scaffolding is erected. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Burnt Mountain services (the Company) employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Bearer - A horizontal member of a scaffold upon which the platform rests and which may be supported by ledgers.

Brace - A tie that holds one scaffold member in a fixed position with respect to another member.

Coupler - A device for locking together the components of a tubular metal scaffold which shall be designed and used to safely support the maximum intended loads.

Double pole or independent pole scaffold - A scaffold supported from the base by a double row of uprights, independent of support from the walls and constructed of uprights, ledgers, horizontal platform bearers, and diagonal bracing.

Guardrail - A rail secured to uprights and erected along the exposed sides and ends of platforms.

Heavy Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 75 pounds per square foot.

Ledger (stringer) - A horizontal scaffold member which extends from post to post, and which supports the putlogs or bearer forming a tie between the posts.

Light Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 25 pounds per square foot.

Manually Propelled Mobile Scaffold - Manually propelled mobile scaffold.

Maximum intended load - The total of all loads including the working load, the weight of the scaffold, and such other loads as may be reasonably anticipated.

Medium duty scaffold - A scaffold designed and constructed to carry a working load not to exceed 50 pounds per square foot.

Mid-Rail - A rail approximately midway between the guardrail and platform, used when required, and secured to the uprights erected along the exposed sides and ends of platforms.

Putlog - A scaffold member upon which the platform rests.

Runner - The lengthwise horizontal bracing or bearing members or both.

Scaffold - Any temporary elevated platform and its supporting structure used for supporting workmen or materials or both.

Toe board - A barrier secured along the sides and ends of a platform, to guard against the falling of material.

Tube and coupler scaffold - An assembly consisting of tubing, which serves as posts, bearers, braces, ties, and runners, a base supporting the posts, and special couplers which serve to connect the uprights and to join the various members.

Tubular welded frame scaffold - A sectional, panel, or frame metal scaffold substantially built up of prefabricated welded sections that consist of posts and horizontal bearer with intermediate members. Panels or frames shall be braced with diagonal or cross braces.

Working Load - Load imposed by men, materials, and equipment.

Key Responsibilities

Managers and Supervisors

- Responsible for ensuring that scaffolds are erected by a qualified person, that set up inspections are performed, and all daily inspections are performed before work starts for the day.
- Responsible for ensuring that all employees, and/or contractors have been trained in the use and inspection methods for scaffolds. Only qualified and competent personnel are allowed to use or modify scaffolding systems.
- Responsible for ensuring that all employees and contractors are aware that if an inspection discovers a defect, the scaffold cannot be used until repairs are made.

Employees

- Responsible for following this program by inspecting the scaffolds daily and reporting any damage or repairs that may be needed to their supervisor.

Procedure

General Requirements

Scaffolds shall be furnished and erected in accordance with applicable standards for persons engaged in work that cannot be done safely from the ground or from solid construction. Except that ladders used for such work shall conform to ladder safety standards.

Scaffolds shall only be erected by a qualified third party, who is competent to certify the scaffolding safe to use.

The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose boards shall not be used to support scaffolds or planks.

Scaffolds and their components shall be capable of supporting without failure at least four times the maximum intended loads. Scaffold components must meet OSHA requirements 29 CFR 1910.28 and 29 CFR 1926.451.

Wood scaffold planks must be cross-supported every 8 feet. Scaffold deck boards shall be cleated, wired or nailed into place.

All working levels of scaffolds will be floored completely except where internal ladders require space for ladder openings.

Scaffolds and other devices mentioned or described in this program shall be maintained in safe condition. Scaffolds shall not be altered or moved horizontally while they are occupied.

Any scaffold damaged or weakened from any cause shall be immediately repaired and shall not be used until repairs have been completed.

Scaffolds shall not be loaded in excess of the working loads for which they are intended.

Bolts used in the construction of scaffolds shall be of adequate size and in sufficient numbers at each connection to develop the designed strength of the scaffold.

All platforms shall be overlapped (minimum 12 inches) and secured from any movement.

An access ladder or equivalent safe access shall be provided.

Scaffold planks shall extend over their end supports not less than 6 inches or more than 18 inches.

The poles, legs, or uprights of scaffolds shall be plumb, and securely and rigidly braced to prevent swaying and displacement.

Materials being hoisted onto a scaffold shall have a tag line.

Overhead protection shall be provided for workers on a scaffold exposed to overhead hazards.

Toe boards and guardrails shall be installed if a scaffold or platform is erected to a height of 6 feet or more. Scaffolds shall be provided with a screen between the toe board and the guardrail, extending along the entire opening, consisting of No. 18 gauge wire one-half inch mesh or the equivalent, where workers are required to work or pass under the scaffolds.

Work shall not be performed on a scaffold during storms or high winds.

Work shall not be performed on scaffolds that are covered with snow or ice unless all snow and ice has been removed and all planking has been sanded to prevent slipping.

Tools, material, and debris shall not be allowed to accumulate in quantities to cause a hazard.

Inspections

Scaffolding shall be inspected, by a qualified person, in conjunction with the manufacturers required recommendations. The competent person must also ensure scaffolds are safe prior to and during scaffold use.

- At a minimum, the following shall be inspected by the competent person after erection, before the start of the day or beginning of a shift change to ensure scaffolds are safe prior to and during use:
    - Ground or surface footing shall be inspected to ensure that there is no settling.
    - All main supports and cross braces shall be inspected for any signs of damage, missing pins, bolts, and any locks and/or safety keepers.
    - All walking surfaces and/or planks shall be inspected for damage and proper placements and any possible movement.
    - All walkways and planks must be secure to prevent any movement.
- Inspection shall be made to ensure that the scaffold is stable, and any movement is prevented.
- If during the inspection, a defect or damage to the scaffold is discovered, the scaffold shall be tagged out by the competent person, complied with and use prohibited until needed repairs are made.

Mandatory Signs and Tags for Defects Found

Signs and tags shall be visible at all times when work is being performed and shall be removed or covered promptly when the hazards no longer exist. Employees shall be instructed in complying with signs and tags.

Defective or unsafe equipment or conditions shall be tagged out by the competent person using a weather resistant tag secured to the scaffolding structure on all four sides and must be complied with. An example would be improper footing conditions were observed.

Danger signs shall be used only where an immediate hazard exists. Danger signs must be posted around the immediate area of the scaffold, to alert other workers of possible danger from falling objects from the scaffold.

Caution Signs and/or barricade tape shall be used to mark off a larger area around scaffolding warning other workers to use caution.

Modifications

Modification and repairs shall be performed by a qualified person, who is competent to certify the scaffolding safe to use to ensure non-qualified personnel do not create additional hazards.

Employees shall not perform any modifications or repairs, unless they have been trained and certified, and failure to comply may result in disciplinary action and or termination.

Training Requirements

The Company is required to train all employees that work on scaffolds regarding hazards by "qualified" persons. The supervisor shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall occur before use and include the following areas:

- Basic safety information and duties of a competent person assembling/disassembling scaffolding (see below). Basic safety information must be provided prior to use and when conditions change.
- Hazards including fall protection, electrical safety, falling object protection (see below).
- Tags – types and the requirement to comply with.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
- The maximum intended load capacity of the scaffolds used.

The supervisor shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question.

- The training shall include the following topics, as applicable:
- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in use.
- The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.

When the employer has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employer shall retrain each employee so that the requisite proficiency is regained. Retraining is also required in at least the following situations:

- Where changes in scaffolding at the worksite present a hazard about which an employee has not been previously trained.
- Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained.
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

Hazards Associated with the Use of Scaffolds

- Nearby electrical lines or source of electrical hazards
- Poor foundation – scaffold shall be erected on a firm and stable base.
- Damaged scaffold components.
- Overload of scaffold components (load capacity).
- Unstable, incomplete, or incorrect use of scaffold.
- Base frames not adequately braced, tied or supported.
- Scaffold exceeds height to base dimensions ratio.

- Inappropriate access or egress points.
- Slips and falls.
- Falling objects.
- Manual handling.
- Movement of plant and machinery – all cranes and mobile machinery shall be kept within designated areas and away from scaffolding.

Duties of a Competent Person Assembling/Disassembling Scaffolding

General

- To select and direct employees who erect, dismantle, move, or alter scaffolds.
- To determine if it is safe for employees to work on or from a scaffold during storms or high winds and to ensure that a personal fall arrest system or wind screens protect these employees. (Note: Windscreens should not be used unless the scaffold is secured against the anticipated wind forces imposed.)

For Training

- To train employees involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting scaffolds to recognize associated work hazards.

For Inspections

- To inspect scaffolds and scaffold components for visible defects before each work shift and after any occurrence which could affect the corrective actions.
- To inspect ropes on suspended scaffolds prior to each work shift and after every occurrence which could affect the structural integrity and to authorize prompt corrective actions.
- To inspect manila or plastic (or other synthetic) rope being used for top rails or midrails.

For Suspension Scaffolds

- To evaluate direct connections to support the load.
- To evaluate the need to secure two-point and multi-point scaffolds to prevent swaying.

For Erectors and Dismantlers

- To determine the feasibility and safety of providing fall protection and access.
- To train erectors and dismantlers to recognize associated work hazards.

For Scaffold Components

- To determine if a scaffold will be structurally sound when intermixing components from different manufacturers.
- To determine if galvanic action has affected the capacity when using components of dissimilar metals.

Tube And Coupler Scaffolds - Light Duty

Uniformly distributed load	Not to exceed 25 p.s.f.	
Post Spacing (longitudinal)	10 ft. 0 in.	
Post Spacing (transverse)	6 ft. 0 in.	
Working Levels	**Additional Planked Levels**	**Maximum Height**
1	8	125 ft.
2	4	125 ft.
3	0	91 ft. 0 in.

Tube And Coupler Scaffolds - Medium Duty

Uniformly distributed load	Not to exceed 50 p.s.f	
Post spacing (longitudinal)	8 ft. 0 in.	
Post spacing (transverse)	6 ft. 0 in.	
Working Levels	**Additional Planked Levels**	**Maximum Height**
1	6	125 ft.
2	0	78 ft. 0 in.

Purpose

The purpose of the Short Service Employee (SSE) Management program is to prevent work related injuries and illnesses to new hires and temporary workers. The Supervisors and co-workers must be able to readily identify Short Service Employee participants. Burnt Mountain Services (the Company) will assign experienced employees to oversee the daily activities of those assigned to the SSE program.

Scope

- Applies to all newly hired Company employees regardless of experience.

Definitions

Short Service Employee (Who is Covered Under the Short Service Employee Program) – An employee with less than six months experience in the same job or with his/her present employer.

Mentor – An experienced employee, who has been assigned to help and work with a new Short Service Employee by his/her supervisor.

Key Responsibilities

- Managers and Supervisors shall ensure that this program is implemented and followed.
- Employees shall follow the requirements of this program.

Monitoring of Short Service Employees at the Job Site

- The Company shall monitor its employees, including SSE personnel, for HES awareness.
- If, at the end of the six-month period, the SSE has worked safely, adhered to HES policies, and has no recordable incident attributable to him/her, the SSE identifier may be removed at the discretion of the Company.
- The Company shall require any employee that does not complete the six-month period recordable free to get operator approval in writing prior to returning to operator property.

