General Programs and Best Practices

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1.0 ADVERSE WEATHER CONDITIONS AND THERMAL EXPOSURE

Extreme Heat

Control Measures to Protect Employees from Heat Stress

If a worker is or may be exposed to heat stress Mobile Energy Systems must implement engineering controls to reduce the exposure of workers. If engineering controls are not practicable, Mobile Energy Systems must reduce the exposure of workers to levels below those listed in the screening criteria for heat stress exposure in the heat stress and strain section of the ACGIH Standard by providing administrative controls, including a work-rest cycle or personal protective equipment, if the equipment provides protection equally effective as administrative controls.

Workers showing symptoms of heat stress must be removed from the heat and provided first aid. If a worker shows signs or reports symptoms of heat stress or strain, the worker must be removed from the hot environment and treated by an appropriate first aid attendant, if available, or by a physician.

Additional control measures include:

- New employees should acclimatize before assuming a full workload. It is advisable to assign about half of the normal workload to a new employee on the first day of work and gradually increased on subsequent days.
- Potable water is provided to workers to prevent heat stress. If a worker is or may be exposed to high temperatures, Mobile Energy Systems must provide and maintain an adequate supply of cool potable water close to the work area for the use of a heat exposed worker. On average, about one litre of water each hour may be required to replace the fluid loss.
- Supervisors will provide frequent reminders to employees to drink frequently.
- Every morning there will be a short tailgate meeting to remind workers about the importance of frequent consumption of water throughout the shift during hot weather.
- 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.
- 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, if the crews are moving to different locations, workers will be reminded about the address and directions to the worksite in case it is necessary to inform medical responders and emergency procedures.
- Wear loose clothing that permits sweat evaporation but stops radiant heat. Use cooled protective clothing for extreme conditions.

HEAT STRESS / HEAT STROKE

If heat stress is not treated in the early stages a much more serious condition, such as heat exhaustion and/or heat stroke can develop. In heat exhaustion, your body loses too much water and salt as sweat and lead to Heat Stroke. Heat stroke is a life-threatening condition in which the body's core temperature rises above 41°C. Without immediate first aid, heat stroke can result in loss of consciousness, permanent brain damage, and death.

DANGER SIGNS and SYMPTOMS

Heat Exhaustion	Heat Stroke
Shallow breathing Increased breathing rate Weak, rapid pulse Cool, pale, clammy skin Sweating Weakness, fatigue, dizziness Headache and nausea Fainting Muscle cramps **NOTE:** Sweating is an important sign, because it is often the only way to tell apart heat exhaustion from a life-threatening condition called heat stroke.	Hot, dry, flushed skin Seizures Absence of sweating Increased breathing rate Agitation, confusion Irregular pulse Decreased level of consciousness Shock Headache Cardiac arrest Nausea and vomiting

TREATMENT

Heat Stress	Heat Stroke
• Seek medical aid immediately • Move the worker to a cooler environment • Worker should lay down • Remove or loosen tight-fitting clothing • Sponge worker with cool water and fan them to cool body temperature. (Take care not to cool the worker too much. If the worker begins to shiver, stop cooling)	• Move the worker to the coolest place available. • Notify the first aid attendant, call 911, and/or arrange for immediate transportation to medical aid. • Maintain airway, breathing, and circulation as required, and monitor patient until help arrives. • Remove all outer clothing and apply cold water to the worker by either dousing or applying wet, cool sheets. • Spraying or sponging the entire body with cold water is also effective. Fanning will also help. • Continue to cool the worker during transport.

PREVENTION

Heat Stress	Heat Stroke
• Acclimatize your body by gradually exposing yourself to the heat and work. • Drink plenty of water (one glass every 20 minutes). • Wear clean, light-coloured, loose-fitting clothing made of breathable fabric. • Take rest breaks in a cool or well-ventilated area. • Take more breaks during the hottest part of the day or when doing hard physical work. • Allow your body to cool down before beginning again.	• Acclimatize your body (gradually expose yourself to heat and work). • Drink plenty of water (one glass every 20 minutes). • Wear clean, light-coloured, loose-fitting clothing made of breathable fabric. • Take rest breaks in a cool or well-ventilated area. • Take more breaks during the hottest part of the day or when doing hard physical work. Allow your body to cool down before beginning again. • Schedule work to minimize heat exposure. • Do the hardest physical work during the coolest part of the day.

Extreme Cold

Control Measures to Protect Employees from Cold Stress

If a worker is or may be exposed to low temperatures Mobile Energy Systems must implement effective engineering controls to reduce the exposure hazard.

If the above action is not practicable, Mobile Energy Systems must reduce the exposure hazard by providing effective administrative controls or personal protective equipment, if the equipment provides protection equally effective as administrative controls. Examples include:

- Engineering Controls – heated supplied air equipment, etc.
- Administrative Controls - a work-rest cycle, warm up sheds, etc.
- Personal Protective Equipment – arctic cold weather clothing, etc.
- For continuous work in temperatures below the freezing point, heated warming shelters such as tents, vehicle cabs or rest rooms should be available.
- The work should be paced to avoid excessive sweating. Proper rest periods in a warm area should be allowed and employees should change into dry clothes.
- Drinking plenty of fluids will help prevent dehydration and exhaustion, which can lead to hypothermia.
- 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.
- Clothing should be selected to suit the temperature, weather conditions (e.g., wind speed, rain), the level and duration of activity and job design.
- Clothing should be worn in multiple layers which provide better protection than a single thick garment.
- Almost 50 percent of body heat is lost through the head. A wool knit cap or a liner under a hard hat can reduce excessive heat loss.
- Clothing must be dry. Moisture should be kept off clothes by removing snow prior to entering heated shelters.
- If fine manual dexterity is not required, gloves should be used below 4°C for light work and below -7°C for moderate work. For work below -17°C, mittens should be used. Cotton is not recommended. It tends to get damp or wet quickly and loses its insulating properties. Wool and synthetic fibres, on the other hand, do retain heat when wet.
- 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.

Workers showing symptoms of cold stress must be removed from the cold and provided first aid. 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.

HYPOTHERMIA

One of the major hazards you face when working in the cold is losing body heat. Hypothermia is when your body becomes so cold that it can no longer produce more heat than it loses. With hypothermia, your vital organs and body systems begin to lose their ability to function. Hypothermia can happen so slowly that you don't realize you're in danger until it is too late. If untreated, hypothermia can lead to death. It is important to treat hypothermia in its early stages. If no action is taken, the condition may worsen and become moderate or severe hypothermia.

DANGER SIGNS and SYMPTOMS

Mild Hypothermia	Moderate Hypothermia	Severe Hypothermia
• Spells of shivering • Sleepiness, unsteadiness, poor judgment, muddled thinking, and abnormal behaviour • Breathing and pulse is normal	• Intense or violent shivering, or shivering has stopped altogether • Inability to think and pay attention • Slow, shallow breathing, slurred speech, • Poor body co-ordination • Pulse is slow or weak	• Person has stopped shivering • Unconsciousness • Little or no breathing • Weak, irregular, or non-existent pulse • Pupils are dilated and victim may appear dead but is still alive

TREATMENT

Mild Hypothermia Treatment	Moderate Hypothermia Treatment	Severe Hypothermia Treatment
• Insulate from ground – pine branches, leaves, moss, anything to provide insulation will work. • Change wet clothing for windproof, waterproof gear • Add heat - If using hot water bottles or chemical hot packs, wrap them in cloth; do not apply them directly to the skin. – if safe, start a fire • Increase exercise, if possible • Get into a pre-warmed sleeping bag or blankets • Drink hot drinks, followed by candy or other high-sugar foods • Apply heat to neck, armpits and groin • Medical attention should be sought out, even if a full field recovery is achieved.	• Insulate from ground – pine branches, leaves, moss, anything to provide insulation will work. • Change wet clothing for windproof, waterproof gear • Add heat - If using hot water bottles or chemical hot packs, wrap them in cloth; do not apply them directly to the skin. – if safe, start a fire • You can apply warm bottles of water, or warm rocks to the armpits and groin area (comfortably warm when touched by a hand flat on the stone and held in place). • Fully conscious victims can sip lukewarm sweetened, non-alcoholic fluids. If their condition is clearly improving, then more fluids and warmth can be administered.	• Call 911 for immediate medical treatment • In severe hypothermia, the best hypothermia treatment is best for three people to get under a pile of blankets or in a sleeping bag. Skin on skin contact of the torso works best with a person on each side of the victim. You should ignore their pleas to be left alone or allowed to go to sleep but be gentle with them. • You should not administer fluids or make any other attempts to increase body temperature. • Maintaining temperature and preventing further loss is the most important thing. • If a person becomes unconscious from hypothermia monitor their breathing and pulse carefully. • If you can detect a faint pulse do not do CPR to support their heart. Only start rescue breathing, chest compressions or full CPR if you cannot detect any breathing, any pulse or both. Check frequently to see if they start breathing on their own, even if it is shallow, the same for a pulse. Administering CPR to someone, even someone with a slight pulse can cause his or her heart to stop.

PREVENTION

Wear warm head covering - Most body heat is lost through the head. Wear layered clothing - Layers allow warm air to stay trapped but do not trap perspiration next to the skin.

1st layer of clothing should allow the skin to breathe by allowing sweat to escape. Underwear, socks, and glove liners made of polypropylene.

2nd layer of insulating clothing should be one that absorbs perspiration but does not allow heat to escape.

3rd layer of clothing should also trap body heat as well as keep water or dampness out.

Drink plenty of non-alcoholic fluids - Doing this will help prevent dehydration and exhaustion, which can lead to hypothermia. Heated drinks can be helpful but limit your intake of coffee and tea.

Pace yourself during vigorous activity and take regular breaks to get away from the cold environment.

When possible, heat the working environment or set up heated rest areas. (heated cabs or shelters)

Control Measures to Protect Drivers Exposed to Adverse Conditions

- Check weather conditions, forecasts and road conditions before leaving.
- Vehicles must not be dispatched when adverse conditions are known to exist on the route.

Vehicles shall not operate during adverse weather conditions when:

- the visibility due to snow or fog is less than 150 metres
- the roadway is covered with snow, sleet, or ice which impedes the driver's or other motorist's ability to drive in a safe manner.

If you encounter unexpected conditions as listed above while already enroute:

- Stop at the next safe location (or as directed by an authorized Transportation staff member or a peace officer) and wait for the adverse conditions to subside.
- DON'T stop on the side of a highway where part of your load extends into a driving lane or shoulder.

Driving

- Radio should be on to listen to forecasts and warnings to keep updated on the conditions as you travel because weather conditions change frequently.
- If unexpected adverse conditions are encountered enroute drive with extreme caution until the next safe location (pullout) stop and wait for the adverse conditions to abate.
- You must not stop on the side of a highway such that part of the load extends into a driving lane or shoulder. (Unless directed to do so by an authorized transportation staff member or a peace officer)
- Office/dispatch must be informed immediately to let them know where you are and conditions that apply.

If you are stranded enroute:

- Contact office/dispatch immediately with location
- Run vehicle if it is safe to do so to stay as warm as possible.
- Always leave the window down a bit and ensure the exhaust can be vented clearly away from vehicle. Get out and clean away snow from around exhaust pipe (as/if situation requires).
- If you can smell the exhaust strongly shut vehicle off immediately
- If you find yourself getting tired, get out of vehicle and breathe some fresh air. (There may be an exhaust problem you are unaware of)
- If you cannot keep vehicle running warm it as much as possible by shutting windows and lighting a candle from emergency kit. Wrap yourself in additional clothing, blankets. Do not overdress as sweating can cause more problems.

Training

All employees shall be trained on recognition of heat and cold stress symptoms and emergency procedures for the treatment of heat and cold stress.

Training shall be on an annual basis and documented.

2.0 BEHAVIOUR BASED SAFETY

Requirements

Conducting Formal Observations of Employees Work Behaviour

Formal job observations are performed for the company's employees. Job observations are used to identify unsafe behaviours. They provide direct, measurable information on employees' work practices. Job observations are never to be used to discipline employees. They are intended to help employees identify the safest ways to perform their work.

The process starts with the observation of workers - fellow employees, other contractor employees and customer employees as they perform their tasks. Observers collect information about worker performance and provide feedback via the observation card. The emphasis is not on who was observed but rather what behaviour was observed.

During the observation, the observer records their findings on the BBS Observation Form. Items to be observed include but are not limited to:

- Personal Protective Equipment
- Procedures / Methods
- People
- Work Environment
- Equipment

Feedback is provided to observed employees after an observation is complete. Upon completion of an observation, the observer is expected to have a discussion with the employee he/she observed. The observer shall:

- Review the results with the observed employee,
- Reinforce safe behaviours observed,
- Describe unsafe behaviours observed,
- Obtain feedback from the employee on why the work was performed that way, and
- Emphasize that the purpose of observations is help employees perform their jobs safely, not to punish or discipline.

Documenting feedback allows workers to assess what should be repeated and what should change to reduce risks in the workplace. Job observations are documented. Job observations must be documented on an observation form or checklist. Records of observations shall be kept.

Collection of Data and Performing Trend Analysis

Observation results are analyzed to identify trends and increase safe behaviours. Management and/or the Safety Department shall analyze results to identify trends and enhancements that can be made to make work activities safer.

Individual departments, as well as Mobile Energy Systems as a whole, will compare these measurements and track these results by an acceptable method so that numerical and statistical comparisons can be made over time.

BBS Observation Forms are forwarded to the corporate safety manager for input into the BBS database. Reports are generated and forwarded to management.

Elements of an Action Plan after the Trend Analysis is Completed

Once trend analysis is complete, appropriate action plans shall be developed to address unsafe behaviours. Action planning will include:

- Evaluate unsafe behaviours from trend analysis and prioritize
- Develop action plan for unsafe behaviours based on comments and feedback from data sheets
- Designate responsible parties and timeframes within the action plan
- Define who is responsible for action planning
- Ensure management support

Action Plan Follow Up

All action plans shall be arranged by a set time period. To ensure effectiveness of the BBS follow-up is necessary to ensure the closure of all actions listed. The follow-up process will include:

- Monthly frequency for review of action by the safety manager, senior management and employees.
- Assign accountability for closeout of action plans within Mobile Energy Systems
- Document archiving of action plans with completed action items.

Responsibilities

Oversight

The manager/supervisor has these oversight responsibilities:

- Coach observers and develop action plans to ensure continuous improvement.
- Ensure that all employees are trained on the Behaviour Based Safety elements.
- Maintain communication with workforce by channeling information in a timely manner (feedback).
- Collect and review process modification change requests from employees.
- After reviewing and giving feedback the BBS/JSA cards should be forwarded to the corporate safety director for data entry.

Person being observed:

- Be willing to be observed.
- Be open and cooperative.
- Avoid being defensive.
- Participate in problem-solving meetings.
- Be familiar with the Behaviour Based Safety process.

Person performing the observation:

- Learn the Behaviour Based Safety process and the benefits of reducing at-risk behaviours.
- Promote the Behaviour Based Safety process.
- Make observing proactive.
- Be open to coaching.
- Be courteous and helpful.
- Assist workers by offering suggestions to safely perform a task or help them with a task if necessary.
- Communicate with the workers being observed.
- Give constructive feedback after observations.

- Stress the safe behaviours before the at-risk behaviours.
- Offer and work towards solutions of problems found.
- Record a comment for every recorded "at-risk" to include what and why. Make quality observations, concentrating on quality comments.

Manager

- Actively promote and participate in the behaviour safety process by supporting the goals and objectives of the Behaviour Based Safety process.
- Ensure that all employees are aware of what is expected of them regarding the BBS process.
- Encourage employees to participate in observations so that incidents/injuries are reduced in the workplace.
- Provide necessary resources to keep process productive.
- Attend safety meetings and offer feedback on areas of improvement.

Supervisor

- Actively promoting and participating in the Behaviour Based Safety process by reviewing BBS Observation Forms turned in at least weekly and giving feedback, completing corrective actions needed, etc.
- Refraining from using data from the Behaviour Based Safety process in a punitive manner.
- Assisting in problem solving and completing corrective actions in a timely manner.
- Understanding the behaviour safety process and the benefits of reducing at-risk behaviours.

Health and Safety Representative

- Support the goals and objectives of the Behaviour Based Safety process.
- Encourage, promote, provide technical support and assist in acquiring the resources needed for the Behaviour Based Safety process.
- Address the concerns and suggestions of field personnel.
- Collect all observation data cards.
- Enter data into BBS database.

Training

Employees are provided training on how to conduct effective job observations. Employees are provided training on job observations. Training must include how to conduct an observation and how to provide effective feedback on observed behaviours.

Training will include:

- Program objectives and incident metrics reviewed,
- How to conduct the observation,
- How to complete the observation form,
- What do the behaviours mean,
- Feedback training and role play (mentoring and coaching), and
- Employees should be aware they may be observed at any time.

3.0 BLOOD-BORNE AND AIRBORNE PATHOGENS

Definitions

Blood: Human blood, human blood saliva components, and products made from human blood, feces, and urine.

Blood-borne Pathogens: Pathogenic micro-organisms that are present in human blood and can cause disease in humans. These pathogens include but are not limited to: Hepatitis B Virus (HBV), Hepatitis C (HBC), and Human Immunodeficiency Virus (HIV).

Air-borne Pathogens: Infection causing micro-organisms spread by droplets expelled into the air by coughing or sneezing. These pathogens include but are not limited to: Tuberculosis (TB), German Measles (Rubella), and Influenza.

Contaminated: The reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Decontamination: Use of physical or chemical means to remove, inactivate, or destroy blood-borne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles on the surface, or item is rendered safe for handling, use, or disposal.

Exposure Indicant: A specific eye, mouth, or other mucous membrane, non-intact skin, or parenteral contact (introduced otherwise than by way of the intestines) with blood or other potentially infectious materials that results from the performance of an employee's duties.

Exposure Determination: Designated first aid responders are the most potentially affected employees who are considered exposed or will potentially be exposed to blood and/or other potentially infectious materials.

Exposure Control: Universal precautions must be observed to prevent contact with blood or other potentially infectious materials. All employees that perform first aid/CPR should use the proper personal protective equipment.

Personal Protective Equipment

- Disposable latex gloves and safety eyewear shall be worn when the employee may have contact with blood.
- Pocket masks or mouthpieces will be used while performing CPR.
- Face protection will be used in any situation where splash contact with the face is possible or a suspected respiratory tract infection is present. Facial protection may be afforded by using both a face mask and eye protection. The first choice is to mask the patient; if this is not feasible, the provider should wear a mask. If a face shield is used, a mask must still be used.

Housekeeping

- All equipment and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials. The decontamination shall occur as soon as feasible, using an appropriate disinfectant.
- All contaminated materials (e.g., gloves, pocket masks, or clothing) shall be collected and sealed in a plastic bag for proper disposal.
- In addition, the material is to be handled with tongs or pliers and placed, double bagged, in a container designated for sharp objects. This material will be stored and disposed of as bio-hazardous waste "sharp objects container".

- Hand washing facilities will be provided at each job site. This may consist of running water and soap or antiseptic hand cleanser or towelettes. Employees must wash hands and any other skin immediately following contact of such body areas with blood or other potentially infectious materials.

Post-Exposure Evaluation and Follow-Up

Following report of an exposure incident, the exposed employee will be provided a confidential medical evaluation and follow-up including:

- Documentation of the route of exposure, and the circumstances of the exposure incident. Receive suggested treatment for high risk exposures as indicated by medical personnel; suggest base line testing of exposed employee following exposure.
- Identification and documentation of the source individual.
- Source individual's blood will be tested for HCV/HBV/HIV/TB antigens as soon as feasible after exposure; and
- Exposed individuals, when possible, will be advised of source individual's test results and informed of applicable laws and regulations concerning disclosure of identity and infectious status of the source individual.

Training

Operations personnel will receive initial training and an annual refresher course which will include the following:

- A review of the local legislative requirements of the Blood-borne/Air-borne Pathogens Program.
- A general explanation of the epidemiology and symptoms of blood-borne/air-borne diseases.
- An explanation of the modes of transmission of blood-borne/air-borne pathogens.
- An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate work practices, and personal protective equipment.
- An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be available; and
- Description and picture of needles and drug paraphernalia.

Record Keeping

- Medical Records - an accurate record for each employee with an occupational exposure will be kept in a confidential file. These files will be under the direct control of the Manager, Human Resources, and
- Training Records - training records will include the dates, content, and names of those attending and the name of the person conducting the training.

Note: All records containing medical information will remain under the direct control of the Manager, Human Resources.

4.0 CHEMICAL BIOLOGICAL HAZARDS AND HARMFUL SUBSTANCES

Responsibilities

Company

- Identify, assess and properly control chemical and biological hazards.
- Shall develop and maintain a list of all chemical and biological substances that are regularly handled, used, stored, produced or disposed of in the course of work processes and that may be hazardous to the health and safety of the workers at the worksite. All chemical and biological substances that are controlled products must be identified on the list. This list must be readily available to the workers at the worksite.
- Shall take all reasonable steps to ascertain and record the precautions that need to be taken with respect to the substances to ensure the health and safety of workers. Clearly mark the containers holding the substances with the name of the substance as set out in the list of substances.
- Maintain hazard identification and control lists and maintain written procedures that are prepared and implemented to prevent exposure by any route that could cause an adverse health effect, and to address emergency and cleanup procedures in the event of a spill or release of the substance.
- Ensure that atmosphere contamination of the workplace by chemical substances is kept as low as is reasonably practicable and in the case of the substances for which a threshold limit value is currently established by the ACGIH and that threshold value shall not be exceeded.
- Every employee is to be informed of the nature and degree of health effects of the chemical substances to which the employee is exposed by virtue of his or her work the exposure of employees to harmful chemical substances is as little as is reasonably practicable.
- If a worker is or may be exposed to a chemical or biological substance which could cause an adverse health effect, Mobile Energy Systems must ensure that the content and meaning of the information is clearly communicated to the worker.
- Train employees with regards to required control measures to keep them safe at work and ensure that the supervisors and the employees are trained in and follow the established procedures for safely handling, using, storing and disposing of the substance, including emergency and spill cleanup procedures.
- Ensure that an emergency response plan is developed for tasks involving chemical and biological substances.
- Maintain a Safety Data Sheet (SDS) control system.
- Place SDS' in a highly visible area and to be readily available for staff and student use as required.
- Update the Safety Data Sheets every three years.

Managers and Supervisors

- Identify all potential chemical and biological hazards and risks to employees in their work area.
- Develop and implement measures to reduce, eliminate or control the identified risks.
- Develop procedures to respond to an emergency.
- Train employees about these hazards and the control strategies.
- Include chemical and biological hazard identification and control strategies as part of the new employee orientation process.
- Ensure employee compliance with safe work procedures.
- Train employees in safe work procedures and inform them of chemical and biological hazards.
- Supervise employees to ensure employee compliance.

Employee

- Comply with safe work practices.
- Inform their supervisor of chemical and biological hazards encountered in their workplace.
- Work with their supervisor to resolve hazardous situations.

Health and Safety Representative

- Assist Mobile Energy Systems and their supervisors to identify, assess and control chemical and biological hazards.
- Monitor the effectiveness of the implemented controls.
- Ensure training programs regarding identified chemical and biological hazards are developed and implemented for employees.

Procedure for Identifying and Controlling Harmful Substances

- Define the types of hazards.
- Determine the degree of risk to employees.
- Determine appropriate control measures for each chemical and biological hazard.
- Develop written safe work practices that identify the hazard(s) and state the control measures required, including any written emergency procedures to be implemented in the event of an accumulation, spill or leak.
- Train employees to identify chemical and biological hazard(s) and proceed with tasks using safe work procedures.
- Ensure the identity of the substance, its possible effects on employee health and safety and any precautions required for the health and safety of the employee are clearly indicated by labels, SDSs, placards, signs, tags or other similar means.
- Ensure employee compliance.

Define Types of Hazards

A hazard is any activity, situation or substance that can cause harm. Categorizing the hazard(s) helps to determine the type of control(s) that may be necessary to protect employees. Biological hazards and chemical hazards are two of the categories and examples are noted below.

Biological hazards: caused by organisms such as viruses, bacteria, fungi, parasites, dusts, molds or other living organisms.

Chemical hazards: caused by solids, liquids, vapors, gases, dust, fumes or mists, such as battery acids, solvents, etc.

Potential Health Hazards Associated with Exposure or Potential Exposure

Each Mobile Energy Systems worksite site specific safety plan shall list the potential health hazards associated with any exposure to any chemical or biological hazards applicable to the specific tasks being performed. Listed below are some of the chemicals/substances employees may be exposed. This list is not all-inclusive and other hazards may be present varying by jobsite location and work activity.

- Asbestos
- Benzene
- Cadmium
- Lead

- Hydrogen Sulfide
- Oils and Greases
- Compressed Gases
- Fuels
- Acids and Caustics
- Blood borne Pathogens (result of injury)

These hazards may be encountered near or around the following locations/processes/equipment:

- Tanks
- Pits
- Piping
- Well Heads
- Storage and Containment Facilities

If a worker is or may be exposed to a chemical or biological substance which could cause an adverse health effect, Mobile Energy Systems must ensure that the identity of the substance, the health hazards associated with the exposure and assess the employee's exposure, its possible effects on worker health and safety and any precautions required for the health and safety of the worker are clearly indicated by labels, SDSs, placards, signs, tags or other similar means. Some of the most common health hazards associated with the above-referenced substances include but are not limited to:

Asbestos Specific

- Asbestosis: A chronic lung ailment caused by the buildup of scar tissue inside the lungs.
- Asbestosis can cause shortness of breath, permanent lung damage, and increases the risk of lung infections.
- Mesothelioma: Asbestos caused cancer of the chest cavity lining or abdominal cavity.
- Other cancers: Cancer of the lung, esophagus, stomach, colon, and pancreas.

Hydrogen Sulfide (H2S)

- H2S paralyzes the sense of smell. Do Not Rely on Smell to Detect H2s – Rely Strictly on Instruments Designed to Measure Concentrations of H2S.
- Hydrogen sulfide is a very dangerous and deadly gas - it is colorless and heavier than air.
- Exposure to certain concentrations of H2S can cause serious injury or death.

Benzene

- Short-term exposure causes depression of the central nervous system (CNS), marked by drowsiness, dizziness, headache, nausea, loss of coordination, confusion and unconsciousness.
- Exposure to 50 to 150 ppm produces headache, and tiredness.
- Nose and throat irritation have also been reported following short-term exposure.

Blood borne Pathogen Specific

- HIV infection
- Hepatitis B infection
- Hepatitis C infection

Multiples Substance Common Health Effects

- Burn
- Eye irritation

- Breathing difficulty
- Confusion
- Sleepiness
- Rapid pulse
- Loss of consciousness
- Anemia
- Damage to the nervous system
- Kidney Damage
- A rise in blood pressure
- Miscarriages and subtle abortions
- Disruption of nervous systems
- Brain damage
- Declined fertility of men through sperm damage
- Suppression of the immune system
- Death

Identify Chemical and Biological Hazards in the Workplace

Mobile Energy Systems must assess all information that is practicably available respecting a chemical or biological substance present in the workplace to determine if the substance creates or may create a risk to the safety or health of an employee in the workplace.

Supervisors and local safety staff are responsible for identifying potential chemical and biological hazards and risks to employees. Chemical and biological hazards may be identified through data gathered by any of the following processes:

- Workplace inspections
- Job safety analysis (JSA)
- Dangerous occurrences
- Workplace incident reports (types and causes)
- Incident investigations
- Concerns raised by employees
- Employees' Compensation Board (WCB) claims
- Joint Health Safety and Health Committee minutes
- New or modified jobs
- New or modified equipment or job procedures
- New scientific information regarding hazards or risks
- Legislation (WSH, Transportation of Dangerous Goods, WHMIS)
- Industry standards (infection control)
- Regulatory (codes of practice, ANSI, CSA, provincial, territorial and local)
- Supplier, client or manufacturer information.

Determine the Degree of Risk to the Employee

Hazards need to be assessed by the degree of risk or harm posed to employees. When determining the degree of risk to employees, consider not only the probability or likelihood of the hazard causing harm, but also the potential severity of the harm. Probability is the chance that a hazard will cause harm. Severity is the seriousness of the harm that could be suffered. Risk represents the odds that a hazard will cause harm.

Common questions to ask that will help with assessing the degree of risk include:

- How likely is the hazard to cause harm?
- Under what conditions is harm likely to occur?
- How quickly could an unsafe condition arise?
- What type of harm is involved?
- How many employees could get hurt?
- Is there a history or problems, incidents or dangerous occurrences resulting from this hazard?
- What monitoring is required to evaluate the risk?

When looking for hazards for a specific task, ask questions such as:

- Can any body part be exposed to the substance?
- Do tools, equipment or processes present any problems?
- Can the employee make harmful contact with any materials?
- Is there a danger from falling/spilling objects?
- Is lighting a problem?
- Can weather conditions affect the chemical or biological substance?
- Is contact possible with hot, toxic or caustic substances?
- Are there fumes, dusts, mists or vapors in the air?
- What are the task and job specific risks?

Determine and Implement Appropriate Control Measure(s) for Each Hazard

Controls at the Source

Engineering controls either reduce or remove the hazard at the source or isolate employees from the hazard.

- Eliminate the risk by getting rid of the hazardous substance.
- Substitute the hazard with a less hazardous process or material.
- Redesign the layout of the workplaces, workstations, work processes and jobs.
- Isolate, contain or enclose the hazard, often used for chemical or biological hazards.
- Automate dangerous work processes by using mechanical equipment.

Controls along the Path to the Employee

- Relocate by moving the hazard a safe distance from the employee.
- Create barriers between employee and the hazard to block the hazard path. For example, use of screens, walls, aprons or other personal protective equipment.
- Absorb the hazard by using local exhaust ventilation to remove toxic gases (airborne hazards) at the source where they are produced.
- Dilute the hazard, such as hazardous gases, by mixing with clean outside air.

Controls at the Employee

Work practice controls alter the manner in which a hazardous task is performed, such as minimizing exposure, prohibiting smoking, inspecting equipment and eating in regulated areas.

- Administrative controls such as implementation of new policies, improved and standardized work procedures, job rotations, shift scheduling and good supervision.
- Housekeeping, maintenance and repair to ensure cleaning, waste disposal and spill cleanup at the workplace, as well routine preventive maintenance and repair of equipment.
- Hygiene practices that can reduce the spread of infections such as frequent hand washing, lockers for changing between work and street clothes and footwear, separate eating areas away from the hazardous work area, etc.
- Personal protective equipment (PPE) such as gloves, eye protection and face shields are to be used as controls when other controls are not feasible are reasonably practicable, or where additional protection is required.
- Mobile Energy Systems shall provide, and employees shall wear and use, personal protective equipment appropriate in the circumstances to protect the employees from exposure to a hazardous biological or chemical agent.

Written Safe Work Practices

Once chemical and biological hazards have been identified and control measures have been selected to reduce, eliminate or control the hazard, the safest way to perform the task must be put in writing. Safe work practices outline the step-by-step method for performing a particular task, including any potential or existing hazards present and the control measures that must be taken to eliminate, reduce or manage the risk. Safe work practices should also outline any emergency procedures required in the event that control measures are sufficient to protect the employee from harm.

Decontamination and Emergency Baths, Showers, Eye Wash Equipment

Emergency washing equipment is readily available. If a worker is present at a work site where chemicals harmful to the eyes or skin are used, Mobile Energy Systems must ensure that the worker has immediate access at the worksite to emergency baths, showers, eye wash equipment, or other equipment appropriate for the potential level of exposure

Eyewash stations shall be present in all work locations and maintained at lukewarm temperature.

Prohibited Activities

Employees shall not eat, drink or smoke tobacco in an area of a work site that is contaminated with a harmful substance.

Monitoring

Mobile Energy Systems will monitor the use or presence of employees' exposure to any chemical or biological substance that may be hazardous or harmful to the health or safety of an employee. An example is a portable H2S meter.

Storage of Harmful Substances

The Mobile Energy Systems must ensure that a harmful substance used or stored at a work site:

- It shall be clearly identified or the container clearly identified
- Be used and stored in such a way the use or storage is not a hazard to any person

All containers, used or handled at a workplace, which by reason of toxicity, flammability or reactivity create risk to the health or safety of employees shall be contained, so far as is reasonably practicable in a suitable container which is clearly labelled to identify the substance, the hazards associated with its use or handling, the workplace uses for which it is intended, and protective measures to be taken by employees before, during and after its use.

Mobile Energy Systems will ensure that residue or waste from the substance or materials used for cleaning or wiping it is placed into suitably labelled containers for safe disposal.

Harmful substances are to be stored in a self-contained enclosure, room or building that is isolated from work-related areas and worksites and is adequately ventilated and protected from conditions, including excessive temperature, shock or vibration that could reduce the stability or increase the potential hazard of the substance.

Restricted Areas

These are areas where there is a reasonable likelihood that airborne concentrations of asbestos, silica, coal dust or lead will exceed their OELs. Mobile Energy Systems shall ensure that only authorized persons or by law to do so enters a restricted area. Signs shall clearly indicate that:

- Asbestos, silica, coal dust or lead are present
- Only authorized person may enter and,
- Eating, drinking and smoking are prohibited

Mobile Energy Systems is responsible for laundering clothing used by employees in a restricted area that contains asbestos or lead. This includes towels that are used for employee decontamination.

During storage and transportation, all contaminated protective clothing must be in sealed containers that are clearly labelled to identify the contaminants.

Employees must be warned not to inhale the dust during handling.

Codes of Practice

- Employees trained in the safe handling practices of hazardous chemicals such as acids, caustics, and the like.
- Employees aware of the potential hazards involving various chemicals stored or used in the workplace--such as acids, bases, caustics, epoxies, and phenols.
- Employee exposure to chemicals is kept within acceptable levels.
- Eye wash fountains and safety showers provided in areas where corrosive chemicals are handled.
- All containers, such as vats and storage tanks labeled as to their contents--e.g. "CAUSTICS".
- All employees required to use personal protective clothing and equipment when handling chemicals (i.e. gloves, eye protection, and respirators).
- Flammable or toxic chemicals kept in closed containers when not in use.
- Chemical piping systems clearly marked as to their content.
- Where corrosive liquids are frequently handled in open containers or drawn from storage vessels or pipelines, adequate means is readily available for neutralizing or disposing of spills or overflows properly and safely.
- Standard operating procedures have been established and are they being followed when cleaning up chemical spills.
- Where needed for emergency use, respirators are stored in a convenient, clean and sanitary location.

- Respirators intended for emergency use adequate for the various uses for which they may be needed.
- Employees prohibited from eating in areas where hazardous chemicals are present.
- Is personal protective equipment provided, used and maintained whenever necessary.
- There are written standard operating procedures for the selection and use of respirators where needed.
- Respirator protection program requires employees to be instructed on the correct usage and limitations of the respirators.
- The respirators NIOSH approved for this particular application.
- They regularly inspected and cleaned sanitized and maintained.
- Hazardous substances are used in your processes require a medical or biological monitoring system in operation.
- Familiar with the Threshold Limit Values or Permissible Exposure Limits of airborne contaminants and physical agents used in your workplace.
- Control procedures have been instituted for hazardous materials, where appropriate, such as respirators, ventilation systems, handling practices, and the like.
- Whenever possible, hazardous substances are handled in properly designed and exhausted booths or similar locations.
- Use general dilution or local exhaust ventilation systems to control dusts, vapors, gases, fumes, smoke, solvents or mists which may be generated in your workplace.
- Ventilation equipment is provided for removal of contaminants from such operations as production grinding, buffing, spray painting, and/or vapor decreasing, and is it operating properly.
- If internal combustion engines are used, carbon monoxide is kept within acceptable levels.
- Vacuuming used, rather than blowing or sweeping dusts whenever possible for clean-up.
- Materials, which give off toxic asphyxiates, suffocating or anesthetic fumes, are stored in remote or isolated locations when not in use.

Ensure Employee Compliance

Supervisors are responsible to ensure that employees comply with safe work procedures. Procedures are written to provide information and guidance to anyone performing a hazardous task or work process. Employees must comply with safe work procedures by using equipment and/or tools provided in order to do the task safely. Non-compliance with safe work practices may result in disciplinary action of the employee. Working safely is a condition of employment.

Procedures to be followed in the Event of an Uncontrolled Release or Spill

Where there is a possibility of an accumulation, spill, or leak of a chemical substance or biological substance that may be hazardous to the health or safety of a worker at a place of employment Mobile Energy Systems shall develop written emergency procedures to be implemented in the event of an accumulation, spill, or leak. The procedures shall be site specific based on the type of substance, containment methods, emergency notification, proper PPE and proper clean up and disposal methods and all workers involved trained prior to responding to the event.

Education and Training for Workers

Workers are provided training on the chemical and biological hazards they may be exposed to. Mobile Energy Systems must ensure that a worker who may be exposed to a harmful substance at a work site is informed of the health hazards associated with exposure to that substance is informed of measurements made of airborne concentrations of harmful substances at the work site and is trained in procedures developed by Mobile Energy

Systems to minimize the worker's exposure to harmful substances. Mobile Energy Systems shall ensure that, prior to performing any hazardous task(s), employees are trained in:

- If a worker is or may be exposed to a chemical or biological substance which could cause an adverse health effect, Mobile Energy Systems must ensure that the supervisor and the worker are trained in and follow the established procedures for safely handling, using, storing and disposing of the substance, including emergency and spill cleanup procedures.
- Work procedures developed and the proper use of any personal protective equipment required by regulations.
- The health hazards associated with exposure to that substance.
- Informed of measurements made of airborne concentrations of harmful substances at the work site.
- Is trained in procedures developed by Mobile Energy Systems to minimize the worker's exposure to harmful substances.

Emergency procedures developed that require the involvement of the worker or are necessary to protect the health and safety of the worker.

5.0 CONFINED SPACE AWARENESS

Purpose

Mobile Energy Systems Inc. employees are not required to work in confined spaces. However, it is important for all employees to be able to identify confined spaces and the hazards associated with confined spaces.

Definitions

A "confined space" is an enclosed or partially enclosed space that is not designed or intended for continuous human occupancy with a restricted means of entry or exit and may become hazardous to a worker entering it because:

- of its design, construction, location or atmosphere,
- of the work activities, materials or substances in it,
- the provision of first aid evacuation, rescue or other emergency response service is compromised, or
- of other hazards relating to it

Examples of confined spaces include bins, bunkers, crawl spaces, storage tanks, silos, tunnels, wells, etc

Entry Permit refers to the written document that controls entry into a confined space, and contains all pertinent information required by local regulatory requirements.

Hazardous Atmosphere refers to an atmosphere which may expose a person to the risk of death, incapacitation, injury, acute illness, or impaired ability to escape unaided from an emergency. An atmosphere is considered hazardous if it contains one or more of the following:

- Atmospheric oxygen concentration below 19.5% or above 23.0%.
- Flammable gas, vapours, or mists in excess of 10% of its lower explosive limit (LEL).
- Airborne combustible dust at a concentration that meets or exceeds its LFL, lower flammability limit, or (if the dust obscures vision at a distance of 5 feet).
- Atmospheric concentration of any substance where personnel exposure would exceed any listed toxic dose or permissible exposure limit.
- Any other atmospheric condition that is immediately dangerous to life and health.

Responsibilities

Management

Management is responsible for ensuring this program is available to supervisors and employees.

Supervisors

All supervisors are responsible for ensuring this program is discussed with all employees and made available for review.

Employees

Employees are responsible for attending session on confined space awareness.

No employee is allowed to enter confined spaces.

Hazard Awareness

Hazards present and associated with working in confined spaces are:

1. Oxygen – too little or too much
2. Toxic gases and vapours
3. Explosions
4. Biological hazards
5. Entrapment
6. Moving parts
7. Electrical shock
8. Temperature extremes
9. Noise
10. Drowning

When working around confined spaces the following is important:

- Recognize signage indicating confined space or no unauthorized entry,
- Recognize Entry Permits posted at the entrance of the confined space,
- Do not try to rescue someone who may have loss consciousness or unable to move who have entered a confined space. These spaces contain toxic gases that may be very harmful,
- Do not enter a confined space unless you have been trained to enter and work in confined spaces,
- Alert your supervisor to potential confined spaces that were not identified.

6.0 CRANES, HOISTS AND LIFTING DEVICES

Key Responsibilities

Managers and Supervisors

- For ensuring only trained personnel operate the equipment.
- Verify the supporting structure is safe.
- Test the equipment after installation and prior to use.
- Establish and maintain a monthly and annual inspection program.
- Lifting devices are only operated by competent workers. Mobile Energy Systems must ensure that a lifting device is only operated by a competent worker authorized by Mobile Energy Systems to operate the equipment.
- Establish a recordkeeping log for safety checks, maintenance, and repairs.
- 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 to follow the requirements of this program.

Procedure

Hoisting equipment shall be operated only by authorized workers and a worker shall not operate hoisting equipment until he or she has demonstrated he or she is a competent operator, is familiar with the operating instructions pertaining to the equipment, is familiar with the code of signals authorized by local provincial or territorial regulatory requirements and has been instructed and authorized by Mobile Energy Systems to operate the equipment. All training must be documented and indicating that he or she is trained in the safe operation of the equipment.

Any mobile crane, tower crane or boom truck must be operated only by a person with a valid operator's certificate issued by a person acceptable to local regulatory requirements, in accordance with any conditions stipulated on the certificate issued by a person acceptable to local regulatory requirements and in accordance with any conditions stipulated on the certificate.

All Mobile Energy Systems operators shall be trained in the safe work procedures in this program.

Mobile Energy Systems shall develop written procedures for safely erecting and dismantling a hoist or a crane and personnel provided documented training for those procedures.

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

Mobile Energy Systems shall ensure a copy of the manufactures operating manual for a hoist or crane is readily accessible to the operator and an operator of a hoist or crane is thoroughly trained in and implements the manufacturers recommended operating procedures.

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.

Safe working load must be clearly marked on a lifting device. Mobile Energy Systems must ensure that a lifting device has a plate or weatherproof label permanently secured to it that legibly shows the manufacturer's rated load capacity the manufacturer's name, the model, serial number and year of manufacture or shipment date. If a lifting device is not commercially manufactured, an employer must ensure that it has a plate or weatherproof label permanently secured to it that legibly shows the rated load capacity according to the professional engineer's certification.

If a lifting device is not commercially manufactured, an employer must ensure that it has a plate or weatherproof label permanently secured to it that legibly shows the rated load capacity according to the professional engineer's certification.