Subcontractors

- Subcontractors must manage their Short Service Employees in accordance with the requirements of their Short Service Employee program.

Procedure

General

A Short Service Employee may not work alone.

Supervisors will ensure that all new, transferred, and temporary employees have been through the Company Safety Orientation and have a complete knowledge of the expectations for their job function.

Mentoring Oversight and Monitoring

A Short Service Employee is mentored by an experienced/ knowledgeable employee. A mentoring system shall be implemented to provide guidance to Short Service Employees and assist with their development.

Supervisors will identify all employees and temporary personnel with less than 180 days of service, or those employees they desire to return to a mentoring status for improvement in job and/or safety performance.

Managers and the Safety Department will randomly audit for process compliance. This will involve interviewing employees in the Short Service Employee program (documentation is not required).

Short Service Employees are monitored for compliance with HSE policies and procedures. Once the Short Service Employee has demonstrated competency and compliance with HSE policies and procedures, the contractor may remove the hi-visibility identifier.

Short Service Employee Identification

Short Service Employees shall be visibly identified through the use of a different colored hardhat or other method of identification. The method used to identify SSEs should be communicated to the Owner Client.

Notification and Communication Processes

The host facility must be notified when a Short Service Employee is working at their site. Prior to starting work, the Company shall notify the host facility (project coordinator, contractor contact, and/or on-site supervisor) if Short Service Employees that are present on work crews.

Mentors will converse daily with SSEs assigned to them, preferably at the start of the day. This will be in addition to other tailgate or daily safety meetings held in the work area.

Purpose

The purpose of the silica exposure control plan (ECP) is to set out our approach to protecting workers from harmful exposure to respirable crystalline silica.

A combination of control measures will be required to achieve this objective. We commit to being diligent in our efforts to select the most effective control technologies available, and to ensure that the best practices, as described in this Exposure Control Plan (ECP), are followed at Burnt Mountain Services (the Company) worksites.

The work procedures we establish will protect not only our workers but all workers on our worksites.

Key Responsibilities

Due to the significant risk posed by respirable crystalline silica, it is critical that all personnel involved in operations that could potentially create silica dust take specific action to ensure that, as much as possible, a hazard is not created.

The Company is responsible for:

- Make a copy of the ECP available at the worksite (BMS Support Center).
- Substitution of less hazardous products for those that contain crystalline silica is required where feasible.
- Ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this exposure control plan (ECP) are readily available where and when they are required.
- Providing a job specific ECP for each project, which outlines in detail the work methods and practices that will be followed on each site. Considerations will include:
    - Availability and delivery of all required tools/equipment
    - Scope and nature of grinding work to be conducted
    - Control methods to be used and level of respiratory protection required
    - Coordination plan
- Conducting a periodic review of the effectiveness of the ECP. This would include a review of the available dust-control technologies to ensure these are selected and used when practical.
- Initiating sampling of worker exposure to concrete dust when there are non-standard work practices for which the control methods to be used have not been proven to be adequately protective.
- Ensuring that all required tools, equipment, and personal protective equipment are readily available and used as required by the ECP.
- Ensuring supervisors and workers are educated and trained to an acceptable level of competency.
- Maintaining records of training, fit-test results, crew talks, and inspections (equipment, PPE, work methods/practices).
- Coordinating the work with the prime contractor and other employers to ensure a safe work environment.
- Ensuring that a copy of the written exposure control plan is available to all employees. The written exposure control plan must be available for examination and copying by each employee. Copies may be available electronically or physically, depending on location needs and requirements.

The supervisor (foreman and lead hand) is responsible for:

- Selecting, implementing, and documenting the appropriate site-specific control measures
- Providing adequate instruction to workers on the hazards of working with silica-containing materials (e.g., concrete) and on the precautions specified in the job-specific plan covering hazards at the location
- Ensuring that workers are using the proper respirators and have been fit-tested, and that the results are recorded
- Directing the work in a manner that ensures the risk to workers is minimized and adequately controlled
- Communicating with the prime contractor and other sub-contractors to ensure a safe work environment

The worker is responsible for:

- Knowing the hazards of silica dust exposure
- Using the assigned protective equipment in an effective and safe manner
- Setting up the operation in accordance with the site-specific plan
- Following established work procedures as directed by the supervisor
- Reporting any unsafe conditions or acts to the supervisor
- Knowing how and when to report exposure incidents

Crystalline Silica Properties

Crystalline silica is a common mineral found in many naturally occurring materials and used in many industrial products and at construction sites. Materials like sand, concrete, stone, and mortar contain crystalline silica. Crystalline silica is also used to make products such as glass, pottery, ceramics, bricks, concrete, and artificial stone. Industrial sand used in certain operations, such as foundry work and hydraulic fracturing (fracking), is also a source of crystalline silica exposure. Amorphous silica, such as silica gel, is not crystalline silica.

Inhaling very small (“respirable”) crystalline silica particles, causes multiple diseases, including silicosis, an incurable lung disease that can lead to disability and death. Respirable crystalline silica also causes lung cancer, chronic obstructive pulmonary disease (COPD), and kidney disease.

List of Tasks That Expose Employees to Respirable Crystalline Silica

A list or description of tasks in the workplace that expose employees to respirable crystalline silica must be in place. Tasks include activities like the below and anything else that is likely to expose employees to respirable crystalline silica:

- Sawing
- Drilling
- Grinding
- Abrasive blasting (e.g., of concrete structures)
- Jackhammering, chipping, or drilling rock or concrete
- Cutting brick or tiles
- Sawing or grinding concrete
- Tuck point grinding
- Road construction

- Loading, hauling, and dumping gravel
- Demolition of structures containing concrete
- Sweeping concrete dust

The list of tasks shall be included in the job hazard assessment or any other form of prework hazard assessment.

Health Hazards
Exposure to respirable crystalline silica has been shown to cause silicosis, lung cancer, pulmonary tuberculosis, and other airway diseases. Crystalline silica dust can cause a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening, and scarring of the lung tissue. The scar tissue restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but symptoms of the disease may not appear for many years.

A worker may develop any of three types of silicosis, depending on the concentrations of silica dust and the duration of exposure:

- Chronic silicosis—develops after 10 or more years of exposure to crystalline silica at relatively low concentrations
- Accelerated silicosis—develops 5 to 10 years after initial exposure to crystalline silica at high concentrations
- Acute silicosis—develops within a few weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica

Initially, workers with silicosis may have no symptoms; however, as the disease progresses, a worker may experience:

- Shortness of breath
- Severe cough
- Weakness

These symptoms can worsen over time and lead to death. Exposure to silica has also been linked to other diseases, including bronchitis, tuberculosis, and lung cancer.

Exposure Assessments

Exposure assessments must be conducted for those employees who are expected to be exposed to respirable crystalline silica at or above the action level. The exposure of each employee who is or is expected to be exposed to respirable crystalline silica at or above the action level (8-hour TWA of 25µg/m³) must be assessed. This assessment can be performed by monitoring employees individually or taking a representative sample from employees.

The key step in developing a silica exposure control plan is to identify the work activities that would put workers at risk of exposure.

- Work activities — that may generate airborne silica dust—for silica, the route of exposure is through the inhalation of airborne dust. The employer should have a qualified person review the planned work activities to identify those that may generate airborne silica.
- Identify workers at risk of exposure—For example, workers who finish concrete would be at greater risk of exposure than plumbers or electrical workers.
- Amount of exposure—some work activities generate more dust than others, and the amount of exposure should be estimated. Published resources are available that provide air sampling data and compare silica dust levels from various construction activities.
- Duration of exposure—Workers who grind concrete for a full shift would be at greater risk than workers jackhammering for an hour.

Engineering and Work Practice Controls

Engineering and work practice controls shall be used to reduce and maintain employee exposure to respirable crystalline silica to the lowest feasible level and maintain it at that level when required.

The following hierarchy of control measures must be followed:

- Elimination/substitution (e.g., using products with less silica or using work methods that would eliminate the need for surface grinding)
- Engineering controls (e.g., water, local exhaust ventilation, enclosure)
- Administrative controls (e.g., coordination of tasks with subcontractors, signage)
- The use of proper PPE such as gloves, coveralls and eye protection when exposed to silica. Personal protective equipment such as gloves, coveralls and eye protection will be used to control silica exposure.

Our firm commits to developing knowledge and expertise about these controls, and to establishing policies/procedures to protect workers from harmful exposure and to minimize reliance on respirators. Effective engineering controls such as HEPA vacuum attachments and wetting methods, which control silica dust at its source, are readily available. These controls have been proven to reduce airborne dust levels significantly when selected and operated in accordance with best practices. We know that engineering controls alone do not reduce airborne silica to safe levels; so, in most cases other control measures, including respiratory protection, will be necessary.

If we take on a job that could release an unusually high amount of dust, and we are unsure of the adequacy of our control measures, we will conduct air sampling to ensure that control methods are protective.

We will reduce or eliminate worker exposure to silica dust by selecting a combination of the following controls listed in order of preference:

- Elimination and substitution - Engineering
- Administrative - Personal protective equipment

Elimination and Substitution

We recognize the importance of planning the work to minimize the amount of silica dust generated. During the project planning phase, we will advocate for the use of methods that reduce the need for cutting, grinding, or drilling of concrete surfaces (e.g., formwork planning). Whenever possible, we will schedule work when concrete is still wet, because we know that much less dust is released at that time.

Engineering Control of Dust

Selecting an appropriate control measure depends on the specifics of the operation. In some cases, local exhaust ventilation (LEV) is more effective at controlling exposure (e.g., during grinding operations) than wetting methods. In a different application, wetting may be more effective (e.g., during cutting operations) than LEV. However, using LEV may reduce the amount of final cleaning required, as the silica dust is captured.

Our dust control systems may employ three well-established techniques:

- Local exhaust ventilation (LEV)
- Wet dust suppression (WDS)
- Restricting or isolating the work activity with barriers or full enclosures (this may be the only option where LEV or WDS is not practical or effective)

Local Exhaust Ventilation (LEV)

When LEV is used in our work, we will employ the following systems and safe work practices:

- Vacuum attachment systems to capture and control the dust at its source whenever possible.
- Dust control systems (used regularly and well maintained).
- Grinding wheels operated at the manufacturers' recommended rpm (operating more than this can generate significantly higher airborne dust levels).
- Retrofit shrouds or exhaust cowlings for corner grinding; use manufacturer-specified rpm speeds and a well-maintained HEPA vacuum.
- Diamond stone grinders, which allow for the use of a more efficient suction casing on the grinder, whenever practicable.
- HEPA or good quality, multi-stage vacuum units approved for use with silica dust. [The vacuum units should create a target airflow of at least 70 cfm. This should achieve a face velocity at the shroud of about 1.3 m/s (260 fpm)—the higher the face velocity, the more dust captured at source.]
- Work planning, so that concrete grinding can be completed when wet (dust release can be significantly reduced).
- Train workers and supervisors on how to properly use and maintain the equipment.

Wet methods for Dust Control

When water spray systems are used in our work, we will follow these safe work practices:

- Pneumatic grinders will be used instead of electric-powered grinders if water is the method of control.
- Pressure and flow rate of water will be controlled in accordance with tool manufacturers' specifications (for cutting saws, a minimum of 0.5 liters of water per minute should be used).
- When sawing concrete or masonry, we will use only saws that provide water to the blade.
- Wet slurry will be cleaned from work surfaces when the work is completed, using a wet vacuum or wet sweeping.

Barriers and Enclosures - When barriers or enclosures are used in our work the site foreman will determine the type and design of barrier or enclosure (based on the work activity and the work area) and ensure it is constructed in accordance with the work plan. Barriers may be simple hazard-flagging ribbon or more restrictive barriers.

Administrative Controls

We will follow these safe work practices:

- Exposure control plans and the site risk assessment/work plan will be submitted to the general contractor prior to the start of work.
- Housekeeping Measures Put in Place to Limit Employee Exposure to Respirable Crystalline Silica – A description of housekeeping measures used to limit exposure to respirable crystalline silica must be in place (and included in the prework hazard assessment). This can include vacuuming, sweeping, wetting and other techniques used to limit the amount of respirable crystalline silica exposure during housekeeping activities. Vacuums with high-efficiency particulate air (HEPA) filters are required.
- We will establish procedures for housekeeping, restricting work areas, personal hygiene, worker training, and supervision.
- As part of our project planning, we will assess when silica dust may be generated and plan to eliminate or control the dust at the source. We recognize that awareness and planning are key factors in the prevention of silicosis.
- Warning signs will be posted to warn workers about the hazards of silica and to specify any protective equipment required (for example, respirators).
- Work schedules will be posted at the boundaries of work areas contaminated with silica dust.
- Work that generates silica dust will be conducted after hours, when access to other unprotected workers cannot be restricted.
- We will develop a site-specific exposure control plan to cover project-specific issues (e.g., scope of work, project location and site-specific hazards) and to be kept available at the worksite.

Personal Protective Equipment

Respiratory Protection

- When required, respirators must be provided to employees that are exposed to respirable crystalline silica.
- Respirators must be provided to employees who are or will be exposed to actionable levels of respirable crystalline silica. If an employee is performing a task listed in Table 1 of 1926.1153 (c) that does not require the use of a respirator then they are not required. All other tasks not covered by Table 1 must be accounted for by providing respirators if necessary.
- Link for Table 1 https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=1270#1926.1153(c)
- All workers who wear respirators will do so in adherence with our respiratory protection program.
- Respirators must be selected based upon measured exposure levels and the assigned protection factor of respirators.
- Only approved respirators will be used.
- Workers who wear respirators will be clean-shaven. Filtering face piece respirators give little or no protection to workers with beards, and even a minor growth of stubble can severely reduce the effectiveness of respiratory protection.

- All workers who wear respirators will be fit-tested.
- Workers will be properly trained in the use of respirators, and a high standard of supervision, inspection, and maintenance will be followed.

Protective clothing

The Company will provide workers in a restricted area with protective clothing that protects other clothing worn by the worker from silica contamination, ensure that silica does not contaminate workers' street clothing, and ensure that a worker does not leave a restricted area until the worker has been decontaminated.

Documentation

Records must be kept of the following:

- All workers who are exposed to respirable silica dust while on the job
- Worker education and training sessions
- Respirator fit-testing
- Equipment maintenance and repair
- Worksite inspections
- Medical surveillance when required

Annual Assessment

The written program's effectiveness must be reviewed at least annually. The written exposure control plan must be evaluated at least once per year and as necessary. Situations where reevaluation may be necessary include regulatory updates, changes in equipment and exposure incidents.

Medical Surveillance

A medical surveillance program for all employees whose exposure is equal to or exceeds the action level for 30 or more days per year is required. A medical surveillance program must be established for employees who are exposed to the action level of 8-hour TWA of 25µg/m³ of respirable crystalline silica. A baseline medical assessment must be available to exposed employees within 30 days of initial assignment unless they have previously received a suitable medical examination in the past three years. This applies to employees who would be required to wear a respirator more than 30 days per year or who are exposed to action level respirable crystalline silica for more than 30 days per year. A suitable prescreen that meets the same requirements is also acceptable.

The basics of the medical examination include:

If the employee needs to go to a qualified health care professional, have an exam, and obtain a written medical opinion which is shared with the Company. This written opinion needs to contain:

- The date of the exam
- A statement that the exam has specifically checked for silica exposure per the requirements of the standard.
- Any recommended limitations on the employee's exposure to respirable crystalline silica as a result of the exam's findings

The employee may learn other medical information from his or her physician during the visit, but this is private and not required to be shared with the Company.

The exam conducted by the qualified healthcare provider must include the following:

- A review of the patient's medical and work history.
- A physical examination with special emphasis on the respiratory system.
- A chest x-ray.
- A pulmonary function test administered by a certified spirometry.
- Testing for latent tuberculosis.
- Any other tests deemed appropriate by the healthcare provider.

Information required to be given to the heathcare provider:

- A copy of the OSHA respirable crystalline silica rule.
- Construction Standard - https://www.osha.gov/silica/SilicaConstructionRegText.pdf
- Construction Medical - https://www.osha.gov/silica/AppendixBtosect1926.1153.pdf
- General Industry/Maritime Standard https://www.osha.gov/silica/SilicaGeneralIndustryRegText.pdf
- General Industry/Maritime Medical https://www.osha.gov/silica/AppendixBtosect1910.1053.pdf
- A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica.
- The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica.
- A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment.
- Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the Company.

Records

Applicable records must be kept. Accurate records of all air monitoring data, objective data, and medical surveillance shall be maintained as required by the regulation.

Training

Employees must be provided with training.

A training program shall be provided for all employees who are exposed to action level respirable crystalline silica. The training shall ensure that employees covered by the written exposure control plan can demonstrate knowledge and understanding of the health hazards associated with respirable crystalline silica, the specific tasks in the workplace that could result in exposure to respirable crystalline silica, the specific measures taken to protect employees from exposure to crystalline silica, the contents of the respirable crystalline silica rule, and the purpose of the medical surveillance program.

CONTROL PLAN

Date control plan completed:		
Prime contractor:	Superintendent:	
Project manager:	CSO/First aid attendant:	
Project:	Address:	
Company completing work:		
Address:	Contact:	
Contact phone:	Contact fax:	
On-site supervisor(s):		
Worker(s):		
Scope of work to be completed:		
Work start date:	Duration: ☐ Days ☐ Months ☐ Years	
Employer responsible for:		
Supervisor responsible for:		
Worker responsible for:		

HAZARDS IDENTIFIED (other than silica	**CONTROL MEASURE(S)**
☐ Falls	
☐ Slipping	
☐ Confined space	
☐ Workers above	
☐ Workers below	
☐ Noise	
☐ Electrical	

Overview of work procedure (How are you going to work safely?):

Workers trained in (training records must be available for review):

Proper use of grinding equipment	Y☐ N☐	Proper use of admin controls	Y☐ N☐
Proper use of engineering controls	Y☐ N☐	Proper use of PPE	Y☐ N☐
Proper disposal methods	Y☐ N☐	Other (fall protection, swing stages, etc.)	Y☐ N☐

Respirators (Refer to ECP for respirator requirements)

Required: Y☐ N☐	Available: Y☐ N☐	Fit-tested: Y☐ N☐

PPE required for scope of work (other than respirator)

☐ Coveralls ☐ Gloves ☐ Rubber boots ☐ Eye protection ☐ Reflective vest ☐ Hearing protection

Documents to be attached to control plan (☑ if present)

☐ Exposure control program ☐ Respiratory protection program ☐ Training records ☐ SWP (tools and equipment)

Project management signature	Position:	Date:
Contractor supervisor signature	Position:	Date:

Task/risk management matrix (relating to silica dust) use table 1 for codes, separate with a comma (,)

#	Date/Duration		Task	Controls		PPE	Supplies/ Equipment
				Engineering	Administrative		

Notes (For task/risk management matrix above. Use # to indicate which task the note relates to.)

SITE INSPECTION CHECKLIST (complete pre-work & periodically during project)

Engineering controls		Problem noted (DETAIL)	Problem corrected (DETAIL)
Available at site	Y☐ N☐		
Operating correctly	Y☐ N☐		
Used appropriately	Y☐ N☐		
Effective in dust control	Y☐ N☐		
Administrative controls			
Available at site	Y☐ N☐		
Used appropriately	Y☐ N☐		
In place before work start	Y☐ N☐		
Effective	Y☐ N☐		
Cleanup			
Vacuum used properly	Y☐ N☐		

Large pieces picked up	Y☐ N☐		
Vacuum capacity maintained	Y☐ N☐		
Pre-filters in place	Y☐ N☐		
Vacuum attachments used	Y☐ N☐		
Collection bags in place	Y☐ N☐		
Waste properly disposed of	Y☐ N☐		

TABLE 1 (Codes for task/risk management matrix)

Engineering controls		Administrative controls		PPE		Supplies/Equipment	
1	Exhaust fan	1	Signage	1	Respirator	1	Hand grinder
2	LEV	2	After hours work	2	Gloves	2	Ceiling grinder
3	Wetting	3	Scheduling	3	Coveralls	3	Floor grinder
4	Partial enclosure			4	Hearing protection	4	Disposal bags
5	Full enclosure			5	Eye protection	5	HEPA filter (vacuum)
6	Shroud			6	Reflective vest	6	HEPA filter (respirator)
7	Barriers			7	Rubber boots (CSA)	7	Shovel
				8	Fall arrest	8	Lifeline

SITE-SPECIFIC SILICA EXPOSURE CONTROL PLAN

Location: _____ **Date:** _____

Work description:

Primary silica control options (check those options used and explain use if needed)

- Substitution controls (using procedures or products that do not create silica; must review MSDSs)
  - Other means of demo: _____
  - Different products: _____
  - Other substitutions: _____

- Engineering controls (when using ventilation, draw air out and do not expose others to exhaust dusts)
  - Vacuuming: _____
  - Wetting: _____
  - Ventilation: _____
  - Isolation: _____
  - Other means: _____

- Administration controls (reducing exposure by work schedules, timing, or planning options)
  - Control points: _____
  - Work schedule: _____
  - Other means: _____

Secondary silica control options (check those options used and explain use if needed)

- Personal protective equipment
  - Half-mask respirators: _____ Cartridge type: _____ Fit tests confirmed: _____
  - Full-face respirators: _____ Cartridge type: _____ Fit tests confirmed: _____
  - Supplied air units: _____
  - Coveralls required: _____

- Hygiene and decontamination options (reducing exposures after work has stopped or during breaks)
  - Water or washing facilities on site: _____
  - Vacuuming clothing/self: _____

Safe work procedures and other details: _____

Ventilation plan (sketch)

⇦ Show direction of airflow including makeup air locations and discharge air outlets

Area or location in building of ventilation plan (e.g., floor #, wing)

Date plan was reviewed by workers and posted for workers to see

Types of neg. air fans & no.'s *

* Indicate on plan by number the location of the negative air fans

Ventilation safety checklist

- ☐ Makeup air free of contaminants
- ☐ Exhaust fan operation has failure warning
- ☐ Dilution fans not stirring up dust
- ☐ Wetting of materials used to keep dust down
- ☐ Workers not placed between contaminants created and exhaust inlet ports
- ☐ Discharge air not affecting others
- ☐ All workers equipped with approved respirators

Note: Attach additional sheets if needed or other documents if required due to hazards or work conditions.