Prior to Lifting

All loads shall be hooked or slung under the direction of an experienced worker.

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.

A fire extinguisher having at least a 10 BC rating must be immediately available in the cab of each crane or other hoisting equipment.

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 signaller 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; however, in an emergency, other workers 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.

Mobile Energy Systems shall develop adequate emergency rescue procedures and communicate these in writing to all workers involved with the hoisting operation.

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

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

- A worker must not operate a lifting device if it may endanger other workers. If the operator of a lifting device has any doubts as to the safety of workers 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. The worker 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 a worker.
- Ensure all workers which may be affected by the lift are aware of the hazards and are adequately protected.
- Loads shall not be passed over workers. Mobile Energy Systems must ensure that work is arranged, if it is reasonably practicable, so that a load does not pass over workers. An operator of a lifting device must not pass the load on the device over workers unless no other practical alternative exists in the circumstances and the workers 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.
- Workers shall not stand or pass under suspended loads. A worker must not stand or pass under a suspended load unless the worker has been effectively warned of the danger and the operator of the lifting device knows the worker 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 Mobile Energy Systems shall ensure:

- The outriggers or other stabilizing devices are used in accordance with manufactures 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 minimum clearance of 600mm between any moving part of the crane and any obstacle near the base of the hoist or crane.
- Where there is a danger of a worker 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 workers.

Requirements for Raising and Lowering Workers with Lifting Devices

If a crane or hoist will be used to raise or lower workers, Mobile Energy Systems shall develop and implement work practices and procedures that will provide for:

- The safe raising and lowering of the workers.
- Training of the workers in the work practices and procedures.
- Ensure that the hoisting equipment and personnel lifting unit are inspected by a competent person before use and daily when in use.
- Ensure that the competent person records the details of the inspection in the logbook.
- where the equipment is not designed for the specific purpose of hoisting personnel, the load applied to the crane, lift truck, or similar equipment is less than one half the maximum rated load.
- the platform has a sign indicating the load limits.
- where controls are provided at more than one location, each control station is provided with means whereby the operator can shut off power to the equipment, and interlocks have been provided so that only one station can be operative at any time: and
- except when the controls are operated from the platform, the controls are attended and operated by another worker.

Logbook Procedure

A logbook must be maintained for each lifting device. Mobile Energy Systems must set up a paper or electronic logbook for each lifting device at each work site.

The logbook will be readily available at all times to the operator and to another worker 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 operator 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 local regulatory requirements.

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 a worker
- 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
- A logging truck trailer reload hoist
- Any other type of hoisting equipment specified by local regulatory requirements

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

At the beginning of each shift, the competent operator shall visually inspect:

- The hoist for proper operation and structural elements.
- The limit switches without a load on the hook.
- The hook for deformation and cracks.
- The cable and rigging equipment for excessive wear, broken wires, stretching, kinking, and twisting.
- The load attachment chain for excessive wear, distorted or stretched links.

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

An inspection and written, signed report must be made by a designated individual at each facility, appointed by the manager, of all components used on or associated with the hoist. Components checked must include:

- Hoist or load attachment
- Chains and their end connections
- Wire rope slings
- Hooks and hook latches
- Motors and brakes

- Push buttons and other electrical equipment
- Hardware, sleeves, bolts, rivets, pins, and drums

Any defects must be corrected before the hoist 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.

A mobile crane or boom truck must be inspected at least once every 12 months in accordance with good engineering practice, to ensure it meets the crane or boom truck manufacturer's specifications, the requirements of the applicable design or safety standard, and local regulatory requirements.

A mobile crane or boom truck must not be used after an inspection unless a professional engineer certifies it is safe for use on the basis of that inspection

Rigging

All rigging work shall be assembled, used, maintained and dismantled under the direct supervision of a competent and qualified workers 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 shall not be subjected to a load of more than 10 percent of the breaking strength of the weakest part of the rigging, if a worker 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 a worker is not being raised or lowered the maximum load must not exceed 25 percent of the ultimate breaking strength.

Mobile Energy Systems 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 workers at the work site.

Rigging Inspection and Rejection Criteria

All Mobile Energy Systems rigging and rigging equipment to be used during a work shift is to be inspected thoroughly prior to each period of continuous use during the shift to ensure the rigging is functional and safe by a competent person. All deteriorated or defective equipment will be immediately removed from service if it does not 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 fibre 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 labelled to indicate the slings maximum load or the slings maximum load is made readily available to workers.
- 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 Mobile Energy Systems shall not require or permit a worker 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 labelled with the maximum load of the hook in a location where a worker using the hook can easily see the rating or the hooks maximum load is made readily available to workers.
- 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. Mobile Energy Systems will ensure the maximum load rating of the rigging is available to the workers at the work site.
- Wire rope, alloy steel chain, synthetic fibre rope, metal mesh slings, and synthetic fibre 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 a worker 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.
- Except as otherwise specified by this program or other local regulatory requirements, the maximum rated load of chains, attachments and other rigging equipment shall be warranted by the manufacturer of the equipment, or by a professional engineer, or by other persons whose qualifications are acceptable to the designated local governmental official or department.
- 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 a worker, 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 a worker 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 workers 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 (shoulder less) eyebolts are threaded in 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

Signals to the operator shall be in accordance with the standard hand signals prescribed by the applicable standard for the type of equipment. Specific requirements include:

- Each movement of equipment shall be proceeded by distinctive signals clearly discernible to all workers 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.
- A worker 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 workers within the area for which he or she is responsible are not endangered by the movement.
- Only a designated worker shall cause a signal to be given for the movement of equipment, but workers may cause a stop signal to be given and this signal shall be obeyed promptly and without question.
- A worker 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 signalling device that functions unreliably or in a way that might constitute a hazard to a worker 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.

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.

7.0 DRUG AND ALCOHOL PROGRAM

Requirements

All workers of Mobile Energy Systems must accept responsibility for their own safety and fitness to work and for the safety of others. This commitment encompasses conduct or behaviour off site or during non-working hours that may adversely affect their ability to work safely and reliably perform their duties during their shift. The policy is also being established to incorporate COAA Canadian Model for Providing a Safe Workplace - Alcohol and Drug Guidelines and Work Rules and the requirements of the client as per their local requirements.

Key Definitions

Alcohol - means the intoxicating agent in beverage alcohol, ethyl alcohol, or other low molecular weight alcohols including methyl and isopropyl.

Beverage alcohol - refers to beer, wine and distilled spirits.

Company Business - refers to all business activities undertaken in the course of the company's operations, whether conducted on or off company premises. It includes those situations when an individual is on paid time and is representing or could reasonably be perceived as representing, the company (e.g. training on and off site, hosting clients or others, attending conferences or sales meetings, etc.)

Company Premises - includes but is not necessarily restricted to, all land, property, structures, installations, vehicles, and equipment owned, leased, operated, or otherwise directly controlled by the company for the purpose of conducting company business.

Contractor - refers to any person or entity, including their workers, and sub-contractors that has been contracted or otherwise engaged to provide services to Mobile Energy Systems

Drug - Any chemical substance, including alcohol, that either produces physical, mental or emotional change in the user, or one that is capable of altering the mood, perception, or judgment of the individual consuming it. For the purpose of this policy, drugs of concern are those that inhibit a worker's ability to perform his or her job safely.

Employees - includes all regular full time, part time, seasonal, temporary, casual, or contracted workers.

Fitness for Work/Duty - in the context of this policy means being able to perform assigned duties safely and acceptably without any limitations due to the effects of sleep deprivation, illness, medications (prescription or non-prescription), alcohol, street drugs, or stress.

Illicit drugs - means any drug or substance which is not legally obtainable and whose use, sale, possession, purchase or transfer is restricted or prohibited by law (e.g. street drugs such as marijuana and cocaine).

Medications - refers to a drug obtained legally, either over-the-counter or through a doctor's prescription, or an herbal or homeopathic preparation.

Managers and Supervisors - are individuals accountable for a particular area or shift, includes managers, foremen and others in supervisory positions, and have specific responsibilities around performance management under this policy.

Under the Influence - For the purposes of this policy a worker is under the influence if a worker is affected by a drug, chemical substance or alcohol, or the combination of a drug, chemical substance or alcohol in any detectable manner. The symptoms or influence are not confined to those consistent with misbehaviour, nor to obvious impairment of physical or mental ability, such as slurred speech or difficulty in maintaining balance. A determination of influence can be established by professional opinion, scientifically valid test and, as in case of alcohol, by a lay person's opinion.

Roles and Responsibilities

Workers must:

- have an understanding of the alcohol and drug policy and ensure they comply with the policy
- remain fit to work at all times when scheduled to be on call and take responsibility to ensure their own safety and the safety of others
- follow appropriate treatment if deemed necessary
- use medications responsibly, be aware of potential side effects and notify their supervisor of any potential unsafe side effects where applicable
- encourage their peers or co-workers to seek help when there is a potential breach or breach of policy.

Managers and Supervisors must:

- be knowledgeable about the company's alcohol and drug policy and procedures
- ensure they comply with the standards as part of their responsibility to perform their work-related activities in an effective and safe manner
- be knowledgeable about the use of alcohol and drugs and be able to recognize the symptoms of the use of alcohol and drugs
- take action on performance deviations
- take action on reported or suspected alcohol or drug use by workers

Project Manager and Mobile Energy Systems must:

- provide a safe workplace
- provide prevention programs that emphasize awareness, education and training with respect to the use of alcohol and drugs
- ensure effective worker assistance services are available to workers
- assist workers in obtaining confidential assessment, counseling, referral and rehabilitation services
- actively support and encourage rehabilitation activities and re-employment opportunities where applicable
- ensure completion of supervisory training and awareness in dealing with the use of alcohol and drugs in the workplace
- participate with unions, worker associations and employer organizations to assist in the provision of rehabilitating opportunities for persons who have problems with the use of alcohol and drugs
- ensure that all workers understand the existence of and content of the policy and procedures as part of the worker's orientation.
- ensure that the alcohol and drug testing is performed according to the standards set out in this document.

Policy Statement

The use, abuse, reporting to work with detectable amounts in the system, bringing onto Mobile Energy Systems premises, Mobile Energy Systems property (as defined above), possession, transfer, storage, concealment, promotion or sale of the following substances and other items as listed below by workers of Mobile Energy Systems is strictly prohibited.

The possession of illegal drugs, unauthorized controlled substances, look-alikes, inhalants of abuse, designer and synthetic drugs, alcohol or intoxicating beverages (including the presence of any detectable amount in the worker's body while working), and any other drugs or substances which may affect a person's perception, performance, judgment, reactions or senses while working or while on Mobile Energy Systems business, including any and all drugs declared to be illegal under any Federal or Provincial law is prohibited.

The possession or the reporting to work or working with detectable amounts in the system of alcoholic or intoxicating beverages on Mobile Energy Systems premises which may affect a worker's mood, senses, responses, motor functions, or alter or affect a person's perception, performance, judgment, reactions or senses while working or while on Mobile Energy Systems premises, the bringing onto Mobile Energy Systems premises (as defined above), or the possession, transfer, storage, concealment, transportation, promotion or sale of alcoholic or intoxicating beverages is prohibited.

The possession or the reporting to work or working with drug-related paraphernalia, including any material or equipment used or designed for use in testing, packaging, storing, injecting, ingesting, inhaling or otherwise introducing into the human body an illegal, unauthorized controlled or dangerous substance as defined by this policy is prohibited. The legal use of prescription drugs (Legally Controlled Substances) prescribed by a licensed physician are permitted, however:

- Employees will immediately inform their supervisor prior to using prescribed drugs or medication on the job.
- Medication will be in its original vial or be in a vial provided by the pharmacist commonly referred to as "day carriers" and will be in the worker's name and will have the doctor's name and the prescription number on the label, as well as the date of issuance.
- Each prescription will be not older than one (1) year of the date issued.
- Employees will only possess a reasonable amount of medication for a normal shift.
- The worker whose name appears on the label of the vial will not allow any other company worker, visitor, guest, subcontractor or any other person to consume the prescribed drug or medication.
- The worker will not consume the prescribed drug or medication more often than as prescribed by the worker's physician and as set out on the label of the vial.

Prevention

This policy stresses the importance of prevention and early identification of potential problem situations. Employees will be provided with information on health and safety, recognizing related performance problems, and the process to access the company Employee Assistance Program for assistance with an alcohol or drug problem, or any other personal problem that may be affecting work performance.

Assessment Referral

Individuals who suspect they have a substance dependency or emerging alcohol or drug problem are encouraged to seek advice and to follow appropriate treatment properly before performance is affected or violations of this policy occur. No one with an alcohol or drug problem will be disciplined for voluntarily requesting help in overcoming his or her problem. However, they are expected to access help prior to the initiation of disciplinary action under this policy. Employees taking prescription or non-prescription medication, which may cause drowsiness, dizziness, or other potential adverse side effects that could affect work, must notify their supervisor. The supervisor will involve the local occupational health staff in a "fit for duty" assessment. Supervisors, through performance management and in consultation with the local occupational health staff shall address any situation when a worker at works does not appear to be fit for duty.

Treatment Rehabilitation

Mobile Energy Systems philosophy of treatment rehabilitation is if a worker who voluntarily seeks assistance will be referred to local Mobile Energy Systems representatives to seek treatment under their medical benefit plan. Where in the opinion of a qualified professional there is a risk an individual could not do their job safely, the individual will be removed from that job until management is confident they are able to return to work safely.

When a worker is voluntarily undergoing treatment for a substance abuse problem, Mobile Energy Systems will ensure that they receive the time off that is required to participate in the program. If the worker who is undergoing rehabilitation needs to be placed in a treatment facility, Mobile Energy Systems will hold employment for the individual until they have successfully completed the rehabilitation process. Once management is fully confident that the worker has been rehabilitated they can return to work. Employees should understand that Mobile Energy Systems reserves the right to inquire with the rehabilitation facility as to the progress with your treatment and as to your commitment to attendance.

Employees should understand that voluntarily accessing assistance does not eliminate the requirement for participation in an aftercare program, and maintenance of satisfactory performance levels. Disciplinary action under the policy cannot be avoided by a request for concealing or treatment, or by disclosure of that when the individual is already involved in a treatment program.

Fit for Duty Procedure

- Each supervisor is responsible for taking appropriate action when he/she has specific, objective and documentable grounds to believe a worker is unfit for duty. Another supervisor may be called to the work location to assist in the investigation as outlined.
- In the interest of safety, the supervisor will ensure the worker is removed from the workplace immediately and escorted to a safe place.
- Supervisor will notify the worker representative, may request another supervisor to observe the worker, and may involve other health or safety personnel as required or appropriate.
- Should the worker request a fellow worker or representative to be present, the supervisor will comply.
- Supervisor will give the worker the opportunity to explain why he/she appears to be in a condition unfit for duty.
- Supervisor should attempt to ascertain the nature and severity of the problem and determine if it is a possible violation of this policy, however, the supervisor should not attempt to diagnose a potential health problem.
- After giving the worker the opportunity to explain his/her condition, and after consultation with a worker representative, if the supervisor still believes the worker is in a condition unfit for normal duty.
- The worker should be referred to the appropriate emergency care center (i.e. hospital) or appropriate contracted treatment facilities for further medical attention if it appears to be a medical problem. The supervisor will involve the local occupational health staff in a "fit for duty" assessment.

Impaired Driving Charge or Conviction

All individuals that operate any motor vehicle on behalf of Mobile Energy Systems will be required to maintain a valid driver's license. Any loss of license must be reported immediately, and the individual will no longer be qualified to drive on behalf of the company. In addition, any individual charged with an impaired driving offense (including but not restricted to blowing over the legal BAC in that jurisdiction, driving while impaired, or refusal to blow into a breath analyzer) when operating a vehicle on behalf of Mobile Energy Systems must inform their supervisor immediately.

Receipt of a charge will result in a full investigation, and a range of actions, which can include alternative work, assessment for a problem, or discipline up to and including dismissal depending on the circumstances. Failure to report the charge will normally be grounds for discipline up to termination of employment. A conviction for an impaired driving offense when driving on company business or in a company vehicle will normally be considered grounds for termination of employment. Each situation will be fully investigated, and action taken will depend on the circumstance surrounding the event.

Alcohol and Drug Testing

As part of the recruitment process and established hiring standards, many of the sites in which we operate require that Mobile Energy Systems workers undergo drug and alcohol testing. As a result, Mobile Energy Systems will require that all workers have passed an alcohol and drug test within 90 calendar days before access to a site can be given. They will be advised in advance of the requirement to pass the test, and those that do not pass or refuse to participate may not be eligible for employment with Mobile Energy Systems. Every three years, continuous workers will be required to re-test. Testing may be a requirement under a continuing employment agreement after non-compliance of this policy, as determined on a case-by-case basis. Drug and Alcohol Testing will be with an approved provider and will be in accordance with the COAA Canadian Model for Providing a Safe Workplace- Alcohol and Drug Guidelines and Work Rule.

Employees shall be considered to be unfit for duty if:

- They refuse to submit to a drug and alcohol test where reasonable cause exists or in a post-incident situation
- They cause any undue delay in submitting to a drug and alcohol test where reasonable cause exists or in a post-incident situation
- They tamper with or attempt to tamper with a drug and alcohol sample
- Both the screening and confirmation tests for alcohol (breathalyzer) are equal to, or in excess of, 40 mg/100 ml (0.04%); a positive alcohol test or both the screening and confirmation levels for the specified drugs tested are detected at levels equal to or in excess of the limits set out in the COAA Model Rule.

General Testing Requirements

A "reason for testing" checklist must be signed off by at least two management or supervisory personnel that have been trained in the Drug and Alcohol Awareness Program prior to reasonable cause or post incident drug and alcohol evaluations being undertaken. Management or supervision personnel must accompany the worker to the testing facility after all communication and documentation is complete and signed off.

Significant Incident Requirements

Investigation of all significant incidents will include the potential for drug and alcohol testing of any worker (includes contractors and subcontractors) including visitors directly or indirectly involved in the events forming part of the significant incident. A decision to proceed with drug or alcohol testing will be made as part of the incident management process where there is objective evidence that the use of alcohol and drugs cannot be ruled out in relation to the cause of the incident, after completion of a Reason for Testing Checklist.

Reasonable Cause Testing

Drug and alcohol testing may be performed when there are reasonable grounds to believe that a worker or visitor may be under the influence of drugs and/or alcohol or be in possession of drugs and/or alcohol. The decision to test will be made using the Drug and Alcohol Testing Reasonable Cause Checklist completed and signed off by two management or supervision personnel trained in a Drug and Alcohol Awareness Program.

Approved Provider of Drug and Alcohol Testing

Mobile Energy Systems will locate a qualified occupational testing service as provider for drug and alcohol testing.

Training

Management and supervisors shall receive drug and alcohol awareness training and training on this policy. Refresher training will occur every three years. Retraining of this policy must occur annually.

Canadian Legislation

Section 10 of the Canadian Human Rights Act, R.S.C. 1985, c. H-6 reads as follows:

- It is a discriminatory practice for an employer … or organization of employers to establish or purchase a policy or practice, or to enter into an agreement affecting recruitment, referral, hiring, promotion, training, apprenticeship, transfer or any other matter relating to employment or prospective employment, that deprives or tends to deprive an individual or class of individuals of any employment opportunities on a prohibited ground of discrimination.
- Section 3(1) and 25 of the Canadian Human Rights Act are in this form: 3(1) for all-purpose of this Act, race [and]…disability… are prohibited grounds of discrimination. 25 In this Act… disability means any previous or existing mental or physical disability and includes…previous or existing dependence on alcohol or a drug.

Parts of section 15 of the Canadian Human Rights Act read as follows:

- 15 (1) It is not a discriminatory practice if any refusal, exclusion, expulsion, suspension, limitation, relation to any employment's established by an employer is based on a bona fide occupational requirement.
- 15 (2) For any practices mentioned in paragraph 1(a) to be considered to be based on a bona fide occupational requirement…it must be established that accommodation of the needs of an individual or a class of individuals affected would impose undue hardship on the person who would have to accommodate those needs, considering health, safety, and cost.
- 15 (8) This section applies in respect of a practice regardless of whether results in direct discrimination or adverse effect discrimination.
- Section 15(2) and (8) of the Canadian Human Rights Act was enacted in an Act to amend the Canada Evidence Act and the Criminal Code in respect of persons with disabilities, to amend the Canadian Human Rights Act in respect of persons with disabilities and other matters and to make consequential amendments to other Acts, S.C. 1998, c.9, s.10. It came into effect on June 30, 1998.

Alcohol and Drug Testing Procedures

Alcohol Testing

General

- The donor is the person from whom a breath or saliva sample is collected.
- The donor is directed to go to a collection site in order to give a breath or saliva sample.
- The breath alcohol technician (BAT) or the screening test technician (STT) as appropriate establishes the identity of the donor. Photo identification is required.
- The BAT or STT as appropriate explains the testing procedure to the donor.
- The company must securely store information about alcohol test results to ensure that disclosure to unauthorized persons does not occur.
- Breath testing and saliva testing devices are used to conduct alcohol screening tests and must be listed on the National Highway Traffic Safety Administrations (NHTSA) conforming products list.

Breath Testing

- The BAT and the donor complete those parts of the alcohol testing form that are to be completed before the donor provides a breath sample.
- The BAT explains to the donor how to provide a breath sample and asks the donor to provide a breath sample.

- The BAT reads the test result and ensures that the test result is recorded on the alcohol testing form after showing the results to the donor.
- The BAT completes the part of the alcohol testing form that is to be completed after the donor provides a breath sample and asks the donor to do so as well.
- If the test result shows an alcohol level that is less than 0.020 grams/210 liters of breath, the BAT informs the donor that there is no need to conduct any further testing and reports the result in a confidential manner to the company's designated representative. While the initial communication need not be in writing, the BAT must subsequently provide a written report of the test result to the company's designated representative.
- If the test result shows an alcohol level that is equal to or greater than 0.020 grams/210 liters of breath, the BAT informs the donor of the need to conduct a confirmation test.

Confirmation Test

- If a breath alcohol testing device was used for the screening test, an evidential breath alcohol device must be used to conduct the alcohol confirmation test. If a saliva testing device was used for the screening test, the confirmation test will use an evidential breath alcohol testing device.
- The BAT advises the donor not to eat, drink, put anything into his or her mouth or belch before the confirmation test is complete.
- The confirmation test must start not less than fifteen minutes after the completion of the screening test and not more than thirty minutes after the completion of the screening test.
- The BAT explains to the donor how to provide a breath sample and asks the donor to provide a breath sample.
- The BAT reads the test result on the device and shows the donor the result displayed. If the confirmation test result is equal to or in excess of 0.040 grams per 210 liters of breath, the BAT will do an external calibration check (accuracy check) to ensure the device is in working order. The BAT ensures that the test result is recorded on the alcohol testing form. The BAT verifies the printed results with the donor.
- The BAT completes the part of the alcohol testing form that is to be completed after the donor provides a breath sample and asks the donor to do so as well.
- The BAT immediately reports in a confidential manner the test results to the company's designated representative. While the initial communication need not be in writing, the BAT must subsequently provide a written report of the test result to the company's designated representative.

Drug Testing

- The donor is the person from whom a urine specimen is collected.
- The donor is directed to go to a collection site in order to give a urine specimen.
- The collection site person must establish the identity of the donor. Photo identification is preferable. Positive identification by a company representative who holds a supervisory position is acceptable.
- The donor must remove coveralls, jacket, coat, hat or any other outer clothing and leave these garments and any briefcase or purse with the collection site person.
- The donor must remove any items from his or her pockets and allow the collection site person to inspect them to determine that no items are present which could be used to adulterate a specimen.
- The donor must give up possession of any item which could be used to adulterate a specimen to the collection site person until the donor has completed the testing process.
- The collection site person may set a reasonable time limit for providing a urine specimen.
- The collection site person selects or allows the donor to select an individually wrapped or sealed specimen container. Either the collection site person or the donor, in the presence of the other, must unwrap or break the seal of the specimen container.

- The donor may provide his or her urine specimen in private, in most circumstances. The specimen must contain at least forty-five milliliters.
- The collection site person notes on the chain of custody form any unusual donor behaviour.
- The collection site person determines the volume and temperature of the urine in the specimen container.
- The collection site person inspects the specimen and notes on the chain of custody form any unusual findings.
- If the temperature of the specimen is outside the acceptable range or there is evidence that the specimen has been tampered with, the donor must provide another specimen under direct observation by the collection site person or another person if the collection site person is not the same gender as the donor.

8.0 ELECTRICAL SAFETY

Key Responsibilities

Managers and Supervisors

- For ensuring to implement and enforce the electrical safety program and to ensure that workers must be informed of the potential electrical hazards before being permitted to do work in proximity to energized electrical conductors or equipment.
- To ensure all electrical installations, equipment, apparatus and appliances shall be in conformity with the requirements of the local, provincial and national regulatory codes.
- Establish & implement an assured grounding conductor program on sites covering all cord sets, receptacles which are not part of the building or structure & equipment connected by cord & plug which are available for use or used by employees.
- To ensure only approved electrical equipment is used by workers and that the electrical equipment is:
- Approved for the intended use and location of the electrical equipment.
- Maintained in proper working condition and capable of safe operation; and
- Tested in accordance with the manufacturer's recommendations

Employees

- Shall follow the requirements in this electrical safety program.

Procedure

Qualifications of Electrical Workers

Electrical work may only be performed by competent/qualified workers. Mobile Energy Systems shall permit only competent, qualified electrical workers to construct, install, alter, repair or maintain electrical equipment. Only qualified electrical workers may enter electrical rooms and enclosures containing live parts.

PPE and Tools

Personal protective equipment must be worn for protection from electrical shock and/or arc flash. PPE requirements within the arc flash boundary shall be determined by completing an arc flash hazard analysis. PPE must cover the entire body when working within the arc flash boundary. This may include, but is not limited to, arc flash suit with face shield, safety glasses, non-conductive head protection and leather gloves and footwear. Rubber insulating gloves shall be worn for protection from electric shock due to inadvertent contact with an energized electrical conductor or circuit parts. If more information is needed refer to CSA Standard Z462.

Only non-conductive tools and equipment may be used while performing electrical work. Tools and other equipment that are capable of conducting electricity and endangering the safety of any worker shall not be used in such proximity to any live electrical installation or equipment that they might make electrical contact with the live conductor.

Only nonconductive hardhats are allowed for use where there is a potential for injury from electric shock or burns due to contact with energized parts.

General Electrical Safe Work Procedures

Work shall not be done on an energized electrical conductor or equipment that has a voltage of more than 750 volts unless 2 or more authorized personnel are present while the work is being performed.

Mobile Energy Systems must ensure that the path to ground from circuits, equipment, or conductor enclosures shall be permanent and continuous, shall have ample ampacity to conduct safely and currents liable to be imposed on it, and shall have impedance sufficiently low to limit the voltage above ground and to facilitate the operation of the over current devices in the circuit. Equipment that does not meet the requirement of this program shall not be used by workers.

Equipment with defective electrical components is immediately removed from service. Mobile Energy Systems shall mark or tag as unsafe and remove from service any equipment with damaged or defective electrical components (e.g.- damaged power cord or plug) that may render it unsafe for use.

Mobile Energy Systems shall ensure that all operating electrical equipment is kept in safe and proper working condition. Electrical equipment maintained for emergency service will be periodically inspected and tested by qualified personnel as necessary to ensure its fitness for service.

Infrequently used electrical equipment maintained for future service shall be thoroughly inspected by qualified personnel before use in order to determine its fitness for service.

All wire joints or connections are to be fitted with an approved cap or other approved cover, enclosed in an approved box or where the wire joints or connections are not permanently installed be protected from damage by another approved means and all dead, abandoned or disused electrical conductors or equipment are removed from the work area or disconnected and secured to prevent inadvertent energization.

Electrical equipment must be approved for its intended use. Mobile Energy Systems must ensure that electrical equipment shall be of a type and rating approved for the specific purpose for which it is to be used.

Electrical Fire Safety

Mobile Energy Systems shall ensure that electrical installations shall be made so that the probability of spread of fire through fire stopped partitions, floors, hollow spaces, firewalls or fire partitions, vertical shafts, or ventilating or air-conditioning duct is reduced to a minimum. Where a fire separation is pierced by a raceway or cable, any openings around the raceway or cable shall be properly closed or sealed in compliance with the National Building Code of Canada.

Mobile Energy Systems shall ensure that a fire extinguisher approved for Class C fires is readily available to workers working on or near energized high voltage electrical equipment.

Flammable materials must not be stored near electrical equipment. Flammable material shall not be stored or placed close to electrical equipment.

Signage, Markings and Warnings

Warning techniques will be used to protect employees from injury by electrical equipment. These include:

- Safety signs or tags will be used when necessary to warn employees about electrical hazards.
- Electrical equipment such as switchboards, panel boards, industrial control panels, meter socket enclosures and motor control centres that are installed in other than dwelling units and are likely to require examination, adjustment, servicing or maintenance while energized shall be field marked to warn persons of potential electric shock and arc flash hazards. The markings shall be located so that it is clearly visible to persons before examination, adjustment, servicing, or maintenance of the equipment.
- Barricades, along with safety signs or tags, will be used where necessary to prevent or limit employee access to work areas exposing employees to exposed energized equipment. The barricades should not be conductive if the potential for electrical contact exists.

- Where signs and barricades do not provide sufficient warning and protection from electrical hazards, an attendant must be stationed to warn and protect employees.
- Electrical control panels have their covers permanently marked: DANGER" "HIGH VOLTAGE" and must have an approved rubber mat in front of the panel.
- Notices reading "DANGER" "HIGH VOLTAGE" shall be placed in prominent positions in proximity to energized electrical equipment, operating at over 750 volts, which may be accessible to workers.
- Access to electrical control rooms and enclosures is restricted. The entrance to a room or similar enclosure containing exposed live electrical parts shall have a conspicuous sign, warning of the danger, and forbidding entry by unauthorized persons.
- All electrical panel switches must be legibly marked to indicate what they control. The markings must be durable to withstand the service environment.
- For electrical powered equipment in the shop: air compressors, fans, etc., controls must also be labeled unless the location of the switch makes it obvious what the control switch operates.

Lockout/Tagout

Lockout Tagout is used before performing electrical work. Before any work begins on an electrical conductor or electrical equipment and during the progress of that work, Mobile Energy Systems shall ensure that the electrical conductor or electrical equipment is isolated, locked out and connected to ground. If it is not reasonably practicable to de-energize electrical equipment before performing electrical work, alternative hazard controls must be implemented and approved before electrical work begins.

See Mobile Energy Systems Lockout/Tagout Program.

If more than one worker is involved in Lockout/Tagout the worker who disconnected and locked out the power supply will communicate the purpose and status of the disconnecting and locking out.

If a tag is used as a means of communication, the tag:

- Shall be made of non-conducting material.
- Shall be secured to prevent its inadvertent removal.
- Shall be placed in a conspicuous location.
- Shall state the reason the switch is disconnected and locked out.
- Shall show the name of the worker who disconnected and locked out the switch; and
- Shall show the date on which the switch was disconnected and locked out.

Guarding

Work shall not be done in or around an area or structure in proximity to energized electrical conductors or equipment which are normally isolated by position or elevation, unless the electrical connections, conductors or equipment are provided with cabinets or guards which will effectively prevent contact by a worker, or by equipment being used or handled.

Bare live parts shall be guarded against accidental contact by means of approved cabinets or other forms of approved enclosures except where local codes exempt and cabinets or guards shall meet the specifications of an authority acceptable to regulatory authorities.

All switches, receptacles, luminaries and junction boxes shall be fitted with a cover that is approved for the intended use and location of the cover.

Egress

Mobile Energy Systems shall ensure that passageways and working space around electrical equipment shall not be used for storage and shall be kept clear of obstruction and be arranged to give authorized persons' ready access to all parts requiring attention.

A minimum working space of 1 meter with secure footing shall be provided and maintained about electrical equipment such as switchboards, panel boards, control panels, and motor control centers that are enclosed in metal, except that working space is not required behind such equipment where there are no renewable parts such as fuses or switches on the back and where all connections are accessible form locations other than the back.

Each room containing electrical equipment and each working space around equipment shall have suitable means of egress (walk areas, corridors, doors, etc.), which shall be kept clear of all obstructions.

Access to electrical equipment must be kept free of obstruction and allow easy access to all parts which may require maintenance.

For outdoor installations, arc producing electrical equipment shall not be installed within 1 meter from the discharge of a combustible gas relief device or vent.

Hazardous Locations

Hazardous locations will be classified as listed below:

- Class I: Locations in which flammable gases or vapours are or may be present in the air in quantities sufficient to produce explosive gas atmospheres.
- Class II: Locations in which there is a presence of combustible dusts or electrically conductive dusts.
- Class III: Locations in which there is a presence of easily ignitable fibres but in which such fibres are not likely to be in quantities sufficient to produce ignitable mixtures.

Wherever reasonably practicable no electrical equipment or devices shall be used or installed within hazardous locations unless the equipment is essential to the process being carried on therein.

Service equipment, panel boards, switchboards, and similar electrical equipment shall, where practicable, be located in rooms or sections of the building in which hazardous conditions do not exist.

Electrical equipment shall be adequately ventilated to prevent the development around electrical equipment of ambient air temperatures in excess of those normally permissible for such equipment.

Adequate illumination shall be provided to allow for safe operation and maintenance of electrical equipment.

Use of Portable Electric Equipment

Portable equipment must not be handled in any way that would cause damage. Electrical cords cannot be used for raising or lowering equipment or be fastened by staples or otherwise hung in a manner which could cause damage to the outer insulation.

Portable electrical equipment used outdoors or in damp locations is equipped with ground fault circuit interrupters (GFCI). When used outdoors or in a wet or damp location, portable electrical equipment shall be protected by an approved, CSA (or equivalent) certified, ground fault circuit interrupter.

When a portable luminaire is used, Mobile Energy Systems shall ensure that the electrical extension cord and fittings are approved for the intended use and location of the extension cord and fittings and are properly maintained and the electrical extension cord is not used to supply power to any equipment other than the portable luminaire unless the cord meets the proper requirements.

Extension and power supply cords are maintained in a safe condition. Mobile Energy Systems shall ensure that an electrical extension or power supply cord used for supplying energy to any electrical equipment is approved for the intended use and location of the electrical extension or power supply cord, is fitted with approved cord end attachment devices that are installed in an approved manner, is provided with a grounding conductor, is maintained and protected from physical or mechanical damage and is plugged into an approved GFCI plug adapter or GFCI receptacle (if used in a damp location).

Emergency Procedures

The following emergency procedures shall be required as training to be completed and are to be followed if a person comes in contact with exposed energized electrical equipment and that contact may affect his or her safety or health:

When Closing Contacts at Electrical Control Panels

- If personnel must touch anything on an electrical control panel, first check it with a voltage tester (contact or non-contact). If not available, tap it with the back of your hand. (Prevents hand from grabbing)
- Before operating switches or breakers ensure all protective panels are closed and properly fastened.
- To disconnect the electrical power from the equipment, always shut the control switch off first, before shutting the main switch off.
- To connect the electrical power, always ensure all control switches are off before engaging the master switch.
- When operating the control or master switch, never stand in front of the electrical panel. Always stand off to the side of the panel to operate the switch. Never look at the control panel. Should the panel explode, your eyes or body must not be in a direct line with the explosion.

Contact with Normal Electrical Current

- Do not touch the victim unless the power is off.
- Unplug the equipment or turn the power off at the main control area.
- If you cannot turn off the power, use a dry wooden board or broom handle to separate the victim from the power source.
- Call for emergency medical assistance.
- If the victim is not breathing, perform mouth-to-mouth resuscitation, if trained.
- If the victim is conscious, keep them calm. Lay them on their back. Elevate their feet. Cover them with a blanket.

Contact with High Voltage Line

- Do not try to separate the victim from the power source.
- Do not touch the victim unless you are absolutely certain the victim is not in contact with electrical wire.
- Call for emergency help and medical assistance.

Electrical Fire

- Unplug the burning or smoking appliance.
- Get everyone out at once.
- If the fire is small, use a CO2 or dry powder fire extinguisher. Never put water on an electrical fire.
- Call for emergency assistance or the fire department. Tell the dispatcher your name, address, and that you have an electrical fire.

Training

All employees are provided electrical awareness training. All employees shall be provided basic electrical safety training. Employees should be provided training on working safely with electricity, recognition of electrical hazards, prevention of electrical shock and arc flash and recognition of electrical shock and arc flash hazard labels.

All training must be documented and kept on file.

9.0 ENVIRONMENTAL – GENERAL WASTE MANAGEMENT

Procedure

The Mobile Energy Systems Safety Manager or other designated person in his or her absence is accountable for managing waste and disposition of wastes generated at the work site.

Waste Estimation

Each work site will estimate the waste, trash and/or scrap that will be generated and taken into consideration prior to work being performed so the need for containers and waste removal, if necessary, can be determined.

Each site will utilize the following for planning of dumpster scheduling and total non-hazardous dry waste material. These figures do not include neither recycling nor waste minimization efforts and reflect no use of an incinerator. Dumpster figures are based on a 40-yard container and can be modified if another size is used by changing the table below.

SAMPLE ONLY - SOLID WASTE

Number of Employees	**10**	**25**	**35**	**50**	**100**
Total Estimated Square Feet of Waste (@ 0.675 cu ft per person daily)					
Daily	7	17	24	34	68
Weekly	47	118	165	236	473
Monthly (4.33 wks)	205	511	716	1,023	2,046
Annual	2,455	6,138	8,593	12,276	24,551
Total Estimated Weight of Waste (@ 4lb per person daily)	40	100	140	200	400
Weekly	280	700	980	1,400	2,800
Monthly (4.33 wks)	1,212	3,031	4,243	6,062	12,124
Annual	14,549	36,372	50,921	72,744	145,488
Number of Total Dumpster Fills 40 yard dumpster 7x8x22 = 1,232 square feet					
Daily	0.0	0.0	0.0	0.0	0.1
Weekly	0.0	0.1	0.1	0.2	0.4
Monthly (4.33 wks)	0.2	0.4	0.6	0.8	1.7
Annual	2.0	5.0	7.0	10.0	19.9

Mobile Energy Systems must coordinate with the project site or owner to ensure proper disposal of wastes or scrap materials.

Mobile Energy Systems must ensure the owner client is aware of whether wastes and scrap materials will be taken off site by Mobile Energy Systems or will be disposed of on the owner client's site.

Waste Segregation

- Do not mix waste streams
- Only place waste in the designated container, satellite accumulation area (SAA), recyclable accumulation area (RAA), universal waste accumulation area (UWAA) or designated dumpster.

Recycling

Wastes should be recycled whenever practicable. Mobile Energy Systems will encourage proper segregation of waste materials to ensure opportunities for reuse or recycling occurs at each work site. The collection of recycled material will reduce the total load on the environment. Bins of sufficient size must be lined with a plastic bag and clearly labeled for use. Posters from Mobile Energy Systems will be posted throughout the work site to encourage recycling. Collection bins will also be placed in administrative areas and will follow the following colour guiding:

- Blue - Paper

- Green - Aluminum cans
- Yellow - Plastic

Cardboard will be flattened, staples and excess shipping tape removed. No cardboard shall be placed in the dumpster used for the landfill.

Waste Handling Matrix

Each work site will develop a Waste Handling Matrix (sample shown) that will:

- Address safe practices related to the immediate storage and handling of waste, scrap or leftover material.
- The handling, organization and storage of waste and scrap materials to minimize potential impact to the environment. Waste materials shall be properly stored and handled to minimize the potential for a spill or impact to the environment. During outdoor activities receptacles must be covered to prevent dispersion of waste materials and to control the potential for runoff.

Storage Requirements

Mobile Energy Systems must ensure project related wastes are stored and maintained in an organized fashion to encourage proper disposal and minimize risks to employees. Proper waste receptacles must be provided for trash and materials that may be reused or recycled during a project.

PPE

For each site waste management plan Mobile Energy Systems shall determine a PPE matrix that includes gloves, hand protection, eye and face protection and/or other necessary PPE.

Education and Training

Employees shall be instructed on managing waste generated at the work site and on the proper disposal method of wastes. Examples include:

- Instruction on the proper handling, storage and disposal of wastes and depending on the waste generated at the site to also include general instruction on disposal of non-hazardous wastes, trash or scrap materials. If wastes generated are classified as hazardous then employees shall be trained to ensure proper disposal and compliance with regulations.
- Minimization methods to reduce waste.
- Recycling methods and proper PPE to be utilized.

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Aerosol Can Contents	Equipment Repair Shop	Puncturing of aerosol cans	Hazardous	SAA is self-contained in the equipment repair shop	Ship to assigned site for recycling or disposal	Read warnings before use of Aerosol unit.
Aerosol Can Puncturing Unit Filter	Equipment Repair Shop	Filter Changes	Hazardous	Place in designated labeled container	Ship to assigned site for recycling or disposal	Change filter every 3 months
Aerosol Cans	Various Locations	Painting, lubricants, cleaning	Non-Hazardous if aerosol can be punctured and drained	Place punctured aerosol can in RAA storage drum	Crush RAA storage drum and place in the scrap metal dumpster from client.	See "Scrap Metal" for waste stream management
Ash	Smart Ash Unit	Incineration of acceptable waste	Non Hazardous	Dispose of Immediately	Place in the Burnable Waste Dumpster	Gloves Goggles
Automotive and Heavy Equipment Parts-Used	Equipment Repair Shop and Fab Shop	Replacement	Non-Hazardous	RAA's by equipment repair shop	Returned to vendors for recycling	Starters, Alternators, Pumps, Transmissions
Batteries (Alkaline)	Various Locations	Battery Failures	Universal Waste	Place in the UWAA in the equipment repair shop	"D" cell and below are acceptable in the Non-Burnable Waste Dumpster	Ship to designated site for recycling or disposal
Batteries (Lead Acid)	Equipment Repair Shop and Fab Shop	Battery Failures	Universal Waste	No storage allowed. Containment boxes are labeled and available in the shops.	Lead acid batteries are returned to the Vendor upon removal	Ship to designated site for recycling

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Batteries (Nicad)	Various Locations	Battery Failures	Universal Waste	UWAA in the equipment repair shop.	Ship to assigned site for recycling or disposal	Cell phones, radios
Butane Torch Bottle	Various Locations	Mechanic activities	Excluded Hazardous if recycled	Place drained Butane Torch Bottles in RAA storage drum	Crush RAA storage drum and place in the scrap metal dumpster	Prosolv Butane Bottle processor l
Cardboard/Office Paper	Parts Department & Offices	Shipping Boxes & Office Activities	Non-Hazardous	RAA in the Hog Barn	Place on pallet in RAA and band for shipment to assigned site for recycling.	
Computers Discarded	Parts Department & Offices	Replacement	Non-Hazardous	Place in RAA	Ship to assigned site for recycling or disposal	
Diesel Filters-Used	Equipment Repair Shop and Fab Shop	Filter Changes	Non-Hazardous	RAA for drained and crushed used filters	Drain for 12 hrs., crush and incinerate in Smart Ash unit	Place metal in recycle metal dumpster
Diesel Rags	Various Locations	Mechanic activities	Non-Hazardous	Oily waste rag in clear bags w/yellow stripes.	Incinerated in Smart Ash unit	See "Ash" for management and disposal
Drained Diesel	Equipment Repair and Fab Shop	Draining diesel fuel and filters	Non-Hazardous when burned as Off-Spec fuel	Place in "used oil" tank in the equipment repair shop and fab shop.	Burned for energy recovery in clean burn multi-oil heating system.	