Print supervisor's name

Supervisor's signature

Purpose

The purpose of this plan is to document spill prevention and response requirements for Burnt Mountain Services (BMS) sites (the Company). Each BMS work site will develop a spill prevention and response plan based on the requirements and template provided in this document.

Scope

This procedure applies to all BMS operations. When work is performed on a site that BMS does not own or operate, the site operator's spill prevention program shall take precedence. However, this document applies to BMS employees and contractors on BMS-owned premises, or when an operator's program does not exist or is less stringent than the BMS guidelines.

Requirements

- Each BMS work site spill prevention and response plan shall include the following requirements:
- Chemical Storage: Chemical substances must be stored in proper containers to minimize spill potential. Whenever possible, chemicals should be kept in closed containers and stored in a way that prevents exposure to stormwater.
- Chemical Inventory Identification: The BMS online Safety Data Sheet (SDS) tab provides a full inventory of all chemicals that can be found on a Company site.
- Spill Kits: Each site must have spill kits appropriate for any anticipated spills. Spill kits should contain the necessary supplies for handling the materials likely to be spilled. Supplies must be easily accessible, and each kit should consider both the type and quantity of materials that may be present. The contents of spill response kits must be periodically inspected to ensure the availability of adequate supplies, with adjustments made to inventory as necessary.
- Spill Response Supplies: BMS shall ensure the availability of adequate spill response supplies through regular inspections and adjust the inventory as necessary to meet anticipated needs.
- Employee Training: Employees must receive training on spill prevention and the proper response procedures for potential spills. Training should cover the available spill response materials, proper waste disposal practices, and communication procedures.
- Good Housekeeping Practices: Areas where chemicals are used or stored must be maintained using good housekeeping best management practices. This includes clean and organized storage, appropriate labeling, and secondary containment when necessary.
- Communication Measures: Each site must establish proper communication measures to be used by employees in the event of a spill.
- Environmental Reporting: Any environmental reportable spills must be reported to environmental authorities as required by local, state, or federal regulations. Reporting procedures will be based on the type and quantity of materials spilled and should be outlined in the client site’s specific spill prevention and response plan. Never report a spill without expressed and written consent of the client.

Record Keeping of Incidental Spills

All spills, regardless of size, if reported by the Company, and not the client, must be documented using the electronic Spill Notification Form located at the Online Safety Support Center under the Forms tab (www.bms.support). This documentation will include details of the spill, response actions taken, materials involved, and any necessary follow-up. These records will be securely stored online for reference, compliance verification, and future safety improvements.

Purpose

The Stop Work Authority process involves a stop, notify, correct, and resume approach for the resolution of a perceived unsafe condition, act, error, omission, or lack of understanding that could result in an undesirable event.

All Burnt Mountain Services (the Company) employees have the authority to stop work when the control of the HSE risk is not clearly established or understood. All Company employees have the authority and obligation to stop any task or operation where concerns or questions regarding the control of HSE risk exist.

Scope

This program applies to all Company projects and operations.

Roles and Responsibilities of Employees and Management

- Employees are responsible for initiating a Stop Work intervention when warranted and management is responsible for creating a culture where SWA is exercised freely.
- Supervisors are responsible to ensure a culture is created where SWA is exercised and honored freely to resolve issues before operations resume and recognize proactive participation.
- Management must establish and support clear expectations to exercise SWA, create a culture where SWA is exercised freely and hold those accountable that chose not to comply with established SWA policies.

Stop Work Authority Steps

- When an unsafe condition is identified the Stop Work intervention will be initiated in a respectful and positive manner. The issue will be resolved before work is resumed.
- No work will resume until all stop work issues and concerns have been adequately addressed.
- Employees will not be reprimanded for issuing a Stop Work intervention. Any form of retribution or intimidation directed at any individual or company for exercising their right to issue a stop work authority will not be tolerated.

Follow-Up

- The Company places a high importance of follow-up after a Stop Work intervention has been conducted. It is the desired outcome of any Stop Work intervention that the identified safety concern(s) have been addressed to the satisfaction of all involved persons prior to the resumption of work. Most issues can be adequately resolved in a timely manner at the job site, occasionally additional investigation and corrective actions may be required to identify and address root causes.

Training

Employees are provided training on Stop Work Authority. Employees must receive Stop Work Authority training before initial assignment.

Purpose

The purpose of the program is to prescribe rules and establish minimum requirements for traffic control.

Scope

When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Burnt Mountain Services (the Company) employees and contractors and shall be used on owned premises or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers and Supervisors

- Managers and supervisors are responsible for ensuring that all employees, and/or contractors have been trained in the procedures, equipment and PPE associated with traffic control.

Employees

- Employees are responsible for following this program.

Procedure

the Company shall develop, in writing, and implement a traffic control plan for its workers at a worksite if any of them may be exposed to a hazard from vehicular traffic that may endanger the safety of any worker or the public. It shall include the following control measures:

- Pedestrians have the right-of-way. In all instances on the work site, pedestrian traffic has the right-of-way.
- the Company shall ensure the use of signs, barricades, and other control measures to protect workers from traffic hazards. Employees struck by vehicles or mobile equipment account for many work zone injuries or fatalities. Work zones should be marked by traffic control devices such as:
  - Signals
  - Message boards
  - Cones
  - Barricades
  - Delineator Posts
  - Flashing Lights
  - Flares
  - Conspicuously identified pilot vehicles
  - Speed Restrictions
- Traffic control personnel must wear high visibility work vests. Workers exposed to traffic must be attired in bright, highly visible apparel. See OSHA Safety Vest Classification Table.
- Provisions of Flaggers to Direct Traffic – When work activity occurs on or adjacent to a surface being used by the public, the Company is responsible for providing flagger(s) to direct traffic.
- Flaggers are provided with proper hand-signaling devices. Hand-signaling devices such as Stop/Slow paddles or red flags should be provided to flaggers. Oftentimes, the Stop/Slow paddle is the preferred

hand-signaling device because the paddle gives road users more positive guidance than red flags, which are primarily used in emergency situations.

- Traffic control persons operating during hours of darkness or when there is poor visibility are provided with a reflective paddle and a flashlight fitted with a red signaling device.
- A means of communication is provided when there is more than one traffic control person. When there are multiple traffic control persons that are not working within sight of each other, an effective means of communication should be provided and used (preferably radios).

Training

- All workers involved in traffic control, including flaggers, are provided training as per their respective duties.

OSHA Safety Vest Classifications
ANSI Class 2 Safety Vests: These safety vests are required for workers near traffic between 25-50 mph, heavy machinery, inclement weather, and low visibility conditions. ANSI class 2 vests are the most commonly required safety vests. You can also find ANSI class 2 jackets and t-shirts.
ANSI Class 3 Safety Vests: Class 3 vests are required for workers near traffic exceeding 50 mph and very dark or “no visibility” conditions. These traffic safety vests have longer sleeves than class 2 vests, to meet the requirements for high visibility and reflective material. In addition to vests, ANSI class 3 apparel can include safety jackets and long-sleeved shirts. Wearing an ANSI class 2 safety vest with ANSI class E safety pants together qualifies as an ANSI class 3 outfit.

Purpose

The purpose of this training program is to protect employees from safety hazards that may be encountered during work in trenches and excavations.

Scope

Burnt Mountain Services (the Company) is required to participate as a contract employer at client locations with trenching and excavation work; however, the Company does not initiate trenching operations.

When work is performed on a non-owned or operated site, the operator's program shall take precedence; however, this document covers Company employees for basic awareness purposes that addresses all items and shall be used when an operator's program doesn't exist.

Definitions

Accepted engineering practices means the standards of practice required by a registered professional engineer.

Aluminum Hydraulic Shoring means a manufactured shoring system consisting of aluminum hydraulic cylinders (crossbraces) used with vertical rails (uprights) or horizontal rails (wales).

Bell-bottom pier hole means a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

Benching (Benching system) is a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or more horizontal steps, usually with vertical or near-vertical surfaces between levels.

Cave-in means the movement of soil or rock into an excavation, or the loss of soil from under a trench shield or support system, in amounts large enough to trap, bury, or injure and immobilize a person.

Cross braces mean the horizontal members of a shoring system installed from side to side of the excavation. The cross braces bear against either uprights or Wales.

Excavation means any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.

Faces or sides mean the vertical or inclined earth surfaces formed as a result of excavation work.

Failure means the movement or damage of a structural member or connection that makes it unable to support loads.

Hazardous atmosphere means an atmosphere that is explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, which may cause death, illness, or injury.

Kickout means the accidental movement or failure of a cross brace.

Protective system means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

Ramp means an inclined walking or working surface that is used to gain access to one point from another. A ramp may be constructed from earth or from structural materials such as steel or wood.

Sheeting means the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

Shield (Shield system) means a structure used in an excavation to withstand cave-ins and which will protect employees working within the shield system. Shields can be permanent structures or portable units moved along as work progresses. Shields used in trenches are usually referred to as "trench boxes" or "trench shields."

Shoring (Shoring system) means a structure that is built or put in place to support the sides of an excavation to prevent cave-ins.

Sides - See "Faces."

Sloping (Sloping system) means sloping the sides of the excavation away from the excavation to protect employees from cave-ins. The required slope will vary with soil type, weather, and surface or near surface loads that may affect the soil in the area of the trench (such as adjacent buildings, vehicles near the edge of the trench and so forth).

Stable rock means natural solid mineral material that can be excavated with vertical sides that will remain intact while exposed.

Structural ramp means a ramp built of steel or wood, usually used for vehicle access. Ramps made of soil or rock are not considered structural ramps.

Support system means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

Tabulated data means tables and charts approved by a registered professional engineer and used to design and construct a protective system.

Trench (Trench excavation) means a narrow excavation (in relation to its length) made below the surface of the ground.

Trench box or shield - See "Shield".

Uprights mean the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called "sheeting."

Wales are horizontal members of a shoring system placed in the direction of the excavation face whose sides bear against the vertical members of the shoring system or earth (the uprights or sheeting).

Key Responsibilities

Management shall determine if this program is required for regulatory compliance within his/her region. If this program is deemed necessary, then management shall determine which employees within his/her region is required to receive this training. Management shall select a training facility or use an in-house qualified trainer to supply the training.

Only trained personnel can be involved in working in trenches or excavations.

Procedure

Competent Person Duties – The Safety Manager or their designee shall have the following duties:

Protective Systems or Equipment

- Monitoring water removal equipment and operations.
- Removal of workers if conditions dictate.
- Atmospheric testing.
- Inspecting excavations subject to runoff from heavy rains to determine need for diversion ditches, dikes, or other suitable protection.
- Determining cave-in potential to assess need for shoring or other protective system.
- Examining damaged material or equipment used for protective systems to determine its suitability for continued use.
- Classifying soil and rock deposits, by both visual analysis and by testing, to determine appropriate protection; re-classifying, if necessary, based on changing conditions.
- Determining the appropriate slope of an excavation to prevent collapse due to surcharge loads from stored material or equipment, operating equipment, adjacent structures, or traffic, and assuring that such slope is achieved.

Inspecting Trench and Protective Systems

- Inspections prior to entry and authorizing immediate removal of employees from the hazardous area where evidence of possible cave-in, failure of protective systems, hazardous atmospheres, or other hazardous conditions exists.

Unsafe Access/Egress

- Designing structural ramps that are used solely by employees as a means of access or egress. Structural ramps used for access or egress of equipment must be designed by a competent person qualified in structural design.

Utilities and Pre-work Site Inspection
The location of underground installations shall be determined before excavation.

When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours, or cannot establish exact location of these installations, the Company may proceed, provided it does so with caution and provided detection equipment or other acceptable means to locate utility installations are used.

Excavation shall be done in a manner that does not endanger the underground installations or the employees engaged in the work. Utilities left in place shall be protected by barricades, shoring, suspension or other means as necessary to protect employees.

Protection of the Public
Barricades, walkways, lighting and posting shall be provided as necessary for the protection of the public prior to the start of excavation operations.

Guardrails, fences, or barricades shall be provided on excavations adjacent to walkways, driveways and other pedestrian or vehicle thoroughfares. Warning lights or other illumination shall be maintained as necessary for the safety of the public and employees from sunset to sunrise.

Wells, holes, pits, shafts and all similar hazardous excavations shall be effectively barricaded or covered and posted as necessary to prevent unauthorized access. All temporary excavations of this type shall be backfilled as soon as possible.

Protection Against Falls
Walkways or crossings shall be protected by standard guardrails or railings shall be provided where employees and the general public are permitted to cross over excavations. Where workers in the excavation may pass under these walkways or bridges, a standard guardrail and toe board shall be used.

Protection of Workers in Excavations

Access and Means of Egress
Stairs, ladders or ramps shall be provided where employees are required to enter trench excavations over 4 feet deep. The maximum distance of lateral travel (e.g., along the length of the trench) required to reach the means of egress shall not exceed 25 feet.

Structural Ramps
Structural ramps used solely by employees as a means of access or egress from excavations shall be designed by a competent person. Structural ramps used for access or egress of equipment shall be designed by a person qualified in structural design, and shall be constructed in accordance with the design.

Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent movement or displacement.

Structural members used for ramps and runways shall be of uniform thickness.

Cleats or other appropriate means used to connect runway structural members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping.

Structural ramps used in place of steps shall be provided with cleats or other surface treatments on the top surface to prevent slipping.

Ladders

When portable ladders are used, the ladder side rails shall extend a minimum of 3 feet above the upper surface of the excavation.

Ladders shall have nonconductive side rails if work will be performed near exposed energized equipment or systems.

Two or more ladders, or a double-cleated ladder, will be provided where 25 or more employees will be conducting work in an excavation where ladders serve as the primary means of egress, or where ladders serve two-way traffic.

Ladders will be inspected prior to use for signs of damage or defects. Damaged ladders will be removed from service and marked with "Do Not Use" until repaired.

Ladders shall be used only on stable and level surfaces unless secured. Ladders placed in any location where they can be displaced by workplace activities or traffic shall be secured, or barricades shall be used to keep these activities away from the ladder.

Non-self-supporting ladders shall be positioned so that the foot of the ladder is one-quarter of the working length away from the support.

Employees shall not be allowed to carry any object or load while on the ladder that could cause them to lose their balance and fall.

Exposure to Vehicular Traffic

Employees exposed to vehicular traffic shall be provided with, and shall wear vests or other suitable garments marked with or made of reflectorized or high-visibility material. Warning vests worn by flagmen shall be red or orange, and shall be of reflectorized material if worn during night work.

Employee Exposure to Falling Loads

No employee shall be permitted underneath loads (or where loads may fall) handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles provide adequate protection for the operator during loading and unloading operations.

Warning System for Mobile Equipment

A warning system shall be used when mobile equipment is operated adjacent to the edge of an excavation if the operator does not have a clear and direct view of the edge of the excavation. The warning system shall consist of barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

Hazardous Atmospheres

The atmosphere shall be tested for air contaminants (oxygen, flammable gases, etc.) in excavations over 4 feet deep or if a hazardous atmosphere exists or could reasonably be expected to exist. A hazardous atmosphere could be expected, for example, in excavations in landfill areas, in excavations in areas where hazardous substances are stored nearby, or in excavations near or containing gas pipelines.

Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or forced ventilation of the workspace.

Forced ventilation will be provided where necessary to ensure the atmosphere is safe.

When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, continuous air monitoring will be performed. The device used for atmospheric monitoring shall be equipped with an audible and visual alarm.

Atmospheric testing will be performed using a properly calibrated direct reading gas monitor. Direct reading gas detector tubes or other acceptable means may also be used to test potentially toxic atmospheres.

Personal Protective Equipment

All employees working in trenches or excavations shall wear approved hard-hats and steel toed shoes or boots.

Employees exposed to flying fragments, dust, or other materials produced by drilling, sawing, sanding, grinding and similar operations shall wear approved safety glasses with side shields.

Employees exposed to hazards produced by, or performing, welding, cutting, or brazing operations shall wear approved spectacles or a welding faceshield or helmet.

Employees entering bell-bottom pier holes or other similar deep and confined footing excavations shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.

Employees shall wear approved gloves or other suitable hand protection.

Employees using, or working in the immediate vicinity of, hammer drills, masonry saws, jackhammers or similar high noise producing equipment shall wear suitable hearing protection.

Each employee at the edge of an excavation 6 feet or more deep shall be protected from falling. Fall protection shall be provided by guardrail systems, fences or barricades.

Emergency rescue equipment, such as breathing apparatus, a safety harness and line, and a basket stretcher shall be readily available where hazardous atmospheric conditions exist or may develop during work in an excavation. This equipment shall be attended when in use. Only personnel that have received approved training and have appropriate equipment shall attempt retrieval that would require entry into a hazardous atmosphere.

Protection from Hazards Associated with Water Accumulation

Employees shall not work in excavations that contain or are accumulating water unless precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions taken must include inspection by a competent person before work begins, special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water or use of safety harnesses and lifelines.

If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operation shall be monitored by a competent person trained in the use of the equipment.

If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation. Precautions shall also be taken to provide adequate drainage of the area adjacent to the excavation.

The competent person shall inform workers of the precautions or procedures that are to be followed if water accumulates or is accumulating in an excavation.

Stability of Adjacent Structures

The competent person will determine if the excavation work could affect the stability of adjoining buildings, walls, sidewalks or other structures.

Support systems (such as shoring, bracing, or underpinning) shall be used to assure the stability of structures and the protection of employees where excavation operations could affect the stability of adjoining buildings, walls, or other structures.

Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees shall not be permitted.

Protection of Employees from Falling Objects and Loose Rocks or Soil

Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of:

- Scaling to remove loose material;
- Installation of protective barricades, such as wire mesh or timber, at appropriate intervals on the face of the slope to stop and contain falling material; or
- Benching sufficient to contain falling material.

Excavation personnel shall not be permitted to work above one another where the danger of falling rock or earth exists.

Employees shall be protected from excavated materials, equipment or other materials that could pose a hazard by falling or rolling into excavations.

Protection shall be provided by keeping such materials or equipment at least 2 feet from the edge of excavations, by the use of restraining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

Materials and equipment may, as determined by the competent person, need to be stored further than 2 feet from the edge of the excavation if a hazardous loading condition is created on the face of the excavation.

Materials piled, grouped or stacked near the edge of an excavation must be stable and self-supporting.

Using the following categories, soil is classified into different types, which determine the kind of cave-in protection required. Only a competent and trained person can determine the soil type by using these classifications.

- Grain sizes are usually classified into four types: gravel, sand, silt, clay. Gravel is the least stable, and clay is the most stable.
- Saturation is the amount of water that the soil is currently holding. Complete saturation is much less stable than soil that is only slightly damp. However, soil with no water content is unstable.
- Cohesiveness is a test that determines how well the soil sticks together. The more it sticks together, the more stable the trench walls will be. The field test usually consists of rolling the soil in your hand into the shape of a worm and observing how and when it separates.
- Unconfined compressive strength determines how much weight per square foot the soil can withstand. This will determine how easily the soil will shear and cave in

Soil Types
Soil classifications must be determined by testing and protective systems designed according to soil classifications.

- The most stable type of soil is Type A. It is dense and heavy and consists primarily of clay.
- Type B has a medium level of stability and is made of soils such as silt, sandy loam, and medium clay.
- The least stable soil is Type C, which consists of gravel, loamy sand, and soft clay.

Timber shoring or aluminum hydraulic shoring must be determined according to the appendixes A & C of 29 CFR 1926 (Excavations).

The devices should be used while in good repair and maintenance. If damaged they must be inspected.

Employees should be protected from hazards of falling, rolling or sliding materials or equipment. Shields should not be subjected to excessive forces and will be installed to protect employees from lateral loads. Employees are restricted from being in the shield when installing or removing. The shield must be designed to resist calculated trench forces.

Daily Inspection
The competent person shall conduct daily inspections of excavations, adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, failure of protective systems, hazardous atmospheres or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when the trench will be or is occupied by employees.

Where the competent person finds evidence of a situation that could result in a possible cave-in, failure of protective systems, hazardous atmosphere, or other hazardous conditions, exposed employees shall be immediately removed from the hazardous area until precautions have been taken to assure their safety.

There shall be a written log of all inspections conducted. This log shall include the date, work site location, results of the inspection, and a summary of any action taken to correct existing hazards.

Training

All personnel involved in trenching or excavation work shall be trained in the requirements of this program and regulatory requirements.

Training shall be performed before the employee is assigned duties in excavations.

Retraining will be performed whenever work site inspections conducted by the competent person or Safety Manager indicate that an employee does not have the necessary knowledge or skills to safely work in or around excavations.

Training records shall include the date(s) of the training program, the instructor(s) of the training program, a copy of the written material presented, and the names of the employee(s) to whom the training was given.

Purpose

During vacuum truck operations, workers are at risk of being exposed to toxic gases, flammable materials, and other various hazards. This procedure will address proper and safe vacuum truck operations.

Scope

When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Burnt Mountain Service's employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Employees will be aware of provisions of site-specific contingency/emergency plans by either Burnt Mountain Service's or of a facility owner.