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Empty Paint Cans	Various Locations	Painting activities	Non-Hazardous	No storage allowed	Ship to assigned site for recycling or disposal	Paint cans must be RCRA empty.
Fluorescent Light Ballast	Various Locations	Failure	Non-Hazardous unless they contain PCB's or DEHP	None	Place in Non-Burnable Dumpster	Ballast will say on the label if it contains PCB's
Fluorescent Light Bulbs	Shops, Office Areas	Bulb replacement	Universal Waste	Place bulbs in their original container in the RAA in the shop area	Ship to assigned site for recycling or disposal	Label bulbs "Used Bulb" when put into RAA.
Glass	Various Locations	Replacement	Non-Hazardous	None	Place in Non-Burnable Dumpster	Ensure glass containers are empty.
Glycol Rags	Equipment Repair Shop and Fab Shop	Fluid Changes	Non-Hazardous	Oily waste rag WAA's lined w/clear bags w/yellow stripes.	Incinerated in Smart Ash unit	Minimize use of absorbent rags
Glycol-Used	Equipment Repair Shop and Fab Shop	Fluid Changes	Non-Hazardous	RAA - self-contained tank on recycling unit	Recycled in glycol recycling unit	Recycling unit stored in shop
Grinding Wheels	Equipment Repair Shop and Fab Shop	Grinding activities	Non-Hazardous	None	Place in Non-Burnable Dumpster	
Hoses & Belts	Equipment Repair Shop and Fab Shop	Replacement	Non-Hazardous	Place in Non-Burnable Dumpster	Place in Non-Burnable Dumpster	Drain all fluids from hoses

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Metal Shavings/Cuttings	Equipment Repair Shop and Fab Shop	Fabricating activities	Excluded Hazardous if recycled	Placed in recycle metal dumpster or metal only RAA's	Place in recycle metal dumpster	Ensure there are no free flowing cutting fluids present before disposal.
Oil Filters-Used	Equipment Repair Shop and Fab Shop	Oil filter changes	Excluded Hazardous	RAA for drained and crushed used filters	Drain for 12 hrs., crush and incinerate in Smart Ash unit	Place metal in recycle metal dumpster
Oil-Used	Equipment Repair Shop, Fab Shop, Service Trucks	Draining oil and filters	Excluded Hazardous if burned for energy recovery	Receiving sumps are located in the Equipment Repair Shop and Fab Shop	Burned for energy recovery in clean burn multi-oil heating system.	Keep lids on receiving sumps at all times. DO NOT PUT SOLVENTS INTO USED OIL
Oily Waste (rags, absorbents)	Various Locations	Mechanic activities, equipment drips and leaks	Non-Hazardous	Oily waste rag WAA's lined w/clear bags w/yellow stripes.	Incinerated in Smart Ash unit	Collected daily. See "Ash" for management and disposal
Paint Waste (rags, rollers, brushes, etc.)	Various Locations	Painting activities	Determine on per occurrence basis. Use SDS or testing	If hazardous, store in the assigned area. If non-hazardous, no storage is required.	If hazardous, ship to assigned site for disposal. If non-hazardous, place in burnable waste dumpster.	Need to review SDS, do analytical test, or use generator knowledge to make waste determinations.
Parts Cleaner Rags	Equipment Repair Shop	Cleaning parts	Non-Hazardous	Oily waste rag WAA's lined w/clear bags w/yellow stripes.	Incinerated in Smart Ash unit	See "Ash" for management and disposal
Scrap Metal	Various Locations	Fabrication activities & house cleaning	Excluded Hazardous if recycled	Placed in recycle metal dumpster or metal only RAA's	Place in recycle metal dumpster	Eye Protection Gloves

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Sodium Vapor/ Metal Halide Light Bulbs	Various Locations	Bulb replacement	Universal Waste	Place bulbs in their original container in the RAA.	Ship to assigned site for recycling or disposal	Label bulbs "Used Bulb" when put into RAA.
Toner Cartridges	Offices	Copiers, printers, fax machines	Non-Hazardous	Placed in original container in RAA	Ship to assigned site for recycling or disposal	Verify toner is expended before disposal.
Water Scrubber Filter & Absorbents	Equipment Repair Shop and Fab Shop	Filtering sump water in shops	Non-Hazardous	None	Incinerated in Smart Ash unit	See "Ash" for management and disposal
Wood Waste	Various Locations	Various activities and shipping pallets	Non-Hazardous	Store on the far back corner of the pad or in the dump truck box if available.	Place in recycle wood dumpster	Pallets are refurbished and recycled when possible

10.0 ENVIRONMENTAL - SPILL PREVENTION & RESPONSE

Requirements

Each work site spill prevention and response plan shall contain the following requirements.

- Chemical substances should be stored in proper containers to minimize the potential for a spill. Whenever possible, chemicals should be kept in closed containers and stored so they are not exposed to storm water.
- The program must identify chemicals used that may be potentially spilled or released. This will include both liquid chemicals used at our facilities or brought on to owner client sites.
- Spill kits must be adequate for any anticipated spills. A proper spill kit must contain the appropriate supplies for materials that may be spilled. Supplies must be easily accessible when required, and considerations must be made for both the type and quantity of materials. The contents of spill response kits shall be periodically assessed to ensure the availability of adequate spill response supplies and adjust inventory, as necessary.
- Mobile Energy Systems shall ensure the availability of adequate spill response supplies by periodic inspection to assess their availability and adjust the inventory, as necessary.
- Employees must be instructed on spill prevention and the proper response procedures for spilled materials. The training should include materials available for use, proper waste disposal and communication procedures.
- Areas where chemicals may be used or stored must be maintained using good housekeeping best management practices. This includes, but is not limited to clean and organized storage, labeling and secondary containment where necessary.
- Proper communication measures for employees to initiate in the event of a spill will be created on a site by site basis. Communication procedures will be based on type and quantity of materials spilled.
- Environmental spills shall be reported to environmental authorities when required. Reporting procedures will be based on type and quantity of materials spilled.

Spill Response

What is done in the first few hours of a leak or spill is critical to the success of the response. Containment/recovery efforts focus on minimizing the effects of spill on the surroundings. Should it become apparent that the entire spill cannot be contained; procedures for the protection of sensitive areas will be considered.

General Response

- Evacuate and isolate the area.
- Sound the alarm.
- Call for assistance, as needed.
- Backup personnel.
- Emergency Services.
- Response specialists.
- Assess the situation and identify additional hazards.
- Ensure personal safety. Don appropriate PPE.
- If safe to do so, determine how to respond to any persons injured or trapped.
- Treat and/or evacuate injured.
- Account for all personnel on site.
- Establish personnel accountability system for onsite responders.

- If safe to do so, conduct search and rescue procedures for anyone missing.
- Notify Immediate Supervisor, provide all known information.
- What happened.
- Any known injuries.
- Secure the area to prevent people from entering the spill site.
- Assess the spill site to determine how the area will be contained and cleaned up. Consider the following:
- Location, type and volume of spill.
- Acquire applicable SDS, TDGA, EPEA and AER spill reporting guidelines
- Duration of spill prior to discovery.
- Access and recovery points.
- Available equipment and resources.
- Spill containment capability.
- What are the ground and weather conditions.
- Nearby waterways and groundwater.
- Local residents and water wells.
- Wildlife and livestock.
- Contain the spill to preventing further environmental damage.
- Prioritize and organize containment points, based on flow rates, sensitive receptors and access.
- Prevent the spill from entering a watercourse.
- If weirs are installed they should be able to handle large flow rates and surges.
- Surface run off may have to be diverted from the spill site if wet conditions are present.
- Determine where bell holes or trenches would be most effective. Keep trenches shallow and narrow to prevent additional clean up. If digging trenches will drive the contamination down to the sub soil establish surface structures for containment (dikes, etc.).
- Notify required regulatory agencies and confirm the Level of Emergency.
- Notify local authorities and health authorities, as required.
- Initiate public protection measures in the EPZ, as required.
- Notify RCMP/Police and provincial highway authorities for approval to close and detour municipal and/or provincial highways.
- Request a Fire Hazard Order, Closure Order from the regulatory agency, if needed.
- Develop an Incident Action Plan

Spill Reporting – Alberta Environment

The *Environmental Protection and Enhancement Act (EPEA)* require that any release (including spills and leaks) or emergency that may cause, is causing or has caused an adverse effect to the environment must by immediately reported to Alberta Environment. An adverse effect is considered the impairment of, or damage to the environment, human health or safety, or property. To be reportable, the release must be into the environment.

A spill that is fully contained within a building, including odours, is not considered a release into the environment; however, if there is any possibility of odours venting from the building into the environment, Alberta Environment should be notified.

When reporting, provide the following information, if available:

- The location and time of the release.
- A description of the circumstances leading to the release.
- The type and quantity of substance released.
- The details of any action proposed or taken at the release site.
- A description of the immediate surrounding area.

A written report must be submitted to the Alberta Environment Director within 7 days of the initial immediate report.

Spill Reporting – Transport Canada

Any release, spill or leak exceeding quantities specified in the *Transportation of Dangerous Goods Act* which occurs in the course of transportation of the substance shall be immediately reported, as required.

Federal regulations require that the Canadian Transport Emergency Centre (CANUTEC) must be contacted in the event of an incident or accident involving infectious substances. The following template shall be used for each work site.

11.0 ENVIRONMENTAL SUSTAINABILITY

Environmental Sustainability Initiatives

Mobile Energy Systems cares about the environment and we are doing our part to make Mobile Energy Systems sustainable for future generations. We realize the process of becoming "Greener" is one that continuously evolves and by initiating our program we will make a positive difference to the environment, step by step.

All initiatives taken at each work site will be reported to Mobile Energy Systems

Energy Conservation

Each Mobile Energy Systems work site will develop measures to be in place for energy conservation and energy conservation measures should be used whenever possible. This can include shutting down equipment when it is not in use, use of energy efficient light bulbs, using new energy efficient technology, using equipment with the ENERGY STAR mark, reduction in the use of generators and using more local electrical supply, etc.

Water Conservation

Each Mobile Energy Systems work site will develop measures to be in place for water conservation. Water conservation measures should be used whenever possible. This can include repair on any equipment leaking water, use of a broom instead of a hose for cleaning purposes, upgrade equipment efficiency, educating employees, recycling dirty water for other applications instead of clean water, etc.

Efficient Use of Vehicles

Mobile Energy Systems will make efficient use of vehicles and equipment to minimize the impact to the environment. Vehicles and equipment should be kept in good condition with up-to-date preventative maintenance, should not be left idling unnecessarily, should use alternative fuels when possible, reviewing trips to reduce the number of vehicles used, etc. The most efficient vehicles and equipment should be used when possible.

Habitat Impact

Mobile Energy Systems will always work towards minimizing environmental impacts on the local habitat when activities may affect them. When activities may affect the local animal or plant population or habitat a plan shall be in place to minimize any environmental impact to them. The plan is to be reviewed and approved by the site manager prior to work beginning.

Waste Management

Efficiency

We must make efficient use of materials in order to minimize waste. An efficient material management system should be used to reduce the impact on the environment by limiting the amount of materials that are used, left over as waste or transported.

Purchasing

Mobile Energy Systems will emphasize purchasing products with minimal impact on the environment when available. Mobile Energy Systems should take into consideration the impact a product has on the environment before purchasing. Preference should be given to products that minimally impact the environment, made of recycled, renewable material, energy-efficient, etc. Local purchasing will also reduce the amount of emissions and fuel used as compared to purchasing involving direct shipment from more distant locations.

Recycling

Each Mobile Energy Systems work site will develop measures to be in place for recycling. Besides recycling paper, cardboard, fluids, tires and plastics at our facilities we also want to recycle used engine oil, treat or recycle solvents, etc.

Measures in Place for Limiting Greenhouse Gas Emissions

Each Mobile Energy Systems work site will develop a process for implementing procedures to protect the climate. This includes limiting the amount of greenhouse gases by use of low-emission technologies, driving less or carpooling and use of renewable energy.

Site managers are responsible to reduce greenhouse gas emissions and fuel consumption, decrease wasted expenditures in fuel and maintenance and improve efficiency.

Employee Awareness

All Mobile Energy Systems workers will be made aware of our sustainability efforts and asked for their input for additional methods to protect the environment while we conduct our work.

12.0 ERGONOMICS MANUAL MATERIAL HANDLING

Key Responsibilities

Health and Safety Representative

Develops local Manual Material Handling procedure for all worksites in accordance with this procedure and ensures all employees are aware of the requirements of the local Manual Material Handling procedure.

Site Manager

Responsible for the review, implementation and maintenance of the local worksite Manual Material Handling procedure and shall:

- Communicate, promote and support the Manual Material Handling procedure.
- Maintain records of 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.
- Assist in the investigation of incidents to address injury hazards.
- Bring to the attention of Mobile Energy Systems management any hazards identified during their investigations, audits or inspections.
- Provide input into purchasing specifications for new tools, equipment and furniture as needed to reduce lifting hazards.
- Provide input into the development of safe work procedures to reduce lifting hazards.

Employees

- Shall attend all related training for the task they are performing.
- Comply with safe work procedures.
- Correctly use the equipment provided by Mobile Energy Systems according to manufacturers' recommendations.
- Report to the supervisor any unsafe acts, unsafe conditions or equipment.
- Provide suggestions to supervisors and/or the JHSC for their review regarding MSD prevention or control measures, e.g., purchasing specifications for equipment and furniture.

Procedure

Mobile Energy Systems requires each worksite to establish and maintain a Manual Material Handling procedure with the following elements:

- Ongoing training of management, supervisors, and employees (including new hires) on lifting and manual handling awareness hazards and control measures.
- Training of specialized staff (designated Mobile Energy Systems Representative, JHSC members) on lifting or manual handling 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
- Implementation of the Manual Material Handling procedure by incorporating ergonomic control principles into the purchasing process, i.e., by proactively integrating ergonomics principles into purchasing equipment and furniture

- Proactively integrating ergonomics principles into workplace design and work techniques
- Ongoing evaluation (no less than annually) of the local Manual Material Handling procedure implementation and effectiveness
- 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.

Mobile Energy Systems must ensure that every worker who may be exposed to a risk of musculoskeletal injury is informed of the risk and of the signs and common symptoms of any musculoskeletal injury associated with their work.

Worksite Assessment

A hazard assessment must be performed before manually lifting and handling a load. Before a worker manually lifts, lowers, pushes, pulls, carries, handles, or transports a load that could injure the worker, Mobile Energy Systems must perform a hazard assessment that considers the weight of the load, the size of the load, the shape of the load, the number of times the load will be moved and the manner in which the load will be moved. The assessment shall include the following factors must be considered, where applicable:

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 is curved too much or in a stooped position?
- Is the back is 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?

Mechanized Equipment

Mechanized equipment is provided, wherever practicable, to assist with material handling and should be used for material handling, whenever practicable. Mobile Energy Systems must provide, where reasonably practicable, appropriate equipment for lifting, lowering, pushing, pulling, carrying, handling or transporting heavy or awkward loads.

Handling Heavy or Awkward Loads

Mobile Energy Systems 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:

- Employees shall not attempt to lift more than they can comfortably taking and absolutely not more than 18kg without assistance from another employee or use of mechanical aids (pallet jack, hand dolly, etc.) to lift the load.
- All loads carried on handcarts shall be secured.
- All awkward type loads shall be secured to prevent tip page.
- 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
- reducing the distance the load must be held away from the body by reducing the size of the packaging
- 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.

Review and Updating Manual Material Handling Procedure

Each worksite will review the effectiveness of the Manual Material Handling procedure at least annually. Any injuries will be reviewed for MSI and Manual Material Handling procedure deficiencies and those factors must be corrected without undue delay and the MSD and Manual Material Handling procedure revised. When the monitoring required identifies deficiencies, they must be corrected without undue delay.

Any revision must involve retraining of employees at the effect of the corrective actions.

Training

Workers are provided ergonomics training. Mobile Energy Systems will 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.

Mobile Energy Systems must 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. Mobile Energy Systems must ensure that the training includes identification of factors that could lead to a musculoskeletal injury, the early signs and symptoms of musculoskeletal injury and their potential health effects and preventive measures including, where applicable, the use of altered work procedures, mechanical aids and personal protective equipment.

Training shall be documented and must remain in the worker's training file.

13.0 FALL PROTECTION

Responsibilities

Operations Manager

It is the responsibility of the work site 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

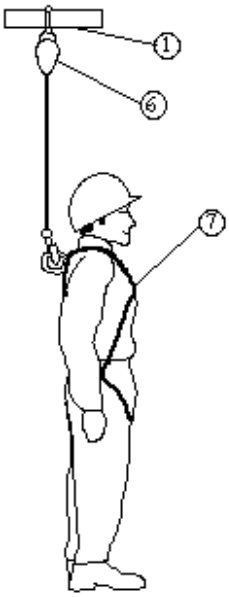
- Supervisors shall make exposure determinations and shall discuss with their employees the extent to which scaffolds, ladders or vehicle mounted work platforms can be used.
- Ensure that fall protection equipment is available and in safe working condition.
- Provide for emergency rescue in the event 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

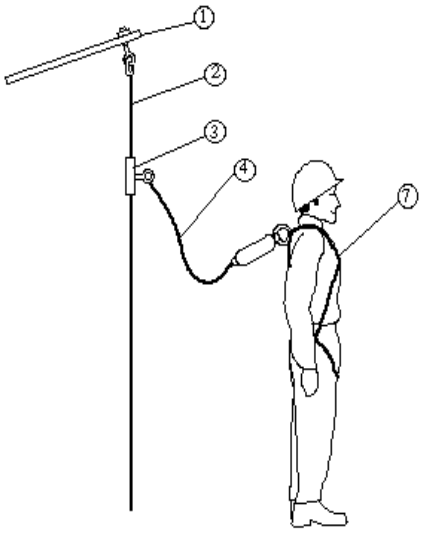
- Understand the potential hazards of working at elevated levels as well as gaining access to and from the work location.
- Understand the use and limitations of such equipment.
- Pre-plan the job with his/her supervisor to agree that the job can be done safely.
- Before using a lifeline or lanyard, a worker shall ensure that the lifeline or lanyard is free of imperfections, knots and splices other than end terminations, is protected by padding where the lifeline or lanyard passes over sharp edges and is protected from heat, flame or abrasive or corrosive materials during use.
- Before using a safety belt or full body harness a worker shall ensure that the safety belt or full body harness is properly adjusted to fit the worker securely and is attached by means of a connecting linkage to a fixed anchor or lifeline.
- Inspects the connecting linkage, personal fall arrest system, full-body harness or lifeline before each use and that where a defect or unsafe condition that may create a hazard to a worker is identified in a connecting linkage, personal fall arrest system, full-body harness or lifeline.

Drawing of Components

Figure A



1. Tie-off Point
2. Lifeline
3. Rope Grab
4. Shock Absorbing Lanyard



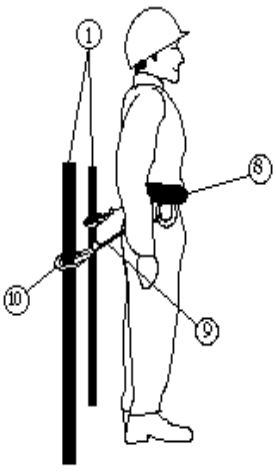


Figure D

Fall Protection Plan Requirement

Mobile Energy Systems has a written fall protection plan. Fall protection is required where workers are exposed to a potential fall of 3 m (10 ft.) or greater. Mobile Energy Systems must ensure that a worker is protected from falling at a temporary or permanent work area if a worker may fall a vertical distance of 3 meters or more, a vertical distance of less than 3 meters if there is an unusual possibility of injury or into or onto a hazardous substance or object, or through an opening in a work surface.

Safe Work Procedures

Use of Fall Protection

Mobile Energy Systems must ensure that:

- A worker using a personal fall arrest system must wear and use a full body harness.
- A worker uses a body belt only as part of a travel restraint system.
- A lanyard used by a worker is made of wire rope or other material appropriate to the hazard if a tool or corrosive agent that could sever, abrade or burn a lanyard is used in the work area.
- A personal fall arrest system consists of a full body harness and a lanyard equipped with a shock absorber or similar device.
- A carabineer or snap hook is self-closing and self-locking, may only be opened by at least two consecutive deliberate manual actions and is marked with its breaking strength in the major axis, and the name or trademark of the manufacturer.
- All components of a fall protection system are compatible with one another and with the environment in which they are used.
- A personal fall arrest system is arranged so that a worker cannot hit the ground, an object which poses an unusual possibility of injury or a level below the work area.

A worker shall be adequately protected by a guardrail system. If it is not reasonably possible to install a guardrail system, a worker shall be adequately protected by at least one of the following methods of fall protection:

- A travel restraint system
- A fall restricting system
- A fall arrest system
- A safety net

Prevention

Engineering controls shall always be used first to remove the hazard of injuries by falls. Examples include:

- Designing engineered access walkways vs. use of elevating platforms, scaffolds or climbing.
- Stairway units on scaffolds versus climbing a scaffolding ladder.

Use of guard rails, safety net, or personal fall arrest systems shall be used when the standard methods of protection are not feasible or a greater hazard would be created.

Where a guardrail is removed in order for work to be done Mobile Energy Systems and any contractor shall each ensure that adequate precautions are taken to ensure the safety of the employee doing the work and any other employee, and the area is not left unguarded. An employee who removes a guardrail in order to do work shall replace the guardrail before leaving the area.

An opening into which an employee may fall, other than a hatchway, chute, pit or trap-door opening shall be guarded on all exposed sides by guardrails or by an adequately strong and supported cover secured over the opening.

Defects / Unsafe Conditions

Defective fall protection equipment must be removed from service. Mobile Energy Systems must ensure that equipment used as part of a fall protection system is removed from service and either returned to the manufacturer or destroyed if it is defective or it has come into contact with excessive heat, a chemical, or any other substance that may corrode or otherwise damage the fall protection system.

Requirements of Fall Protection Equipment

One or several of the following measures shall be taken by Mobile Energy Systems to ensure the safety of workers:

- Change the work position of workers so that they can work on the ground or on another surface from which they are not at risk of falling.
- Install guard-rails or a system which, by limiting the movements of workers, prevents them from being at risk of falling.
- Use common protective devices and equipment, such as safety nets.
- Ensure that workers wear safety harnesses when they are working; or
- Use another means that ensures equivalent safety for workers.

The wearing of a safety harness is mandatory for all workers exposed to falls of over 3 meters from their workstations, except if a worker is protected by some other device that ensures equivalent safety or by a safety net or when he is only using some means of access or egress. A safety harness shall be used with one of the following systems:

- a shock absorber attached to a lifeline preventing a fall in excess of 1.2 meters; or
- a harness retractor that includes a shock absorber or that is attached thereto.

All fall protection equipment meets CSA standards. All fall protection equipment- including full body harnesses, body belts, lanyards, shock absorbers, connectors, carabiners, and snap hooks, fall arrestors, self-retracting devices, descent control devices, life safety ropes, adjustable lanyards for work positioning, rope adjustment devices for work positioning and wood pole climbing equipment must meet current CSA Standards. Refer to Part 9, sections 142-149 of the Alberta OHS Code for specific details.

The following are minimum standards for Mobile Energy Systems employee personal fall protection systems:

- 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.
- Where a snap hook is used as an integral component of a personal fall arrest system, connecting linkage, fall arresting device, full body harness or lifeline Mobile Energy Systems shall ensure that the snap hook is self-locking and is approved and maintained.
- A fall arrest system shall consist of a full body harness with adequate attachment points and a lanyard equipped with a shock absorber or similar device.
- The fall arrest system shall be attached by a lifeline or by the lanyard to an independent fixed support.
- A lanyard must be kept as short as work conditions permit, is constructed of nylon, polyester or polypropylene rope or webbing or wire rope that is equipped with an approved shock absorbing device, is equipped with suitable snap hooks and is approved and maintained.
- 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.
- Where vertical lifelines are used, each employee shall be attached to a separate lifeline.

- Where the use of a lifeline is required Mobile Energy Systems shall ensure that the lifeline is suitable for the conditions in which the lifeline is to be used, having regard to factors including strength, abrasion resistance, extensibility and chemical stability. Mobile Energy Systems will ensure that a lifeline is made of wire rope or synthetic material, is free of imperfections, knots and splices, other than end terminations, is protected by padding where the lifeline passes over sharp edges, is protected from heat, flame or abrasive or corrosive materials during use and is maintained to manufacturer's recommendations.
- 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.
- Full body harnesses requirements:
- Full body harness and connecting linkage must be approved and maintained.
- Properly fitted to the worker.
- Worker is trained in the safe use of the full body harness.
- All metal parts of the full-body harness and connecting linkage are of drop-forged steel 22.2 kilonewtons proof tested.
- A protective thimble is used to protect ropes or straps from chafing whenever a rope or strap is connected to an eye or a D-ring used in the full body harness or connecting linkage.
- The connecting linkage is attached to a personal fall arrest system, lifeline or secure anchor point to prevent the worker from falling more than 1.2 meters.
- Provide for prompt rescue of employees in the event of a fall or assure that employees are able to rescue themselves.
- 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.

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. Additionally:

- 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.

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 / Damage

Fall protection equipment must be inspected before use. Mobile Energy Systems must ensure that the equipment used as part of a fall protection system is inspected by the worker as required by the manufacturer before it is used on each work shift, kept free from substances and conditions that could contribute to deterioration of the equipment and re-certified as specified by the manufacturer.

Defective fall protection equipment must be removed from service. Mobile Energy Systems must ensure that equipment used as part of a fall protection system is removed from service and either returned to the manufacturer or destroyed if it is defective or it has come into contact with excessive heat, a chemical, or any other substance that may corrode or otherwise damage the fall protection system.

After a fall protection system has arrested the fall of a worker, it must be removed from service, and not be returned to service until it has been inspected and recertified as safe for use by the manufacturer or its authorized agent, or by a professional engineer.

Elevated Personnel Platforms

Work performed, regardless of the nature of the work, from personnel platforms raised by forklifts, cranes, scissor lifts, a boom elevating work platform, boom-supported aerial device, or telescopic forklift truck work platform requires a personal fall arrest system and the employee shall be connected to the platform.

Rescue

Before any use of a fall arrest system or a safety net by a worker at a project Mobile Energy Systems shall develop written procedures for rescuing the worker after his or her fall has been arrested. Prompt rescue of employees shall be provided in the event of a fall. The pre-planning stage prior to the beginning of each elevated work assignment shall be evaluated by the manager or Safety Manager to provide rescue of employees involved in a fall.

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 3 meters nor more than 25 feet (7.5 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 required 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.

Training

Workers are provided fall protection training. Mobile Energy Systems must ensure that a worker is trained in the safe use of the fall protection system before allowing the worker to work in an area where a fall protection system must be used. The training must include the following:

- a review of current Alberta legislation pertaining to fall protection,
- an understanding of what a fall protection plan is,
- fall protection methods a worker is required to use at a work site,
- identification of fall hazards,
- assessment and selection of specific anchors that the worker may use,
- instructions for the correct use of connecting hardware,
- information about the effect of a fall on the human body, including
- maximum arresting force
- the purpose of shock and energy absorbers
- swing fall and
- free fall
- pre-use inspection,
- emergency response procedures to be used at the work site, if necessary, and
- practice in inspecting, fitting, adjusting and connecting fall protection systems and components and emergency response procedures.

Training must be conducted initially, and refresher training conducted annually or as needed due to deficiencies in training, changes in the workplace, changes in fall protection systems or procedures that render previous training obsolete or inadequacies in an employee's understanding of previous training.

Training must be documented in writing: who was trained, when and dates of training. Signature of person providing training and date training was deemed adequate.

Training records shall be retained in the local office.

14.0 FATIGUE MANAGEMENT PROGRAM

Policy

The guiding principles of fatigue management shall be incorporated into the normal management functions of the business and include the following:

- Workers must be in a fit state to undertake work
- Workers must be fit to complete work
- Workers must take minimum periods of rest to safely perform their work

These principles will be managed through:

- The appropriate planning of work tasks, including driving, vehicle and equipment maintenance, loading and unloading and other job related duties and processes
- Providing appropriate equipment to help reduce stress and fatigue
- Regular medical checkups and monitoring of health issues as required by legislation
- The provision of appropriate sleeping accommodations where required
- Ongoing training and awareness of employee health and fatigue issues

Roles and Responsibilities

The following addresses the roles and responsibilities of workers to report tiredness/fatigue to supervision and that supervision take appropriate action to assist the worker.

Mobile Energy Systems Management

- Management accepts responsibility for the implementation of this fatigue management policy.

Manager

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

Workers

- Workers must present in a fit state free from alcohol and drugs.
- Workers must never operate motor vehicles and/or heavy equipment while excessively fatigued.
- Workers must not chronically use over-the-counter, prescription drugs and any other product which may affect an employee's ability to perform their work safely, including fatigue that sets in after the effects of the drug wear off.
- Workers must report fatigue to their supervisor. Supervisor must take appropriate actions to prevent loss.
- Workers need to be rested prior to starting work.
- Workers need to monitor their own performance and take regular periods of rest to avoid continuing work when tired.

Work Hour Limitations and Rest Breaks to Control Fatigue and Increase Mental Fitness

Work schedules are managed to help control worker fatigue. The material in this document does not take precedence over applicable government legislation which all employees must follow.

Mobile Energy Systems will set work hour limitations and will control job rotation schedules to control fatigue, allow for sufficient sleep and increase mental fitness. Work scheduling should take into consideration the amount of rest between workdays, shift work, on-call time, traveling across different time zones, etc.

Workers should take periodic breaks to minimize fatigue and increase mental fitness. Mobile Energy Systems will provide sufficient rest breaks for workers to allow for rest and recovery time.

Every worker shall have necessary work breaks in order to avoid fatigue. These scheduled breaks will apply to both driving and on site hours. The following shall be a minimum:

- 15 Minutes each 2.5 Hours
- 30 Minutes after 5 Hours
- 30 Minutes after 10 Hours

No worker shall work more than:

- 12 hours per day
- 24 Days Continuous

Use of Ergonomic Friendly Equipment

Ergonomic equipment will be used to improve workstation conditions such as anti-fatigue mats for standing, lift assist devices for repetitive lifting, proper lighting and controls of temperature and other ergonomic devices as deemed appropriate. Equipment to be used will be determined in the work task analysis.

Analysis of Work Tasks to Control Fatigue

Job tasks are designed to minimize/control fatigue. Work tasks to control fatigue must be analyzed and evaluated periodically. Fatigue hazards should be minimized. Examples of fatigue hazards include the type of work task, the length of the task, workplace conditions, etc. This will be included in the site specific hazard analysis.

Incident Analysis

If there is an incident there shall be an initial identification/assessment of evidence. Initial identification of evidence immediately following the incident might include a listing of people, equipment, materials involved and a recording of environmental factors such as weather, illumination, temperature, noise, ventilation, etc. and physical factors such as fatigue, age and medical condition.

Initial and Annual Training for Workers on Fatigue and Controlling Fatigue

Workers are provided training on the Fatigue Management program. Training must be provided on how to recognize fatigue, how to control fatigue through appropriate work and personal habits and fatigue reporting.

Workers will receive initial and annual training. A record of individual fatigues training and competency will be maintained.

15.0 FIRE PROTECTION

Responsibilities

Safety Manager

Develops local first aid plans or procedures for all worksites in accordance with this procedure and ensures workers are aware of the requirements of the fire and explosion prevention program plans or procedures.

Worksite Project Manager

Responsible for the implementation and maintenance of the fire and explosion prevention program for their facility and ensuring all assets are made available for compliance with the procedure.

Employees

All workers are responsible for following these provisions and attending specified training.

Procedure

Assessment for Fire and Explosion Hazards

A site specific assessment for fire and explosions shall be developed for each project. The Mobile Energy Systems Safety Manager will perform a written assessment review.

Fire Safety Plan

Mobile Energy Systems will factor the following into the hazard assessment and development of the site specific fire safety plan and shall:

- Take all reasonably practicable steps to prevent the outbreak of fire at a place of employment and to provide effective means to protect workers from any fire that may occur.
- Develop and implement a written fire safety plan that provides for the safety of all workers in the event of a fire. A plan developed must include:
    - the emergency procedures to be used in case of fire, including: sounding the fire alarm, notifying the fire department and evacuating endangered workers, with special provisions for workers with disabilities.
    - the quantities, locations and storage methods of all flammable substances present at the place of employment.
    - the designation of persons to carry out the fire safety plan and the duties of the designated persons.
    - the training of designated persons and workers in their responsibilities for fire safety.
    - the holding of fire drills at least once during each 12-month period; and
    - the control of fire hazards.
- Suitable procedures are developed and implemented to prevent the ignition of flammable liquids or explosive dusts that are present at a worksite.
- All sources or potential sources of ignition are eliminated or controlled where an explosive atmosphere exists or is likely to exist; and
- Static charge accumulations during transfer of flammable liquids or explosive substances from one container to another are prevented by electrically bonding the containers or otherwise designed to control the presence of static electricity.

Other Planning Requirements

No worker shall enter a workplace where a flammable or explosive substance is present in the atmosphere at a level that is more than 10% of the lower explosive limit of that substance.

Only if in a life-threatening emergency exposure of emergency response workers is permitted above 10% of the LEL provided that only the minimum number of those qualified and properly trained and equipped workers necessary to correct the unsafe condition are exposed to the hazard and every possible effort is made to control the hazard while this is being done.

When portable flare stacks are used these must be located a minimum of 25 meters from the hazardous location.

Good housekeeping and preventative maintenance on all equipment shall be maintained to prevent fire hazards from occurring.

Smoking must be confined to areas specifically designated by Mobile Energy Systems management. Smoking is not permitted while around any active/functioning hydrocarbon clean-up/vacuuming equipment, around compressed gas cylinder storage locations or at any Mobile Energy Systems or client designated “No Smoking” areas.

Oily/greasy rags, paper waste and other flammable trash will be removed and disposed of in covered metal containers or appropriately marked safety cans, or in over-pack spill containers, whenever these sources are generated, for the prevention of spontaneous combustion.

Matches or cigarette lighters should not be taken into any area where an explosive atmosphere may be present.

Fire Potential and Response Procedures

All leaks of flammable liquids will be reported immediately and repaired if practicable. If immediate repair is not possible, all spark-producing operations within the vicinity of the leak or spill will be stopped and adequate warning signs or barricade tape will be posted until the hazard is controlled or eliminated.

If a worker’s clothing is contaminated with a flammable or combustible liquid, the worker must avoid any activity where a spark or open flame may be created or exists, remove the clothing at the earliest possible time and ensure that the clothing is decontaminated before it is used again. If a worker’s skin is contaminated with a flammable or combustible liquid, the worker must wash the skin at the earliest possible time.

All fires at a Mobile Energy Systems worksite shall be reported to supervisory personnel immediately. A written incident report will be filed by the immediate supervisor in charge of that area once the fire has been addressed.

Fire Extinguishing Theory

Fire is a chemical reaction that occurs when a fuel rapidly unites with oxygen in the presence of a heat source, and a flame is produced. Four elements are necessary to produce and support a fire:

- Fuel source (solid - liquid - gas)
- Heat source (a type of energy)
- Oxygen source (gas for ignition and flame support)
- Chemical chain reaction (occurs when fuel, heat and oxygen are united in the proper proportions to create a fire).

If any one of these four elements is eliminated, the fire will go out. There are four ways that a fire can be extinguished:

- Isolate, contain, separate, cover, or remove the fuel source.

- Remove the heat source by applying a cooling agent which absorbs the heat. Water is the most common cooling agent used to remove the heat from the reaction.
- Separate the oxygen from other essentials that make a fire by smothering the fire with a wet blanket, throwing soil or sand on it, or covering it with a chemical foam or water fog.
- Stop the chemical reaction by applying certain chemical substances that break up this chain reaction, such as sodium bicarbonate (baking soda) or potassium bicarbonate ("purple K") or sodium monophosphate (ABC dry chemical). Application of these chemicals will result in a reduction of the combustion rate and the fire can be extinguished.

Fire Classifications

There are 3 basic fire classification types present within Mobile Energy Systems operations and most host-facility job-sites. A specific class of fire extinguishers may be required based on the type of situation. The classifications are:

CLASS "A"

Fires that involve paper, wood, cardboard, textiles, etc. Foam or water-based liquids are used to extinguish this type of fire.

CLASS "B"

Fires that involve flammable liquid such as gasoline, diesel, grease, oil, paint, solvents, etc., dry chemicals, carbon dioxide or water in a spray-fog form are used to extinguish this type of fire.

CLASS "C"

Fires involving electrical equipment. Dry chemical or carbon dioxide is used to extinguish this type of fire.

Warning: Never use water to extinguish this type of fire due to the potential for electrical shock hazards.

Incipient Stage – Portable Firefighting Procedure

If personnel discover a fire in its early incipient (small) stage, initiate the following procedure if on Mobile Energy Systems locations: (if servicing a host-facility client, observes that client's contractor requirements concerning fire prevention.)

- Remain calm
- Report the fire to appropriate supervisory personnel
- If personnel believe the fire can be controlled through the use of a fire extinguisher and personnel are properly trained in the use of a fire extinguisher, seek out and remove the closest fire extinguisher from its securing location in the area of occurrence and put out the fire.

Miscellaneous

Garbage that may constitute a fire hazard is stored in covered receptacles. Where garbage may constitute a fire hazard is present Mobile Energy Systems shall provide covered receptacles for the garbage that are suitable to the nature of the hazard.

A person must not enter or work at a work area if more than 20 percent of the lower explosive limit of a flammable or explosive substance is present in the atmosphere. Atmospheric testing results will be assessed before a worker is exposed.

Hydrocarbon resistant gloves will be worn to prevent skin absorption by the hands.

Control Measures for Internal Combustion Engines in Hazardous Locations

Mobile Energy Systems must ensure that an internal combustion engine in a hazardous location has a combustion air intake and exhaust discharge that are equipped with a flame arresting device or located outside the hazardous location. Mobile Energy Systems must ensure that all the surfaces of an internal combustion engine that are exposed to the atmosphere in a hazardous location are at a temperature lower than the temperature that would ignite a flammable substance present in the hazardous location or shielded or blanketed in such a way as to prevent any flammable substance present in the hazardous location from contacting the surface.

Whenever possible, internal combustion engines should be located outside the hazardous location. Internal combustion engines in a hazardous location should not be running if possible.

No worker shall undertake any servicing or maintenance of a vehicle while a flammable liquid or gas or an explosive substance is loaded into or unloaded from the vehicle or is present in the vehicle in any place other than the fuel tank.

Any driver who operates a vehicle that contains a flammable liquid or gas or an explosive substance shall ensure that the engine of the vehicle is shut off during the connection or disconnection of the lines for the loading or unloading of the flammable liquid, gas or explosive substance.

Safe Storage and Handling of Flammable Substances

Mobile Energy Systems must ensure that flammable substances stored or used at the work area will not be in sufficient quantity to produce an explosive atmosphere if inadvertently released, are not stored within 30 metres of an underground shaft, are not stored in the immediate vicinity of the air intake of a ventilation supply system an internal combustion engine, or the fire box of a fired heater or furnace, and are stored only in containers approved to CSA Standard B376-M1980 (R2008), Portable Containers for Gasoline and Other Petroleum Fuels (or current version).

Safe Storage and Handling of Compressed Gas Cylinders

Mobile Energy Systems must ensure that:

- Compressed or liquefied gas containers are used, handled, stored, and transported in accordance with the manufacturer's specifications.
- A cylinder of compressed flammable gas is not stored in the same room as a cylinder of compressed oxygen, unless the storage arrangements are in accordance with Part 3 of the Alberta Fire Code (1997).
- Compressed or liquefied gas cylinders, piping, and fittings are protected from damage during handling, filling, transportation and storage.
- Compressed or liquefied gas cylinders are equipped with a valve protection cap if manufactured with a means of attachment.
- Oxygen cylinders or valves, regulators, or other fittings of the oxygen using apparatus or oxygen distributing system are kept free of oil and grease.

All compressed gas cylinders will be stored in their appropriately marked secured (chained) locations and capped when not in use. If in use, all hook-up hoses and equipment used for hot-work purposes will be inspected prior to use. Defective equipment found shall not be used, but instead, tagged out of service or repaired before being used again.

Oxygen is never to be used as a substitute for compressed air in pneumatic tools, to create pressure, for ventilating purposes or to blow out a pipeline.

All regulators and its flexible connecting hose are to be tested immediately after connections to a gas cylinder to ensure that there is no leak of the gas supply. If a leak of the gas supply develops during gas welding or an allied process, the supply of gas is immediately shut off by the worker performing the welding or allied process and the work is not resumed until the lead is repaired.

Storage compartments for compressed and liquefied gas cylinders must meet local legislative requirements.

All welding services will be provided from vehicles that comply with CSA Standard W117.2-06 - Safety in Welding, Cutting and Allied Processes.

All storage cylinders for compressed gas shall be secured in an upright position.

The control valve of a storage cylinder for compressed gas, other than a cylinder connected to a regulator, supply line or hose, shall be covered by a protective cap that is secured in its proper position.

A spent storage cylinder shall not be stored inside a building.

No storage cylinder for propane shall be placed closer than three metres to a source of ignition or fire.

Fire Extinguishers

Fire extinguishing equipment is readily available. Each work site shall be provided with readily accessible fire extinguishers adequately marked locations at a project.

Every worker who may be required to use fire extinguishing equipment shall be trained in its use.

Mobile Energy Systems will ensure that portable fire extinguishers are selected, located, inspected, maintained and tested so the health and safety of workers at the place of employment is protected.

Fire extinguishers that have been partially or completely used will be removed from service and replaced by similar equipment that has been inspected and authorized for service. Spent containers will temporarily be placed at either any work site trailer or each individual main office location.

Every fire extinguisher shall be inspected for defects or deterioration at least once a month by a competent worker who shall record the date of the inspection on the tag attached to it.

All portable fire extinguishers shall also be checked annually by a competent fire extinguisher supplier.

Portable fire extinguishers are to be selected, located, inspected, maintained and tested so that the health and safety of workers at the place of employment is protected. Mobile Energy Systems shall ensure that portable fire extinguishers are placed not more than nine meters away from each industrial open-flame portable heating device, tar pot or asphalt kettle that is in use and each welding or cutting operation that is in progress.

All fire extinguishers shall be maintained as follows:

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

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

The worker 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 workers must evacuate the area.

Flammable Liquids and Substances

Flammable liquids such as various fuels or solvents will be transported in appropriately marked safety cans with their contents identified. No glass container use will be allowed.

The use of gasoline as a cleaning agent on Mobile Energy Systems property is strictly forbidden. Only low flash point liquids are permissible for use in cleaning parts and machinery. Also no worker shall use gasoline to start a fire or use gasoline or replenish a tank on a heating device with a flammable or combustible liquid while the device is in operation or is hot enough to ignite the liquid.

All materials combustible and flammable liquids contaminated by flammable liquids are placed in receptacles that meet the requirements of the National Fire Code of Canada 1990, including any Revisions and Errata published from time to time, respecting the storage of flammable and combustible liquids that. All shall be non-combustible and have close-fitting metal covers, are labelled “flammable” and are located at least one meter away from other flammable liquids.

No tar pot, while in use, will be placed within three meters of an entrance to or exit from a building.

When a flammable gas or a flammable liquid is handled, used or stored, all sources of ignition must be eliminated or adequately controlled including open flame, spark-producing mechanical equipment, welding and cutting processes, smoking, static discharge and any electrical equipment or installation that is not approved for hazardous locations, as specified by local regulatory requirements and national codes.

Metallic or conductive containers used to transfer flammable liquids must be electrically bonded to each other or electrically grounded while their contents are being transferred from one container to the other.

Only containers approved to CSA Standard B376-M1980 (R1998), NFPA Standard 30 or ULC Standard C30-1995 shall be used to store flammable substances.

Containers of flammable substances will be stored in fire-proof cabinets and no appreciable combustible materials will be stored within 12 meters of any spark producing operation.

Hot Work

Mobile Energy Systems must develop and implement safe work procedures for fire and explosive hazards in the workplace, including hot work if hot work is performed in the workplace additionally, where a flammable substance is or is intended to be handled, used, stored, produced or disposed of at any Mobile Energy Systems location the Safety Manager shall develop written procedures to ensure the health and safety of workers who handle, use, store, produce or dispose of a flammable substance that may spontaneously ignite or ignite when in combination with any other substance or perform hot work where there is a risk of fire.

Our site specific procedures are to ensure that hot work is not begun until a hot work permit is issued which must include the nature of the hazard, the type and frequency of atmospheric testing required, the safe work procedures and precautionary measures to be taken, and the protective equipment required.

Mobile Energy Systems requires where a flammable substance is or may be present no hot work is to be permitted or performed until suitable tests have been conducted that indicate whether the atmosphere contains a flammable substance in a quantity sufficient to create an explosive atmosphere or risk of fire. We will confirm that the work may safely be performed through suitable work steps, tests taken at intervals appropriate to the work being performed and record the results and procedures developed and implemented to ensure continuous safe performance of the work.

Any container or piping that contains or has contained a flammable substance shall be purged using an effective method to remove the flammable substance from the container or piping before any hot work is begun on that container or piping. Mobile Energy Systems does not require nor permit any welding or cutting of metal that has been cleaned with a flammable or combustible liquid until the metal has thoroughly dried.

No hot tapping will occur until the Safety Manager develops a hot tap plan specific to the type or class of hot tap work being performed. There will be no exceptions to this requirement.

Welding Restrictions

All welding will comply with the requirements of CSA Standard W117.2-06, "Safety in Welding, Cutting and Allied Processes."

All welding or allied process equipment is erected, installed, assembled, started, operated, used, handled, stored, stopped, inspected, serviced, tested, cleaned, adjusted, carried, maintained, repaired and dismantled in accordance with the manufacturer's specifications. Additionally, the area surrounding the operation is inspected and all combustible, flammable or explosive material, dust, gas or vapour is removed or alternate methods of rendering the area safe are implemented.

If a welding or allied process if performed above an area where a worker may be present, the supervisor shall ensure that adequate means are taken to protect a worker below the operation from sparks debris and other falling hazards.

An operator of an electric welding machine must not leave the machine unattended without removing the electrode.

All appropriate welding and ground leads are used to fasten the electric supply cable securely.

Training

Employees are provided training on the fire safety plan. Mobile Energy Systems shall ensure that:

- Designated persons and workers who have been assigned fire safety duties are adequately trained in, and implement, the fire safety plan.
- The fire safety plan is posted in a conspicuous place for reference by workers; and
- A fire drill is held at least once during each 12-month period.

Mobile Energy Systems shall also provide training for:

- The proper use of portable fire extinguishers, for incipient (small stage) fire-fighting purposes only, upon initial hire and annually thereafter if they are required to use fire extinguishing equipment.
- The safe work procedures for fire, flammable substances and explosive hazards in the workplace including hot work and how to implement the procedures developed.

Retraining

Retraining shall re-establish worker proficiency and introduce new or revised control methods and procedures, as necessary. Retraining shall be provided for all authorized and affected workers whenever there is:

- An annual basis or if a change in job assignment or
- Mobile Energy Systems has reason to believe that there are deviations from or inadequacies in the worker's knowledge or use of fire extinguishers or fire prevention procedures.

Training Documentation

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

16.0 FIRST AID

Responsibilities

Safety Manager

- Develops and/or approves local first aid plans or procedures for all worksites in accordance with this procedure and ensures employees are aware of the requirements of the first aid plans or procedures.

Worksite Project Manager

- Responsible for the implementation and maintenance of the first aid procedure for their facility and ensuring all assets are made available for compliance with the procedure.

Workers

- Workers must report injuries and illnesses immediately after they occur. If a worker has an acute illness or injury at the work site, the worker must report the illness or injury to the employer as soon as is practicable.

Procedure

Assessment for First Aid

A site specific assessment for first aid shall be developed for each project. The Mobile Energy Systems Safety Manager will perform a written assessment review and this review will include, but not be limited to, the following areas:

- The number of employees who may require first aid at any time.
- The nature and extent of the risks and hazards in the workplace, including whether or not the workplace as a whole creates a low risk of injury.
- The types of injuries likely to occur.
- Any barriers to first aid being provided to an injured employee.
- The time that may be required to obtain transportation and to transport an injured employee to medical treatment.
- Mobile Energy Systems must review the first aid assessment within 12 months after the previous assessment and whenever a significant change affecting the prior assessment occurs in the worksite.

Posting Requirements

- Each site shall post, at conspicuous places at the work site, in the vicinity of first aid kits or first aid room, signs indicating the location of first aid services, equipment and supplies or, if posting of signs is not practicable, ensure that each worker knows the location of first aid services, equipment and supplies.
- A list of all qualified first aid attendants, qualifications and work locations will be posted, revised as needed and annually, and be contained with the site specific safety plan.
- The first aid procedures and a telephone list or other instructions for reaching the nearest police, ambulance, fire station, hospital or physician.
- In a conspicuous position at a workplace a written notice which outlines a policy and procedure for the reporting of injuries.
- The list of first aid attendants shall be provided to the safety committee or representative.

Availability of First Aid Personnel

- Workers certified in first aid are readily available to assist injured workers. Mobile Energy Systems must ensure that the number of first aiders at a work site and their qualifications and training comply with Schedule 2, Tables 5, 6 or 7 of the Alberta Occupational Health and Safety Code - 2009.

- Mobile Energy Systems must make sure that at least one first-aider is present at all times during working hours where there are 50 or less workers on a shift and another first-aider for every additional 100 workers or fraction thereof assigned to the shift.
- The Emergency Response Plan and list of first aid personnel will be made available in new employee orientations and training.

First Aid Attendant Qualifications

All first aid providers are certified. A worker who successfully completes the training of an approved training agency must meet the standards for a certificate in emergency first aid, standard first aid, or advanced first aid that are adopted by the Director of Medical Services in consultation with the Joint First Aid Training Standards Board.

First Aid Attendant Responsibilities

- The first aid attendant must promptly provide injured employees with a level of care only within the scope of the attendant's training.
- Objectively record observed or reported signs and symptoms of injuries and exposures to contaminants based on local regulatory requirements.
- Refer for medical treatment employees with injuries considered by the first aid attendant as being serious or beyond the scope of the attendant's training.

First Aid Equipment and Storage Requirements for First Aid Supplies

- All first aid supplies are readily available. An employer must ensure that first aid services, first aid equipment, and supplies required by the Alberta OHS Code (Schedule 2) are located at or near the work site they are intended to serve, and available and accessible during all working hours.
- Mobile Energy Systems must ensure that first aid equipment and supplies are maintained in a clean, dry, and serviceable condition, contained in a material that protects the contents from the environment and clearly identified as first aid equipment and supplies.
- On a monthly basis the site manager or the designated person will conduct an inspection of the first aid facilities (if Mobile Energy Systems is providing) and supplies to ensure that they meet Alberta regulatory requirements as related to the type, number and specification of required kits. These inspections shall be documented by marking an inspection card for each box with the date of the most recent inspection and the signature of the person making the inspection
- Mobile Energy Systems shall ensure that anything in the workplace that has been contaminated by blood or bodily fluids is disposed of or cleaned by a competent person in a manner that prevents an employee from being exposed to the blood or bodily fluids.

How to Summon First Aid Services

- Mobile Energy Systems and prime contractor will ensure that an emergency communication system is in place for workers to summon first aid services. The emergency communication plan will be contained within the Mobile Energy Systems site specific Emergency Response for each worksite.
- This shall include an effective means for communication between the first aid attendant and the employees served and the first aid attendant's ability to call for assistance. Examples include: radio, telephone, etc.
- The first aid attendant and all other persons authorized to call for transportation for injured workers must be trained in the procedures.

Preparing for Transportation to the Nearest Health Care Facility in the Event of an Injury or Illness

- Before workers are sent to a work site, Mobile Energy Systems must ensure that arrangements are in place to transport injured or ill workers from the work site to the nearest health care facility.

- Mobile Energy Systems must ensure that an ambulance service is readily available to the work site when travel conditions are normal. If an ambulance service is not readily available to the work site, or if travel conditions are not normal, Mobile Energy Systems must ensure that other transportation is available that:
- is suitable, considering the distance to be travelled and the types of acute illnesses or injuries that may occur at the work site,
- protects occupants from the weather,
- has systems that allow the occupants to communicate with the health care facility to which the injured or ill worker is being taken, and
- can accommodate a stretcher and an accompanying person if required to.
- Transportation arrangements need to be approved in advance by the Safety Manager.

Documentation

- All work related injuries and illnesses are documented.
- Mobile Energy Systems must record every acute illness or injury that occurs at the work site in a record kept for the purpose as soon as is practicable after the illness or injury is reported to Mobile Energy Systems
- A record must include the following:
- the name of the worker.
- the name and qualifications of the person giving first aid.
- a description of the illness or injury.
- the first aid given to the worker.
- the date and time of the illness or injury.
- the date and time the illness or injury was reported.
- where at the work site the incident occurred, and
- the work-related cause of the incident, if any.
- Mobile Energy Systems must retain the records for three years from the date the incident is recorded.
- All first aid records are to be kept confidential and may not be disclosed except as permitted by law.

17.0 FIT FOR DUTY

Requirements

It is the goal of Mobile Energy Systems to provide a safe workplace for all workers. To accomplish this goal, we have adopted the following fitness for duty policy requirements.

Competency

Workers are competent/qualified to perform their job. Mobile Energy Systems must ensure that workers have the necessary education, experience and training to perform their job tasks.

Physically Capable

Workers must be physically capable to perform their job. Workers must be physically capable of performing their job tasks.

A Physical Demands Analysis (PDA) should be prepared for each job duty to ensure workers are placed accordingly.

PDAs will be arranged through the Safety Manager.

Medication Reporting Requirements

Workers must notify their supervisor if they are taking prescription or over-the-counter medication that may impair their ability to work safely. Employees must report all medications they are taking.

Over-the-counter medications such as allergy or cold and flu medications could also impair one's ability to perform safely and must also be reported to their supervisor.

Employee Activity and Behaviour

Mobile Energy Systems is responsible for monitoring workers for unsafe behaviours and removing workers from the job site, if necessary. Employee's activities and behaviours will be monitored to determine if employee(s) should be removed from the work site.

Workers are prohibited from entering the workplace while under the influence of drugs or alcohol. Mobile Energy Systems must ensure that no person enters or remains at the job site while under the influence or drugs and/or alcohol.

Employee Assistance

Mobile Energy Systems will provide assistance to workers who are unable to safely perform their job duties. If an employee is determined to be unfit for duty, Mobile Energy Systems should have a process in place to provide reasonable assistance to the employee. This may include, but is not limited to, transferring the worker to another role, providing a leave of absence, Employee Assistance Programs, etc. Mobile Energy Systems will review each matter on a case by case basis.

Disciplinary action may occur for an employee reporting to work in a condition which could endanger their safety or the safety of any other person(s).

Training

The Fit for Duty policies and procedures for Mobile Energy Systems are communicated to employees. Mobile Energy Systems must ensure that workers are trained on the Fit for Duty policies and procedures for Mobile Energy Systems. Safe work practices and procedures must be followed. Safe work procedures must be in place prior to work beginning.

Employees shall follow our and our client's safety requirements. Examples may include, hot work permitting, confined space, lockout tagout, process safety management, electrical safety, operator safety and other standard work practices, safety rules or procedures.

18.0 FORKLIFTS AND AERIAL LIFTS

Purpose

The purpose of this section is to provide guidance and outline the requirements necessary for efficient, effective, productive, and safe procedures to follow during daily operations of our various Mobile Energy Systems Forklifts and/or Aerial Lifts and to allow employees to understand their responsibilities when operating this equipment.

Scope

This section applies to all Mobile Energy Systems employees when use of a Forklift or Aerial Lift is performed on Mobile Energy Systems owned premises or on a non-owned or operated client site.

Responsibilities

Management

Mobile Energy Systems management is responsible for following and implementing the regulations as defined in Section 19 of the Alberta Occupational Health and Safety Code.

Management must maintain records of training for each individual operator and provide them access to re-training upon expiration of their certifications in addition to maintaining records of all company Forklifts and/or Aerial Lifts.

Any incident involving a Forklift and/or Aerial Lift must be followed up via investigations or disciplinary action.

Supervisors

Supervisors are responsible to monitor all employees under their supervision and ensure that the following are adhered to:

- Performing daily checks and inspection of forklift/aerial lift equipment.
- Assigning and supervising the work of forklift/aerial lift operators.
- Coordinating with client/drivers for the unloading and loading of material.
- Ensuring and following safety measures and regulations for forklift/aerial lift operators.
- Supervision of records of the weight, labels and tags of all lifted goods.
- Ensuring the smooth operation and handling of materials during transfer.
- Maintaining records of damage to a forklift and subsequent repair documents.
- Conducting regular training and exercises for equipment operators.
- Evaluating the work and performance of equipment operators.

Employees

- Follow manufacturers guidelines associated with each particular piece of equipment they are operating.
- Follow the guidelines laid out in this safety manual.
- Maintain their Forklift and/or Aerial Lift operation training certification.
- Report any deficiencies with the equipment to their Supervisor

Forklift Guidelines

Prior to the daily operation of any company Forklift, a Forklift Inspection Report must be conducted to determine if the unit is in good working order and safe to use. If any concerns are noted during the inspection they must be brought to the attention of management to determine the appropriate course of action.

The following are guidelines for operating a Forklift on Mobile Energy Systems property and must be adhered to. If an operator is found to be contravening any of these guidelines, disciplinary action up to and including termination may occur.

- Do not travel at excessive speed
- Where possible, always travel with the load near ground level
- Center the load on the forks
- Do not disengage warning devices on the forklift (back-up alarm)
- Pre-plan your lift and destination (obstacles, surface conditions, narrow passages etc.)
- Personnel are NOT to ride on forks or on the outside of the forklift
- Personnel are NOT to ride on the load being transported
- No horseplay or stunting with the forklift
- Use a spotter when Line-of-Sight is compromised
- Make sure the platform a load is being taken from or taken to is stable
- Make sure all pedestrians are clear of the forklift when conducting a lift
- Pedestrians should approach the forklift from the front or side and make eye contact with operator
- Palleted goods are stacked and secured so they do not become an unstable load
- Use pallets that are in good condition only
- Do NOT lift a load that exceeds the capacity of the forklift – CHECK first!
- Use High-Vis clothing during dark or poor weather conditions (Night, rain/snowstorm etc.)
- Do NOT walk under raised forks

Aerial Lift Guidelines

Prior to the daily operation of any company Aerial Lift, an Aerial Lift Inspection Report must be conducted to determine if the unit is in good working order and safe to use. Check for drop-offs or holes, bumps, floor obstructions or debris, overhead obstructions and high voltage wires and conductors, hazardous locations, adequate surface support, weather and wind speed, and other possible unsafe conditions. If any concerns are noted during the inspection they must be brought to the attention of management to determine the appropriate course of action.

The following are guidelines for operating an Aerial Lift on Mobile Energy Systems property and must be adhered to. If an operator is found to be contravening any of these guidelines, disciplinary action up to and including termination may occur.

- read and understand the operators' manual;
- all overhead dangers should be identified, controlled or resolved prior to the commencement of work;
- only authorized and trained personnel will operate the boom lift;
- operator will be in complete control at all times;
- keep hands and feet inside the cage while in motion;
- operators will perform a "walk around" before each use;
- outriggers will be used in accordance with manufactures recommendations;
- pedestrians will have the right of way at all times;
- do not exceed the rated capacity of the lift;
- when unattended the lift key will be in the "OFF" position with the boom fully lowered;
- the cage area will be kept free of oil, grease and any other materials that may constitute a safety hazard;

- Do not drive near drop-offs, holes, or loading docks;
- Do not raise platform on slope or drive onto slope when elevated;
- Do not drive onto uneven or soft surfaces;
- Do not use without guardrails, mid rails, chain, or bar in place;
- Do not raise platform in windy or gusty conditions (30 kph / 20 mph);
- Do not use if working platform is not working properly or if any part is damaged, worn or missing;
- Do not use near moving vehicles or cranes;
- Do not stand or sit on guardrails;
- Do not use under the influence of alcohol or drugs;
- Do not override safety devices;
- Do not raise platform while machine is on a truck, forklift, or other device or vehicle;
- Do not use ladder, scaffolding, or other devices to increase size or working height of platform;
- Do not use with damaged tires;
- Do not attach ropes or chains to guardrails or use as a crane; and
- Do not use with tires that are not per manufacturers, specifications.

Forklift and/or Aerial Lift Emergencies

Physical Injury Alone to The Operator, Co-worker, Contractor or Client Personnel

Depending on the nature of the physical injury, several options are available that may include:

- General First Aid with minimal to no further medical intervention required,
    - Minor cuts, scrapes, bruises, sprains, strains, minor pain etc.
- General First Aid with transportation to medical services conducted by Logic personnel,
    - Significant cuts, pinched appendages, possible broken bones, major pain etc.
- General First Aid and summoning of medical assistance (Ambulance)
    - Large cuts with significant blood loss, obvious broken bones, significant pain etc.
- Immediate activation of the 911 system to summon medical help.
    - Loss of consciousness, severe deformities, danger to others in vicinity etc.

Since the nature of an incident may have varying degrees of severity, it is the responsibility of the highest-ranking company official available at the time of the incident to determine the best course of action. First Aid is only to be supplied by personnel trained in First Aid/CPR. If none are available, call 911 for assistance.

If in doubt about the severity of an injury – Call 911. Mobile Energy Systems will not reprimand any employee for being overly cautious when attending to an injured co-worker, contractor or client.

Physical Damage Alone to Mobile Energy Systems, Contractor or Client Property

The equipment Operator must immediately cease all activities that he/she was conducting and summon management to assess the situation. If the situation has the potential to get worse, steps must be taken to secure the Forklift or Aerial Lift and any load being transferred so as not to cause further damage.

If there is potential for fire or if a fire has already begun on the equipment:

- Use available Fire Extinguisher to suppress the flames
- If flames are beyond control of a hand-held Fire Extinguisher, call 911 immediately and secure all personnel away from the burning equipment.

Physical Damage and Injury

Any combination of damage to company, contractor or client property in conjunction with physical injury to Logic, contractor or client personnel should be treated with the following in mind.

- The injured person or persons will receive priority treatment over damaged materials. ALWAYS!
- If the damaged equipment (forklift, vehicle, tool etc.) is impeding the ability of First Aiders or medical personnel from attending to an injured person, steps will be taken to move the equipment to gain access to the injured party.

Restricted and Designated Areas

Mobile Energy Systems Forklift and/or Aerial Lift use shall be restricted to areas of each yard where loading and unloading of materials is regularly conducted and inside each shop where similar activities are performed.

When working inside the shop area, ensure there is enough ventilation to prevent any exhaust buildup that may affect personnel. This may be more applicable during cold weather months when doors which are normally open may be closed to maintain shop heat.

Since the Forklift and/or Aerial Lift may generally be operated in all areas of each shop, designated Forklift and/or Aerial Lift traffic areas are not applicable. However, this does require a significant level of communication within the shop between the operator and all other nearby personnel, including contractors and clients.

Signage and warnings are restricted to the ones required to be visible on each individual Forklift and/or Aerial Lift such as load capacity, Fire Extinguisher, Watch Your Step, etc.

Training

Any employee of Mobile Energy Systems operating a Forklift and/or Aerial Lift must have a Valid Forklift Operators Certification and Valid Aerial Lift Operators Certification. This Ticket is to be kept on file at Mobile Energy Systems - Head Office for record keeping and will be tracked on the company Training Matrix to alert the operator and management when the ticket is due to expire. All re-training required to maintain an operators' certification will be paid for by Mobile Energy Systems as per contractual agreement, which includes repayment by the employee if he/she does not continue to be employed with the company for a period of 1 year following the training course date.

19.0 GENERAL HEALTH AND SAFETY REQUIREMENTS

Key Responsibilities

Safety Manager

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

Site Manager

- Responsible for the implementation and maintenance of the plan 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 General Safety Requirements program.
- Follow all requirements, report unsafe conditions, and follow all posted requirements.
- Shall use the safeguards, safety appliances and personal protective equipment while following all safe work practices and procedures for the workplace.

Mobile Energy Systems Employer Responsibilities and Requirements

Mobile Energy Systems will provide workers with ready access to a copy of the Alberta OHS Regulations.

The general duties of Mobile Energy Systems as a place of employment in Alberta include:

- the provision and maintenance of plant, systems of work and working environments that ensure, as far as is reasonably practicable, the health, safety, and welfare at work of the Mobile Energy Systems's workers.
- arrangements for the use, handling, storage and transport of articles and substances in a manner that protects the health and safety of workers.
- the provision of any information, instruction, training and supervision that is necessary to protect the health and safety of workers at work; and
- the provision and maintenance of a safe means of entrance to and exit from the place of employment and all worksites and work-related areas in or on the place of employment.

A supervisor shall ensure that a worker works in the manner and with the protective devices, measures and procedures required by the appropriate provincial or territorial safety act and the appropriate regulations and uses or wears the equipment, protective devices or clothing that Mobile Energy Systems requires to be used or worn.

Mobile Energy Systems Employee General Duties

A worker shall use the safeguards, safety appliances, and personal protective equipment provided in accordance with the Alberta OHS Regulations and any other regulations made pursuant to the Act and follow the safe work practices and procedures required by or developed pursuant to the OHS Regulations and any other regulations made pursuant to the Act.

Competency and Training

Workers are qualified and trained to perform their job tasks. If work is to be done that may endanger a worker, Mobile Energy Systems must ensure that the work is done by a worker who is competent to do the work or by a worker who is working under the direct supervision of a worker who is competent to do the work. Mobile Energy Systems must ensure that a worker is trained in the safe operation of the equipment the worker is required to operate.

Training must include procedures to be taken in the event of a fire or other emergency, the location of first aid facilities, identification of prohibited or restricted areas, precautions to be taken for the protection of the worker from physical, chemical or biological hazards, any procedures, plans, policies and programs that Mobile Energy Systems is required to develop and any other matters that are necessary to ensure the health and safety of the worker while the worker is at work.

Inspections

Mobile Energy Systems shall ensure that regular inspections of the workplace and of work processes and procedures at the workplace are conducted to identify any risk to the safety or health of any person at the workplace.

Mobile Energy Systems shall ensure that every dangerous occurrence is investigated as soon as is reasonably possible.

Mobile Energy Systems must ensure that if a risk is identified we will correct any unsafe condition as soon as is reasonably practicable and, in the interim, take immediate steps to protect the safety and health of any person who may be at risk.

Mobile Energy Systems shall ensure that every accident that causes or may cause the death of a worker or that requires a worker to be admitted to a hospital as an in-patient for a period of 24 hours or more is investigated as soon as is reasonably possible.

Mobile Energy Systems shall enable members of a committee or a representative to inspect a place of employment at reasonable intervals determined by the committee or the representative and Mobile Energy Systems

Mobile Energy Systems shall prepare a written report that includes a description of the dangerous occurrence, any graphics, photographs or other evidence that may assist in determining the cause or causes of the dangerous occurrence, the immediate corrective action taken and any long-term action that will be taken to prevent the occurrence of a similar dangerous occurrence or the reasons for not taking action.

Incidents and Investigations

Except to the extent necessary to free a trapped person or to avoid the creation of an additional hazard, Mobile Energy Systems must ensure that nothing involved in a serious incident is altered or moved until at least 24 hours after the notice is given.

Mobile Energy Systems shall prepare a written report that includes a description of the incident, any graphics photographs or other evidence that may assist in determining the cause or causes of the incident, an explanation of the cause or causes of the incident, the immediate corrective action taken, and any long-term action that will be taken to prevent the occurrence of a similar incident or the reasons for not taking action.

Mobile Energy Systems must ensure that each of the following is investigated as soon as reasonably practicable after it occurs: a serious incident, an incident that requires a worker to be admitted to a hospital as an in-patient for a period of 24 hours or more, an accident or other dangerous occurrence that injures a person, and results in the person requiring medical treatment or that had the potential to cause a serious incident.

Refusal to Work

A worker may refuse to work or do particular work where he or she has reason to believe that any equipment, machine, device or thing the worker is to use or operate or the physical condition of the workplace in which he or she works or is to work is likely to endanger himself, herself or another worker.

General Facility Requirements

Housekeeping

Mobile Energy Systems requires that a worksite be kept as clean as is reasonably practicable and shall ensure, to the extent that is reasonably practicable that each site meets the appropriate local provincial or territorial act or standards.

Mobile Energy Systems must require that all work sites be kept clean and free from hazards such as materials or equipment that could cause workers to slip, trip, or fall.

Workers must:

- put equipment in the proper place when finished using it,
- clean up any spills,
- eliminate tripping hazards,
- put soiled rags in fireproof metal containers,
- keep work areas organized
- keep storage areas organized and the aisles clear
- keep aisles, stairs and exits clear

The above applies to all Mobile Energy Systems worksite locations including company vehicles.

A reasonable supply of potable drinking water shall be kept readily accessible at a project for the use of workers.

- Mobile Energy Systems is responsible for making sure that the work site, and in particular entry and exit routes at a work site, are free of waste, materials and equipment.
- Obstructed entry and exit routes can pose a serious hazard to workers having to leave a work site quickly, as might be required during an emergency and shall be kept clear at all times.
- Obstructions may reduce visibility at a work site and may also present a tripping hazard and shall be removed as observed.

Safe Equipment Maintenance

Mobile Energy Systems is responsible to provide equipment that is maintained in a safe condition and is appropriate to the work performed. Mobile Energy Systems must ensure that all equipment used at a work site is maintained in a condition that will not compromise the health or safety of workers using or transporting it, will safely perform the function for which it is intended or was designed, it is of adequate strength for its purpose and is free from obvious defects.

Defective equipment is removed from service immediately. Where a defect is found in equipment, Mobile Energy Systems shall ensure that steps are taken immediately to protect the health and safety of any worker who may be at risk until the defect is corrected and the defect is corrected by a competent person as soon as is reasonably practicable.

Workers must report hazards to their supervisor. A worker who knows or has reason to believe that equipment under the worker's control is not in a safe condition shall immediately report the condition of the equipment to the Mobile Energy Systems and repair the equipment if the worker is authorized and competent to do so.

Whenever workers are present at a worksite Mobile Energy Systems will provide lighting that is sufficient to protect the health and safety of workers and suitable for the work to be done at the worksite.

No worker is allowed to smoke in an enclosed place of employment, worksite or work-related area except in an area designated for smoking.

Lighting

Mobile Energy Systems must ensure lighting at the work site is adequate for the tasks being performed and the conditions at the site to ensure safe working conditions, safe passage and the identification of hazards or obstructions.

Mobile Energy Systems will consider the following factors when establishing lighting levels:

- the type of activity or task being performed.
- the importance of speed and accuracy in performing the visual task
- the worker's needs.

Emergency lighting (not natural daytime lighting) must be available if workers are in danger if the normal lighting system fails. The emergency lighting system must provide sufficient light to allow workers to safely leave the work site, start any necessary emergency shutdown procedures or restore normal lighting. Company will ensure emergency lighting meets the requirements of the Alberta Building Code where appropriate.

- Mobile Energy Systems is responsible for ensuring adequate lighting is available for tasks requiring the ability to distinguish detail, such as an electrician working on live circuits at a panel board or a sewing machine operator stitching a product.
- Mobile Energy Systems is responsible for protecting light sources above a working or walking surface against damage such as:
    - partial or total loss of light at the work site or a work area.
    - exposure of workers to come in contact with energized electrical components. Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.
    - exposure of workers to the sharp debris or surfaces of broken bulbs.
- Emergency lighting must be available if workers are in danger if the normal lighting system fails. Natural daytime lighting cannot be relied upon as a dependable source of emergency lighting.
- Mobile Energy Systems is responsible for ensuring that an emergency lighting system provides sufficient light to allow workers to safely leave the work site, start any necessary emergency shutdown procedures or restore normal lighting.

Pallets and Storage Racks

All goods, materials and equipment at work sites must be stacked, stored, and secured so they do not flow, move, roll or collapse. According to Part 14 of the OHS Code and sections 13, 14 and 15 of the OHS Regulation, workers responsible for stacking, storing, or securing goods, materials, and equipment must be trained in the safe methods of doing this job.

Incidents involving pallets occur for five main reasons:

- poor pallet design.
- poor pallet construction.
- inappropriate use of a pallet for the load or storage method.
- continued use of a damaged pallet(s); and
- poor handling.

Causes of storage rack system failure, acting alone or in combination are usually:

- poor storage rack design – the rack is inherently unsafe

- incorrect installation and assembly
- using the wrong material handling equipment to load and unload the storage system
- operator error when using material handling equipment
- structural problems with the floors or walls of the storage area – supporting structures may be overloaded, floors may not be sufficiently level.

Mobile Energy Systems will ensure that stacks, shelving and other fixtures are laid out and designed so that there is sufficient access for safe loading and unloading. Storage areas must be designated and be clearly marked. Aisles should be wide enough for the type of storage and be kept free of obstacles and waste materials. Stacks should not block aisles, walkways, and doors and exists.

Racks, shelving, fixtures, etc. must be regularly inspected for damage and other defects that might cause loss of strength or result in injury or damage. Workers must report to their employer any damage to storage racks as soon as is practical. Mobile Energy Systems will assess the damage and based on that assessment, may have the damage repaired or the rack replaced.

All goods, materials and equipment at work sites must be stacked, stored, and secured in such a way that they do not flow, move, roll or collapse. Employees responsible for stacking, storing, or securing goods, materials, and equipment must be trained in the safe methods for doing so.

Storage areas shall be specifically designated and be clearly marked. Aisles should be wide enough for the type of storage and be kept free of obstacles and waste materials.

Suitable racks will be provided for materials capable of rolling such as steel tubes, bars and piping. Large diameter tubes or pipes can be stored on their sides as drums might be stored.

Wedges, chocks, stakes or other means shall be used to restrain the bottom tier of round objects that are stacked or tiered and that could cause the stack to collapse by rolling or moving.

Employees must report to their employer any damage to storage racks as soon as is practical.

Facility Equipment and Working Conditions

Damaged and faulty equipment reporting procedures must be in place.

No Mobile Energy Systems worker is allowed service vehicle tires or wheel assemblies. This work shall only be performed by a qualified contractor.

No equipment shall be operated unless the worker has received proper training by the supervisor.

Tools and equipment damaged during use must be replaced or repaired only by a qualified person or company.

Areas not intended to be accessible to workers shall be secured by locked doors or equivalent means of security and shall not be entered unless safe work procedures are developed and followed. All controlled areas are to have proper signage warning workers not to enter.

Floors, platforms, ramps, stairs and all walking surfaces for workers must be maintained in a state of safe repair and kept free of slipping and tripping hazards. If such areas are taken out of service Mobile Energy Systems will take reasonable means for preventing entry or use.

Mobile Energy Systems shall ensure that work site traffic is controlled to protect our workers. This will be accomplished through engineering controls or administrative controls either by Mobile Energy Systems or via our customers if they maintain control of the traffic on the work site. Each work site must have a designated safe way of entering and exiting. Employees on foot and exposed to the hazards of moving vehicles are required to wear highly visible apparel that is clearly distinguishable.

Mobile Energy Systems will ensure all equipment is maintained, safe to perform adequate strength for its purpose and free from obvious defects. As with our statement that if it is not safe do not do it – this also applies to equipment; if it is not safe do not use it. Any equipment being found to be defective or in need of repair shall be tagged out, isolated from service by being turned into a worker's direct supervisor and not used until repaired by a qualified repair person.

Apparel

- Apparel should be kept clean and worn as intended – done up properly around the body with no loose or dangling parts and worn in a way that ensures that no other clothing or equipment obscures the high visibility materials.

Smoking

- Mobile Energy Systems must control the exposure of workers at any workplace to environmental tobacco smoke by ensuring that all smoking rules are followed
- Smoking is not allowed in the workplace and no person shall smoke in a non-smoking area
- Smoking is only allowed in a designated smoking area that is a safe outdoor location that is a minimum of 5 metres from a doorway, window or air intake of an indoor workplace

Lifting and Handling Loads

- No worker will manually lift, lower, push, pull, carry, handle or transports a load that could injure them. All workers shall receive ergonomic training addressed in the MSD procedure in this safety management system.
- Mobile Energy Systems has a responsibility to provide, where reasonably practicable, appropriate equipment for lifting, lowering, pushing, pulling, carrying, handling or transporting heavy or awkward loads.
- Within each work site's site specific safety plan is a hazard assessment that all workers receive. Included within that document that all workers receive and are tested on is an area addressing how to handle heavy and awkward loads to minimize manual handling by the worker. Examples include: not lifting over a set amount, being required to ask for help, being required to utilize mechanical means for lifting and transport, etc.
- Material and equipment must be placed, stacked or stored in a stable and secure manner. Stacked material or containers must be stabilized as necessary by interlocking, strapping or other effective means of restraint to protect the safety of workers.
- An area in which material may be dropped, dumped or spilled must be guarded to prevent inadvertent entry by workers, or protected by adequate covers and guarding.

Securing Equipment and Materials

- Bags, containers, bundles, etc. stored in tiers must be stacked, blocked, interlocked and limited in height to prevent sliding or collapse.
- Loads must be secured by tie-downs, bulkheads, or blocking. Rolling equipment, when parked, shall have wheels chocked to prevent unintentional movement.

Improper Conduct

All workers shall engage in proper activity or behaviour. Improper behaviour that might create or constitute a hazard to any person is not acceptable. Improper activity or behaviour includes horseplay, scuffling, fighting, practical jokes, and unnecessary running or jumping.

Industrial Hygiene

Where a worker is exposed to a potential hazard of injury to the eye due to contact with a biological or chemical substance, an eyewash fountain shall be provided.

A worker who may be exposed to a biological, chemical or physical agent that may endanger the worker's safety or health shall be trained to use the precautions and procedures to be followed in the handling, use and storage of the agent, in the proper use and care of required personal protective equipment, and in the proper use of emergency measures and procedures.

No food, drink or tobacco shall be taken into, left or consumed in any room, area or place where any substance that is poisonous by ingestion is exposed.

Protective clothing or other safety device that has been worn next to the skin shall be cleaned and disinfected prior to being worn by another worker.

Where a worker is exposed to a sound level of ninety decibels or greater measures shall be taken to reduce the sound level below local provincial or territorial prescribed exposure levels of noise, and where such measures are not practicable the duration of exposure shall not exceed the duration shown for the particular sound level or the person shall wear hearing protection.

Workers who handle or use corrosive, poisonous or other substances likely to endanger their health shall be provided with washing facilities with clean water, soap and individual towels.

PPE

The use and care of personal protective equipment is the responsibility of the worker. Mobile Energy Systems provides basic safety equipment such as safety glasses; gloves and other as-required PPE.

PPE must be inspected by the worker for defects prior to each use. Where defective or damaged PPE is found during inspection, it is disposed of. PPE must be kept clean and in good repair at all times.

Mobile Energy Systems may require that other companies with workers to work on our site. They shall have a comprehensive health and safety program and comply with Mobile Energy Systems safety and environmental policies.

20.0 GROUND DISTURBANCE

Ground Disturbance Definition

For the purposes of Mobile Energy Systems, a Ground Disturbance shall be considered to be any disturbance of the earth's surface, greater than 30cm, including, but not limited to:

- Excavating
- Trenching
- Drilling
- Auguring
- Topsoil stripping
- Peat removing
- Clearing and grading
- Digging
- Plowing
- Tunneling
- Blasting
- Land Leveling
- Quarrying
- Backfilling

Regular road surface grading to a depth less than 30cm and temporary facility marker placement are not considered Ground Disturbance, however caution must always be exercised when undertaking these activities.

Ground Disturbance Supervision

The Ground Disturbance Supervisor must have completed a Supervisory Ground Disturbance training program and possess a current Certificate of Training.

A Ground Disturbance Supervisor may be a Mobile Energy Systems employee, a consultant, or a contractor who Mobile Energy Systems has deemed to have sufficient knowledge and experience to competently act in that position.

Supervision for ground disturbance activities must be provided by a qualified person (Mobile Energy Systems or contractor) trained in ground disturbance (supervisory level).

Hazard Identification

Contact with an underground facility such as, conduits, cables, tanks, etc., may result in one or more of the following:

➢ Fluids, steam, or gas release ➢ Toxic or hazardous vapor release ➢ Fire or explosion ➢ Electrocution ➢ High-pressure discharges (jetting) ➢ Injury or death ➢ Property damage ➢ Environmental contamination and/or damage ➢ Excavating previously contaminated soil ➢ Loss of essential services ➢ Production loss ➢ Loss of regulatory approval	In trenches and excavations, additional Hazards are identified, *(even if contact with an Underground Facility does not occur)* as follows: ➢ Cave-in hazard ➢ Improper stabilization or design ➢ Over burden falling on worker ➢ Fall hazards ➢ Inadequate access and egress ➢ Potential for the trench or excavation to become a confined space ➢ Undercutting/over-cutting excavation

Hazard Assessment

A Hazard Assessment identifying the potential hazards must be undertaken prior to the ground disturbance work commencing with a report being written that identifies the methods used to control or eliminate the hazards.

Undertaking a Ground Disturbance

It is the responsibility of the person proposing to create the ground disturbance that prior to undertaking the activity, all reasonable precautions must be taken to ascertain whether or not another ground facility exists within:

- The excavation area, and
- 30 m surrounding the outside perimeter of the excavation area.

Mobile Energy Systems will generally require the following information from the person/company conducting a ground disturbance within the above listed criteria:

- Contact Name
- Contact Number
- Mobile Energy Systems Inc
- Site location of ground disturbance by municipal address or legal land description
- Type of work being undertaken
- Extent of ground disturbance activity including depth
- Start date

**The above information should be provided to 3rd party buried facility owners when Mobile Energy Systems is conducting the ground disturbance. **

Notification

Once all the underground facility owners have been determined, they must be notified minimally 2 working days prior to the event, indicating:

- Nature/scope of the proposed Ground Disturbance, and
- Schedule for the undertaking of the Ground Disturbance.

This is undertaken so the owner of the facility can locate the position of their facility and mark its position on the surface of the ground.

Notification is generally performed through the Provincial One-Call service.

**** CAUTION **** Not all facility owners subscribe to a one-call service **** CAUTION ****

The notification period may be greater than the stated minimum due to conditions of any crossing agreement or other approval.

The National Energy Board's minimum notification period is 3 working days.

NOTE: If the only facilities within 30 meters from all sides of the disturbance are Mobile Energy Systems then notification is already applied, and no formal notification process is required.

Mobile Energy Systems Response to Notification

Once Mobile Energy Systems has received notification of a proposed ground disturbance we are responsible to:

- Provide the person proposing to excavate with any information in respect to any buried facility within the excavation area and 30m search area
- Identify, accurately locate and mark the position of the buried facility of the ground surface, using industry-approved marker, color system and standards
- This should be at no cost to the excavator and be completed within 2 working days of receiving notification or some mutually agreed time frame
- Site drawings produced by the location process must be made available to the excavator
- Inspect the site to ensure that locates are accurate, if provided by anyone other than the Mobile Energy Systems representative
- Conduct inspections to ensure that Mobile Energy Systems systems are not at risk.

Documentation Search

All persons proposing to undertake a ground disturbance must be able to demonstrate that all reasonable precautions were taken to determine the presence of buried facilities in close proximity to the proposed excavation.

There are many sources of information that can be used to determine the presence and ownership of buried facilities; the following are some of the most common.