Safe Work Procedures

Safe work procedures for vacuum truck operations must address the potential for chemical reactions and the potential release of toxic gas or fumes. They must also take into account the variety of fluids or substances that vacuum trucks typically carry. Before starting any vacuum truck operations Burnt Mountain Service's shall make sure that vacuum truck owners and operators, as well as facility personnel are aware of the following hazards of vacuum truck operations and associated controls:

- The numerous potential hazards associated with vacuum truck operations in petroleum facilities including but not limited to:
    - sources of ignition, flammable atmospheres, potential hazards associated with the surrounding area, toxic vapors and their PEL's and STEL's.
    - additional hazards such as slips and falls, spills and releases, fires and explosions and accidents within the facility or on the highway.
- Ensure that air quality monitoring at the work site is continuous at such locations as the discharge area of the vacuum truck venting hose.
- Ensure that first aid is readily available on site in the event of exposure to toxic gas.
- Consult the manufacturer's instructions to confirm that the vacuum equipment is designed for the particular transfer operation.
- Ensure that all equipment, including tank and vacuum trucks and pumping equipment is in safe working condition.
- Ensure that the tank interior, filter baghouse and cyclone separators are clean and free of any substances that may react with the liquids to be vacuumed or transferred.
- Burnt Mountain Service's has inspection requirements that shall be done before beginning operations. Before beginning operations, vacuum truck operators shall obtain any required permits and inspect vacuum trucks, equipment, and loading/off-loading sites to assure safe operations.
- Drivers are to be aware of high discharge temperatures associated with vacuum pumps and blowers. Under normal conditions, the absence of oxygen minimizes the risk of ignition in a vacuum truck. However, operating rotary lobe blowers and vacuum pumps at high speeds creates high air movement and high vacuum levels, resulting in high discharge air temperatures and high discharge vapor concentrations that can present potentially ignitable conditions.

Atmospheric Testing and When It Should Be Conducted

The areas where vacuum trucks will operate must be free of hydrocarbon vapors in the flammable range.

The areas where the vacuum truck operator and others work without respirators must also be at or below air contaminant PEL's/STEL's. If there is any question whether the area is vapor or toxic gas free, atmospheric testing shall be performed by a qualified person using properly calibrated and adjusted detectors.

Testing shall be conducted prior to starting any operations, and if necessary, during operations, including but not limited to the following:

- when operations in the area are subject to change such as automatic pump start-up or product receipt into, or transfer out of, a tank located in the vicinity of the transfer operations.
- when off-loading
- when atmospheric conditions change such as wind direction
- when an emergency situation, such as product release, occurs within the facility that may affect atmospheric conditions in the transfer area.

To prevent exposure to toxic gases during transfer operations:

- never transfer fluids from one truck to another unless it has been established that no chemical reaction will occur.
- position trucks to minimize exposure to any discharged gases and fumes.
- ensure that discharge lines are long enough and large enough for safe operation.
- position vent lines away from workers and workstations, including control panels, valve handles, gauges, shut-offs, and hose attachment points - if possible, use a vertical exhaust stack to divert exhaust gases away from workers and ignition sources.
- check air monitoring equipment during operations to confirm that venting is proceeding safely.
- monitor the following:
  - tank level indicators to avoid overfilling.
  - tank pressure gauges to avoid over-pressurizing receiving tanks or creating excessive vacuum in supply tanks.
  - tank temperature gauges to help identify possible chemical reactions.
- minimize the air introduced into the system when pressure loading or unloading - submerge the suction line in liquid or reduce the vacuum pump speed when skimming or nearing the end of a load.
- maintain a log of transported fluids and any potential residue.
- use gravity loading and unloading whenever possible.
- Ensure that the entire tank is unloaded so the valve does not freeze in low temperatures.
- use a vapor recovery system — when available — to avoid venting tanks directly to the atmosphere.

Conductive Hoses and Qualities of Conductive Hoses That Must Be Used

Vacuum hose constructed of conductive material or thick-walled hose with imbedded conductive wiring shall be used when transferring flammable and combustible liquids when the potential for a flammable atmosphere exists in the area of operations.

Conductive hose shall provide suitable electrical conductance less than or equal to 1 mega ohm per 100 feet (as determined by the hose manufacturer). Thin-walled metallic spiral-wound conductive hoses should not be used because of the potential for electrical discharge through the thin plastic that covers the metal spiral.

Bonding and Grounding

The complete vacuum transfer system needs to be bonded so that there is a continuous conductive path from the vacuum truck through the hose and nozzle to the tank or source container and grounded to dissipate stray currents to earth (ground).

Prior to starting transfer operations, the vacuum truck needs to be grounded directly to the earth or bonded to another object that is inherently grounded (due to proper contact with the earth) such as a large storage tank or underground piping. A safe and proper ground to earth may be achieved by connecting to any properly grounded object including but not limited to any one or more of the following examples:

- a metal frame of a building, tank, or equipment that is grounded.
- an existing facility grounding system such as that installed at a loading rack.
- fire hydrants metal light posts, or underground metal piping with at least 10' of contact with earth
- a corrosion free metal ground rod of suitable length and diameter (approximately 9' long and 5/8-in. diameter), driven 8' into the earth (or to the water table, if less)

Vacuum Exhaust Venting

A number of methods can be used by vacuum truck operators to safely vent vacuum pump exhaust vapors, including but not limited to the following:

- operators can prevent dieseling by locating the vacuum truck upwind of vapor sources and by extending the vacuum pump discharge away from the diesel engine air intake,
- vapors may be returned to the source container using conductive and closed connections,
- vapors may be vented into the atmosphere to a safe location using a safety venture,
- vacuum truck operators may provide vertical exhaust stacks extending approximately 12' above the vacuum truck (or higher if necessary) to dissipate the vapors before they reach ignition sources or other potential hazards and personnel, and
- vacuum truck operators may attach a length of exhaust hose to the vacuum exhaust that is long enough to reach an area that is free from potential hazards, sources of ignition, and personnel - the hose should be preferably extended 50' downwind of the truck and away from the source of the liquids.

Training and Personnel Safety

Burnt Mountain Service's requires the safe operation of vehicles and that only qualified operators shall be allowed to operate the vehicle. Training consists of:

- Vacuum truck operators shall be trained and properly licensed in accordance with applicable regulations.
- Vacuum trucks shall not enter into tank dike area until such areas have been checked/monitored and rendered safe.
- Vacuum trucks cargo tanks shall be depressurized.
- Vacuum truck operators must be aware of the effect of speeds, turns and the changing center of gravity.
- Vacuum truck operators shall maintain proper distances when operating vacuum trucks inside facilities with restricted clearances.

Additionally, vacuum truck personnel working in petroleum facilities shall be trained for personnel safety in the following areas:

- Workers must be trained in the safe operation of the vacuum equipment before operating equipment without coaching and/or supervision.
- Workers must be familiar with hazards of the petroleum products, by-products, wastes, and materials being transferred. This information can be found in the SDS tab located at www.bms.support.
- Workers must be aware of relevant government and facility safety procedures and emergency response requirements.
- Workers must review the SDS of the substances being vacuumed or transferred prior to handling the material. The SDS's
- Appropriate PPE shall be used at all times.
- All personnel shall leave the vacuum truck cab during loading and off-loading operations.
- When transferring flammable liquids or hazardous materials, vacuum truck operators shall remain positioned between the vacuum truck and the source or receiving tank, vessel, or container and within 25' of the vacuum truck throughout the duration.
- Vacuum truck operators shall monitor the transfer operation and be ready to quickly close the product valve and stop the pump in the event of a blocked line or release of material through a broken hose or connection.
- Smoking, or any other source of ignition, shall not be permitted within at least 100' (depending on local procedures and atmospheric conditions) of the truck, the discharge of the vacuum pump or any other vapor source.

Purpose

The purpose of this program is to ensure a safe work environment during welding, cutting and hot work operations.

Scope

This program is applicable to all employees directly involved or assisting in the welding, cutting and hot work operations. When work is performed on a no owned or operated site, the operator's program shall take precedence, however, this document covers Burnt Mountain Service's employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Operators of equipment should report any equipment defect or safety hazards and discontinue use of equipment until its safety has been assured. Repairs shall be made only by qualified personnel.

If fire hazards cannot be taken to a safe place or guards cannot be used to confine heat, sparks, slag and protect the immovable fire hazards, the welding and cutting shall not be performed.

Definitions

Welding/Hot Work Procedures - any activity which results in sparks, fire, molten slag, or hot material which has the potential to cause fires or explosions.

Examples of Hot Work - Cutting, Brazing, Soldering, Thawing Pipes, Grinding, using an electric tool in a hazardous area and Welding.

Special Hazard Occupancies - any area containing Flammable Liquids, Dust Accumulation, Gases, Plastics, Rubber and Paper Products.

Hazards - includes, but not limited to the following: fires and explosions, skin burns, welding "blindness", and respiratory hazards from fumes and smoke.

Key Responsibilities

Managers and Supervisors

- Determine if its property is safe for welding and cutting operations.
- Establish safe areas for welding and cutting operations.
- Provide training for all employees whose task includes heat, spark or flame producing operations such as welding, brazing, or grinding.
- Develop and monitor effective hot work procedures.
- Provide safe equipment for hot work.
- Provide proper and effective PPE for all hot work.
- Monitor all hot work operations.
- Ensure all hot work equipment and PPE are in safe working order.
- Allow only trained and authorized employees to conduct hot work and conduct inspections of the hot work area before operations begin.

- Ensure permits are used for all hot work outside authorized areas.

Employees

- Follow all hot work procedures.
- Properly use appropriate hot work PPE.
- Inspect all hot work equipment before use.
- Report any equipment problems or unsafe conditions.

Procedure

General

A hot work permit must be completed before performing hot work. Precautions that are to be taken shall be in the form of a written permit. Before cutting or welding is permitted the area shall be inspected and a written permit shall be used to authorize welding and cutting operations.

Where practicable all combustibles shall be relocated at least 35 feet from the work site. Where relocation is impractical, combustibles shall be protected with flameproof covers, shielded with metal, guards, curtains, or wet down the material to help prevent ignition of material.

Ducts, conveyor systems, and augers that might carry sparks to distant combustibles shall be protected or shut down.

Where cutting or welding is done near walls, partitions, ceilings, or openings in the floor (grating, manholes, etc.), fire-resistant shields or guards shall be provided to prevent ignition.

If welding is to be done on a metal wall, partition, ceiling, or solid decking/flooring, precautions shall be taken to prevent ignition of combustibles on the other side, due to conduction or radiation of heat. Where combustibles cannot be relocated to the opposite side of the work, a fire watch person shall be provided on the opposite side of the work.

Welding shall not be attempted on a metal partition, wall, and ceiling or decking/flooring constructed of combustible sandwich panels.

Cutting or welding on pipes or other metal in contact with combustible walls, partitions, floors, ceilings, or roofs shall not be undertaken if the work is close enough to cause ignition by combustion.

Cutting or welding shall not be permitted in the following situations:

- In areas not authorized by management.
- In sprinkled buildings while such protection is impaired.
- In the presence of potentially explosive atmospheres, e.g., flammables.
- In areas near the storage of large quantities of exposed, readily ignitable materials.
- In areas where there is dust accumulation of greater than 1/16 inch within 35 feet of the area where welding/hot work will be conducted.
- All dust accumulation shall be cleaned up before welding or hot work is permitted.

Whenever welding or cutting is performed in locations where other than a minor fire might develop or any of the conditions mentioned above cannot be met, a fire watch shall be provided.

- The fire watch shall be provided during and for a minimum of 1/2 hour past the completion of the welding project.
- The fire watch shall be trained in the use of fire extinguishers and the facility's alarm system.
- During this time the fire watch will have appropriate fire extinguishers readily available.
- Suitable extinguishers shall be provided and maintained ready for instant use.
- A hot-work permit will be issued on all welding or cutting outside of the designated welding area.

Fire Prevention Measures
A designated welding area shall be established to meet the following requirements:

- Floors swept and cleaned of combustibles within 35 feet of work area.
- Flammable and combustible liquids and material will be kept 35 feet from the work area.
- Adequate ventilation providing 20 air changes per hour.
- At least one 10-pound dry chemical fire extinguisher shall be within access of 35 feet of the work area.
- Protective dividers such as welding curtains or noncombustible walls will be provided to contain sparks and slag to the combustible free area.

Requirements for welding conducted outside the designated welding area:

- Portable welding curtains or shields must be used to protect other workers in the welding area.
- A hot-work permit must be completed and complied with prior to initiating welding operations.
- Respiratory protection is mandatory unless an adequate monitored airflow away from the welder and others present can be established and maintained.
- Plastic materials must be covered with welding tarps during welding procedures.
- Fire Watch must be provided for all hot-work operations.

After welding operations are completed, the welder shall mark the hot metal or provide some other means of warning other workers.

Confined Space

- A space that Is large enough and so configured that an employee can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- Is not designed for continuous occupancy.

Refer to Burnt Mountain Service's Confined Space Program before commencing any welding, cutting, and/or brazing operations in an area meeting the requirements of a confined space.

Ventilation is a prerequisite to work in confined spaces.

When welding or cutting is being performed in any confined spaces, the gas cylinders and welding machines shall be left on the outside. Before operations are started, heavy portable equipment mounted on wheels shall be securely blocked to prevent accidental movement.

When a welder must enter a confined space through a manhole or other small opening, means shall be provided for quickly removing him in case of an emergency.

- When safety belts and lifelines are used for this purpose, they shall be so attached to the welder's body that it cannot be jammed in a small exit opening.
- An attendant with a preplanned rescue procedure shall be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect.

When arc welding is to be suspended for any substantial period of time, such as during lunch or overnight, all electrodes shall be removed from the holders and the holders carefully located so that accidental contact cannot occur, and the machine shall be disconnected from the power source.

In order to eliminate the possibility of gas escaping through leaks of improperly closed valves, when gas welding or cuffing, the torch valves shall be closed and the fuel-gas and oxygen supply to the torch positively shut off at some point outside the confined area whenever the torch is not to be used for a substantial period of time, such as during lunch hour or overnight. If practical, the torch and hose shall also be removed from the confined space.

When welding must be performed in a space entirely screened on all sides, the screens shall be so arranged that no serious restriction of ventilation exists. It is desirable to have the screens mounted so that they are about 2 feet (0.61 m) above the floor unless the work is performed at so low a level that the screen must be extended nearer to the floor to protect nearby workers from the glare of welding.

A fixed enclosure shall have a top and not less than two sides which surround the welding or cutting operations, and a rate of airflow sufficient to maintain a velocity away from the welder of not less than 100 linear feet (30 m) per minute.

All welding and cutting operations carried out in confined spaces shall be adequately ventilated to prevent the accumulation of toxic materials or possible oxygen deficiency. This applies not only to the welder, but also to helpers and other personnel in the immediate vicinity. All air withdrawn will be replaced with air that is clean.

In circumstances for which it is impossible to provide such ventilation, airline respirators or hose masks approved for this purpose by the National Institute for Occupational Safety and Health (NIOSH) will be provided. In areas immediately hazardous to life, a full-face piece, positive pressure, self-contained breathing apparatus or a combination full-face piece, positive pressure supplied-air respirator with an auxiliary, self-contained air supply approved by NIOSH must be used.

Where welding operations are carried on in confined spaces and where welders and helpers are provided with hose masks, hose masks with blowers or self-contained breathing equipment, a worker shall be stationed on the outside of such confined spaces to ensure the safety of those working within.

Fumes, Gases and Dust

Fumes produced by some welding processes can be toxic and may require source extraction. An assessment of the work to be performed must be completed before each job is undertaken. Fumes generally contain particles from the material being welded. Welding fumes can have an acute effect on the respiratory system.

Any welding, cutting, or burning of lead base metals, zinc, cadmium, mercury, fluorides, beryllium or exotic metals or paints not listed here that could produce dangerous fumes shall have proper ventilation or respiratory protection. This includes inert-gas metal-arc welding or oxygen cutting of stainless steel.

Welders and helpers will refer to Burnt Mountain Service's Respiratory Protection Program to determine the appropriate respiratory protection to be used during welding operations.

All welding and cutting operations shall be adequately ventilated to prevent the accumulation of toxic materials. This applies not only to the welder, but also to helpers and other personnel in the immediate vicinity.

Personal Protection

Helmets and hand shields shall be made of a material which is an insulator for heat and electricity. Helmets, shields, and goggles shall not be readily flammable and shall be capable of withstanding sterilization.

Helmets and hand shields shall be arranged to protect the face, neck, and ears from direct radiant energy from the arc.

Helmets shall be provided with filter plates and cover plates designed for easy removal.

All parts shall be constructed of a material, which will not readily corrode or discolor the skin.

Goggles shall be ventilated to prevent fogging of the lenses as much as practicable.

All glass for lenses shall be tempered, substantially free from scratches, air bubbles, waves, and other flaws. Except when a lens is ground to provide proper optical vision correction, the front and rear surfaces of lenses and windows shall be smooth and parallel.

Lenses shall bear some permanent distinctive marking which may readily identify the source and shade.

The following is a guide for the selection of the proper shade numbers. These recommendations may be varied to suit the individual's needs.

Welding Operation		Shade Number
Shielded metal — arc welding 1/16, 3/32, 1/8-5/32 inch electrodes		10
Gas-shielded arc welding (nonferrous) 1/16, 3/32, 5/32 inch electrodes		11
Gas-shielded arc welding (ferrous) 1/16, 3/32, 1/8, 5/32 electrodes		12
Shielded metal arc welding: 3/16	7/32,1/4 inch electrodes	12
	5/16, 3/8-inch electrodes	14
Atomic hydrogen welding		10 – 14
Carbon arc welding		14
Soldering		2
Torch brazing		3 or 4
Light cutting, hp to 1 inch		3 or 4
Medium cutting, 1 inch to 6 inches		4 or 5
Healy cutting, 6 inches or over		5 or 6
Gas welding (light) up to 1/8 inch		4 or 5
Gas welding (medium) 1/8 - 1/2 inch		5 or 6
Gas welding (heavy) 1/2 inch or over		6 or 8

NOTE:
In gas welding or oxygen cutting where the torch produces a high yellow light, it is desirable to use a filter or lens that absorbs the yellow or sodium line in the visible light of the operation. All filter lenses and plates shall meet the test for transmission of radiant energy prescribed in ANSI Z87.1 — 1968 — American National Standard Practice for Occupational and Educational Eye and face Protection. Where the work permits the welder to be enclosed in an individual booth painted with a finish of low reflectivity such as zinc oxide (an important factor for absorbing ultraviolet radiation) and lamp black or shall be enclosed with noncombustible screens similarly painted. Booths and screens shall permit circulation of air at floor level. Workers or other persons adjacent to the welding areas shall be protected from the rays by noncombustible or flameproof screens or shields or shall be required to wear appropriate goggles.

Adequate hand protection and clothing must be used to protect the body from welding hazards.

Cleaning Compounds
In the use of cleaning materials, because of their possible toxicity or flammability, appropriate precautions such as manufacturer instructions shall be followed.

- Degreasing and other cleaning operations involving chlorinated hydrocarbons shall be so located that no vapors from these operations will reach or be drawn into the atmosphere surrounding any welding operation.
- In addition, trichloroethylene and perchloroethylene shall be kept out of atmospheres penetrated by the ultraviolet radiation of gas-shielded welding operations.

Oxygen cutting, using a chemical flux, iron powder or gas shielded arc cutting for stainless steel shall be performed using mechanical ventilation adequate to remove the fumes generated.

Cylinders

Compressed gas cylinders shall be DOT-approved and legibly marked near the shoulder of the cylinder for the purpose of identifying the gas content with either the chemical or trade name of the gas.

- All compressed gas cylinder connections must comply with ANSI B57. 1-1965 Standards.
- Compressed gas cylinders shall be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried.

All cylinders shall be kept away from sources of heat and from radiators and piping systems that may be used for grounding purposes. Cylinders and cylinder valves including couplings and regulators shall be kept free from oily or greasy substances and must not be handled with gloves or rags in the same condition.

Stored oxygen cylinders shall be kept at least 20 feet from the fuel gas cylinders or combustible materials, especially oil or grease, or separated by a non-combustible barrier at least 5 feet high with a fire rating of at least one-half hour. All empty cylinders shall have closed valves. Valve protection caps shall always be in place and hand-tight except when cylinders are in use or connected for use.

Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards.

Fuel gas cylinders stored inside buildings shall be limited to a total capacity of 2000 cubic feet (300 pounds) of liquefied petroleum gas, except for those in actual use or attached ready for use.

All acetylene cylinders shall be stored valve-end up.

Assigned storage spaces shall be located where cylinders cannot be knocked over or damaged by falling objects or subject to tampering by unauthorized persons.

- Back flow protection shall be provided by an approved device that will prevent oxygen from flowing into the fuel-gas system or fuel from flowing into the oxygen system.
- An approved device that will prevent flames from passing into the fuel-gas system shall provide flashback protection.
- An approved pressure-relief device set at the appropriate pressure shall provide back-pressure protection.

Special care must be taken when transporting gas cylinders:

- Cylinders must be secured with valve cap installed.
- Cylinders shall not be lifted by the valve protection caps, the regulators must be removed, and cylinders shall not be dropped or permitted to strike each other.
- Removed regulators must be carried in the cab of the vehicle.
- Cylinders shall not be tampered with, nor should any attempt be made to repair them.
- They shall be handled carefully - rough handling, knocks, or falls are liable to damage the cylinder, valve or safety device and cause leakage.

Safety devices shall not be tampered with.

Arc Welding and Cutting

All personnel operating, installing, and maintaining welding equipment shall be qualified or trained to operate and maintain such equipment.