- Provincial One-Call Services
- Non-Members (One-Call)

Those organizations that choose not to subscribe to this service must be contacted and be provided with the same level of notification as if they were subscribers to the system.

When undertaking this process make every effort to obtain information that indicates:

- The locate request was placed and received
- Contact name and number
- Time and date of site visit to locate facilities
- If the owner requires to be on-site at time of exposure, and
- If there is no conflict as determined by the facility owner, obtain written confirmation

Provincial Certificate of Title (Land Title Deeds)

Once the Certificate of Title has been received check the document for Caveats, easements, or registrants of interest and identify those that pose a potential risk/hazard to the ground disturbance activity. Notification to those parties must be conducted, (see above).

Title deeds are not helpful where buried facilities are contained within road allowances.

CAUTION: not all companies register an interest on title, therefore the most recent/current title must always be accessed.

AER Baseline Maps (Alberta Only)

AEUB registers and licenses pipelines that generally operate at pressures greater than 700Kpa (100psi). These are recorded on simple pencil drawings for future reference.

Access the most recent drawing available for the location where ground disturbances being undertaken in Alberta.

Most on-lease piping is not licensed by the EUB, however there are some notable exceptions, i.e.:

- Sour gas pipelines
- HVP pipelines (Section 2(2)(c) of the regulations), and
- Pipelines within the road allowance leading to the lease

Operations Personnel/Landowner

Consulting operations personnel and using support documentation could help to identify additional buried facilities not indicated on any available documentation. The use of operational personnel and landowners must not be overlooked; the information they supply could prove to be invaluable.

Visible Indicators

It is extremely important that when performing a site visit to look for any visible indications of previous construction work.

- Differing Vegetation
- Above ground installations
- Land Scaring
- Depressions in the ground
- Cut Lines
- Visible improvements
- Buried Facility Markers

Municipal/Rural Utility Owners

Each province has various utilities and services that are provided by buried facilities a search for the following should be conducted.

- Gas – In Alberta, the natural gas distribution records are available from the Utilities branch of Alberta Energy
- Power
- Water
- Sewer
- Telephone

There are many privately owned buried facilities and generally these owners may not have the equipment or expertise to locate them. There may not be any records or plans of their installation and some may not be locatable.

Utility Right of Way (URW)

This term is generally used to mean a right-of-way adjacent to a street or road where the utility companies (electric, telephone, gas, etc.) are installed. The Municipality holds Land interests and approval to install should be sought from them. However, notification must still be given to the facility owner.

Road Allowances

Every road has a surveyed right of way, which is commonly referred to as the road allowance. Should buried facilities be installed within the road allowance or URW, the municipality sets the alignments.

Should the road be a provincial/federal highway, approval to undertake a ground disturbance within the boundaries must be sought from the responsible provincial/federal government department.

National Energy Board (NEB)

NEB regulates International, Inter-provincial pipelines and some pipeline within provinces.

Agreements and Approvals

All licenses, approvals and permits must be obtained and be in place prior to any work being undertaken, e.g.

- Crossing Agreement (pipeline, road, rail, river, overhead cable, etc.)
- Proximity Notice
- Encroachment Notice
- Right of Entry
- Right of Access

The company proposing to undertake the ground disturbance shall obtain all necessary agreements required by Federal and Provincial regulatory agencies.

When unable to obtain approval from the facility owner, permission to cross, etc. should be sought through the Provincial and Federal regulatory agencies.

All approvals must be in the written format; verbal approval is not acceptable.

The following information is typical of what can be found in any approval that would assist you in undertaking a ground disturbance safely.

- The placement of facilities within the Ground Disturbance area in relation to any existing facilities.
- Proper supporting of exposed facilities.
- Distances that must be maintained between Underground Facilities.
- Notification time frames for Underground Facilities, if different from regulations. Distance that must be maintained with mechanical excavation equipment if different than regulations.
- Notification time frame required for an inspection prior to back filling.
- That every facility owner performs a back-fill inspection in writing.

Company Documentation

The following company documentation (obtained from a Mobile Energy Systems Field representative) may or may not be completed and issued prior to, during or after the ground disturbance activity:

- *Ground Disturbance Safe Work Permit* - A "Ground Disturbance Permit" is required for any/all tasks that disturb the ground greater than 30cm. This includes grading and ditching operations excavating deeper than 30 centimeters or where there has been any reduction in ground cover.
- *Safe Work Permit* - Generally the "Safe Work Permit" will be issued for all Cold Work, Hot Work, and Confined Space Work. Where confined Space Entry is required the entry procedure and all documentation the supports the safe entry shall be attached to the "Safe Work Permit".

Protective Measures

During mechanical excavation within 5m of an underground facility, an observer (swamped, spotter, someone with field experience) is required at all times when the mechanical excavation equipment is being used.

The observer and the equipment operator must be provided with a copy of a drawing or drawings, clearly indicating all known/located underground installations in the area of the excavation that might be affected by excavation procedures.

It is Mobile Energy Systems's preference that when an observer and equipment operator are the only 2 individuals on-site, the observer is qualified in supervisory aspects of ground disturbance and can therefore provide the level of supervision required.

Areas not covered by drawings or maps must be considered off-limits for any equipment or excavation activity likely to represent a danger to buried installations.

Exposure of Facilities

Prior to mechanical excavation equipment being used within the "hand-exposure" areas, (5m on either side of it is located and marked position) the buried facility must be exposed using non-destructive methods, i.e. "hand-tools", "Hydrovac" or "Air-vac". 3rd party facility owners may require a greater distance, check any agreement or approval prior to work commencing.

DIG AREA SHALL BE EXPOSED IN ITS ENTIRETY TO CONFIRM THE PRESENCE OR ABSENCE OF ADDITIONAL LINES.

Excavation Supervision

No mechanical excavation equipment will be operated within 1m of an exposed buried facility without direct visual supervision being provided by the Mobile Energy Systems ground disturbance supervisor.

Acceptable non-destructive exposure methods are only to be used when exposing a buried facility.

Security of Trenches and Excavations

To meet legal obligations, barricades must be installed to warn people of the dangers of an open trench or sump and to reasonably protect co-workers, the public, livestock and wildlife from falling into the excavation.

The Criminal Code of Canada Section 242(2) states:

"Everyone who leaves an excavation on land that he owns or of which he has charge or supervision is under a legal duty to guard it in a manner that is adequate to prevent persons from falling in by accident and is required to warn them if an excavation exists."

If the excavation/trench is to be left unattended, it must be barricaded

Trenches and Excavations

Before a worker begins working in excavations or trenches greater than 1.2 meters in depth, Mobile Energy Systems must ensure that the worker is protected from cave-ins and sliding material by either cutback and sloping or installing temporary protective structures.

The provincial regulations vary substantially between provinces. When the Ground Disturbance involves a trench or excavation the trenching and excavation procedure for that province must be used in conjunction with the Mobile Energy Systems Ground Disturbance Safe Work Practice.

Freezing, grouting, and/or stabilization must be designed and approved by a professional engineer. Adjacent foundations must be supported as required.

OH&S Regulations must be followed as applicable to avoid danger of wall collapse onto workers.

Provincial One-Call Systems Listing

The following provinces have a One-Call System that should be called whenever a ground disturbance is undertaken:

Alberta One-Call Corporation (Calgary, AB)

Toll free Number: 1-800-242-3447

Fax Notification: 1-800-940-3447

Web-site: www.albertaonecall.com

Notice: Two (2) working days

21.0 HAND AND/OR POWER TOOLS

Responsibilities

Managers and Supervisors

- Ensure that all employees using portable tools have been trained and fully understand the operations and maintenance procedures of such tools, including their proper use.
- Provide and train employees with all additional PPE that may be needed for the safe operation of portable tools.

Employees

- Shall ensure they have and properly use the correct tool for each task.
- Shall follow manufactures safety and operating instructions before using

Requirements

Proper Personal Protective Equipment (PPE) for Using Hand and/or Power Tools

Employees using hand and/or power tools and are exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dust, fumes, mists vapors, or gases shall be provided with particular PPE necessary to protect them from the hazard.

General

- All hand and power tools shall be maintained in a safe condition. Whether furnished by Mobile Energy Systems or the employee, the tools shall be maintained in a safe condition.
- A power tool may only be operated by a competent person. A person must not be authorized to operate a power tool until the person has been adequately instructed and trained and has demonstrated an ability to safely operate it.
- Ergonomic concerns are taken into consideration when selecting hand and/or power tools. Mobile Energy Systems will select tools that are ergonomically correct for the appropriate task based on the nature of the job, the workplace layout, and the job design. Other factors to consider include (but are not limited to): Low-vibrating tools, lightweight tools, tools with vibration-absorbing handles, tools that are easier to manipulate and handle, etc.
- Defective tools must be removed from service. A defective tool must be removed from service and identified in a manner which will ensure it is not inadvertently returned to service until it has been made safe for use.
- Any tool which is not in compliance with any applicable requirement of this procedure is prohibited and shall be identified as unsafe by tagging or locking the controls to render them inoperable. Such tool shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.
- Tools may only be used for the purposes for which they were designed. Hand and/or power tools shall be appropriate for the job for which they are intended and be used solely for the purposes for which they were designed.
- Employees shall always use the proper tool for the job to be performed. Makeshift and substitute tools shall not be used.
- Hammers with metal handles, screwdrivers with metal continuing through the handle, and metallic measuring tapes shall not be used on or near energized electrical circuit or equipment.
- Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool bags/buckets firmly attached to hand lines.

- Tools shall never be placed unsecured on elevated places.
- Impact tools such as chisels, punches, and drift pins that become mushroomed or cracked shall be dressed, repaired, or replaced before further use.
- Chisels, drills, punches, ground rods, and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee.
- Shims shall not be used to make a wrench fit.
- Wrenches with sprung or damaged jaws shall not be used.
- Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets unless suitable protectors are in use to protect the edge. They shall not be carried in pockets unless suitable protectors are in use to protect the edge.
- Wooden handles that are loose, cracked, or splintered shall be replaced. The handle shall not be taped or lashed with wire. The handle shall not be taped or lashed with wire.
- Tools shall not be left lying around where they may cause a person to trip or stumble.
- When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where others are present or the danger area shall be barricaded or guarded.
- The insulation on hand tools shall not be depended upon to protect users from high voltage shock (except approved live line tools).
- Maintenance records are kept for tools. An effective written or other permanent recording system or log must be immediately available to the operator and to any other person involved with inspection and maintenance of the tool.

Portable Electric Tools

- The non-current carrying metal parts of portable electric tools such as drills, saws, and grinders shall be effectively grounded when connected to a power source unless the tool is an approved double-insulated type or the tool is connected to the power supply by means of an isolating transformer or other isolated power supply.
- All powered tools shall be examined prior to use to ensure general serviceability and the presence of all applicable safety devices.
- Powered tools shall be used only within their design and shall be operated in accordance with manufacturer's instructions. The use of electric cords for hoisting or lowering tools shall not be permitted.
- All tools shall be kept in good repair and shall be disconnected from the power source while repairs or adjustments are being made.
- Electrical tools shall not be used where there is hazard of flammable vapours, gases, or dusts without a valid Hot Work Permit.

Pneumatic Tools

- Pneumatic tools shall never be pointed at another person.
- Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.
- Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.
- Compressed air shall not be used for cleaning purposes, except where reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.

- Compressed air shall not be used to blow dust or dirt from clothing.
- The manufacturers stated safe operating pressure for hoses, pipes, valves, filters, and other fitting shall not be exceeded.
- The use of hoses for hoisting or lowering tools shall not be permitted.
- Before making adjustments or changing air tools, unless equipped with quick-change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.
- Compressed air tools, while under pressure, must not be left unattended.
- All connections to air tools shall be made secure before turning on air pressure.
- Air at the tool shall not be turned on until the tool is properly controlled.
- All couplings and clamps on pressurized air hose shall be bridged (pinned) with suitable fasteners.
- Hose and hose connections used for conducting compressed air to utilization equipment shall be designed for the pressure and service to which they are subjected.
- Use only approved end-fitting clamps (screw type heater hose clamps are not acceptable).
- While blowing down hose, do not point it toward people.
- Conductive hose should not be used near energized equipment.
- Foot protection shall be worn while operating paving breakers, tampers, rotary drills, clay spades, and similar impactor-type tools or at other times when instructed by supervision.
- All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi pressure at the tool shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.

Powder Actuated Tools (Tools actuated by an explosive charge)

- Only those employees who have been qualified in their use shall operate these tools.
- Explosive charges shall be carried and transported in approved containers.
- Operators and assistants using these tools shall be protected by means of eye, face, and hearing protection.
- Tools shall be maintained in good condition and serviced regularly by qualified persons. The material upon which these tools are to be used shall be examined before work is started to determine its suitability and to eliminate the possibility of hazards to the operator and others.
- Prior to use, the operator shall ensure that the protective shield is properly attached to the tool.
- Before using a tool, the operator shall inspect it to determine to his satisfaction that it is clean, that all moving parts operate freely, all guards and safety devices are in place, and that the barrel is free from obstructions.
- Before using tools, the operator shall read and become familiar with the manufacturers operating guidelines and procedures.
- When a tool develops a defect during use, the operator shall immediately cease to use it, until it is properly repaired in accordance with the manufactures specifications.
- Tools shall not be loaded until just prior to the intended firing time, nor shall an unattended tool be left loaded. Empty tools are not to be pointed at any workmen.
- In case of a misfire, the operator shall hold the tool in the operating position for at least 30 seconds. He shall then try to operate the tool a second time. He shall wait another 30 seconds, holding the tool in the operating position; then he shall proceed to remove the explosive load in strict accordance with the manufacturer's instructions.
- A tool shall never be left unattended in a place where it would be available to unauthorized persons.

- Fasteners shall not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface hardened steel, glass block, live rock, face brick, or hollow tile.
- Driving into materials easily penetrated shall be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side.
- Tools shall not be used in an explosive or flammable atmosphere.

Hydraulic Power Tools

- The fluid used in hydraulic powered tools shall be fire-resistant fluids and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed.
- The manufacturer's safe operating pressures for hoses, valves, pipes, filters, and other fittings shall not be exceeded.
- All hydraulic tools, which are used on or around energized lines or equipment, shall use non-conducting hoses having adequate strength for the normal operating pressures.

Hydraulic Jacks

Loading and Marking

- The operator shall make sure that the jack used has a rating sufficient to lift and sustain the load.
- The rated load shall be legibly and permanently marked in a prominent location on the jack by casting, stamping, or other suitable means.

Operation and Maintenance

- In the absence of a firm foundation, the base of the jack shall be blocked. If there is a possibility of slippage of the cap, a block shall be placed in between the cap and the load.
- The operator shall watch the stop indicator, which shall be kept clean, in order to determine the limit of travel. The indicated limit shall not be overrun.
- After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.
- Hydraulic jacks exposed to freezing temperatures shall be supplied with adequate antifreeze liquid.
- All jacks shall be properly lubricated at regular intervals.

Each jack shall be thoroughly inspected before each use. Jacks, which are in unsafe condition, shall be tagged accordingly, and shall not be used until repairs are made.

Guarding Portable Tools

Provisions of guarding and guarding shall be in place when in use. Guards shall be in place and operable at all times while the tool is in use. The guard may not be manipulated in such a way that will compromise its integrity or compromise the protection in which intended.

Portable Grinders

Special "revolving cup guards" which mount behind the wheel and turn with it shall be used. They shall be made of steel or other material with adequate strength and shall enclose the wheel sides upward from the back for one-third of the wheel thickness. It is necessary to maintain clearance between the wheel side and the guard. The clearance shall not exceed one-sixteenth inch.

Vertical portable grinders, also known as right angle grinders, shall have a maximum exposure angle of 180 degrees and the guard shall be located between the operator and the wheel during use. Adjustment of the guard shall ensure that pieces of an accidentally broken wheel will be deflected away from the operator.

Other Portable Grinders

The maximum angular exposure of the grinding wheel periphery and sides for safety guards used on other portable grinding machines shall not exceed 180 degrees and the top half of the wheel shall be enclosed at all times.

22.0 HYDROGEN SULFIDE (H2S)

Key Responsibilities

Managers and Supervisors

- Shall ensure all workers 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 by the respective client.
- To ensure workers have been medically approved to wear respirators and trained on the safe use of respirators, including a respirator fit test in accordance with the Mobile Energy Systems Respiratory Protection Program.
- To ensure workers 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 worker has been provided with a copy of this program.
- The Mobile Energy Systems safety manager is responsible for the code of practice preparation, the manager and supervisors for enforcement and all staff are responsible for following its guidelines and requirements.

Workers

- When workers must wear personal protective equipment, they must use the appropriate equipment. They must not use personal protective equipment that is not in a condition to perform the function for which it was designed.
- Workers with equipment under their control that does not comply with the OHS Code must remove that equipment from service.
- Workers must be aware of the “Code of Practice” developed for jobs involving confined space entry and must not enter or remain in a confined space if control measures are not in place.
- Workers must participate in training programs provided by Mobile Energy Systems. and clients.
- Workers are responsible to comply with this program.

Physical Effects of Hydrogen Sulfide

- H2S paralyzes the sense of smell. Do Not Rely on Smell to Detect H2s – Rely Strictly on Instruments Designed to Measure Concentrations of H2s.
- Hydrogen sulfide is a very dangerous and deadly gas - it is colorless and heavier than air and water soluble.
- It is flammable and can explode in a 4.3 to 46.0 percent by volume concentration.
- It can accumulate in low places and in small concentrations it has a strong, pungent, somewhat distasteful odour similar to rotten eggs. In higher concentrations, it can deaden the sense of smell (olfactory nerve).

Places Where H2S is Found

- Gas Plants, refineries, petro-chemical plants, sulphur recovery plants
- Underground mines
- Tank cars, tank trucks
- Oil and gas wells, battery stations
- Commercial laboratories
- Septic tanks, sewers, manure handling areas

- Pulp and paper mills
- Pipelines

Toxic Effects of Hydrogen Sulfide

CONCENTRATION	PHYSICAL EFFECT
.01 PPM	Can smell odour.
10 PPM	Obvious and unpleasant odour. Beginning eye irritation. Permissible exposure level for 8 hours. Alberta's Occupational Exposure Limit (OEL).
15 PPM	Alberta's Ceiling OEL. An unprotected worker may not be exposed above this concentration.
20 PPM	Severe eye irritation. Nose, throat and lung irritation. Loss of appetite.
100 -200 PPM	Severe nose, throat and lung irritation. Ability to smell odour completely disappears (150 ppm).
500 PPM	Severe lung irritation, headaches, dizziness, staggering, collapse.
500-1000 PPM	Respiratory paralysis, irregular heartbeat, collapse or death.

Safe Work Procedures

- Maintain compliance with permit requirements of Mobile Energy Systems 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.
- 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.
- Workers must not be exposed to a concentration of H2S exceeding 10 ppm over an 8-hour time period. Mobile Energy Systems must ensure that a worker's exposure to H2S is kept as low as reasonably achievable. Mobile Energy Systems must ensure that a worker's exposure to H2S does not exceed its occupational exposure limit of 10 ppm over an 8-hour time period.
- Workers must not be exposed to a concentration of H2S exceeding 15 ppm at any time. A worker may not be exposed to H2S at a concentration exceeding its ceiling limit of 15 ppm at any time.

Equipment

The following equipment shall be provided and used as required by this program:

- Personal H2S monitor set to alarm at permissible exposure limit of 10 PPM. Fixed monitors may be present as well at the same alarm setting.

- 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.
- 5-minute escape pack.
- Full face, air supplied, positive pressure hose line respirator, with 5-minute escape pack attached, or;
- A self-contained breathing apparatus (SCBA) (air pack) with a minimum of a 30-minute air supply.
- Respirator wearers requiring corrective eyewear will be fitted with spectacle kits according to the respirator manufacturer, at no expense to the worker.
- 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.

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.

Education and Training for Workers

Workers are provided training on the hazards of H2S and safe work procedures. Mobile Energy Systems must ensure that a worker who may be exposed to H2S is informed of the health hazards associated with exposure to that substance, is informed of measurements made of airborne concentrations of harmful substances at the work site and is trained in procedures developed by Mobile Energy Systems to minimize the worker's exposure.

Training shall consist of:

- Physical and chemical properties of H2S
- Sources of H2S
- Human physiology
- Health hazards associated with exposure to H2S, 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 and procedures developed to minimize the worker's exposure.
- Regulatory requirements
- Rescue techniques, first aid, and post exposure evaluation
- Use, care, and calibration of personal monitors and gas detection instruments and concentrations of harmful substances at the work site
- Respirator inspections and record keeping

Required Personal Protective Equipment

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.

Respirator Inspections

Respirators will be inspected by the worker before each use and at least monthly.

The inspection will include the respirator face piece, hose, harness, 5-minute escape pack cylinder and all other components of the air supply systems used.

Monthly inspections will be documented as per Mobile Energy Systems Respiratory Protection Program and will be kept on file at the local office for review during safety audits.

Medical

Each worker shall have completed a medical evaluation by a physician or licensed health care professional to determine the worker's ability to wear a respirator as required by the Mobile Energy Systems Respiratory Protection Program.

Each worker will successfully complete the medical questionnaire and examination before being allowed to be fit tested with a respirator.

Procedures to be Followed in the Event of an H2S Release

Each worker, 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.

First aid needs will depend on the concentration level of contaminant H2S. Do not immediately rush to the aid of an affected co-worker unless properly trained and without being protected with the proper PPE. Signs and symptoms of an exposure may be respiratory paralysis by inhalation, burning sensation of the eyes due to contact, or skin irritation.

Inhalation - remove victim to fresh air immediately. If not breathing, administer mouth-to-mouth artificial respiration until medical assistance arrives or victim is deceased. If breathing is restored but slow and laboured, administer 100% oxygen by canister/mask as H2S is rapidly detoxified by the body. Maintain normal body temperature. Transportation to medical services should follow immediately.

Eye or skin contact - should be treated by a 15-minute wash/flush at a safety shower/eye-wash station. Remove any clothing if liquid hydrogen sulfide penetrates the clothing to expose the skin for flushing with water. If irritation or discomfort persists, transportation to medical services should follow immediately.

Workers 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.

Workers 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 worker's service report.

Rescue will only be performed by trained rescue personnel who are wearing appropriate PPE for this emergency situation. If an exposed person has been overcome, notify the host-facility employer's designated rescue service or personnel. Do not attempt to rescue overcome personnel without the proper equipment or assistance.

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 competently trained persons (rescue service) 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 rescue 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 Mobile Energy Systems 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 Mobile Energy Systems workers may wear Mobile Energy Systems respirator equipment.
- If Mobile Energy Systems workers will use client or other third party equipment, the equipment must be inspected to ensure it is safe to use and meets Mobile Energy Systems's requirements.
- After the equipment has been locked and tagged out (per Mobile Energy Systems Lockout/Tag-out Program), opened and the H2S concentration has been cleared to less than 10 PPM, work may then be performed without respiratory equipment, except for the required 5-minute escape pack.

All special precautions to be taken when performing work inside of a confined space are listed in the Mobile Energy Systems Confined Space Program.

H2S - Seven-Step Initial Response Strategy

1 Evacuate		• Get to a safe area immediately • Move upwind if release is downwind of you • Move crosswind if release is upwind of you • Move to higher ground if possible
2 Alarm Others		• Call for help (“Man down”), sound bell, horn, whistle or call by radio
3 Assess Situation		• Do a head count • Consider other hazards
4 Protect Yourself		• Put on breathing apparatus before attempting rescue
5 Rescue Others		• Remove victim to a safe area
6 Revive Victim		• Apply CPR if necessary
7 Call for Medical Aid		• Arrange transport of victim to medical aid • Provide information to Emergency Medical Services (EMS)

Adapted from Gov.of AB “H2S The Killer”

23.0 JOB COMPETENCY

General

Competence is a combination of knowledge, understanding and skill, and the appropriate level of competence cannot be acquired simply by attending a training session. The understanding and skill are acquired by experience. For individuals involved in exposure to HSE hazards and risks experience and training are essential. The following components are to be considered for each worksite's delivery team for competency assurance:

Experience Level of Knowledge Capability to Perform

At Mobile Energy Systems our view of competency assurance involves the continuous assessment of training and development needs against a person's responsibilities, abilities and critical activities. This process enables the continuous improvement loop that feeds back into training and development activities that ensure competency assurance is an ongoing career cycle process.

1. Job Description Identified → Candidate Selection and Hiring Process (Reference and Background Check, Drug Screen, Physical Assessment) → Person Assessed and Hired for Open Position
2. Experience, Qualifications Assessed for Initial Training ↔ Initial Induction Training Completion
3. Further Training Required? If no → Ready for Work → On the Job Training → Competency Continually Assessed
4. Annual Performance Appraisal → Ready to Promote? → Employee Promoted → Further Training Required?

Competency is verified before employees are permitted to perform tasks independently. A competent person (supervisor, lead hand, instructor, etc.) must verify that an employee is competent to perform their roles and responsibilities before being allowed to work independently. If there is a site Short Service Employee (SSE) program established the new or transferred employee will fall under the SSE requirements as well.

Identification of Documentation

Documentation is obtained from employees to demonstrate they meet the qualifications of their job. Based on the job description requirements documentation may include educational, certifications, licenses, prior acceptable training course completion, etc. Documentation is reviewed and confirmed as actual during the employee hiring process.

Identification of Positions

An organizational chart and list of job titles has been established by Mobile Energy Systems Based on the positions and their exposure to risk their required training is entered into each worksite's training matrix. Job descriptions are prepared for each job title.

Identification of Qualifications

Minimum qualification requirements for each job title have been established by Mobile Energy Systems Qualifications may include a combination of education, certifications and work experience. Safety training completion for the indicated job title is required before full qualifications are met to allow an employee to begin work.

Identification of Training and Competency Needs

Employees (new or transferred) are provided job specific training related to their roles and responsibilities and trained on the tasks they perform on a regular basis. Training is identified in our training matrix which specifies safety and health training needs by job title. Our training matrix is updated based on changing risks.

Training Records

All training records are maintained on site either by the Mobile Energy Systems Safety Manager or senior representative of management or their designee.

Delivery of Induction, Transfer & Refresher Training

Employees receive initial induction training. No work by any employee is allowed to begin until the orientation is completed.

Training requirements are tracked by the Mobile Energy Systems Safety Manager and formal training sessions are conducted either on or off site by the Safety Manager or competent/qualified instructor for the required subject matter.

Supervisor Safety Management Training

Supervisors and managers receive annual, documented safety management system training.

Mobile Energy Systems Training Matrix

Additional training for identified hazards must be completed prior to employee exposure based upon a hazard assessment. **Sample shown as each site must develop its own training matrix.**	LOCATION	FREQUENCY	Admin	Management	Craft
Bloodborne Pathogens	All	A	PRN	X	X
Confined Spaces	All	I		X	X
Defensive Driver Awareness | Driving Safety	All	I	X	X	X
Electrical Safety – Unqualified	All	I		X	X
Emergency Response Plan	All	I	X	X	X
Fall Protection	All	I		X	X
Fire Extinguishers	All	A	X	X	X
First Aid/CPR	PRN	2	PRN	PRN	PRN
H2S	All	I		X	X
Hand and Power Tools	All	I		X	X
Hearing Conservation	All	A	X	X	X
Isolation of Energy | LOTO	All	I		X	X
JHA	All	I	X	X	X
Ladder Safety	All	I		X	X
Personal Protective Equipment	All	I		X	X
Rigging Awareness	All	I		X	X
Scaffolding	All	I		X	X
Site Specific HSE Plan	All	I	X	X	X
Supervisor Safety Training	All	PRN	PRN	X	PRN
WHMIS	All	I	X	X	X

PRN = As Required Frequency: I = Initial A = Annual 2 = 2 Years 3 = 3 years

Training Documentation

All training must be documented with: date; employee name, employee signature; instructor name; instructor signature and title of course. Each new employee shall receive an orientation prior to beginning any work.

24.0 JOURNEY MANAGEMENT

Key Responsibilities

Mobile Energy Systems Safety Manager

- The designated Safety Manager is responsible for developing and maintaining the journey management program and related procedures.

Site Manager

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

Employees

- All shall be familiar with this program and the local workplace vehicle safety program.
- Another individual is aware of the driver's trip itinerary. Employees should notify their supervisor or another individual who is not traveling with them of their travel plans. This includes where they are going, when they should be getting there and when they plan to return.
- Drivers must carry a reliable method of communication (cell phones, CB radio, etc.) in case of emergency. Drivers should always carry a cell phone, especially when traveling in rural areas. Consider subscribing to an in-vehicle communication/ remote diagnostic service (e.g. On-Star) if the vehicle is equipped with one.
- Follow all requirements, report unsafe conditions, and follow all posted requirements.

Journey Management Plan

The Journey Management Plan is reviewed with affected employees. The Journey Management Plan should be reviewed with road travelers before they perform any driving on company business. A copy of the plan must be readily available at the workplace. Road travelers should carry a copy of the plan.

Driving directions shall be obtained before traveling to an unfamiliar destination. Before taking a trip to an unfamiliar location each employee will ensure they have printed driving directions available. Do not plan to read directions from a smartphone while driving. A GPS device may be used, but printed directions should be kept as a back-up.

Potential journeys involving driving and/or road transport should be screened and assessed relative to hazards, risks and costs with the following type of questions:

- Road travel should be limited whenever practicable. Road journeys should only be taken when necessary. Try to complete multiple tasks in single trips to reduce the amount of driving for improved safety and efficiency. If the trip is being taken to meet with someone, determine if the meeting can be done over the phone instead.
- Consider safer methods of travel (air, train, etc.) where practicable.
- Can the business requirement for a potential journey be delayed and possibly combined with a later trip?
- Driving during adverse weather conditions should be avoided, whenever practicable. Before leaving on a trip, ensure that weather conditions are safe for driving. Ensure the vehicle being used is adequate for the weather conditions. Make sure emergency supplies are in the vehicle, and the driver has a cell phone in case of emergency. In particularly harsh conditions, consider cancelling or rescheduling the trip.
- Can the journey be combined with other people to share a vehicle?
- Road travel is completed during daylight hours, whenever practicable. Driving should be done during daylight hours rather than after dark whenever possible. Reduce speed when driving at night. Be aware of the potential for wildlife to be on the road, especially when driving at dusk or dawn

- Is a fit-for-purpose vehicle for the expected route and conditions available (for example, a four-wheel drive vehicle, etc.)?
- Rest breaks should be taken to reduce fatigue. When driving long distances sufficient breaks should be taken to prevent fatigue. When driving alone and having trouble staying awake, pull off the road and get out of the vehicle for fresh air, or take a power nap. If driving late at night, consider getting a hotel room and starting fresh the next day. If two licensed drivers are in the vehicle, take turns driving. Get plenty of rest before beginning your journey.

Vehicle Operations Requirements

- Operators of Mobile Energy Systems or client on or off road vehicles shall be qualified by possession of a valid, current driver's license for the type of vehicle being driven.
- Only authorized employees will drive a motor vehicle in the course and scope of work or operate a company owned vehicle.
- 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.
- 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.

Employees driving vehicles are required to follow safe driving practices:

- Obey all federal and local driving laws or regulations as well as requirements of clients;
- Immediately report any citation, warning, traffic violation, collision, vehicle damage or near miss associated with company or client vehicle operation or while driving on company duties to the supervisor;
- Immediately report any restriction or change to their driving privileges to the supervisor.
- Seat belts shall always be worn by all occupants whenever the vehicle is in motion; only seats fitted with three-point inertia-reel type seatbelts shall be used. All vehicles capable of more than 10 mph/15 kmh shall have seat belts installed.
- 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;
- No use of cell phones, radios or other electronic devices while driving any vehicle - vehicle must be safely parked prior to using a mobile phone or 2-way radio.
- Slow down around construction, large vehicles, wildlife, fog, rain, snow, or anything else that adds a hazard to your driving;
- Drive for conditions, not just the speed limit;
- Alcohol or illegal drugs are not allowed to be in a company, client or leased vehicle at any time;
- Drivers shall not operate a motor vehicle while under the influence of alcohol, illegal drugs, or prescription or over-the counter medications that might impair their driving skills.

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

- All vehicles shall be fit for the purpose and shall be maintained in safe working order.
- 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.
- Loads shall be secure and shall not exceed the manufacturer's specifications and legal limits for the vehicle.
- Vehicles are equipped with roadside emergency kits. Roadside emergency kits should be kept in all vehicles used for highway travel. These kits shall include equipment to assist in a roadside emergency such as water, booster cables, first aid supplies, warning triangles, flashlights, etc. If there is a potential for snow and ice, carry sandbags and a shovel.
- 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 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.

25.0 LADDER SAFETY

Key Responsibilities

Managers and Supervisors

- Managers and supervisors are responsible for ensuring that all employees, and/or contractors have been trained in the use and inspection of ladders in accordance with the manufactures guidelines.
- Managers and supervisors are responsible for ensuring that all employees and contractors are aware that if an inspection discovers a defect, the ladder shall not be used and taken out of service.

Employees

- Employees shall inspect ladders prior, during and at the completion of each use to ensure the condition of the ladder and the safety of its occupants.
- Employees are responsible for following this program and reporting any damage or repairs that may be needed to their supervisor.

Procedure

Ladders should not be used if a safer means of accessing an elevated work area is available. Mobile Energy Systems shall ensure that workers do not use a ladder to enter or leave an elevated or sub-level work area if the area has another safe and recognizable way to enter or leave it.

If work cannot be done from a ladder without hazard to a worker, a work platform must be provided. A worker must not carry up or down a ladder, heavy or bulky objects or any other objects which may make ascent or descent unsafe.

Inspection, Care and Safe Work Practices of Ladders

Inspection

Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use. The following requirements apply:

- A ladder must be inspected before use on each shift, and after any modification and any condition that might endanger workers must be remedied before the equipment is used.
- Ladder rungs, cleats and steps shall be parallel, level and uniformly spaced.
- If an extension ladder is used by a worker must be equipped with locks that securely hold the sections of the ladder in the extended position.
- No ladder shall be lashed to another ladder to increase its length.
- Portable ladders used by the Mobile Energy Systems employees must be CSA certified. Mobile Energy Systems must ensure that a portable ladder meets the requirements of CSA Standard CAN3-Z11-M81 (R2005), Portable Ladders.
- A stepladder shall have legs that are securely held in position by metal braces or an equivalent rigid support.
- A manufactured portable ladder must be marked for the grade of material used to construct the ladder and the use for which the ladder is constructed.
- Portable single or extension ladders shall be equipped with a non-slip type base or shall be held, tied or otherwise secured to prevent slipping.
- A ladder found to be broken or defective may not be used until it has been repaired and restored to its original design specifications. Any ladder that has developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use."

- If a ladder is tipped over, it shall be inspected by a competent person for side rail dents or bends, or excessively dented rungs; check all rung to side rail connections; check hardware connections; check rivets for shears.
- Ladders with loose, broken or missing rungs, split side rails or other hazard producing defects shall not be used. Improvised repairs shall not be made.
- All wood parts shall be free from sharp edges and splinters; sound and free from accepted visual inspection from shake, or other irregularities. Wooden ladders must not be painted.

Care

- Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play.
- Metal bearings of locks, wheels, pulleys, etc., shall be frequently lubricated.
- Frayed or badly worn rope shall be replaced. Safety feet and other auxiliary equipment shall be kept in good condition to ensure proper performance.
- Rungs shall be kept free of grease and oil.
- Ladders shall be stored in a well-ventilated area in a manner to prevent sagging and warping.

Safe Work Practices

- Ladders shall be used only for the intended purpose for which they were designed.
- Ladders used when servicing energized electrical equipment must be non-conductive. Mobile Energy Systems shall ensure that a ladder used during the servicing of energized or potentially energized electrical equipment is made of non- conductive material. Metal ladders or wire reinforced wooden ladders shall not be used in proximity to energized electrical equipment.
- The ladder shall be secured at the top or held by another person at the base to prevent movement.
- Portable ladders in use are secured against movement and placed on a stable base. A worker must ensure that a portable ladder is secured against movement and placed on a base that is stable.
- Incline of Portable Ladders - Portable ladders are placed against the top support at a minimum 4:1 incline. A worker must ensure that the base of an inclined portable ladder is no further from the base of the wall or structure than one quarter of the distance between the base of the ladder and the place where the ladder contacts the wall.
- Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.
- Ladders shall not be used in a horizontal position as platforms, runways or scaffolds.
- Ladders shall not be used by more than one worker at a time.
- The upper supports of ladders used to access elevated work areas must extend a minimum of one meter above the elevated surface. A worker must ensure that the side rails of a portable ladder extend at least 1 metre above a platform, landing or parapet if the ladder is used as a means of access to the platform, landing or parapet.
- Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.
- If a ladder is used in a high traffic area, barricades shall be placed to avoid accidental displacement due to collisions.
- Performing work from the top two rungs of a portable ladder is prohibited. A worker must not perform work from either of the top two rungs, steps, or cleats of a portable ladder unless the manufacturer's specifications allow the worker to do so.

- The employee shall maintain a three (3)-point grip on the ladder at all times and carry tools/equipment on a belt or hoist up. Do not carry anything in the hands that could cause injury in case of fall.
- The employee shall face the ladder while ascending or descending.
- The bracing on the back legs of stepladders is designed solely for increasing stability and not for climbing.
- The ladder shall not be moved while occupied.

Training

All employees will be trained for this ladder safety program contents prior to using a ladder.

26.0 LOCKOUT TAG-OUT

Key Responsibilities

Managers and Supervisors

- Responsible to enforce this plan and to see that all their workers and contractors that are affected by lockout/tag-out procedures, have the knowledge and understanding required for safe application, usage, and removal of all energy controls and devices.
- Ensure workers are competent as demonstrated by being qualified, suitably trained and with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.

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.

Written Procedures for Lockout Tag-out

General

Lockout Tag-out is performed by a competent person. If work is to be done that may endanger a worker, Mobile Energy Systems shall ensure that the work is done by a worker who is competent to do the work. Workers who may be required to use safety equipment shall be competent in the application, care, use, maintenance and limitations of that equipment. Training must be completed before isolation of energy tasks are allowed.

When lockout of energy isolating devices is required, the devices must be secured in the safe position using locks in accordance with procedures that are made available to all workers who are required to work on the machinery or equipment.

Power tools may be maintained, repaired, tested or adjusted without applying isolation control if the work does not put the worker at risk by isolating the energy source from the power tool, dissipating any residual energy in the power tool and the energy source remains isolated during the activity.

Energy sources must be turned off, disconnected and/or released before maintenance is performed. If machinery, equipment, or powered mobile equipment is to be serviced, repaired, tested, adjusted, or inspected, Mobile Energy Systems must ensure that no worker performs such work on the machinery, equipment, or powered mobile equipment until it has come to a complete stop and all hazardous energy at the location at which the work is to be carried out is isolated by activation of an energy isolating device and the energy isolating device is secured, or the machinery, equipment, or powered mobile equipment is otherwise rendered inoperative in a manner that prevents its accidental activation and provides equal or greater protection.

Devices

Locks

- Each site shall have the same type of lock as specified by Mobile Energy Systems
- Are made available to all workers who are required to work on the machinery or equipment and shall be provided at the expense of Mobile Energy Systems
- Combination locks must not be used for lockout. Each personal lock must be marked or tagged to identify the person applying it.

Keys

Mobile Energy Systems shall:

- Issue to each worker who is required or permitted to work on a machine a lock that is operable only by that worker's key or a duplicate key,
- Designate a worker to keep the duplicate key,
- Ensure that the duplicate key is accessible only to the designated worker,
- Ensure that the lock used has a unique mark or identification tag on it that identifies the worker to whom the lock is assigned, and
- Ensure that a logbook is kept recording the use of the duplicate key and the reasons for that use each time the duplicate key is used.

Tag-out Device – If an energy source cannot be locked out with a lockout device then a tag-out device shall be used. Tag-out 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 Mobile Energy Systems Each tag will identify the worker who attached it.

Requirements for Tags

If a tag is used as a means of communication, the tag:

- Shall be made of non-conducting material,
- Shall be secured to prevent its inadvertent removal,
- Shall be placed in a conspicuous location,
- Shall state the reason the switch is disconnected and locked out,
- Shall show the name of the worker who disconnected and locked out the switch, and
- Shall show the date on which the switch was disconnected and locked out.

Requirements for Performing Maintenance While Equipment is in Operation

Mobile Energy Systems will develop and implement procedures and controls that ensure the machinery, equipment, or powered mobile equipment is serviced, repaired, tested, adjusted or inspected safely if the manufacturer's specifications require the machinery, equipment or powered mobile equipment to remain operative while it is being serviced, repaired, tested, adjusted or inspected, or there are no manufacturer's specifications and it is not reasonably practicable to stop or render the machinery, equipment, or powered mobile equipment inoperative.

In all cases Mobile Energy Systems requires a written authorization to proceed from senior management due to the increased risk exposure of performing maintenance on operating equipment.

Maintenance Procedures

- Energy sources must be locked out and tagged out before maintenance is performed. Once all energy isolating devices have been activated to control hazardous energy Mobile Energy Systems must ensure that a worker involved in work at each location requiring control of hazardous energy secures each energy isolating device with a personal lock. Mobile Energy Systems must ensure that each personal lock used has a unique mark or identification tag on it to identify it as belonging to the worker to whom it is assigned.
- A written, step-by-step isolation procedure for shutdown and start up 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 workers must notify all other affected workers of the application and removal of lockout/tag-out 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 worker shuts down a machine or equipment, the authorized worker shall have the knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means (locks) to control the energy sources.

3. Machine or Equipment Shutdown

The machine or equipment shall be shut down using the procedures established for that machine or piece of equipment. The shutdown shall be orderly to avoid any addition hazards to workers as a result of the 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(s).

5. Lockout/Tag-out Devices and Application

- Each authorized worker shall have the proper number of locks and devices to be able to independently of each other perform proper lockout/tag-out procedures for machines or equipment that they may be working on.
- Lockout or tag-out devices shall be affixed to each energy isolating device by authorized workers.
- Each lockout and tag-out devices shall include the name of the individual placing the device.
- Lockout devices shall be affixed in a manner to hold the energy isolating devices in a safe or off position.
- Tag-out devices shall be affixed in a manner that will clearly indicate that the operation or movement of isolating devices to the safe or off position and prohibiting the operation of the control device.
- Tag-out 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.
- If more than one worker is involved, the worker who disconnected and locked out the power supply shall communicate the purpose and status of the disconnecting and locking out.
- Isolating machines or equipment shall include, but are not limited to:
- Pumps, compressors, generators, electric distribution, storage tanks, etc.
- Each type of equipment, including isolating pipes and pipelines, to be isolated shall have specific documented procedures for isolation, i.e. for compressors: suction, discharge, power, starting, fuel, dumps shall be closed, locked and tagged out properly.

- For pipes and pipelines see #8.

6. Requirements for Verification of a State of Zero Energy

A state of zero energy must be verified after a lockout device is installed. A worker will not perform work on machinery, equipment or powered mobile equipment to be serviced, repaired, tested, adjusted or inspected until energy sources are isolated, the machinery, equipment, or powered mobile equipment is tested to verify that it is inoperative and the worker is satisfied that it is inoperative.

7. Isolating Energy Sources on Piping, Pipelines or Process Systems

If piping, a pipeline or a process system containing a harmful substance under pressure is to be serviced, repaired, tested, adjusted or inspected Mobile Energy Systems must ensure that no worker performs such work on the piping, pipeline or process system until flow in the piping, pipeline or process system has been stopped or regulated to a safe level, and the location at which the work is to be carried out is isolated and secured. Consideration of automated valve mechanisms that are controlled from remote sites must be factored into the energy control method.

In order to ensure that harmful substances under pressure are not released Mobile Energy Systems will utilize the following methods (with Disconnection/Misalign as the preferred method):

- Blinding - Install full-rated blind(s).
- Disconnection/Misalign - This involves physically removing part of the equipment, or misaligning piping. Isolation devices shall then be attached as close to the energy source as possible and listed on the Energy Isolation Log.
- Double Block and Bleed - This involves three valves: two block valves and a bleed valve in between. For Energy Isolation purposes, all three valves shall be tagged with a “Danger” tag and listed on the Energy Isolation Log. In addition, the two block valves shall be locked.
- Single Block - This involves closing one block valve, then applying locks and tags. Note, this option requires the prior approval of the supervisor.

Note: Control valves shall not be used for energy isolation.

Remote operated valves, designed for positive pressure containment, can be used provided they are disconnected from all energy sources and manually closed.

Multiple Workers / Group Lockout

All workers involved in the maintenance activity must place their own lock and tag on each energy control point. If more than one worker is working at each location requiring hazardous energy to be controlled, each worker must attach a personal lock to each energy isolating device.

- A tailgate meeting shall be conducted to review the written group lockout procedure and other information as required for safe work to continue. The written group lockout procedure must be conspicuously posted at the place where the system is in use.
- An authorized worker will isolate the equipment.
- All workers will then place their locks on the device’s group lockout or tag-out device after they have verified the procedure.

Release from Lockout/Tag-out

When servicing or maintenance is completed or when Lockout / Tag-out 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 verify that no worker is in danger before a worker removes the securing devices and the machinery, equipment, powered mobile equipment, piping, pipeline or process systems is returned to operation.
- Remove the Lockout/Tag-out device.
- Energize and proceed with testing.
- De-energize and reapply control methods including Lockout / Tag-out devices.
- Document the procedure by use of the completed isolation log and provide to supervisor for filing.

Procedures that Must Be Followed in the Event a Worker's Lock Must Be Removed

A person must not remove a personal lock or other securing device unless the person is the worker who installed it. In an emergency, or if the worker who installed a lock or other securing device is not available, a worker designated by Mobile Energy Systems may remove the lock or other securing device in accordance with a procedure that includes verifying that no worker will be in danger due to the removal.

Mobile Energy Systems must ensure that securing devices are not removed until each involved worker is accounted for, any personal locks placed by workers are removed and procedures are implemented to verify that no worker is in danger before a worker removes the securing devices and the machinery, equipment, powered mobile equipment, piping, pipeline or process system is returned to operation.

The following procedures shall be followed to allow for the emergency removal of a lock that another person has applied:

- If the key(s) cannot be made available, the worker who requests removal of the lock shall contact their supervisor.
- Every reasonable effort shall be made by the manager or supervisor to contact the authorized worker who applied the lock to obtain the key(s).
- The manager or supervisor shall ensure that the machinery or equipment can be operated safely before removing the lock and no workers will be in danger if it is removed.
- The competent person removing the lock shall document the lock(s) were removed with permission by manager or supervisor.
- All reasonable efforts will be made by supervisor to notify that worker their lock has been removed and ensuring that the authorized worker is notified at the start of his or her next shift if the worker’s personal lock(s) have been removed since the worker’s previous shift.
- If the equipment is client owned, the supervisor or worker requesting to remove the lock(s) shall contact the client to get the lock removed. Clients must remove their lock(s).
- NOTE: Mobile Energy Systems workers shall not remove any client locks.

Shift or Personnel Changes

In the event shift or personnel changes occur during maintenance and/or repair activities, the designated Mobile Energy Systems worker in charge shall take the necessary steps to maintain the continuity of the lockout/tag-out protection. This includes maintaining that all provisions in this procedure are adhered to and the transfer of lockout/tag-out devices between authorized workers is accomplished in an orderly manner.

Procedures must be implemented for shift or personnel changes, including the orderly transfer of control of locked out energy isolating devices between outgoing and incoming workers.

Contractors

Contractors performing lockout procedures on Mobile Energy Systems property shall comply with this procedure. Contractors shall supply their own locks.

Mobile Energy Systems shall initially lockout Mobile Energy Systems machines and equipment before the contractor will be allowed to apply their own lock in addition to the one assigned to Mobile Energy Systems

Annual Audits

Each year the manager or supervisor, or his representative, will perform an inspection of the Lockout Tag-out Program in their respective areas to verify the effectiveness of the program. An authorized worker other than the one(s) utilizing the energy control procedure being inspected shall perform the audit and shall verify that:

- Each authorized and/or affected worker 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.
- The annual audit will be certified in writing and a copy of the audit maintained on file at the manager's/supervisors office.

Training

Employees are provided Lockout Tag-out training. Mobile Energy Systems shall ensure that a worker who may have to lock out a machine has been adequately trained to lock out the machine. The training shall include the following:

- The recognition of applicable hazardous energy (lockout/tag-out) sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
- The purpose and use of energy control procedures.
- When tag-out systems are used, workers 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.
- Tags must be legible and understandable by all authorized workers, affected workers, and all other workers 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.

All other workers whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

Retraining

Retraining shall be conducted whenever a periodic inspection reveals, or whenever Mobile Energy Systems has reason to believe that there are deviations from or inadequacies in the worker's knowledge or use of the energy control procedures. The retraining shall re-establish worker proficiency and introduce new or revised control methods and procedures, as necessary.

Training Documentation

Mobile Energy Systems shall certify that worker training has been accomplished and is being kept up to date. The certification shall contain each worker's name and dates of training.

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 workers and kept on file at location of machine or equipment)

SAMPLE TAG

WARNING

MINIMUM LOCK/OUT – TAG/OUT PROCEDURES

Inlet Suction Block Valve Discharge Block Valve
Fuel Gas Valve Start Gas Valve
Liquid Dump Line Blow Down (Lock Open)

When working on this compressor package the following items must be **LOCKED OUT and TAGGED OUT**. Residual pressure must be blown down. Open all valves on surge bottles and piping to relieve any pressure that may be trapped.

Side Stream (For Units Set up with Side Streams)

When working on the compressor each person must lock and tag the compressor package!

ISOLATION LOG

Date of Isolation:

Description of Work:

List of Equipment out of Service:

Necessary Requirements of Clear Isolation:

Authorized Worker 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 LOCKOUT TAG-OUT PROGRAM

I certify that an audit of the Mobile Energy Systems Lockout Tag-out Program was conducted and that each worker 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: _____

27.0 MACHINE GUARDING

Key Responsibilities

Safety Manager

- The designated Safety Manager is responsible for developing and maintaining the program.

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 and appropriate repairs are conducted promptly.

Employees

- All shall be familiar with this program.
- Immediately report any guards that are missing, need repair or maintenance or present any type of concern to the worker.
- Follow all requirements, report unsafe conditions and follow all posted requirements.

Guarding Requirements

A hazard assessment must be completed by Mobile Energy Systems where there is a potential to encounter moving parts of machinery, points of machinery at which material is cut/shaped/bored, surfaces with temperatures that may cause skin to freeze/burn/blister, energized cables, debris, material or objects thrown form equipment, material being fed into or removed from process equipment or machinery or equipment that may be hazardous.

Moving parts must be guarded. Mobile Energy Systems must provide safeguards if a worker may accidentally, or through the work process, come into contact with moving parts of machinery or equipment, points of machinery or equipment at which material is cut, shaped, or bored surfaces with temperatures that may cause skin to freeze, burn, or blister, energized electrical cables debris, material, or objects thrown from machinery or equipment material being fed into or removed from process machinery or equipment machinery or equipment that may be hazardous due to its operation or any other hazard.

Where an employee may come into contact with moving drive or idler belts, rollers, gears, drive shafts, keyways, pulleys, sprockets, chains, ropes, spindles, drums, counterweights, flywheels, couplings, pinch points, cutting edges or other moving parts on a machine that may be hazardous to the employee Mobile Energy Systems shall provide adequate safeguards to prevent such contact.

Rotating parts, such as friction drives, shafts, couplings and collars, set screws and bolts, keys and keyways, and projecting shaft ends, exposed to contact by workers must be guarded. Machines or equipment having exposed moving parts that constitute a hazard to workers shall be equipped with guards which shall provide protection against contact with moving parts or prevent access to the danger zone during operations. Mobile Energy Systems shall provide an effective safeguard where a worker may contact:

- a dangerous moving part of a machine;
- a pinch point, cutting edge, or point of a machine at which material is cut, shaped, bored, or formed;
- an open flame;
- a steam pipe or other surface with a temperature that exceeds or may exceed 80° Celsius; or
- a cooled surface that is or may be less than minus 80° Celsius.

The application, design, construction, maintenance and use of safeguards, including an opening in a guard and the reach distance to a hazardous part, must meet the requirements of CSA Standard Z432-94, Safeguarding of Machinery.

Where there is a possibility of machine failure and of injury to a worker resulting from the failure Mobile Energy Systems shall install safeguards that are strong enough to withstand the impact of debris from the machine failure and to contain any debris resulting from the failure.

Employees must not wear loose fitting clothing and/or jewellery if they could come into contact with moving parts. Where an employee or the employee's clothing may come into contact with moving parts of a machine or a moving machine, the employee shall wear close fitting clothing, confine or cut head and facial hair and not wear jewellery, rings, dangling neckwear or similar items.

Tampering with safeguards is prohibited. A person must not remove a safeguard from a machine that is operating if the safeguard is not designed to be removed when the machine is operating. A person must not remove a safeguard or make it ineffective unless removing it or making it ineffective is necessary to perform maintenance, tests, repairs, adjustments, or other tasks on equipment. If a worker removes a safeguard or makes it ineffective, the worker must ensure that alternative protective measures are in place until the safeguard is replaced the safeguard is replaced immediately after the task is completed and the safeguard functions properly once replaced. If a safeguard for machinery is removed or made ineffective and the machinery cannot be directly controlled by a worker, the worker who removes the safeguard or makes it ineffective must lock out or lock out and tag the machinery or render it inoperative.

If a worker may be endangered by moving machine parts when a machine is started and the operator of the machine does not have a clear view from the operating position of all parts of the machine and of the surrounding area in which there is a potential danger, then Mobile Energy Systems shall install:

- an audible alarm system that provides a warning of sufficient volume and for a sufficient period before start-up of the machine to give workers timely notice of the imminent start-up; or
- a distinctive and conspicuous visual warning system to alert workers of the imminent start-up of the machine.

Under no circumstances may workers remove a safeguard from a machine that is operating if the safeguard is not designed to be removed when the machine is operating.

Mobile Energy Systems shall place adequate, appropriate and clearly visible warning signs at each point of access to a machine that starts automatically.

Tampering with safeguards is prohibited. No person shall remove or render ineffective a safeguard for a machine unless the removal or rendering ineffective is necessary to enable the cleaning, maintenance, adjustment or repair of the machine. Where a person removes or renders ineffective a safeguard for a machine, the person shall ensure that the safeguard is replaced and is functioning properly before leaving the machine or that the machine is in a zero energy state.

All safeguards required must remain in place at all times and Mobile Energy Systems shall place adequate, appropriate and clearly visible warning signs at each point of access to a machine that starts automatically.

Guards are required on all types of grinding machines including portable, bench, pedestal, and swing-type grinders.

28.0 MANAGEMENT OF CHANGE

General Requirements

A pre-project review must be completed during the planning/development stage. Before a change to facilities, equipment, or work process has been initiated, a review shall be completed to ensure that health, safety, environmental and/or quality standards can be maintained while staying on budget.

Prior to any change within the scope of this policy, a safety review is to be completed using the Management of Change Procedure Form.

It is the responsibility of the individual or team proposing the change to follow this procedure and complete the safety review prior to making any changes.

Once the review has been completed by the individual or team, it must be approved by the Project Manager, as well as senior overseeing Mobile Energy Systems manager and Safety Manager.

At the completion of the change, the Project Manager and Safety Manager shall audit the changes against the approved plan.

Procedure

The Management of Change (MOC) process must be completed for all changes, except replacement in kind. The MOC process must be used for all permanent and temporary changes to the organization's work processes, equipment, and facilities.

A pre-start up review must be completed prior to the change being put into service. Before a change to facilities, equipment, or work process can be placed into service a pre-start up review must be completed to ensure that all requirements outlined in the pre-project review have been addressed, and to ensure that any other possible hazardous conditions are assessed.

All affected personnel/ stakeholders participate in the Management of Change process. Pre-project and pre-start up reviews will include all interested parties. This may include, but is not limited to, Operations, Engineering, Information Technology, Sales/ Marketing, Quality Assurance, and Environmental, Health and Safety.

Describe in detail all proposed changes to the following areas on the Management of Change Procedure Form. Examples include:

- Utility and Energy Requirements: electrical, hydraulic, compressed air, steam, etc., piping pressures and sizes for liquid and gas supplies, all means for de-energizing utilities provided and identified.
- Hazardous Materials: names and descriptions, SDSs, concentrations, size and type of packaging, flash point, flammable limits, storage requirements, temperatures, etc.
- Waste Disposal: waste generated, containers to be used and locations, amounts, flammability, toxicity, reactivity, ingredients, associated wastes such as gloves and rags, disposal locations, etc.
- Personal Protective Equipment: types required for hazards present or anticipated.
- Personnel: types of training required for hazard communication, waste disposal, PPE, work permits, confined space, moving vehicles, cranes, fire protection, lockout/tagout, new equipment, shifts to be involved, use of temporary employees, qualifications of operators, testing of operators.
- Material Handling: lifting devices required, cranes required, weights to be handled mechanically and manually, forklift requirements, rack storage requirements, access to racks by forklifts, power requirements for lifting aids.

- Fire Protection: access to existing fire extinguishers and fire hoses, sprinklers protected and not obstructed, emergency response procedures.
- Walking Surfaces: Access to aisles, aisles not used for working, aisles designated, clean and smooth surfaces, floor mats, trip hazards.
- Machinery and Equipment: guarding requirements, power transmission guarding, nip points, sharp edges, foot treadles, energy sources, new equipment and tools, maintenance requirements, equipment bolted to the floor, energy isolating requirements (lockout/tagout), special tools required, automatic start or intermittent operations.
- Ergonomics: illumination, noise, worker position and posture, vibration, floor space, machine controls, repetition, force, tool use, heat and cold, emergency stop location.
- Ventilation: airborne contaminants (vapour, gas, dusts, fumes, mists, smoke, vehicle exhaust, etc.), control, methods, amounts of emissions, local and general (dilution) ventilation, CFM, permits required.
- Radiation Sources: ultra-violet radiation from arc welding, laser, light energy from cutting, plasma, microwave, radio frequency, etc.

MANAGEMENT OF CHANGE PROCEDURE FORM

Purpose of Form: To verify the orderly and comprehensive review of any new operations, processes, construction, equipment, machinery, demolition, remodelling, etc. prior to the actual change taking place. We must make sure that changes to the way we perform work do not create safety nor environmental hazards and that we have considered how changes in one area of work will affect other areas.

Project Location: _____ Requestor: _____

	YES	NO
Utility and Energy Requirements: routing and type of electrical, hydraulic, compressed air, steam, etc., piping pressures and sizes for liquid and gas supplies, all means for de-energizing utilities provided and identified, other.		
Hazardous Materials: names and descriptions, SDSs, concentrations, size and type of packaging, flash point, flammable limits, storage requirements, temperatures, other.		
Waste Disposal: wastes generated, containers to be used and locations, amounts, drains used, flammability, toxicity, reactivity, ingredients, associated wastes such as gloves and rags, disposal locations such as compactor or strategic dumpster or hazardous waste drums, other.		
Personal Protective Equipment: types required other.		
Personnel: types of training required for hazard communication, waste disposal, PPE, confined space, moving vehicles, cranes, fire protection, lockout/tagout, new equipment, work shifts to be involved, use of temporary employees, qualifications of operators, testing of operators, other.		
Material Handling: lifting devices required, cranes required, weights to be handled mechanically and manually, forklift requirements, rack storage requirements, access to racks by forklifts, power requirements for lifting aids, other.		
Fire Protection: access to existing fire extinguishers and fire hoses, sprinklers protected and not obstructed, emergency response, other.		
Walking and Working Surfaces: access to aisles, aisles not used for working, aisles designated, clean and smooth surfaces, floor mats, trip hazards, other.		
Machinery and Equipment: point of operation guarding, power transmission guarding, nip points, sharp edges, foot treadles, energy sources, new equipment and tools, maintenance requirements, equipment bolted to the floor, energy isolating requirements (lockout/tagout), special tools required, automatic start or intermittent operations, other.		
Ergonomics: illumination, noise, worker position and posture, vibration, floor space, machine controls, repetition, force, tool use, heat and cold, emergency stop location, other.		
Ventilation: airborne contaminants (vapour, gas, dust, fume, mists, smoke, vehicle exhaust, etc.), control methods, amounts of emissions, local and general (dilution) ventilation, CFM, permits required, other.		
Radiation: ultra-violet radiation from arc welding, laser, light energy from cutting, plasma, microwave, radio frequency, other.		

	YES	NO

If you answered 'Yes" to any of the issues above, explain the proposed changes below:

Submitted by: _____ Date: _____

Review/Approval:

Supervisor: _____ Date: _____

Project Manager: _____ Date: _____

Safety Manager: _____ Date: _____

Client (If Needed): _____ Date: _____

Audits:

Project Manager: _____ Date: _____

Safety Manager: _____ Date: _____

29.0 NOISE

Key Responsibilities

Managers and Supervisors

- Ensure requirements of this program are established and maintained.
- Ensure employees are trained and comply with the requirements of this program.

Employees

- Wear hearing protection when required, attend the training and cooperate with testing and sampling.

If a noise exposure assessment confirm that employees are exposed to excessive noise at a work site Mobile Energy Systems shall have a written procedure to develop and implement a written noise management program that includes policies and procedures.

Noise Management and Hearing Conservation Program

Noise is assessed at the work site and Mobile Energy Systems provides for the selection, use, and care of hearing protective equipment and worker training. Mobile Energy Systems must ensure that the noise management program includes a plan to educate workers in the hazards of exposure to excess noise and to train workers in the correct use of control measures and hearing protection, the methods and procedures to be used when measuring or monitoring worker exposure to noise, the posting of suitable warning signs in any work area where the noise level exceeds 85 dBA, the methods of noise control to be used and the selection, use and maintenance of hearing protection devices to be worn by workers.

Mobile Energy Systems must additionally ensure that the noise management program includes the following:

- the methods of engineered noise control to be used;
- the selection, use and maintenance of hearing protection devices to be worn by workers;
- the requirements for audiometric testing and the maintenance of test records;
- an annual review of the policies and procedures to address the effectiveness of the education and training plan, the need for further noise measurement, and the adequacy of noise control measures.

Requirements

Mobile Energy Systems shall implement a hearing conservation plan developed and appoint a supervisor to oversee the plan.

All employees who work in designated high noise areas must wear hearing protection.

Employees may not be exposed to noise that exceeds exposure limits. Mobile Energy Systems shall ensure that the exposure of an employee to noise is kept as low as is practical and does not exceed the exposure limits listed in Part 5, Section 30 of the Alberta Occupational Health and Safety Regulation.

Workers must not be exposed to noise levels that exceed 85 dBA. Mobile Energy Systems must ensure that a worker's exposure to noise does not exceed the noise exposure limits in Schedule 3, Table 1 of the Alberta OHS Code and 85 dBA Lex.

Engineering Controls

Engineering controls are used to reduce noise whenever practicable. Where the installation of engineering controls is practical Mobile Energy Systems shall install and use appropriate engineering controls. Mobile Energy Systems shall reduce worker exposure to noise by implementing the measures indicated hereafter in the following order:

- Reduce the noise at its source;
- Isolate any workstation exposed to the noise; then
- Insulate the work areas acoustically.

Mobile Energy Systems shall ensure that all new places of employment are designed and constructed so as to achieve the lowest reasonably practicable noise level, any alteration, renovation or repair to an existing place of employment is made so as to achieve the lowest reasonably practicable noise level, and all new equipment to be used at a place of employment is designed and constructed so as to achieve the lowest reasonably practicable noise level.

The following is a sample list of conditions encountered that require protection for sound levels. Each work site has other conditions based on equipment and work scope:

- Band Saw 104 dBA 26 6 minutes
- Blower 99 dBA 21 19 minutes
- Concrete Saw 112 dBA 34 1 minute
- Chain Saw 110 dBA 32 1 ½ minutes
- Compressed Air 92 dBA 14 1 hr. 35 minutes
- Fire Alarms 95 dBA 17 48 minutes
- Front End Loader 95 dBA 17 48 minutes
- Mitre Saw 109 dBA 31 2 minutes
- Pneumatic Staking 103 dBA 25 7 ½ minutes
- Pressure Washer 100 dBA 22 15 minutes
- Radial Arm Saw 103 dBA 25 7 ½ minutes
- Sprayer, 1,000 gal. 101 dBA 23 12 minutes
- Tables Saw 93 dBA 15 1 hr. 16 minutes
- Wet/Dry Vac 94 dBA 16 1 hour

Hearing Protection

Hearing protectors are used where engineering controls are not practicable to ensure workers are not exposed to noise that exceeds 85 Dba.

Mobile Energy Systems must ensure that all reasonably practicable measures are used to reduce the noise to which workers are exposed in areas of the work site where workers may be present. Mobile Energy Systems must ensure that affected workers wear the required hearing protection equipment. Mobile Energy Systems must ensure that hearing protection equipment provided to workers exposed to excess noise meets the requirements of CSA Standard Z94.2-02, Hearing Protection Devices: Performance, Selection, Care, and Use and is of the appropriate class and grade as described in Schedule 3, Table 2 of the Alberta OHS Code of 2009.

Earmuffs and earplugs shall be made available to the employee in sizes and configurations that will be comfortable to the employee.

Noise Survey

A noise survey is conducted to identify high noise areas. For work performed at a client's location, Mobile Energy Systems must ensure that employees observe posted noise signage and implement controls as needed. Where Mobile Energy Systems or an employee has reason to suspect that the noise level in an area where employees work may exceed 80 dBA, Mobile Energy Systems shall ensure that the noise level is measured and documented by a competent person and the amount of time that an employee spends in an area where the noise level exceeds 80 dBA is measured. Where there is reason to suspect that substantial changes in noise levels have occurred, Mobile Energy Systems shall ensure that the noise level and employee exposure is re-measured and documented.

A competent person must evaluate the sources of the noise and recommend corrective actions. The measurements, evaluation and recommendations are to be documented.

To evaluate noise exposure in terms of possible hearing damage, it is necessary to know the overall sound level, the exposure time of the individual in hours per day and the length of time the individual has worked in the area being surveyed. This data shall be supplemented by the following:

- Name of area and location
- Date and time of survey
- Name of person conducting survey
- Description of instrument used model and serial number
- Environmental conditions
- Description of people exposed

A plot of noise levels must be made for owned facilities. The plot must be filed or posted at the facility. Mobile Energy Systems shall evaluate hearing protector attenuation for the specific noise environments. The adequacy of hearing PPE shall be re-evaluated whenever noise exposures increase to the point that the PPE provided may no longer provide adequate protection. Mobile Energy Systems shall then provide more effective PPE where necessary.

All sound measuring equipment must be calibrated before and after each survey.

Records of sound measuring equipment calibration and noise level surveys conducted at the place of employment shall be kept at the place of employment as long as Mobile Energy Systems operates.

Sound Level Surveys

- All owned facilities that are suspected of having high noise levels must be screened.

Exposure Surveys:

- A representative sampling of employees shall be conducted to determine the exposure to noise over a period of time.
- Noise dosimeters must be capable of integrating all continuous, intermittent and impulsive sound levels and must be calibrated.

Hearing Tests

Mobile Energy Systems will, at its expense, provide the employee who is exposed to noise that exceed noise exposure limits an initial audiometric baseline test as soon as is reasonably practicable but not later than 70 days after the employee is initially exposed to high noise levels and a further test at least once every 12 months after the initial baseline test.

A qualified third party shall perform all audiometric testing, evaluation, reporting and retesting. Test results shall be supplied to the employee and if required to regulatory authorities and to others as required by local regulatory requirements.

Annual audiograms shall be evaluated as follows:

- Each audiogram shall be compared to the employees' baseline audiogram to ensure the test was valid and to determine if a standard threshold shift has occurred.
- If a standard threshold shift is determined, the employee will be retested within 30 days.
- The retest results will be considered as the annual audiogram.
- Employees shall be informed of their audiometric test results within 30 days of determination.
- If the employee has sustained a standard threshold shift, after retesting, that employee shall be notified and retrained and refitted for appropriate hearing protection and the employee shall be referred for additional medical evaluation if indicated.

Records

Mobile Energy Systems must keep records of:

- The annual hearing test results for each worker, which must be kept at the place of employment as long as Mobile Energy Systems operates.
- Employee audiograms are considered medical records and shall be kept and treated as confidential and will not be released to anyone without the written permission of the employee or as otherwise required by law.
- The education and training provided to workers.
- Results of noise exposure measurements taken.

Annual Program Review

Mobile Energy Systems shall conduct an annual evaluation of the program to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

Mobile Energy Systems shall regularly consult employees required to use hearing protection to assess the employees' views on this program's effectiveness and to identify any problems. Any problems that are identified during this review shall be corrected. Factors to be assessed include, but are not limited to:

- Hearing protection devices (fit, effectiveness, comfort)
- Monitoring of employee hearing test for threshold shifts in order to re-evaluate specific work areas to see if there is any correlation with conditions and test results.
- Effectiveness of and content of training.
- The employee safety committee shall be involved in the annual review.

Education and Training

Workers are provided training on the hearing conservation program. Mobile Energy Systems must ensure that the noise management program includes a plan to educate workers in the hazards of exposure to excess noise and to train workers in the correct use of control measures and hearing protection.

Mobile Energy Systems must provide workers with training in the selection, use and maintenance of hearing protection equipment required to be used at a work site in accordance with the manufacturer's specifications.

Mobile Energy Systems shall train the employee in the requirement to wear it. Training shall be updated to be consistent with changes in the work process and PPE requirements.

All staff shall have a copy of this program and it shall be posted at the worksite and a copy made available to all employees, their representatives and regulatory agencies.

30.0 OFFICE SAFETY

Purpose

Protecting workers within an office setting, and to ensure office employees are aware of the potential hazards in an office environment. All office equipment shall be operated and maintained as required by the various laws, regulations, or manufacturer instructions.

Guidelines

- Follow the safe work procedures.
- Ensure an Emergency Response Plan is in place.
- Follow the Manufacturer's recommendations.
- Abide by the Alberta Fire Code.
- Abide by the local Legislation.
- Refer to the SDS when using a controlled product.

Supervisors are required to provide proper instruction to their employees on protection and training requirements.

Working Alone or at Night

- Ensure the door is locked at all times.
- Do not let anybody in, unless you know them.
- Prior to leaving, look outside for suspicious looking people.

Housekeeping

Housekeeping makes work easier and conditions safer because the work area is clean, materials are arranged properly and used materials are properly disposed of. Housekeeping is more than just cleanliness; housekeeping is an extent of a workers work ethic and their commitment to a safe workplace. All workers must maintain good housekeeping habits and behaviours. General housekeeping should receive considerable attention at all times during work. Good housekeeping, demonstrated by the orderliness and cleanliness of the job site, usually suggests a safe, well-managed office setting. Poor housekeeping could lead to injuries and damage.

- All work areas should be kept clean and free obstructions at all times to prevent slips, trips and falls.
- Work areas shall be left clean and tidy upon the completion of work assignments and at the end of each shift.
- Materials shall not be stored in aisles or walkways.
- Equipment and tools shall not be left on stairways.
- Any spillage or leaks must be reported to a Supervisor for cleanup immediately.
- Garbage and waste must be placed in containers for disposal.
- All exits must be clear of obstructions.
- All substandard conditions must be reported immediately.

Filing and Storage Cabinets

To prevent cabinets from tipping over:

- Bolt cabinets' together side by side or to support walls.
- Do not overload the top shelves when using filing and storage cabinets.
- Open drawers one at a time so as not to unbalance the cabinet.
- Close the drawers when they are not being used.
- Use the handles for closing the drawers to prevent fingers from being pinched.

Paper Cutters and Shredders

- After using the paper cutters, close the blade.
- Be very careful when using the paper shredder not to catch jewellery, ties, clothing or long hair in the blades.

Wastepaper Baskets

- Never use a wastepaper basket as an ashtray as this could easily start a fire.
- When disposing of glass or sharp-edged cans in the wastepaper basket, place them first in a paper bag and mark the contents clearly.

Electrical Cords

- To avoid a fire hazard, ensure that all electrical cords are in good condition and are not overloaded, have any worn cords repaired or replaced immediately.
- To avoid a tripping hazard, do not run any electrical or telephone cords across aisles or walkways. Ensure cords do not create tripping hazards around desks.
- Never pull a cord from the wall socket by yanking on the cord; pull the plug instead.

Walkways, Aisles and Stairways

There are many possible ways to slip and trip in an office. To prevent tripping and slipping:

- Keep floors, aisles and stairs free of debris and storage boxes. Pick up debris.
- Do not obstruct your view while walking around by reading or carrying oversized loads.
- Wipe up spills immediately.
- Watch for slippery surfaces.
- Report and correct unsafe conditions.
- Hold the handrail when using the stairs

Ladders

When using a ladder:

- If the ladder is a stepladder, ensure that it is fully spread open on a level surface before beginning to climb.
- Always face toward the ladder when going up or coming down.
- Do not stand on either of the top two steps of the ladder.
- Do not reach to the side when on the ladder; instead, get down and move the ladder.
- Always keep one hand on the ladder to maintain three point contact.
    - Ask for assistance if you are retrieving large items to bring down the ladder.
- Only one person at a time should climb a ladder.
- Never paint a wooden ladder.

Flammable Materials

- Never use flammable cleaning fluids, such as gasoline, varsol or naphtha in an office.
- Keep any flammable materials in approved containers that are labelled.
- Never leave the containers uncapped.

Fans

- Use only fans with wire mesh safety guards that completely cover the fan blades.
- Never remove the guards.

Improper Storage of Heavy Items

- Large stacks of materials and/or heavy articles can pose a great safety risk to employees if they fall or are knocked over.
- Heavy items should always be stored close to the floor, and care should be taken never to exceed the safe load capacity of shelving or storage units.

Space Heaters

- Portable space heater can pose a major fire hazard if used improperly. Space heaters in the workplace should always be approved for use by the GSA, never placed near combustible materials, and have a tip-over switch to ensure they will turn off automatically if knocked over. Space heaters should also never be used with an extension cord.
- Only plug one space heater in each circuit to avoid blowing a fuse.
- Turn off space heaters before leaving, even if you will be back in a short while.

Smoking

- All offices are non-smoking areas.
- Smoking is only permitted outside, away from the door.

Fire Precautions

- Ensure that you know that the fire extinguisher covers all types of fires (ABC) and is kept in common areas.
- Ensure that the fire extinguisher is properly maintained and inspected monthly.

31.0 OVERHEAD POWERLINES

Procedure

Prior to working within 7 meters of an overhead power line, the local power company should be contacted to determine the voltage of the lines. This will determine a safe working distance based upon Table 1 (see below). No worker may perform work within 7 m of an overhead power line if the voltage is unknown!

A competent safety watch is required when working in the 7-meter restricted area of an overhead power line.

Signalers must be used to direct equipment movement under overhead power lines and must be equipped with air horns.

Where equipment could enter the prohibited zone or where equipment might touch overhead power lines, workers must:

- De-energize the line wherever possible or follow a detailed written plan.
- Not enter the prohibited zone with any device (e.g. tools, sticks ropes) while the line is energized.
- Workers must not operate equipment closer to power lines than noted on the following table.

Table 1: Power Lines-Minimum Approach Distances

Operating Voltage of Overhead Power Lines Between Conductors	Minimum Distance for People and Equipment	
kV	m	feet
0-40	3.0	10
69-72	3.5	11 ½
138-144	4.0	13
230-240	5.0	16
500	7.0	23

Tag lines must be used when hoisting materials to position workers a safe distance from equipment and energy sources. In addition, tag lines must be clean and dry. The exact height of all equipment and loads moving under power lines must be confirmed before any work begins. Equipment movement plans must detail work plans near overhead power lines including the use of signalers and pilot vehicles.

Booms on equipment (e.g. backhoes and side booms) must be fully lowered when traveling near overhead power lines. Moving other equipment with the boom in the raised position is restricted to situations where lowering and retracting the boom creates a higher risk. Construction activities such as grading and excavation can reduce the clearance to power lines. The work activities must be monitored for potential change to these physical conditions.

Responsibilities

The owner and the contractor must ensure that:

- The contractor uses a JSA or other written procedure or plan to control risks when working near overhead power lines.
- The contractor must acquire all the necessary over height load permits from the power company representatives as well as any other third party requirements.
- The work should be planned around construction shutdowns if possible.

Special Equipment

- Warning signs set at eye level on right of way
- Air horn
- Hand level or clinometers to determine line height
- Clean dry rope for tag lines (if hoisting is required)
- Traffic vests for all personnel

Working in the 7 Meter Restricted Area

- Inspect the work area and identify known and potential hazards before the work begins.
- Ensure crossing agreements are in writing and on site.
- Identify line voltage by contacting utility company to determine safe approach distance.
- Obtain documentation from the power company that the line has been de-energized.
- Determine power line sag distance from height to grade.
- Measure the heights of all equipment to be used to determine proper clearance. If safe clearance cannot be met, the utility company must be contacted to obtain proper approvals.
- Complete the JSA/hazard assessment with all personnel involved.

Owner Representative

- Must ensure that a written plan is in place.
- Observe that steps have been taken to implement the plan. (flagging, signage in place)
- Test worker understanding

Movement of High Loads under Power Lines on a Roadway

If applicable, complete the following steps and review JSA when complete:

- Lay out the detailed route on a plot plan showing all overhead obstructions. Record the height of the highest point of the load on the plot plan including trailer and other wheel heights.
- Walk or drive the route to confirm up to date plot plan information.
- Calculate minimum clearance from power lines and document conditions at each crossing such as road level and width.

If Clearances are less than 1.5m

- Provide all information to utility company which will decide of the will have a representative present during the crossing.
- It is important the over-height load planning is done well in advance of the haul. This is to ensure line raising crews and other utility company personnel are available.

If the Load Exceeds 5.3 Meters

- Ensure the contractor has acquired over-height load permits from both the Department of Highways and the utility company.

Determining Power Line Height or Sag Distance

- The utility company representative should have the proper equipment to do this calculation.
- A surveyor can also be contacted to help determine height.

32.0 PANDEMIC RESPONSE

General Overview

In the event that the World Health Organization (WHO) declares a worldwide Pandemic or Infectious Disease Outbreak, Mobile Energy Systems has developed the Pandemic and Infectious Disease Crisis Management Plan to help prepare for the possible effects of such an event. The plan identifies the risks of an outbreak on the organization and provides response plans for varying levels of effects to help mitigate these risks. All managers, supervisors, and employees are expected to comply with the directions provided under this plan.

The standards for emergency response planning have been used to create this plan and have been designed to accommodate varying lengths of time for each of the WHO phases. An important part of the plan is the proactive communications strategies designed to increase awareness and self-preparedness among employees and stakeholders before a Pandemic or Infectious Disease outbreak becomes an actuality.

Background Information

A Pandemic is classified as a global infectious disease outbreak when a new virus emerges for which people have little or no immunity and there is no vaccine available. In order to cause a worldwide Pandemic, the virus must:

- Cause severe illness in humans;
- Spread easily from human to human; and
- be capable of causing a new disease.

The World Health Organization (WHO) is responsible for determining what phase level the world is at by monitoring all instances of an emerging virus and will adjust the phase according to the risks associated to the outbreak. Local phases are determined through National/Federal and State/ Provincial Health Department and Emergency Management Agency surveillance monitoring activities.

Goals

The four major goals of the Pandemic and Infectious Disease Crisis Management Plan are:

1. To promote health and minimize spread amongst Mobile Energy Systems employees and stakeholders;
2. To provide necessary services for the continuance of operations;
3. To meet the emerging needs of Mobile Energy Systems employees.
4. To meet the emerging needs of Mobile Energy Systems stakeholders.

Key Assumptions

The Virus

A Pandemic/Infectious Disease outbreak could last for a protracted period of time and infect up to one third of the population. There will be 1 to 3 months from virus identification to its arrival beyond the point of origin. The virus will spread by droplet and have a variable incubation rate. The virus can have the ability to live on hard surfaces for up to 48 hours. A Pandemic is projected to occur in multiple waves with each wave lasting approximately 6 to 8 weeks. (*According to the WHO, the first wave will often peak at 3 to 4 weeks, with a rapid surge of numbers of ill people over a 6 to 8 week period*).

The workplace transmission wave will follow a pattern similar to that expected in the general population. As the Pandemic arrives closer to the community and the Company, the time between alert phases will become days, even hours, rather than months.

The Business

During a Pandemic affecting the close community of the company, it will not be business as usual.

The business may be confronted by up to 45% Relative Absenteeism as many workers become ill, stay at home to take care of children or family members or refuse to go to work, especially in workplaces where there is extensive contact with others.

Knowing that reduced productivity will result from employee fear, stress, and absenteeism, Mobile Energy Systems has a responsibility to continue to provide necessary services or make the decision to cease operations for a period of time until it is reasonable to return to work.

Mobile Energy Systems will take steps to prevent the spread and mitigate the effect of the disease including quarantine or closure orders for individuals as well workplace areas and/or buildings.

Processes for managing employees who have been quarantined may be necessary in order to ensure any required quarantine period is completed and the employee(s) is healthy before returning to work.

Prevention Methods

Employers must perform a hazard assessment to identify existing and potential hazards at a work site. Part 2 of the OHS Code outlines minimum hazard assessment requirements. Eliminate a hazard wherever you can. When elimination is not possible or reasonable, it must be controlled. There is a hierarchy of controls that must be followed.

1. First choice: engineering controls. These control a hazard at the source. Depending on the workplace and processes, examples might include ventilation systems or physical barriers, such as plexiglass.
    a. Any employee who has recently visited restricted countries are to follow quarantine protocol to remove themselves from a situation of potentially infecting others.
2. Second choice: administrative controls. These change the way people work. Examples include worker training or hand hygiene, social distancing, alternate work arrangement or regular workplace cleaning policies.
    a. Periodic training on illness prevention, how to avoid the spread of disease, and company policies concerning illness will occur to ensure employees are aware of action plans should the need arise to employ them.
    b. Employees are encouraged to obtain appropriate immunizations.
    c. Good hand hygiene is important. Washing hands with soap and water can prevent the spread of respiratory viruses. Using a hand sanitizer with at least 60 per cent alcohol can also be effective.
    d. Any sneezes or coughs shall be directed into a tissue or elbow, and employee shall wash or sanitize their hands following a sneeze.
    e. Surfaces within the workplace shall be routinely cleaned and disinfected on a daily basis as dictated by employee traffic at the office.
    f. Any travel associated with the business shall be restricted from high risk countries as per government designations.
3. Third choice is personal protective equipment (PPE), which controls the hazard at the worker. PPE examples can include gloves, eye protection, facemasks or respirators. In some circumstances, PPE may be required.

a. Employers must ensure that workers are trained in the PPE they are expected to use, and that PPE is maintained and in good condition to perform the functions for which it was designed.

b. PPE has to meet OHS Code Part 18 requirements. For instance, respirators must be approved by NIOSH or another organization acceptable by the Alberta OHS Director of Occupational Hygiene.

Immediate Response

In case ill workers come to work, Mobile Energy Systems will consider whether first aid services are adequate to look after ill workers. In an outbreak, Mobile Energy Systems will advise workers who are not feeling well to remain at home to avoid spreading of illness and disease. Workers will be directed to employment insurance or human resources to ensure compensation is addressed and to reduce the risk of undue hardship for the employer and the worker.

Internal Communications

A communications plan will be the responsibility of the management team, who may choose to delegate the responsibility of communications regarding infectious diseases and/or a pandemic situation. A variety of emergency notification tools will be used to ensure internal/external messages are delivered in a timely fashion.

Alert Levels and Action Plans

Based upon recommendations provided by the World Health Organization and other authorities, the following alert levels and corresponding action plans have been developed. The alert levels and action plans detailed below are not

intended to be mutually exclusive. Management may decide to implement various elements of an action plan without raising the alert level or alternatively raising the alert level without implementing all of the corresponding action plans.

Once Management has determined that the need exists to implement the Pandemic and Infectious Disease Plan all personnel will be responsible for carrying out their assigned tasks as directed.

Alert Level 1: General Preparedness

Description: At this stage there is a perceived threat of increased spread of a virus or other infectious disease. Governments and health authorities have reported an increasing level of infection and are advising businesses and/or the general public to take appropriate precautions. Infections and related absenteeism may or may not have already been reported within the Company.

Action Plan: The following action plans will be implemented:

- Administration will update their employee recruitment contact information and establish estimates for the ability to replace employees due to infection/absenteeism. Additional training or instruction should be provided as required to ensure sufficient back-up is available.
- Management will ensure that sufficient information technology services are available so that key personnel can work remotely in the event of travel restrictions, office closures, or other unforeseen circumstances.
- Management will develop a list of key positions and identify back-up personnel for each of those positions in the event of illness.
- Management will develop contingency plans for work sharing, remote work sites, shift work alterations, and other options that reduce the spread of infection.
- The office will arrange for increased health and sanitation in their work sites including the provision of additional hand sanitizing stations, increased cleaning services, protective masks and other measures as identified by local health authorities.