- All workmen assigned to operate or maintain equipment shall be familiar with and electrical welding equipment shall be chosen for safe operation and comply with applicable Requirements for Electric Arc Welding Standards to include: 29 CFR 1910.254, 29 CFR 1910.252 (a)(b) (c) and if gas shielded arc welding is done the must be familiar with the American Welding Society Standard A6-1-1966.
    - Arc welding equipment must be designed to meet conditions such as exposure to corrosive fumes, excessive humidity, excessive oil vapor, flammable gases, abnormal vibration or shock, excessive dust and seacoast or shipboard conditions.
    - It shall be operated at the recommended voltage in accordance with the manufacturer recommendations.
    - All leads shall be periodically inspected and replaced if insulation is broken, or splices are unprotected.
    - Leads shall not be repaired with electrical tape.
- All ground connections shall be checked to determine that they are mechanically strong and electrically adequate for the required current.

A disconnecting switch or controller shall be provided at or near each welding machine along with overcurrent protection.

All direct current machines shall be connected with the same polarity and all alternating current machines connected to the same phase of the supply circuit and with the same polarity.

- To prevent electrical contact with personnel, all electrode holders shall be placed where they do not make contact with persons, conducting objects or the fuel of compressed gas tanks.
- All cables with splices within 10 feet of the holder shall not be used.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

If an object to be welded or cut cannot be moved and if all the fire hazards cannot be removed, then guards shall be used to confine the heat sparks and slag and to protect the immovable fire hazards.

Resistance Welding

All personnel operating, installing, and maintaining welding equipment shall be qualified or trained to operate and maintain such equipment.

- Voltage, interlocks, guarding, grounding and shields shall be in accordance with manufacturer recommendations.
- Precautions such as flash guarding, ventilation and shields shall be provided to control flashes, toxic elements, and metal fumes.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

Transmission Pipeline
When arc welding is performed in wet conditions, or under conditions of high humidity, special protection against electric shock shall be supplied.

Pressure testing:

- In pressure testing of pipelines, the workers and the public shall be protected against injury by the blowing out of closures or other pressure restraining devices.
- Protection shall be provided against expulsion of loose dirt that may have become trapped in the pipe.

The welded construction of transmission pipelines shall be conducted in accordance with the Standard for Welding Pipelines and Related Facilities, API Std. 1104-1998.

Oxygen Fuel Gas Welding and Cutting:
Only approved apparatuses such as torches, regulators, or pressure-reducing valves, setting generators and manifolds shall be used:

- Mixtures of fuel gases and air or oxygen may be explosive and must be guarded against.
- All hoses and hose connections shall comply with the Compressed Gas Association and Rubber Manufacturers' Associations' applicable standards.
- Workers in charge of the oxygen or fuel-gas supply equipment, including generators, shall be instructed, and judged competent by the Burnt Mountain Service's before being left in charge.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

Fire Watch Requirements
A fire watch shall be under these conditions as a minimum and when welding, cutting, brazing and/or soldering is performed near combustible materials and/or locations where fire may develop:

- Locations where other than a minor fire might develop.
- Combustible materials are closer than 35 feet to the point of operation.
- Combustibles that are 35 feet or more away but are easily ignited.
- Wall or floor openings within a 35 feet radius of exposed combustible materials.
- Combustible materials are adjacent to the opposite side of metal partitions, ceilings, or roofs.

Fire watch personnel shall be maintained at least a half an hour after welding or cutting operations have been completed and fire watchers shall have fire extinguishers readily available.

First Aid Equipment
First aid equipment shall be available at all times. All injuries shall be reported as soon as possible for medical attention. First aid shall be rendered until medical attention can be provided.

Training

Training shall include:

- Position Responsibilities
- Cutters, welders, and their supervisors must be suitably trained in the safe operations of their equipment and the safe use of the process.
- Fire Watch Responsibilities - specifically, the fire watch must know:
    - That their ONLY duty is Fire Watch.
    - When they can terminate the watch.
    - How to use the provided fire extinguisher(s).
    - Be familiar with facilities and how to activate fire alarm if fire is beyond the incipient stage.
    - Operator Responsibilities
    - Contractor Responsibilities
    - Documentation requirements
    - Respirator Usage requirements
    - Fire Extinguisher training.

Purpose

Burnt Mountain Services (the Company) will provide a safe work environment for its employees. In doing so, the Company will take all reasonable and practical measures to eliminate or minimize injury or incident risks associated with the nature of the work performed when employees work alone.

The Company site managers shall establish site specific procedures for employees working alone.

Objectives

To minimize risk to employees who may work alone, and assistance is not readily available, the site manager will collaborate with the lone worker to:

- Conduct a written Job Hazard Assessments (JSA) to identify existing or potential working alone hazards.
- Take measures to eliminate or control the hazards of working alone at the worksite.
- Ensure that affected employee(s) are informed of the hazards and methods used to control or eliminate them.
- Provide an effective system for communication between any employee who works alone and persons capable of assisting the employee.
- Ensure all incidents are reported, investigated, and documented.
- Update this Procedure when there is a change in work arrangements which could adversely affect an employee's well-being or a report that the system is not working effectively.

Key Responsibilities

Company Safety Manager

- Conduct a hazard assessment to identify existing or potential hazards related to the nature of the work or the work environment given the circumstances of the work when working alone.
- Responsible for the review, implementation, and maintenance of the site-specific Working Alone Plan.
- Communicate this policy and its procedures to employees who work alone.
- Periodically review the effectiveness of the hazard controls and procedures of the Working Alone Plan(s) and make improvements as required.

Worksite Project Manager

- Responsible for the implementation and maintenance of the Working Alone Plan for their project and ensuring all assets are made available for compliance with the procedure.
- Take all reasonable and practical steps to minimize or eliminate identified working alone risks.
- Review the hazard assessment results and take action or provide recommendations to management to minimize or eliminate identified working alone risks.
- Periodically review the effectiveness of the policy and guidelines and make changes as required by consulting with management staff and employee representatives.
- Respond to employee concerns related to working alone and communicate these to management.
- Report all incidents of work site incidents immediately.
- Participate in work site hazard assessments and the implementing of procedures to eliminate or control hazards of working alone.

Safe Work Procedures

This procedure applies if an employee is working alone at a work site where assistance is not readily available if there is an emergency, or the employee is ill or injured.

Worksite Assessment
A hazard assessment for working alone will anticipate work and travel time, weather, communication, type of work, employee medical conditions and training. The hazard assessment shall address hazards and identify control measures in order to minimize risk associated with working alone.

The hazard assessment will be conducted on a project by project or site basis as circumstances vary between locations and conditions. To assess this hazard the Company should review records, past incidents and identify measures or actions needed to correct any hazards. The assessment should involve:

- Participation by employees through methods such as one-on-one interviews, kick off safety meetings, etc.
- The assessment should utilize information from employees about their experiences working alone, their current concerns and their suggestions for improvement.
- Consideration for the time interval between checks and the procedure to follow in case the employee cannot be contacted, including provisions for emergency rescue.

Plan

The Job Hazard Assessment (JSA) must develop and implement a written procedure for checking the well-being of a worker assigned to work alone or in isolation under conditions which present a risk of disabling injury, if the worker might not be able to secure assistance in the event of injury or other misfortune.

Communication and Regular Contact Person System
Workers must carry a cellular phone or electronic monitoring device at all times while working alone. The use of a radio, cellular/satellite phone, electronic monitoring device or another form of direct, reliable correspondence shall be used to establish an effective means of communication is established between the lone employee and designated check person.

Each site-specific Working Alone Plan shall address a check-in/check-out process where employees are monitored or contacted at regular intervals. Individuals must be monitored at regular intervals, or the individual must contact their designated communicator at pre-determined intervals based on determinations made in the hazard assessment.

Individual(s) by job function responsible for establishing contact with the affected employee, as well as a back-up form of communication will be established for each site-specific plan. The Safety Manager, Project Manager or designee is responsible for check-in with the lone employee at regular intervals.

A backup form of communication in the event primary communication (cell phone or land line) is unavailable will be via satellite phone or if electronic communication is not practicable or readily available at the worksite, the Company must ensure that a competent employee visits the employee at regular intervals. The Company shall document communications with the lone employee on the JHA/JSA at the check in intervals.

These visits or contacts shall be at intervals of time appropriate to the nature of the hazards associated with the employee's work.

Procedures to be Followed in the Event That a Worker Working Alone Does Not Respond

Considerations such as length of time missing, weather conditions, physical fitness, etc. must be factored into the site-specific working alone program. The program must specify procedures for emergency response including provisions for contacting appropriate local officials. The program shall identify specific criteria to determine when an employee search is necessary. The minimum requirements include:

- If the working alone employee fails to respond at the scheduled contact time repeated contact efforts will be made for 1 hour.
- If the employee working alone is not contacted within 1 hour of the scheduled contact a designated individual will be dispatched to the working location if within close proximity. If the working alone employee is not found, then the closest police (city) or governmental search and rescue authority shall be notified to conduct a search.

Limitations on or Prohibitions of Specified Activities

- No heavy equipment will be operated if a worker is alone.
- No hot work will occur if a worker is alone.
- No working at heights will occur if a worker is alone and requiring a personal fall arrest system.
- Other limitations will be placed based on the site-specific hazard assessment.

Minimum Training or Experience

All employees will be trained (if working alone is a hazard at that location) in:

- Any revision to the written local Working Alone Plan and safe work practices.
- Being informed of working alone hazards at the Company worksite and the methods used to control or eliminate them.
- The methods for identification, hazard reduction and prevention when working alone and dealing with situations or individuals that present a potential risk.
- A worker required to work alone, and any person assigned to check on the worker must be trained in the written procedure for checking the worker's well-being.
- All training shall be documented.

Provisions of PPE

- Cold weather clothing shall be worn when appropriate if a worker is alone.
- Additional PPE for workers working alone will be identified in the site-specific Job Hazard Assessment process.

Safe Work Practices

Controls implemented at Company worksites shall, at a minimum:

- An Emergency Action Plan (www.BMS.support) must be created for a work alone site before work is initiated.
- A Working Alone Hazard Assessment must be completed before lone work is initiated. The form is located in the Forms tab of the safety support center.
- Have employees check road reports and weather forecast before traveling and NOT allow work alone activities if weather could hinder site access.
- Include in the hazard assessment a plan that includes rest breaks, a procedure for tracking overdue employees and emergency contact information.

- Ensure all lone workers are to be equipped with cell phones or radios and first aid kits.
- Advise employees to travel with another employee when possible.

Provision of Emergency Supplies

- All vehicles shall contain the appropriate emergency supplies including flares, marking devices, food, water, warm clothing during winter and other supplies as determined by the hazard assessment.
- Workers working alone shall have spare batteries or portable charging devices for communication devices in case of power failure, a radio for local weather conditions and other equipment as determined by the hazard assessment.
- If an employee requires personal medication, they must ensure they have sufficient supplies available.

Review & Updating Working Alone Plan

- The hazard assessment and Working Alone Plan for each Company worksite must be reviewed at least on an annual basis or more frequently if there is a change in work processes or arrangements which could adversely affect an employee's well-being are introduced or changed.
- The local Working Alone Plan shall be immediately revised if there is any indication or report that the plan is not working effectively or needs changing.