- Management will communicate the encouragement to employees to obtain appropriate vaccinations, if available and accessible.
- The office will verify inventory levels for critical supplies and initiate the procurement of additional supplies, as necessary. Back-up service providers will also be identified and contact information communicated as required.
- The office will begin the process of communicating with employees, customers and other third party providers as required.

Alert Level 2: Increasing Rate of Infection

Description: At this stage infection levels are increasing at a significant rate in one or more of the areas in which the Company operates. Governments and health organizations are advising that full pandemic is probable and are beginning to implement their response plans. Infections and related absenteeism have been reported within the Company and are increasing.

Action Plan: In addition to the action plans identified in Alert Level 1, the following action plans will be implemented:

- Management meetings will be increased to a weekly schedule to evaluate the situation, direct the implementation of the required action plans and determine if the alert level should be escalated.
- The office will implement alternate work schedules, implement remote working arrangements and disperse and/or rotate key personnel to maintain business continuity.
- The office will restrict employee travel to emergency and rotational travel only.
- The office will elevate cleaning protocols and employee communications pertaining to personal health measures to avoid infection.
- The office will implement quarantine procedures for employees returning from areas where a higher rate of infection is occurring.
- Management will increase employee communications and coordinate internal efforts with local authorities and customers as required.

Alert Level 3: Full Pandemic

Description: At this stage the WHO, local governments and/or health authorities have declared that a full pandemic is occurring *in one or more areas in which the Company operates*. Rates of infection are climbing significantly, and public health procedures have been implemented to limit the effects of the pandemic. Infections and related absenteeism are impacting the Company's ability to maintain normal operations.

Action Plan: In addition to the action plans identified in Alert Levels 1 and 2, the following action plans will be implemented:

- Management meetings will be increased to a daily schedule to evaluate the situation, direct the implementation of the required action plans and determine the alert level status.
- Offices will continue to replace employees reporting absent or demonstrating symptoms to limit the spread of the virus. Quarantine and screening procedures will be strictly maintained.
- The office will suspend all employee travel.
- Where the safety of employees or equipment is determined to be at risk due to high levels of employee absenteeism or the lack of required supplies and services, Offices will suspend operations and/or reallocate personnel and resources.
- The office will instruct all non-essential staff to remain at home in the event of a work site shutdown.
- Management will determine whether or not to repatriate employees assigned outside their country of residence and make emergency travel plans as required.

- Management will increase employee communications and continue to coordinate internal efforts with local authorities as required.
- Management will inform customers of the potential for work site shutdowns or other actions that may impact the contractual relationship.

Recover Phase

Description: At this stage the WHO, local governments and/or health authorities have declared the pandemic as retracting. Rates of infection are declining significantly, and public health recovery procedures have been implemented in response to the decrease of transmission within the local population. Infections and related absenteeism have plateaued and are declining and the Company's ability to begin returning to normal operations is present.

Action Plan: The following action plans will be implemented:

- Management will meet to evaluate the situation and confirm employee absenteeism has lessened significantly to allow recovery operations to begin.
- Upon direction from Management, the company will begin business recovery operations.
- An operational debrief will be conducted at the conclusion of recovery operations and an After Action Report will be completed and submitted to Management for their review. Lessons learned following a pandemic event will serve as tools to improve the Pandemic and Infectious Disease Plan, Emergency Response Plan and the development and implementation of additional contingencies, if found to be necessary.

CURRENT PANDEMIC SITUATION

COVID-19 (Coronavirus)

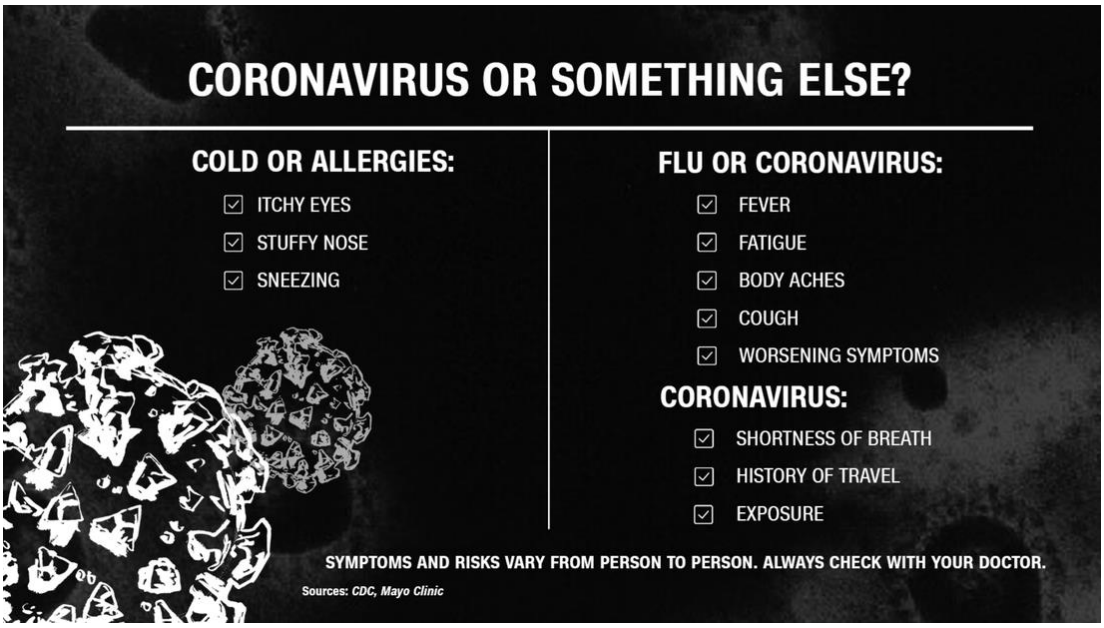
In some ways, COVID-19 is similar to influenza (also known as the flu). They both:

- cause respiratory disease in people who get sick.
- spread by small droplets from the nose and mouth.
- are not spread through the air over long distances and times, unlike the measles.

However, there are some key differences between COVID-19 and the flu:

- COVID-19 does not appear to transmit as efficiently as influenza:
    - only those with symptoms seem to be spread the disease
    - controlling spread is possible when people with symptoms are isolated
- There is no specific vaccine or treatment for COVID-19.
- COVID-19 causes severe disease and mortality in more cases than the flu. On average there is about 1-2 deaths per 100 people infected with COVID-19, compared to 1 death in every 1000 people with the flu.
- Because COVID-19 can cause such a serious illness, it is critical to keep it from spreading by having people with a cough or fever stay home and away from others.
- COVID-19 is transmitted through person-to-person spready by:
    - Larger droplets, like from a cough or sneeze,
    - Touching contaminated objects or surfaces, then touching your eyes, nose or mouth.
- COVID-19 is not airborne and cannot spread through the air over long distances or times, like the measles.

Symptoms



Most people recover without needing special treatment; however, it can cause serious illness in some and there is a risk of death in severe cases.

Prevention and Preparing

Prevention strategies have been implemented in various provinces; it is important to remain current in the local public health restrictions. In addition to adhering to the restrictions, the following should be practiced helping prevent spreading of the infection:

- use good hygiene practices, such as frequent handwashing
- cover coughs and sneezes
- avoid touching your eyes, nose and mouth – especially with unwashed hands
- stay at home and away from others if you feel ill
- if you have symptoms, stay home – call local health personnel to determine if testing or treatment is required
- try to have a separate area in your home to separate sick members from healthy ones if possible. Plan to clean these rooms a needed when someone is sick

Masks can be very important in certain situations. When sick, wearing a mask helps prevent us from spreading illnesses to others. This is why people who have a cough or respiratory symptoms must wear masks and wash their hands when visiting an emergency department or clinic.

- If you are sick, wearing a mask helps prevent spreading the illness to other people.

The COVID-19 pandemic can have a significant impact on your mental health. Resources are available if you, or someone you know, is struggling or needs a little extra support.

The Mental Health Help Line is available 24/7 to provide advice and referrals to community supports near you.

Call: 1-877-303-2642

33.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Key Responsibilities

Safety Manager

- Assists in the selection of appropriate PPE.
- Where it is not reasonably practicable to protect the health and safety of workers by design of facility and work processes, suitable work practices, engineering or administrative controls Mobile Energy Systems shall ensure that every worker wears or uses suitable and adequate personal protective equipment.
- The Safety 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. Workers need to give feedback to the supervisor about the fit, comfort, and suitability of the PPE being selected.
- Assists supervisor and project managers in assuring all PPE obtained meets regulatory and this procedure's requirements.
- Performs Worksite Hazard Assessments - Initially and as needed to assess the need for PPE. 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.
- Mobile Energy Systems has a written Personal Protective Equipment (PPE) policy. If the hazard assessment indicates the need for personal protective equipment, Mobile Energy Systems must ensure that workers wear personal protective equipment that is correct for the hazard and protects workers, workers properly use and wear the personal protective equipment and the personal protective equipment is in a condition to perform the function for which it was designed.
- Mobile Energy Systems must ensure that:
- PPE is correct for the hazard and protects the workers, be selected and is used in accordance with recognized standards.
- The PPE is in a condition to perform the function for which it was designed and is at the worksite before work begins.
- Be compatible, so that one item of personal protective equipment does not make another item ineffective.
- Ensure that the use of PPE does not in itself create a hazard to or endanger the worker.
- Be maintained in good working order and in a sanitary condition.
- Certifies in writing the tasks evaluated, hazards found and PPE required to protect workers against hazards and ensures exposed workers are made aware of hazards and required PPE before they are assigned to the hazardous task.

Project Managers and Supervisors

- Supervisors and project managers shall regularly monitor workers for correct use and care of PPE and obtain follow-up training if required to ensure each worker has adequate skill, knowledge, and ability to use PPE.
- Supervisors and project managers shall enforce PPE safety rules following provisions of the Mobile Energy Systems progressive disciplinary procedures and ensure Required PPE Poster is posted properly.

Workers

- Workers must wear the required PPE. The worker shall wear or use, as the case may be, the individual or collective protective means and equipment. Wearing of required PPE is a condition of employment.
- Inspect the equipment before use,
- Reporting any reporting defective equipment or malfunction to the supervisor or Mobile Energy Systems.

- A worker who is assigned responsibility for cleaning, maintaining or storing personal protective equipment must do so in accordance with training and instruction provided.
- Reporting changes in exposure to hazardous conditions that might require a follow-up assessment of the task for PPE.
- Take reasonable steps to prevent damage to the PPE.

Procedure

Worksite Hazard Assessment

During a hazard assessment Mobile Energy Systems looks for the following sample hazard sources:

- High or low temperatures; Chemical exposures (use SDSs 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 workers, personal protective equipment must be selected to substantially eliminate the injury potential. A certification of worksite hazard assessment form is located in each site specific HSE plan that the Safety Manager uses to identify potential workplace hazards.

Provisioning

Workers are responsible for providing clothing needed for protection against the natural elements, general purpose work gloves, and appropriate footwear including safety footwear and safety headgear.

Mobile Energy Systems is responsible for providing, at no cost to the worker, all other items of personal protective equipment required by local regulatory requirements.

Mobile Energy Systems must ensure that PPE is stored in a location that is clean, secure, and readily accessible by the worker, immediately repaired or replaced if it is rendered ineffective to provide protection it was indeed for, contaminated or defective with clean or decontaminated equipment.

Where PPE provided to a worker becomes defective or otherwise fails to provide the protection it was intended for, the worker shall return the PPE to Mobile Energy Systems or contractor and inform Mobile Energy Systems or contractor of the defect or other reason why the PPE does not provide the protection that it was intended to provide. Mobile Energy Systems or contractor shall immediately repair or replace any PPE returned.

General

Where there is danger of contact with moving parts of machinery the clothing of the worker shall fit closely about the body. Dangling neckwear, bracelets, wristwatches, rings or like articles shall not be worn and head and facial hair shall be completely confined or cut short so as not to extend to the shirt collar.

PPE Equipment Matrix

Each worksite has a PPE Equipment Matrix based on the worksite hazard assessment. This matrix is included in the site specific HSE plan. See the last page of this procedure for a sample PPE Matrix.

Selection of PPE

Eye and Face Protection: Workers exposed to eye hazards must wear eye protection. If a worker’s eyes may be injured or irritated at a work site, Mobile Energy Systems must ensure that the worker wears properly fitting eye protection equipment that is approved to CSA Standard Z94.3-07, Eye and Face Protectors (or current version).

Prescription safety eyewear having glass lenses must not be used if there is danger of impact unless it is worn behind safety glasses that meet the standard.

Head Protection: Workers exposed to head hazards must wear protective headgear. If there is a foreseeable danger of injury to a worker's head at a work site, Mobile Energy Systems must ensure that the worker wears industrial protective headwear that is appropriate to the hazards and meets the requirements of CSA Standard Z94.1-05, Industrial Protective Headwear (or current version).

Foot Protection: Workers exposed to foot hazards must wear foot protection. Mobile Energy Systems must ensure that a worker uses footwear that is appropriate to the hazards associated with the work being performed and the work site. If the hazard assessment identifies that protective footwear needs to have toe protection, a puncture resistant sole, metatarsal protection, electrical protection, chainsaw protection, or any combination of these, Mobile Energy Systems must ensure that the worker wears protective footwear that is approved to CSA Standard Z195-02, Protective Footwear (or current version).

Hand Protection: All workers must use gloves when handling objects that could injure the hands. If there is a danger that a worker's hand may be injured, Mobile Energy Systems must ensure that the worker wears properly fitting hand protective equipment that is appropriate to the work, the work site and the hazards identified.

Fall Protection: Fall protection must be provided when workers are exposed to a vertical fall of six feet or more over a lower level (1.83 meters). Fall protection must comply with CAN/CSA Z259.10-M90 (R1998), Full Body Harnesses.

Skin Protection: Workers exposed to skin hazards must wear protective equipment. Mobile Energy Systems must ensure that a worker's skin is protected from a harmful substance that may injure the skin on contact or may adversely affect a worker's health if it is absorbed through the skin.

Respiratory Protection: The use of respirators is not allowed unless approved by the Safety Manager who will insure all legally required respiratory protection procedures are completed. Product substitution is required to eliminate hazards protected by respirators.

Caustics: Workers handling or using acids, caustics and other harmful substances shall use personal protective equipment, or other means shall be adopted that will provide equivalent protection against these hazards.

Hazardous Substances: Where workers are routinely exposed to a hazardous material or substance Mobile Energy Systems shall provide and require workers to use, protective clothing, gloves and eyewear or face shields that are adequate to prevent exposure of a worker's skin and mucous membranes to the hazardous material or substances.

Visibility Protection: A worker exposed to the danger of moving vehicles traveling at speeds in excess of 30 km/h (20 mph) must wear high visibility apparel.

Flame Resistant Clothing: Flame resistant clothing is worn by workers if they may be exposed to a flash fire or electrical equipment flashover. If a worker may be exposed to a flash fire or electrical equipment flashover, Mobile Energy Systems must ensure that the worker wears flame resistant outerwear and uses other protective equipment appropriate to the hazard.

Hearing Protection: All hearing protective equipment must conform to CSA standard Z94.2-94, "Hearing Protectors" (or current version).

CSA CERTIFICATION MARK FOR CANADA Indicates footwear is CSA-certified to Canadian national requirements **CLASSES OF PROTECTION** One or more of these markings will appear on the outer side or the tongue of the right shoe		
	Green triangle indicates sole puncture protection with a Grade 1 protective toe to withstand impacts up to 125 Joules.	For any industry, especially construction and heavy work environments, where sharp objects, such as nails are present.
	Yellow triangle indicates sole puncture protection with a Grade 2 protective toe to withstand impacts up to 90 Joules. Comparable to a 22.7 kg (50 lb) weight dropped from 0.4 m. Sole puncture protection is designed to withstand a force of not less than 1200 Newtons (270 lbs) and resist cracking after being subjected to 1.5 million flexes.	For light industrial work environments requiring puncture protection as well as toe protection.
	Blue rectangle indicates Grade 1 protective toe without sole puncture protection. Grade 1 protective toe withstands impacts up to 125 Joules. Comparable to a 22.7 kg (50 lb) weight dropped from 0.6 m.	For industrial work environments not requiring puncture protection.
	Grey rectangle indicates Grade 2 protective toe without sole puncture protection. Grade 2 protective toe withstands impacts up to 90 Joules. Comparable to a 22.7 kg (50 lb) weight dropped from 0.4 m.	For institutional and non-industrial work environments not requiring puncture protection.
	White label with green fir tree symbol indicates chainsaw protective footwear. Protective features are designed into the boots to prevent a running chainsaw from cutting all the way through the boot uppers so as to protect the shins, ankles, feet and toes.	For forestry workers and others exposed to hand-held chain saws or other cutting tools.
	White rectangle with orange Greek letter omega indicates soles that provide resistance to electric shock. Such certified footwear contains a sole and heel design assembly that, at the point of manufacturing, has electrical insulating properties intended to withstand 18,000 Volts and a leakage current not exceeding 1 mA.	For any industry where accidental contact with live electrical conductors can occur.
	Yellow rectangle with green “SD” and grounding symbol indicates soles are static-dissipative. The outer soles are made from an antistatic compound, chemically bound into the bottom components, capable of dissipating an electrostatic charge in a controlled manner.	For any industry where a static discharge can create a hazard for workers or equipment.
	Red rectangle with black “C” and grounding symbol indicates soles are electrically conductive. The outer soles are made from a conductive compound that is permanently bound to the bottom components to provide electrical grounding of each foot. Test criteria are 0 to 500,000 Ohms.	For any industry where static discharge may create a hazard of explosion.

Training

Workers are trained on the selection, use and care of PPE. Mobile Energy Systems must ensure that workers are trained in the correct use, care, limitations and assigned maintenance of the personal protective equipment. Each worker must be trained to know at least the following:

- When and why personal protective equipment is necessary
- What personal protective equipment is necessary
- How to properly inspect before use, adjust and wear personal protective equipment
- Refrain from wearing protective equipment outside of the work area where it is required if to do so would constitute a hazard,
- Report any equipment malfunction to the supervisor or Mobile Energy Systems
- The limitations of the personal protective equipment

- Proper wearing of flame resistant clothing if used
- The proper use, care, cleaning, storage, assigned maintenance duties, useful life and disposal of the personal protective equipment to be used, and
- To not use any PPE unable to perform the function for which it is designed.

Each worker shall demonstrate an understanding of the training and the ability to use personal protective equipment properly before being allowed to perform work requiring the use of PPE. When Mobile Energy Systems has reason to believe that any affected worker who has already been trained does not have the understanding and skill required to use PPE Mobile Energy Systems shall retrain the worker.

Monitoring

Supervisors and project managers monitor worksite tasks for changes in, or the introduction of new hazards. If new hazards are discovered, they advise the Safety Manager who then conducts a hazard assessment for appropriate PPE. The Safety Manager monitors the effectiveness of the PPE Procedure and makes recommendations to management to improve the procedure.

Annual Review

The personal protective equipment program must be reviewed annually.

PPE Matrix

For Mobile Energy Systems **Location: ___Sample___**

D = Depends on situation M = Mandatory – = Not Mandatory unless hazards become present
SUBJECT TO CHANGE BASED ON INDIVIDUAL WORKSITE HAZARD ASSESSMENT

CATEGORY	EQUIPMENT	HAZARD	INSPECTION	MAINTENANCE	Job/Task: Field Tech	Housekeeping	Shop Work	Driving	Office	Winter Conditions
Head Protection:										
	Hard Hat (Class G or E Only)	Striking Head or Falling Objects	Each use	Dispose	-	-	D	-	-	-
Eye and Face Protection:										
	Safety Glasses w/shields	Objects Striking Eyes	Each use	Dispose	D	D	M	*	-	M
	Impact Vented Goggles	Small Particles in Eyes	Each use	Dispose	-	-	D	-	-	D
	Chemical Splash Goggles	Chemicals or Oil in Eyes	Each use	Dispose	D	D	D	-	-	-
Hearing Protection:										
	Disposable Earplugs	Damage to Hearing (85 db.)	Each use	Dispose	D	D	D	-	-	-
	Earmuffs (w/Disposables)	Damage to Hearing (105 db.)	Each use	Dispose	D	D	D	-	-	-
Personal Protective Clothing:										
	Cold Weather Clothing	Cold Temperature	Each use	Clean and Repair	D	D	D	D	-	D
	Rainwear	Wet body	Each use	Dispose	-	-	D	-	-	-
	Protective Sleeves	Biohazardous materials	Each use	Dispose	-	M	-	-	-	-
Foot Protection:										
	Slip Resistant Footwear	Injury to Body	Each use	Replace	M	M	M	-	-	-
	Anti-Slip Cleats during Winter	Injury to Body	Each use	Dispose	M	M	M	-	-	M
Hand Protection:										
	Anti-cut Gloves	Cuts	Each use	Dispose	M	D	M	-	-	-
	Vinyl Disposable Gloves	Biohazardous materials	Each use	Dispose	-	M	-	-	-	-
	Heavy Duty Gloves	Injuries to Hands	Each use	Dispose	-	-	M	-	-	-
	Cold weather Gloves	Environmental Exposure	Each use	Dispose	-	-	-	-	-	M
	Rubber Gloves	Hot Water Burns	Each use	Dispose	M	-	-	-	-	-

PPE Hazard Assessment Certification Form

Name of workplace: _____ **Assessment conducted by**: _____

Workplace address: _____ **Signature of Assessor:** _____

Work area(s): _____ **Date of Signature:** _____

(Use a separate sheet for each job/task or work area)

EYES		
Work activities, such as ☐Abrasive Blasting ☐Sanding ☐Chopping ☐Sawing ☐Cutting ☐Grinding ☐Drilling ☐Hammering ☐Welding ☐Chipping ☐Soldering ☐Torch Brazing ☐Working Outdoors ☐Computer Work ☐Punch Press Operations ☐Other:_____.	Work related exposure to: ☐Airborne Dust ☐Dirt ☐UV ☐Flying Particles/Objects ☐Blood Splashes ☐Hazardous Liquid Chemicals Mists ☐Chemical Splashes ☐Molten Metal Splashes ☐Glare/High Intensity Lights ☐Laser Operations ☐Intense Light ☐Hot Sparks ☐Other:_____.	Can hazard be eliminated without the use of PPE ☐Yes ☐No If no, use: ☐Safety Glasses ☐Safety Goggles ☐Dust Tight Goggles ☐Face Shield ☐Shaded Impact Goggles ☐Prescription Goggles ☐Welding Helmet/Shield ☐Chemical Goggles ☐Chemical Splash Goggles ☐Laser Goggles ☐Shading/Filter (#_____) ☐Other:_____.
FACE		
Work activities, such as: ☐Cleaning ☐Foundry Work ☐Cooking ☐Welding ☐Siphoning	Work related exposure to: ☐Hazardous Liquid Chemicals ☐Extreme Heat ☐Extreme Cold ☐Potential Irritants ☐Other:_____.	Can hazard be eliminated without the use of PPE ☐Yes ☐No If no, use: ☐Face Shield

☐Mixing ☐Painting ☐Pouring Molten ☐Dip Tank Operations ☐Metal Pouring ☐Working Outdoors ☐Others:_____.		☐Shading/Filter (#____) ☐Welding Shield ☐Other:_____.
HEAD		
Work activities, such as: ☐Building Maintenance ☐Confined Space Operations ☐Construction ☐Electrical Wiring ☐Walking/Working Under Catwalks ☐walking/Working on Catwalks ☐Walking/Walking Under Conveyor Belts ☐Working With/Around Conveyor Belts ☐Working/Walking Under Crane Loads ☐Other:_____.	Work related exposure to: ☐Beams ☐Pipes ☐Exposed Electrical Wiring or Components ☐Falling Objects ☐Fixed Objects ☐Machine Parts ☐Other:_____.	Can hazard be eliminated without the use of PPE ☐Yes ☐No If no, use: ☐Protective Helmet ☐Type A (Low Voltage) ☐Type B (High Voltage) ☐Type C ☐Bump Cap (not ANSI approved) ☐Hair Net or Soft Cap ☐Other:_____.
HANDS/ARMS		
Work activities such as: ☐Baking ☐Material Handling ☐Cooking ☐Grinding ☐Sanding ☐Sawing ☐Welding ☐Hammering ☐Working with Glass	Work related exposures to: ☐Blood ☐Irritating Chemicals ☐Tools or Materials that Could Scrape or Cut ☐Extreme Heat ☐Extreme Cold ☐Animal Bites ☐Electric Shock ☐Vibration ☐Musculoskeletal Disorders (MSD)	Can hazard be eliminated without the use of PPE ☐Yes ☐No If no, use: ☐Gloves ☐Chemical resistance ☐Liquid/Leak Resistant ☐Temperature Resistant ☐Abrasion/Cut Resistant ☐Slip Resistant

☐Using Power Tools ☐Using Computers ☐Working Outdoors ☐Using Knives ☐Dental and Health Care Services ☐Garbage Disposal ☐Other:_____.	☐Sharps Injury ☐Other:_____.	☐Latex or Nitrite ☐Anti-Vibration ☐Protective Sleeves ☐Ergonomic Equipment:_____. ☐Other:_____.
FEET/LEGS		
Work activities such as: ☐Building Maintenance ☐Construction ☐Demolition ☐Food Processing ☐Foundry Work ☐Working Outdoors ☐Logging ☐Plumbing ☐Trenching ☐Use of Highly Flammable Materials ☐Welding ☐Other:_____.	Work related exposure to: ☐Explosive atmospheres ☐Explosives ☐Exposed Electrical Wiring or Components ☐Heavy Equipment ☐Slippery Surfaces ☐Impact from Objects ☐Pinch Points ☐Crushing ☐Slippery/Wet Surface ☐Sharps Injury ☐Blood ☐Chemical Splash ☐Chemical Penetration ☐Extreme Heat/Cold ☐Fall ☐Other:_____.	Can hazard be eliminated without the use of PPE ☐Yes ☐No If no, use: ☐Safety Shoes and Boots ☐Toe Protection ☐Metatarsal Protection ☐Electrical Protection ☐Heat/Cold Protection ☐Puncture Resistance ☐Chemical Resistance ☐Anti-Slips Soles ☐Legging or Chaps ☐Foot-Leg Guards ☐Other:_____.
BODY/SKIN		
Work activities such as: ☐Baking or Frying ☐Battery Changing ☐Dip Tank Operations ☐Fiberglass Installation	Work related exposure to; ☐Chemical Splashes ☐Extreme Heat ☐Extreme Cold ☐Sharp of Rough Edges	Can hazard be eliminated with the use of PPE ☐Yes ☐No If no, use:

☐Sawing ☐Welding ☐Other:_____.	☐Irritating Chemicals ☐Other:_____.	☐Vest, Jacket ☐With Long Sleeves ☐Coveralls, Body Suit ☐Raingear ☐Apron ☐Welding Leathers ☐Abrasion/Cut Resistance ☐Other:_____.
BODY/WHOLE		
Work activities such as: ☐Building Maintenance ☐Construction ☐Logging ☐Computer Work ☐Working Outdoors ☐Utility Work ☐Other:_____.	Work related exposure to: ☐Working from Heights of 10 feet or More ☐Impact from Flying Objects ☐Impact from Moving Vehicles ☐Sharps Injury ☐Blood ☐Electrical/Static Discharge ☐Hot Metal ☐Musculoskeletal Disorders (MSD) ☐Sparks ☐Chemicals ☐Extreme Heat/Cold ☐Elevated Walking/Working Surface ☐Working Near Water ☐Injury from Slip/Trip/Fall ☐Other:_____.	Can hazard be eliminated without the use of PPE ☐Yes ☐No If no, use: ☐Fall Arrest/Restraint ☐Traffic vest ☐Static Coats/Overalls ☐Flame Resistance Jacket/Pants ☐Insulated Jacket ☐Cut Resistant Sleeves/Wristlets ☐Hoists/Lifts ☐Ergonomic Equipment:_____. ☐Other:_____.
LUNGS/RESPIRATORY		
Work activities such as: ☐Cleaning ☐Mixing ☐Painting ☐Fiberglass Installation	Work related exposure to: ☐Dust or Particulate ☐Toxic Gas/Vapour ☐Chemical irritants (Acids) ☐Welding Fumes	Can hazard be eliminated without the use of PPE ☐Yes ☐No If no, use:

☐Compressed Air or Gas Operations ☐Confined Space Work ☐Floor Installation ☐Ceiling Repair ☐Working Outdoors ☐Other:_____.	☐Asbestos ☐Pesticides ☐Organic Vapours ☐Oxygen Deficient Environment ☐Paint Spray ☐Extreme Heat/Cold ☐Other:_____.	☐Dust Mask ☐Face Shield ☐Disposable Particulate Respirator ☐Organic Cartridge ☐Replaceable Filter Particulate w/ Cartridge ☐Half Face Respirator ☐Full Face Respirator ☐PAPR (Air Recycle) Cartridge ☐PPSA (Air Supply) ☐Other:_____.
EARS/HEARING		
Work activities such as: ☐Generator ☐Ventilation Fans ☐Motors ☐Sanding ☐Pneumatic Equipment ☐Punch or Brake Presses ☐Use of Conveyors ☐Grinding ☐Machining ☐Routers ☐Sawing ☐Sparks ☐Other:_____.	Work related exposure to: ☐Loud Noises ☐Loud Work Environment ☐Noisy Machines/Tools ☐Punch or Break Presses ☐Other:_____.	Can hazard be eliminated without the use of PPE ☐Yes ☐No If no, use: ☐Earmuffs ☐Ear Plugs ☐Leather Welding Hood ☐Other:_____.

34.0 POWERED MOBILE EQUIPMENT

Key Responsibilities

Safety Manager

- The designated Safety Manager is responsible for developing and maintaining the powered mobile equipment program. 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 program.
- Follow all requirements, report unsafe conditions, and follow all posted requirements.

Powered Mobile Equipment Operator Responsibilities

The equipment operator of mobile equipment shall be directly responsible for the safe operation of that equipment and shall comply with all laws and regulations governing the operation of the equipment.

The operator of mobile equipment is the only worker permitted to ride the equipment unless the equipment is a worker transportation vehicle.

The operator of powered mobile equipment must report to Mobile Energy Systems any conditions affecting the safe operation of the equipment, operate the equipment safely, maintain full control of the equipment at all times, use the seat belts and other safety equipment, ensure that passengers use the seat belts and other safety equipment and keep the cab/ floor free of materials, tools, or other objects that could interfere with the operation of the controls or create a tripping or other hazard to the operator or other occupants of the equipment.

Vehicles are immobilized against accidental movement when left unattended. A vehicle left unattended shall be immobilized and secured against accidental movement.

Powered mobile equipment is secured against unintentional movement when it is not in use. A person must not leave the controls of powered mobile equipment unattended unless the equipment is secured against unintentional movement by an effective method of immobilizing the equipment. A person must not leave the controls of powered mobile equipment unattended unless a suspended or elevated part of the powered mobile equipment is either landed, secured in a safe position, or both.

Under no circumstances will a worker be transported on a vehicle or a unit of powered mobile equipment unless the worker is seated and secured by a seat belt or other restraining device that is designed to prevent the worker from being thrown from the vehicle or equipment while the vehicle or equipment is in motion. This same zero tolerance requirement applies to the fact that no worker is transported on the top of a load that is being moved by a vehicle or a unit of powered mobile equipment.

Signallers are required when mobile equipment operators do not have a full view of the intended path of travel. Where the operator of a vehicle, mobile equipment, crane, or similar material handling equipment does not have a full view of the intended path of travel of the vehicle, mobile equipment, crane, or similar material handling equipment or its load, the vehicle, mobile equipment, crane, or similar material handling equipment shall only be operated as directed by a signaller who is a competent person and who is stationed in full view of the operator, with a full view of the intended path of travel of the vehicle, mobile equipment, crane, or similar material handling

equipment and its load and clear of the intended path of travel of the vehicle, mobile equipment, crane, or similar material handling equipment and its load.

Under no circumstance will a worker be directed, required or permitted to work under or remain in the range of a swinging load or part of unit of powered mobile equipment due to the inherent danger.

A safe limit of approach distance is maintained at all times. Where a vehicle, crane, or similar equipment is operated near a live power line carrying electricity at more than 750 volts, every part of the equipment shall be kept at least the minimum distance from the live power line for the particular voltage.

Equipment Requirements

Mobile equipment in which the operator cannot directly or by mirror or other effective device see immediately behind the machine must have an automatic audible warning device which activates whenever the equipment controls are positioned to move the equipment in reverse, and if practicable, is audible above the ambient noise level.

Mobile equipment operators are protected from falling objects by an overhead cab or guard. All self-propelled vehicles shall be equipped with a roof, a protective screen, a cab or a structure to protect the driver where there is a risk of falling objects or if the driver risks impact with an object being handled.

Mobile equipment used for lifting or hoisting or similar operations shall have a permanently affixed notation stating the safe working load capacity of the equipment and the notation must be kept legible and clearly visible to the operator.

The operator's manual for powered mobile equipment must be readily available to a worker who operates the equipment.

Mobile equipment is equipped with functioning lights where necessary. Mobile equipment shall, when lighting conditions are such that its operation may be hazardous, have head lights and taillights that provide adequate illumination.

Seatbelts are required to be used on all powered mobile equipment fitted with rollover protection (ROPS). Mobile Energy Systems must ensure that powered mobile equipment fitted with ROPS has seat belts for the operator and passengers.

Adequate and approved fire suppression equipment shall be provided on mobile equipment.

Materials and equipment being transported shall be loaded and secured in a manner to prevent movement which could create a hazard to workers or another person. This includes keeping the cab, floor and deck of mobile equipment free of material, tools or other objects which could create a tripping hazard, interfere with the operation of controls or be a hazard to the operator or other occupants in the event of an accident.

Pre-Use and Regular Inspections, Maintenance and Repairs of Powered Mobile Equipment

Mobile Energy Systems must ensure that powered mobile equipment is inspected by a competent worker for defects and conditions that are hazardous or may create a hazard. An inspection must be made in accordance with the manufacturer’s specifications. If an inspection indicates that powered mobile equipment is hazardous or potentially hazardous, Mobile Energy Systems must ensure that the health and safety of a worker who may be exposed to the hazard is protected immediately the powered mobile equipment is not operated until the defect is repaired or the condition is corrected, and the defect is repaired or the unsafe condition corrected as soon as reasonably practicable.

When a worker is required to work beneath elevated parts of mobile equipment including trucks, the elevated parts shall be securely blocked.

Pre-use inspections must be performed before operating powered mobile equipment. Before operating powered mobile equipment the operator must complete a visual inspection of the equipment and the surrounding area to ensure that the powered mobile equipment is in safe operating condition and that no worker including the operator is endangered when the equipment is started up.

Servicing, maintenance and repair of mobile equipment shall be done when the equipment is not in operation, except that equipment in operation may be serviced if the continued operation is essential to the process and a safe means is provided.

No person shall fill the fuel tanks of mobile equipment with gasoline or vaporizing liquids while the engine is running or while a person is smoking in or about the equipment or while there is a known source of ignition in the immediate vicinity.

Exposed moving parts on mobile equipment which are a hazard to the operator or to other workers must be guarded according to a standard acceptable to local provincial or territorial or federal regulations and if a part must be exposed for proper function it must be guarded as much as is practicable consistent with the intended function of the component.

A written record of the inspections, repairs and maintenance carried out on the powered mobile equipment is kept at the workplace and made readily available to the operator of the equipment. As soon as is reasonably practicable the defect must be repaired or the unsafe condition is corrected.

Training

Only competent persons may operate powered mobile equipment. A worker must not operate powered mobile equipment unless the worker is trained to safely operate the equipment, has demonstrated competency in operating the equipment to a competent worker designated by Mobile Energy Systems, is familiar with the equipment's operating instructions and is authorized by Mobile Energy Systems to operate the equipment.

Training shall be documented and maintained in the worker's files.

35.0 RESPIRATORY PROTECTION

Respiratory Program Administrator

Overall responsibility for the respiratory protection program is assigned to the Mobile Energy Systems Safety Manager in order to ensure that specific requirements are followed. 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 site manager. The responsibilities of the Program Administrator will include, but are not limited to:

- Conducting an assessment of the nature of airborne contaminants, the concentration or likely concentration of any airborne contaminants, the duration or likely duration of the workers exposure, the toxicity of the contaminants, the concentration of oxygen, the warning properties of the contaminates and the need for emergency escape.
- 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 are always available at each work site. The Program Administrator may delegate this duty but will retain overall responsibility. The person(s) to whom this duty has been delegated is the site manager.
- Ensuring that only respirators that have been approved ordered and used. Under no circumstances will respirators be used that have not been approved by current CSA standards.
- 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 workers 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 prior to assigning any worker to a task that requires use of a respirator.
- Ensuring that all respirator users are fit-tested at least annually and more often if other local regulatory 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 worker 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 surveillance of workers wearing respirators shall leave the area they are wearing respirators in to wash, change cartridges or if they detect break through or resistance with their PPE.
- Ensuring that the elements of the Respiratory Protection Code of Practice 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 worker.

PPE and Assessing Respiratory Hazards in Work Areas

Workers must wear respiratory protective equipment when airborne contaminants exceed occupational exposure limits. Mobile Energy Systems must determine the degree of danger to a worker at a work site and whether the worker needs to wear respiratory protective equipment if a worker is or may be exposed to an airborne contaminant or a mixture of airborne contaminants in a concentration exceeding their occupational exposure limits. Mobile Energy Systems must provide and ensure the availability of the appropriate respiratory protective equipment to the worker at the work site. A worker must use the appropriate respiratory equipment provided by Mobile Energy Systems.

Respiratory protective equipment must be selected based on respiratory hazards. This program describes the type of equipment that is used in the workplace and the level of protection it affords. In making a determination of what equipment to use, Mobile Energy Systems must consider:

- the nature and exposure circumstances of any contaminants or biohazardous material,
- the concentration or likely concentration of any airborne contaminants,
- the duration or likely duration of the worker's exposure,
- the toxicity of the contaminants,
- the concentration of oxygen,
- the warning properties of the contaminants, and
- the need for emergency escape.

For work performed at a client's location, Mobile Energy Systems must ensure that workers observe posted respiratory hazard signage and implement controls as needed.

A program of monitoring potential worker 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.

When Respiratory Equipment is Required

Respiratory protective equipment is used where engineering controls are not practicable. Any Mobile Energy Systems establishment whose operation could cause the emission of gases, dusts, fumes, vapours and mists into the work area shall be operated so that the concentration of any gas, dust, fume, vapour or mist does not exceed, in the respiratory zone of the workers, occupational exposure limits.

Mobile Energy Systems establishments shall be designed, constructed, fitted or provided with an evacuation system for gases, dusts, fumes, vapours or mists. For work involving maintenance, inspection or repairs outside the workshop, or while waiting for measures to be implemented, Mobile Energy Systems shall provide the worker, free-of-charge, with respiratory protective equipment and ensure that he uses it.

Selection Criteria for Respiratory Protective Equipment

The Mobile Energy Systems program includes criteria to assist workers in selecting the proper respiratory protective equipment for each particular situation. The program includes a description of the various types of equipment provided to workers, including air purifying respirators and/or supplied air respirators

Identification of Respiratory Hazards

Due to the many varied work locations of Mobile Energy Systems the specific identification of respiratory hazards will be contained in the site specific safety plan. However, common respiratory hazards that will be encountered include:

- Dust, Fumes, Gases,
- Chemical particles
- Oxygen Deficiency

Once the specific respiratory hazard is identified then the proper respirator will be selected. To aid in the selection process the safety manager will use the following to identify the proper respirator and filters or cartridges, where appropriate.

Standard for Respirators

Respiratory protective equipment must meet CSA Standards. Mobile Energy Systems must ensure that respiratory protective equipment used at a work site is selected in accordance with CSA Standard Z94.4-02, Selection, Use, and Care of Respirators (or current version).

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

Nature of Hazard

Gaseous Contaminants

- Inert gases (helium, argon, etc.), which do not metabolize in the body but displace air to produce an oxygen deficiency.
- Acid gases (SO2, H2S, HCl, etc.) which are acids or produce acids by reaction with water.
- Alkaline gases (NH3, etc.), which are alkalis or produce alkalis by reaction with water.
- Organic gases (butane, acetone, etc.), which exist as true gases or vapours 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)

Concentration of Contaminant

The concentration of contaminant will determine the model and type of respirator and cartridges or filters to be used. The concentration is based on a sampling of the atmosphere.

Location of Hazardous Area

(Confined Space, nearby contaminants, etc.)

Employee Activity

(Extreme heat, cold, welding hood requirement, etc.)

Respirator Equipment

Types of Respirators

Air-Purifying Respirators

Air-purifying respirators can be either full-face or half masks with mechanical or chemical cartridges to filter dusts, mists, fumes, vapours or gases. They are available in three types: disposable, reusable, and disposable/reusable.

- Disposable air-purifying respirators are intended to be used once or until the cartridge expires. The cartridges are permanently attached and have no replacement parts.
- Reusable air-purifying respirators use both replaceable cartridges and parts. NOTE: The replaceable cartridges and parts must be from the same manufacturer.
- Disposable/reusable air-purifying respirators have no replaceable parts except cartridges.

Cartridge respirators and canister masks shall be marked to identify the nature of protection provided, shall not be used otherwise than as marked, shall not be used for periods of time in excess of their usefulness and shall not be used in atmosphere deficient in oxygen.

Powered Air-Purifying Respirators

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, vapours 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, either contacts the Mobile Energy Systems Safety Manager or a qualified on-site safety representative of the client. You may also consult the Safety Data Sheet of the substance that needs to be filtered.

All cartridges and/or filters shall be changed at the beginning of each shift.

Cartridge respirators cannot provide protection in all instances. Some of their limitations include:

- They do not provide oxygen and so cannot be used in oxygen deficient atmospheres.
- They cannot be used to enter atmospheres that are Immediately Dangerous to Life or Health (IDLH)
- They should not be used to enter unknown atmospheres.
- Negative pressure respirators all leak to some degree. Except for specialty eyewear approved by local regulatory requirements use with positive pressure full face piece, nothing is permitted which intrudes between the face piece and the face, or which interferes with the face seal of the face piece. Facial hair (or any hair) in the sealing surface of the respirator will cause greater leaks. RESPIRATOR USERS MUST NOT WEAR BEARDS, LONG MUSTACHES OR SIDEBURNS THAT WILL INTERFERE WITH RESPIRATOR SEAL.
- Weight gain or loss of 10 or more pounds, dentures or facial scars will affect the seal of the respirator to your face. If any of these conditions occur, you should recheck the fit of your respirator.
- Standard eyeglasses with attached temple bars will interfere with the seal of full face respirators. If full face protection is needed, eyeglass inserts that are filled with a prescription are available and should be used.

Mixing parts from other respirator manufacturers is prohibited. This includes airline hoses, valves, gaskets, cartridges, etc. For example, do not use North cartridges or calve gaskets with an MSA product.

Maintenance and Inspection Requirements for Respiratory Protective Equipment

Mobile Energy Systems must ensure that respiratory protective equipment kept ready to protect a worker is stored in a readily accessible location, stored in a manner that prevents its contamination, maintained in a clean and sanitary condition, inspected before and after each use to ensure it is in satisfactory working condition and serviced and used in accordance with the manufacturer's specifications.

Inspection of compressed air cylinders must be done in accordance with CSA Standard CAN/CSA-Z94.4-02, Selection, Use, and Care of Respirators. Self-contained breathing apparatus, including regulators, must be serviced and repaired by qualified persons.

Compressed air cylinders must be hydrostatically tested in accordance with CSA Standard CAN/CSA-B339-96, Cylinders, Spheres, and Tubes for the Transportation of Dangerous Goods.

Breathing air must meet CSA Standards. Mobile Energy Systems will ensure that air used in a self-contained breathing apparatus or an airline respirator is of a quality that meets the requirements of Table 1 of CSA Standard Z180.1-00 (R2005), Compressed Breathing Air and Systems (or current version) and does not contain a substance in a concentration that exceeds 10 percent of its occupational exposure limit. The CSA Standard specifies that breathing air samples should be collected and analyzed at least once every six months.

Maintenance records for air supplying respirators, powered air purifying respirators and for sorbent cartridges and canisters will be maintained.

All respiratory protective devices are to be regularly cleaned and maintained in an approved manner and ensure that the respiratory protective device is kept, when not in use, in a convenient and sanitary location in which the respiratory protective device is not exposed to extremes of temperature or to any contaminant that may inactivate the respiratory protective device.

Respirator Inspection

Mobile Energy Systems shall ensure that any respiratory protective device for emergency use is thoroughly inspected by a competent person at least once a month and after each use. The date of every inspection made and the name of the person who made the inspection are recorded and conspicuously displayed at the location where the respiratory protective device is stored and any defects identified during the inspection carried out are corrected immediately by a competent person.

Mobile Energy Systems shall ensure that respirators are inspected additionally as follows:

- All respirators used in routine situations shall be inspected by the worker before each use and during cleaning. A check by the worker 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.

Cleaning and Storage Requirements

Respiratory protective equipment is properly cleaned and stored. The respiratory protective equipment shall be disinfected before being used by another worker and stored in a clean place.

Mobile Energy Systems shall ensure that respirators are cleaned and disinfected using the procedures in this Respiratory Protection Code of Practice, or procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness.

Respiratory equipment is not shared by workers, unless it is cleaned and sanitized before different workers use it. Respirators issued for the exclusive use of a worker shall be cleaned and disinfected 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.

Each individual who is assigned a cartridge respirator is responsible for seeing that the respirator is cleaned, inspected and properly stored.

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 and sanitized. Reassemble face piece, replacing filters, cartridges, and canisters where necessary. Test the respirator to ensure that all components work properly.

Respiratory protective equipment kept ready to protect a worker must be:

- Stored in a readily accessible location,
- Stored in a manner that prevents its contamination,
- Maintained in a clean and sanitary condition,
- Inspected before and after each use to ensure it is in satisfactory working condition, and
- Serviced and used in accordance with the manufacturer’s specifications.
- Respirators should be stored in a readily accessible location in plastic, re-seal bags or in plastic tubs or bins with the user’s name clearly identified and are not exposed to extremes of temperature or to any contaminant that may inactivate it.
- Respirators cannot be stored in toolboxes, on nails or in areas where they may become contaminated, distorted or otherwise damaged.
- Respirators shall be maintained in clean and sanitary condition, inspected before and after use and serviced properly.
- Respiratory protective equipment that is not used routinely but is kept for emergency use is inspected at least once every calendar month by a competent worker to ensure it is in satisfactory working condition.

Repairs

Mobile Energy Systems 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 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

An IDLH or Oxygen Deficient Atmosphere

Supplied air respiratory protective equipment must be used in conditions that are immediately dangerous to life or health (IDLH). If Mobile Energy Systems determines that breathing conditions at a work site are or may become immediately dangerous to life or health (IDLH), Mobile Energy Systems must ensure that a worker wears self-contained breathing apparatus or an air-line respirator that is of a type that will maintain positive pressure in the face piece has a capacity of at least 30 minutes unless Mobile Energy Systems hazard assessment indicates the need for a greater capacity, provides full face protection in situations where contaminants may irritate or damage the eyes, in the case of an airline respirator, is fitted with an auxiliary supply of breathable air of sufficient quantity to enable the worker to escape from the area in an emergency, and in the case of a self-contained breathing apparatus, has an alarm warning of low pressure.

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.

Health Surveillance

General

Mobile Energy Systems shall provide a medical evaluation to determine the worker's ability to use a respirator, ***before*** the worker is fit tested or required to use the respirator in the workplace.

Medical Evaluation

The first step in health surveillance is to have the worker complete a questionnaire to identify any health conditions they have that would affect their ability to use a respirator. The Sample Respirator User Screening Form in Appendix E, CSA Standard Z94.4-02, Selection, Use and Care of Respirators provides an example of what could be included in a questionnaire when conducting health surveillance for workers wearing respiratory protection.

Privacy of worker's health information must be protected and must be considered by Mobile Energy Systems. If a worker indicates that they have a health conditions on a questionnaire, they should be assessed by a health professional. Specific health information should only go to the health care professional. The CSA Standard defines a health care professional as "an individual who is licensed by a provincial licensing authority or equivalent to practice medicine or nursing and who possesses relevant experience and knowledge in the field of occupational health and safety".

Mobile Energy Systems outlines the procedure (process) to be followed for health surveillance as part of the Respiratory Code of Practice. When the worker goes to the health professional to have the health surveillance completed, Mobile Energy Systems should also provide information about the type of respiratory protection to be worn, work activities the worker is required to carry out, approximately how many hours per day the respiratory protection is required to be worn and whether worker is required to wear other personal protective equipment in addition to the respirator.

After the health surveillance is completed, the health professional provides Mobile Energy Systems with documentation indicating whether the worker is fit to wear respiratory protection or has limitations.

Mobile Energy Systems will ensure that a review of the fitness to wear a respirator is included at the time of each fit testing to ensure that the respiratory protective equipment and medical status have not changed since the initial evaluation.

Additionally, there may be circumstances when a worker normally able to wear respiratory equipment may be unable to do soon a short term basis. For example, a worker, returning to work following surgery or after recovering from a medical condition, may not be able to wear a respirator.

Recordkeeping

The medical questionnaire and examinations shall be administered confidentially during the worker's normal working hours or at a time and place convenient to the worker. The medical questionnaire shall be administered in a manner that ensures that the worker understands its content.

Mobile Energy Systems shall provide the worker with an opportunity to discuss the questionnaire and examination results with the PLHCP.

Records of medical evaluations required by this section must be retained and made available in accordance with regulatory requirements. Records will be treated confidentially and maintained on file in the Mobile Energy Systems corporate office by the Safety Manager.

Mobile Energy Systems shall provide the PLHCP with a copy of the Mobile Energy Systems Respiratory Protection Code of Practice.

Medical Determination

In determining the worker's ability to use a respirator, Mobile Energy Systems shall obtain a written recommendation regarding the worker'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 worker, or relating to the workplace conditions in which the respirator will be used, including whether or not the worker 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 worker with a copy of the PLHCP's written recommendation.

All recommendations are to be sent to the Mobile Energy Systems Safety Manager.

Respirator Fit Testing and Effective Facial Seal of Respiratory Protective Equipment

Users of respiratory protective equipment must be properly fit tested. Mobile Energy Systems must ensure that respiratory protective equipment that depends on an effective facial seal for its safe use is correctly fit tested and tested in accordance with CSA Standard Z94.4-02, Selection, Use and Care of Respirators (or current version).

Effective Facial Seal of Respiratory Protective Equipment

- Mobile Energy Systems must ensure that, if a worker is or may be required to wear respiratory protective equipment and the effectiveness of the equipment depends on an effective facial seal, the worker is clean shaven where the face piece of the equipment seals to the skin of the face.
- A worker required to wear a respirator which requires an effective seal with the face for proper functioning must be clean shaven where the respirator seals with the face. Except for specialty eyewear approved by the Board for use with positive pressure full face piece respirators, nothing is permitted which intrudes between the face piece and the face, or which interferes with the face seal of the face piece.

Conducting a Positive or Negative Pressure Test (Seal Check)

- Before each use of a respirator which requires an effective seal with the face for proper functioning, the worker must perform a positive or negative pressure user seal check in accordance with the latest CSA Standard - CAN/CSA-Z94.4-02, Selection, Use, and Care of Respirators.

When Fit Testing is Done

- The respirator must be operating in a demand (negative pressure) air supply or non-powered air purifying mode.
- The tester must be qualified and trained to do the type of tests required. They are also required to maintain fit test records. The fit tester must also be able to wear a respirator and have worn one before.
- The wearer of the respirator must be clean-shaven where the respirator will contact the skin of the face prior to fit testing or fit testing may not be done.
- The wearer must be able to wear the respirator safely.

Fit Testing Must Be Done When

- the respirator is first issued,
- at least every two years if there is no change in the respirator or wearer,
- if there is a change in the type, style, brand or size of respirator or
- if there is a change to the wearer's physical condition that could affect respirator fit.

Competency of the Fit Tester

Mobile Energy Systems will designate an individual at the work site to conduct fit testing or use a fit testing service. CSA Standard Z94.4-02 requires that the persons who conduct fit testing have a minimum level of training in the following areas:

- **General Knowledge:** knowledge covers an understanding of the respiratory protection program including local policies and procedures; respiratory hazards encountered in the workplace, their potential health effects on the worker and the means to control them; the rationale for the respirator selected; where to find information and procedure to follow in case of an emergency.
- **Health Surveillance:** The fit tester must have an understanding of the health surveillance process. The health surveillance must be conducted by a health care professional. Health surveillance involves a review and a written opinion by a health care professional of the suitability of the worker to safely use a respirator. This activity also requires the maintenance of accurate records.

The fit tester must have practical experience in the qualitative and quantitative fit testing method used to ensure that the user can achieve an acceptable seal with a specific tight-fitting respirator. The fit tester is also responsible for the maintenance of accurate records on fit testing done at the work site.

The fit tester must be able to demonstrate that they are adequately qualified to conduct fit-testing. This can be verified by a (dated) training card or certificate from a (competent) third party such as a training agency or respirator manufacturer. The fit tester should be able to demonstrate positive and negative pressure user seal checks and qualitative and/or quantitative fit testing to a competent person such as a trainer from a supplier or manufacturer.

If the fit tester will be doing qualitative fit testing, they must be able to properly demonstrate the method(s) that they use.

Fit testers administering quantitative fit tests will be able to

- calibrate the equipment
- perform the tests
- recognize invalid tests
- calculate fit factors
- ensure equipment is working properly

If after passing a QLFT or QNFT, the worker subsequently notifies Mobile Energy Systems, Program Administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the worker 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 accepted QLFT or QNFT protocol. The 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 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 CSA approved configuration, before that face piece can be used in the workplace.

Fit Test Procedures

The requirements in this section apply to all 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.

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 five 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 worker 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 worker cannot perform the test exercises the fit test shall not be performed and the worker 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

Mobile Energy Systems 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. Mobile Energy Systems 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 or Titanium Tetrachloride) Fit Test Procedure

The respirator must be fitted with a high efficiency (N100, P100 or R100) particulate cartridge and the wearer's eyes must be protected with appropriate goggles while this test is done. Alternatively, the wearer should keep their eyes closed throughout the complete test. If Mobile Energy Systems will be using lower efficiency respirators, e.g. N95, the irritant smoke test must be performed with the same make, model and size of respirator equipped with high efficiency filters. Otherwise, another type of qualitative fit test must be done.

The tester must ensure that they are protected from the irritant smoke while doing the fit test. The test must be done in a well-ventilated area or outdoors and the tester should stand upwind of the respirator wearer. The tester may need to also wear a respirator and eye protection while conducting the test, if they notice irritation effects from the test agent.

The irritant smoke test procedure is as follows:

- The wearer dons the respirator along with other protective equipment such as hearing protection, head protection, eye protection, that they will be wearing at the worksite.
- The wearer performs a negative and positive pressure seal check.
- The fit tester prepares the irritant smoke tube for the test. This is done by breaking both ends of the glass tube using a tube breaking tool provided by the manufacturer. A short length of rubber tubing is attached to the outlet end of the tube and the tubing and aspirator bulb provided by the manufacturer is attached to the inlet side. To produce smoke for the test, the aspirator bulb is gently squeezed to force air through the tube.
- The tester ensures that the respirator wearer is sensitive to the irritant smoke effects and familiar with the distinctive odour of the test agent. Before the fit test is done, the tester generates smoke within one metre of the wearer's face and the wearer then brings a handful of smoke within about 20 cm of their nose and inhales gently. The results should be an involuntary cough or verbal acknowledgement of the odour of the smoke.
- The tester releases the irritant smoke around the edges of the mask (from about 50 to 300 mm away), moving around the perimeter of the mask, with particular attention to the areas under the chin and at the bridge of the nose. If the wearer is using a quarter or half face mask, they must keep their eyes closed for this part of the test.
- The fit tester continues to release smoke around the perimeter of the mask while the wearer does a variety of exercises. These should take about 30 seconds each, be done in the following order and will consist of:
- normal breathing
- deep breathing
- turning head from side to side while the wearer inhales
- nodding the head up and down while the wearer inhales
- talking
- normal breathing
- The fit test is successful if the wearer does not detect the test agent by odour or coughs.

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. Mobile Energy Systems 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. Mobile Energy Systems 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 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 meet 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.

Emergency Planning

When workers may be exposed to or confined in a noxious, toxic or oxygen-deficient atmosphere, Mobile Energy Systems shall ensure that there shall be available during working hours a qualified supplier of emergency response providers trained in rescue procedures that have access to breathing apparatus which will enable them to effectively carry out rescue procedures.

Program Evaluation

Mobile Energy Systems shall conduct annual 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.

Mobile Energy Systems shall regularly consult workers required to use respirators to assess the workers' 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 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 worker is exposed;
- Proper respirator use under the workplace conditions the worker encounters; and
- Proper respirator maintenance.

Training

Workers wearing respiratory protective equipment must be thoroughly trained in its use and limitations. Training must include:

- information about the airborne contaminants, including their potential health effects and ways to detect the contaminants' presence,
- why the particular respiratory protective equipment was chosen, and information about its capabilities and limitations,
- how to properly put on and take off the respirator,
- how to test for a satisfactory fit, and
- familiarization with the Mobile Energy Systems Respiratory Protection Code of Practice.

This training needs to be updated regularly, whenever different respiratory protective equipment is used or work conditions change. Mobile Energy Systems requires annual training.

Mobile Energy Systems 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: _____
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 and 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: _____

Distribution: Employee Local File - Mobile Energy Systems Safety and Training Dept.

36.0 RIGGING

Key Responsibilities

Managers and Supervisors

- Are responsible to ensure that workers 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

- Employees are responsible to follow the requirements of this program and report any damage or needed repairs immediately to their supervisor.

Procedure

General

All rigging work shall be assembled, used, maintained and dismantled under the direct supervision of a competent and qualified workers 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

Mobile Energy Systems 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 rigger must be aware of the capacity of the rigging equipment and ensure that it is not exceeded.

The safe working load must be clearly marked on rigging equipment. Mobile Energy Systems must ensure that the maximum load rating of the rigging, as determined by the rigging manufacturer or a professional engineer, is legibly and conspicuously marked on the rigging. If it is not practicable to mark the rigging, Mobile Energy Systems must ensure the maximum load rating of the rigging is available to the workers at the work site.

The rated capacity of rigging equipment must not be exceeded. Mobile Energy Systems must ensure that rigging is not subjected to a load of more than:

- 10 percent of the breaking strength of the weakest part of the rigging, if a worker 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 a worker is not being raised or lowered, the maximum load must not exceed 25 percent of the ultimate breaking strength.

Mobile Energy Systems 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.

Mobile Energy Systems must ensure that the maximum load rating of the rigging as determined by the rigging manufacturer or a professional engineer is legibly and conspicuously marked on the rigging. If it is not practicable to mark the rigging, Mobile Energy Systems must ensure the maximum load rating of the rigging is available to the workers at the work site.

Rigging Inspection and Rejection Criteria

Pre-use inspections are completed before rigging is used. Mobile Energy Systems must ensure that rigging to be used during a work shift is inspected thoroughly prior to each period of continuous use during the shift to ensure that the rigging is functional and safe.

Defective equipment must be removed from service. Mobile Energy Systems must ensure that a sling is permanently removed from service if it is damaged or worn. Mobile Energy Systems must ensure that a worn, damaged or deformed hook is permanently removed from service if the wear or damage exceeds the specifications allowed by the manufacturer. See Sections 305-309 of the AB OHS Code for specific rejection criteria.

See below inspection requirements or rejection criteria.

Rigging

Mobile Energy Systems rigging meets ASME standards. Mobile Energy Systems must ensure that wire rope, alloy steel chain, synthetic fibre rope, metal mesh slings and synthetic fibre slings meet the requirements of ASME Standard B30.9-2006, Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks and Slings (or current version). Mobile Energy Systems must ensure that below-the-hook lifting devices, other than slings, meet the requirements of ASME Standard B30.20-2006, Below the Hook Lifting Devices (or current version).

Slings

- Mobile Energy Systems must ensure that a sling is permanently removed from service if it is damaged or worn.
- 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 fibre 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 labelled to indicate the slings maximum load or the slings maximum load is made readily available to workers.
- A sling must be stored to prevent damage when not in use.
- A sling with a knot must not be used.
- 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

Mobile Energy Systems must ensure that a worn, damaged, or deformed hook is permanently removed from service if the wear or damage exceeds the specifications allowed by the manufacturer.

A synthetic fibre web sling, worn or damaged hook must be permanently and immediately removed from service and Mobile Energy Systems shall not require or permit a worker to use a hook that is worn, damaged, deformed, cracked or otherwise defective or where the throat opening, measured at the narrowest point, 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.

Hooks have safety latches. Mobile Energy Systems must ensure that a hook has a safety latch, mousing, or shackle if the hook could cause injury if it is dislodged while in use.

All hooks shall be clearly labelled with the maximum load of the hook in a location where a worker using the hook can easily see the rating or the hooks maximum load is made readily available to workers.

Hooks have safety latches. Hoisting hooks must be equipped with a safety latch.

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 fibres.
- Discoloration or deterioration.
- Wire rope slings with:
- Kinking, crushing, bird caging, or other distortions.
- Evidence of heat damage.
- Cracks, deformation, damaged or worn end fittings or 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

Loads to be unhooked by a worker must be safely landed and supported before the rigging is detached.

Except as otherwise specified by this program or other local regulatory requirements, the maximum rated load of chains, attachments and other rigging equipment shall be warranted by the manufacturer of the equipment, or by a professional engineer, or by other persons whose qualifications are acceptable to the designated local governmental official or department.

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 a worker, 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 a worker 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 workers 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 (shoulder less) eyebolts are threaded in 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.

Signalling

Signals to the operator shall be in accordance with the standard hand signals prescribed by the applicable standard for the type of equipment. Specific requirements include:

- Each movement of equipment shall be proceeded by distinctive signals clearly discernible to all workers 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.
- A worker 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 workers within the area for which he or she is responsible are not endangered by the movement.
- Only a designated worker shall cause a signal to be given for the movement of equipment, but workers may cause a stop signal to be given and this signal shall be obeyed promptly and without question.
- A worker 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 signalling device that functions unreliably or in a way that might constitute a hazard to a worker 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.

Training

Training shall include:

- Documentation of worker, date of training and subject matter, including method used to test knowledge of material.

- No worker 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.

Sling Inspection Form

Date of Inspection	Serial number of sling	Type of sling (2-legged, 3 legged, etc.)	Type of material (chain, wire rope, synthetic)	Date purchased	Date placed into service	Date of last inspection	Sling Condition (Excellent, Good, Bad) Note: a sling with a Bad rating must be removed from service.	Date repaired (if applicable)	Date removed from service	Inspected by:

37.0 SAFE WORK PERMIT SYSTEM

Responsibilities

Management Responsibility

It is the responsibility of management to ensure that this requirement is distributed to all work locations and that it is understood by all supervisors, employees, and contractors who may be affected by it. It is the responsibility of management to provide the resources necessary for all work location to effectively implement the SWP system. Management shall periodically audit the application of this system to confirm compliance.

Supervisors Responsibility

It is the responsibility of supervisors to apply an enforce these procedures. To do this, supervisors shall ensure that employees and contractors have been thoroughly familiarized with the Safe Work Permit system and associated procedures and to advise management of any deficiencies. Normally, supervisors are responsible for authorizing SWPs and for ensuring that the safety precautions specified in the SWP continue to be met for the duration of the work. Under some circumstances, this responsibility may be designated to a subordinate.

Employees and Contractors Responsibility

It is the responsibility of employees and contractors to apply these procedures and to inform supervisors of any problems or deficiencies in their application. Specifically, employees and contractors shall immediately suspend work and inform the issuing authority (supervisor/operator) when the safety precautions outlined in the SWP cannot continue to be met.

Procedure

When planning and executing work that falls under the scope of this section, the following steps shall be taken:

- Consider both the obvious and hidden hazards associated with the task at hand. In some cases, it may be necessary to call upon expert advice regarding unfamiliar procedures or equipment.
- The supervisor/operator (issuing authority), together with affected workers, shall jointly plan the work and the safety precautions necessary for safe completion. This will entail reviewing all contents of the SWP form and may additionally require institution of special safety precautions not specifically mentioned on the SWP. If so, any applicable safety measure will be noted on the SWP.
- The issuing authority shall consider and implement related Codes of Practice, Standard Operating Procedures, and associated Safe Work Practices as they apply to the work at hand (e.g. respiratory protection, lockout/tag-out, confined space entry, etc.)
- When considering issuance of an SWP, the issuing authority shall take into account other concurrent or planned activities or events that may be impacted by the work. If concurrent, planned activities or events are incompatible with the work at hand, on or the other may have to be postpone.
- The issuing authority shall, prior to issuing a SWP, consider external factors such as: adverse weather (e.g. lightening), worker fatigue, worker competence, resources, etc.
- All adjacent workers or operations that may be affected must be notified, in advance, of the SWP being issued.
- The time period and number of workers that the SWP is valid for shall be agreed upon and entered in the SWP
- When both the issuing authority and worker(s) are satisfied that all of the safety precautions will be met prior to commencing work and will continue to be met for the duration of the work, the issuing authority and senior worker will sign the SWP. The SWP has now been “issued.”

- If not already involved in the process, all workers participating in the duties covered by the SWP must be informed of the conditions of the SWP and should sign off on the document.
- Both receiving authority and workers shall continuously monitory work conditions to ensure that safe working conditions, as specified in the SWP, are maintained. If at any time these conditions cannot be maintained, work shall immediately be suspended until conditions are again met.
- On occasion, the work situation may change enough that the conditions of the SWP are no longer valid. In these cases, work shall cease, the SWP will be cancelled, a new assessment of the task will be undertaken, and a new SWP will be issued
- When work has been satisfactorily completed and a return to normal operations been made, the SWP shall be returned to the issuing authority to debrief, close out, and be filed.

Transfer of Safe Work Permit

Under no circumstances may an SWP be transferred between workers, crews, or shifts. If a new worker, crew or shift must take over work covered by an SWP, the existing SWP shall be cancelled and the process for a new SWP begun. This is essential to ensure all hazards have been addressed and safety of the new workers, crew, or shift can be assured.

In some circumstances, where repetitive activities are performed on a routine basis (e.g. loading, transport, and unloading of product), a blanket SWP may be issued that applies for up to three months in duration. When the period has expired, the work should be re-assessed and the SWP be re-issued with any updates required.

Close Out

When a job falling under an SWP has been satisfactorily completed and operations have returned to normal, the worker responsible for the SWP shall return the SWP to the issuing authority. The issuing authority shall debrief the worker to ensure all of the required steps have been taken to ensure safe return to normal operations.

Depending on the task, the issuing authority and the worker may perform a joint inspection of the area where the work was performed before signing off. In addition, where there is a risk of post work fire hazards, a follow-up inspection or fire watch must be scheduled.

Other affected workers or operations shall be notified of the work completion/return to normal operations.

Finally, the issuing authority shall gather all copies of the SWP and file them for a period of three (3) years (if atmospheric monitoring activities have been included) or two (2) years (if atmospheric monitoring activities have not been included).

38.0 SCAFFOLDS AND TEMPORARY WORK PLATFORMS

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.

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 workers, 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 workers, and/or contractors have been trained in the use and inspection methods for scaffolds.
- Responsible for ensuring that all workers and contractors are aware that if an inspection discovers a defect, the scaffold cannot be used until repairs are made.
- Must ensure that only competent persons maintain and inspect an aerial device, elevating work platform, suspended powered platform, personnel lifting unit or scaffold.

Employees

- Responsible for following this program by inspecting the scaffolds daily and report any damages or repairs that may be needed to their supervisor.

Procedure

General Requirements

Mobile Energy Systems scaffolds meet CSA Standards. Mobile Energy Systems must ensure that scaffolds erected to provide working platforms during the construction, alteration, repair or demolition of buildings and other structures comply with CSA Standard S269.2-M87 (R2003), Access Scaffolding for Construction Purposes (or current version).

Scaffolds shall only be erected by a qualified third party who is competent to certify the scaffolding safe to use or by a competent worker who shall supervise the erection, alteration and dismantling of a scaffold.

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.

Mobile Energy Systems shall send to the Commission all plans including the installation and disassembling procedures signed and sealed by an engineer of the manufacturer, respecting:

- the shoring of an excavation or trench 6 metres or deeper;
- the shoring of concrete formwork;
- any wood scaffolding 9 metres or more in height;
- any metal scaffolding 18 metres or more in height;
- any outrigger scaffolding or suspended outrigger scaffolding extending out more than 2,4 metres from the finished face of a building;
- any temporary runway or platform designed to support workers and that is part of the forms;
- any platform, bucket or basket attached to a hoisting device for the transport of persons;
- any scaffolding used or installed on a vehicle or any equipment which may be moved;
- any anchoring device used for the installation of prefabricated concrete slabs or prefabricated buildings;
- any spreader bar used for the installation of prefabricated concrete slabs or prefabricated buildings;
- any suspended scaffolding or boatswain's chair

Assembly Utilization and Maintenance

Types of scaffolding include:

- Outrigger scaffolding
- Suspended scaffolding: Standard CAN3-Z271-M84 Safety Code for Suspended Powered Platforms.
- Boatswain's chair: Standard CAN3-Z271-M84 Safety Code for Suspended Powered Platforms
- Ladder jack scaffolding

- Mobile scaffolding
- Metal scaffolding
- Suspended scaffolding used by bricklayers

Utilization

Mobile Energy Systems shall see that no one works on scaffolding:

- which does not conform to the safety requirements,
- during a storm or a high wind period or
- when the platform is covered with ice, snow or sleet, unless the surface has been covered with an anti-slip substance.

Workers shall not work on scaffoldings with different levels unless protection has been provided over those working below in order to stop tools or other objects which may fall from a higher level.

A hoisting apparatus forming part of the installation shall be installed and operated according to the manufacturer's instructions.

In assembling metal scaffolding, it is prohibited to use any piece that has been reformed or straightened in such a way that its strength is diminished.

No vehicle or equipment which can be moved and on which scaffolding is installed or erected, may be moved when a worker is on the scaffolding.

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.

Scaffold load limits must not be exceeded. Loading on a scaffold never exceeds one quarter of its load limit. Mobile Energy Systems must ensure that the load to which a scaffold is subjected never exceeds the equivalent of one quarter of the load for which it is designed.

A scaffold used to carry the equivalent of an evenly distributed load of more than 367 kilograms per square metre will be designed and certified by a professional engineer, and constructed, maintained, and used in accordance with the certified specifications. All workers on a scaffold are informed of the maximum load that the scaffold is permitted to carry.

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 connections between the parts of a scaffold must be secure.

All platforms shall be overlapped 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.

A scaffold must be erected with the vertical members' plumb, and with the ledgers and bearers level. The base of a scaffold must have bearing plates or sills that rest on a solid surface and are sufficient to support the weight of the scaffold. The poles, legs and uprights of a scaffold must be securely and rigidly braced to prevent movement.

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.

Work shall not be performed on a scaffold during storms or high winds.

A scaffold must be effectively grounded if it is a metal scaffold and is located close to a high voltage energized electrical conductor or equipment, and a hazardous level of electrical charge is likely to be induced in the scaffold.

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

Scaffoldings shall be inspected before use by a competent person and that they are not used if defects are found:

- To ensure that the scaffold planks are free of defects before the planks are incorporated into a scaffold. Mobile Energy Systems may use a manufactured scaffold plank if the plank is used according to the manufacturer's recommendations and the manufactured scaffold plank is clearly marked with its maximum working load or the load specifications are readily available at the worksite.
- To ensure that where a metal scaffold is used it is inspected by a competent person prior to use and daily when in use for any damage, deterioration or weakening of the scaffold or the scaffolds components.
- Following any failure of the material;
- After any abnormal pressure or any incident which might have adversely affected the structure; and
- When re-used after any length work interruption.
- At a minimum, the following shall be inspected after erection, before the start of the day or beginning of a shift change:
- 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 a metal scaffold or a component of a metal scaffold is damaged, deteriorated or weakened so that the strength or stability of the scaffold is affected, Mobile Energy Systems shall ensure that the scaffold is not used until the scaffold or component is repaired or replaced by a competent person in accordance with the manufacturers or a professional engineers' specifications and recommendations. Additionally, if during the inspection, a defect or damage to the scaffold is discovered, the scaffold shall be tagged out and use prohibited until needed repairs are made.
- Mobile Energy Systems must keep records of inspection, maintenance, repair or modification for each elevating work platform, swing stage and permanent powered platform.

Signs and Tags

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.

Defective equipment shall be tagged out by using a weather resistant tag secured to the scaffolding structure on all four sides.

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.

Scaffold entry points are marked with color coded tags. Mobile Energy Systems must ensure that a scaffold is colour coded using tags at each point of entry indicating its status and condition as follows - a green tag with “Safe for Use”, or similar wording, to indicate it is safe for use, a yellow tag with “Caution: Potential or Unusual Hazard”, or similar wording, to indicate the presence of a potential or unusual hazard or a red tag with “Unsafe for Use”, or similar wording, to indicate it is not safe to use.

Modifications

Modification and repairs shall be performed by a qualified person, who is competent to certify the scaffolding safe to use.

Employees shall not perform any modifications or repairs, unless they have been trained and certified, failure to comply may result in disciplinary action and or termination.

Materials

Materials used for scaffolding shall be free from any defects which might impair their resistance.

The lumber used for scaffolding shall be in good condition, composed of long non-breaking fibres and free from any defect which might impair its strength; of a quality equivalent to No 1 spruce; barked, if it is rough timber, and without paint or any opaque coating.

The metal parts of a scaffold shall not be weakened neither by rust, nor by any corrosive material and if tubular elements are used, not be weakened by the effects of cold or heat.

Erection and Dismantling

The erection and dismantling of scaffoldings shall be performed:

- Under the supervision and control of a qualified person.
- With all safety measures taken to prevent objects from falling.
- Using tools appropriate to the type of scaffolding and being placed at the disposal of the workers.
- No scaffolding shall be left in such a state that it may create a hazard.

Training Requirements

The supervisor shall have each worker 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 include the following areas, as applicable:

- The nature of any electrical hazards, fall hazards and falling object hazards in the work area.
- 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 and the load-carrying capacities of the scaffolds used.
- Workers are made aware of the recognition and use of scaffold tags. A worker must not use a scaffold if it has a red tag, a green or yellow tag that has expired, or no tag at all.

The supervisor shall have each worker 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 Mobile Energy Systems has reason to believe that a worker lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, Mobile Energy Systems shall retrain each worker so that the requisite proficiency is regained.

- Retraining is required in at least the following situations:
- Where changes in scaffolding at the worksite present a hazard about which a worker 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 a worker has not been previously trained.
- Where inadequacies in an affected worker's work involving scaffolds indicate that the worker has not retained the requisite proficiency.

39.0 SHORT SERVICE EMPLOYEE PROGRAM (SSE)

Definitions

Short Service Employee: An employee or sub-contractor employee with less than six months' experience in the same job or with his/her present employer, or in his/her present role.

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.

Mobile Energy Systems shall monitor its employees, including SSE personnel, for HES awareness and compliance. If, at the end of the six-month period, the SSE has demonstrated competency and compliance with HSE policies and procedures Mobile Energy Systems may remove the hi-visibility identifier.

Subcontractors must adhere to the requirements of the SSE program. Subcontractors will manage their SSE in accordance with the requirements of this program.

Employees shall follow the requirements of this program.

Procedure

General

Supervisors will assure that all new, transferred and temporary employees have been through Mobile Energy Systems Safety Orientation and have a complete knowledge of the expectations for their job function. They will ensure that the employee will have all of the necessary training as determined by the hazard assessments pertinent to their work.

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.

Short Service Employee participants will wear high visibility orange hard hats and/or an SSE decal to help identify them. The Mobile Energy Systems shall comply with client designated hardhat color for SSE if orange is not acceptable and the method used to identify SSE workers will be communicated to the owner client.

SSE staff is mentored by an experienced / knowledgeable employee, who is fluent in the language that the short service employee best understands. Mobile Energy Systems shall have in place some form of mentoring process, acceptable to the owner operator, designed to provide guidance, assistance and development for SSE personnel. A mentor can only be assigned one crew that includes SSE and the mentor must remain onsite with them. Mentors will set the proper safety example for any Short Service Employee assigned them.

An SSE may not work alone. A work crew of less than five shall have no more than one SSE.

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).

Prior to having short service employees status removed, the Short Service Employee will undergo a competency assessment with their mentor to confirm they have the skills and knowledge to be able to perform their tasks according to company and industry standards.

Notification and Communication of Information Regarding SSE on the Job Processes

Prior to the job mobilization Mobile Energy Systems will communicate/notify the owner client project coordinator, contractor contact or on-site supervisor if SSE personnel are present on work crews. The project coordinator, contractor contact or on-site supervisor will determine approval status of the crew makeup.

Mentors will converse daily with those persons 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.

40.0 TOILETS AND WASHING FACILITIES

Scope

This section will outline Mobile Energy Systems's responsibilities to regarding toilet facilities at mobile or temporary work sites and the responsibilities to provide workers with access to at least one hand cleaning facility.

Guidelines

Mobile Energy Systems must not place unreasonable restrictions on a workers use of, or access to, any of the facilities mentioned in this section.

Drinking Fluids

Mobile Energy Systems must ensure that an adequate supply of drinking fluids is available to workers at a worksite, this includes potable water.

Mobile Energy Systems must ensure that an adequate supply of single use drinking cups are provided in a sanitary container located by the water supply, unless water is provided by a drinking fountain.

If there are outlets at a worksite that requires both potable water and non-potable fluid, Mobile Energy Systems must ensure that the outlet for potable water has a prominent label that clearly indicates drinking water.

Toilet Facilities

Mobile Energy Systems must ensure that a worksite has the required number of toilets for each gender that are required in separate toilet facilities. Toilet facilities must be located so they are readily accessible to the workers who will use it.

Number of Workers of each gender	Number of Toilets for that gender
1-10	1
11-25	2
26-50	3
51-75	4
76-100	5
> 100	6 Plus 1 for each additional 30 workers of the gender in excess of 100

Hand Cleaning Facilities

Mobile Energy Systems must ensure that at least one wash basin or hand cleaning facility is provided in a toilet facility. An additional one wash basin or hand washing facility if three or more toilets are required.

Mobile Energy Systems may substitute circular wash fountains for wash basins or hand cleaning facilities on the basis that each 500 millimeters of the fountain's circumference is equivalent to one wash basin or hand cleaning facility.

Supplies and Waste Receptacles

Mobile Energy Systems must ensure that a toilet facility at the worksite has:

- Toilet paper available at each toilet
- Hand cleaning agents and single-use towels of cloth or paper, or air hand drying equipment, at each wash basin or hand cleaning facility
- A covered disposal container for feminine hygiene products near each toilet used by women.

Condition of Facilities

Mobile Energy Systems must ensure that a lunchroom, change room, toilet, urinal, wash basin, hand cleaning facility, circular fountain or shower at a worksite is clean, sanitary, and operational.

Mobile Energy Systems must ensure that changing rooms, lunchrooms, toilet facilities and rooms in which a wash basin or shower are located are not used as storage areas for materials unless the storage facilities are properly constructed for those materials.

Exception

A food establishment or other worksite that has specific regulations outlined under the Public Health Act

A mobile or temporary worksite at which work is being performed for no more than 5 working days if Mobile Energy Systems has pre-arranged for workers to use local toilet facilities during that period.

41.0 TRAFFIC CONTROL

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

Mobile Energy Systems 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 traffic that may endanger the safety of any worker.

- Mobile Energy Systems shall ensure the use of signs, barricades and other control measures to protect workers from traffic hazards. Where workers are working on or near a road where they may be injured by vehicular traffic, a system must be in place to protect the workers. Control measures include:
    - warning signs;
    - barriers;
    - barricades;
    - lane control devices;
    - flashing lights;
    - flares;
    - conspicuously identified pilot vehicles;
    - automatic or remote controlled traffic control systems;
    - proper reflective clothing and equipment for day and night or low visibility operations;
    - speed restrictions;
    - one or more workers who are designated and act as flag persons.
- Traffic control personnel must wear high visibility work apparel. To ensure optimal visibility, the traffic control person should be provided with a high visibility traffic control paddle and high visibility apparel (brightly colored vest with reflectorized stripes, safety headgear with reflectorized tape, reflective wrist and leg bands, white gloves).
- 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. During hours of darkness or when there is poor visibility, the traffic control person should be equipped 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

Mobile Energy Systems must ensure that workers required to perform traffic control duties are adequately trained in their responsibilities and the safe work practices.

Mobile Energy Systems must 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.

42.0 TRANSPORTATION (COMMERICAL VEHICLES)

General Requirements

Drivers of Mobile Energy Systems vehicles only operate the company vehicles applicable to their license, class conditions and endorsements.

All drivers of Mobile Energy Systems vehicles hold a valid operator's license while driving company vehicles

All drivers must report all driving violations including those received while driving their own private vehicles

All drivers must report a change in the status of a person's driver's license immediately (notify the appropriate supervisor and inform them of the changes.)

The driver must follow any driver's license restrictions imposed upon their specific license.

Vehicles shall be driven with headlights on at all times. This action increases other drivers' ability to see your vehicle and greatly reduces the odds of being involved in a traffic incident.

The driver and passengers will comply with all local, province, and federal laws, including Department of Transportation regulations and codes (if applicable), while operating or riding in a Mobile Energy Systems vehicle.

Use of radar/laser detection and/or jamming devices is prohibited in all company owned, leased, rented or in vehicle where personnel are being reimbursed for mileage.

Supervisory personnel will assist in determining the safe condition of a company vehicle. No person is allowed to approach, work on or under the raised body of a vehicle without the vehicle being adequately supported with "jack" stands.

The designated Safety Officer for Mobile Energy Systems has the authority to hire and terminate drivers.

Seatbelts

All personnel riding in a vehicle that is owned/leased/rented by Mobile Energy Systems must wear a seat belt at all times. The driver has the responsibility of ensuring that all passengers are wearing seat belts. The driver will also ensure that passengers only ride in designated passenger areas.

Speed Limits

No driver of any vehicle that is owned/leased/rented by the company shall exceed any posted speed limit on any roadway.

Drugs and Alcohol Use

Drivers may not operate commercial vehicles while their ability or alertness is impaired. A carrier (Mobile Energy Systems), shipper, consignee or other person must not request, require or allow a driver to drive and a driver must not drive if the driver's faculties are impaired by fatigue, illness, or a mental or physical infirmity to the point that it is unsafe for the driver to drive or driving would jeopardize or be likely to jeopardize the safety or health of the public, the driver or the employees of Mobile Energy Systems.

Defensive Driving

All employees shall practice defensive driving while operating any company vehicle.

Defensive driver training will be mandatory for any employee who gets any traffic violation tickets or warnings.

Load Restrictions

All drivers will be trained in height and weight restrictions. All employees shall follow all load restriction regulations for the province in which we operate. No driver will exceed the legal limits of the province they are travelling in without first acquiring the proper permitting. If permits are required, drivers are to call into company office or permit office to acquire such permits.

Cargo Securement Systems

Loads are adequately secured for transport. Vehicles must be equipped and cargo must be contained, immobilized, or secured so that it cannot leak, spill, blow off, fall from, fall through, or otherwise be dislodged from the vehicle or shift on or within the vehicle in a manner that affects the stability or manoeuvrability of the vehicle.

To eliminate the potential for injuries, personnel must avoid jumping down from vehicle beds.

Refuelling Vehicles

Vehicle engines must be off before refuelling begins. Smoking is not permitted during the refuelling process. Due to concerns surrounding the potential for cellular phones to cause the ignition of gas vapours, cellular phones must not be worn or used during refuelling of gas powered vehicles.

Vehicles must not carry large quantities of extra fuel unless the fuel is stored in an approved container and properly secured.

Hours of Service Limits for Daily Driving and On-duty Time

Mobile Energy Systems must not request, require or allow a driver to drive and a driver must not drive after the driver has accumulated 13 hours of driving time in a day. Mobile Energy Systems must not request, require or allow a driver to drive and a driver must not drive after the driver has accumulated 14 hours of on-duty time in a day.

The driver must inform dispatch and dispatcher must track hours of driver so there are no scheduling conflicts that would put driver over his/her allotted hours. Appropriate plans to accommodate breaks must be arranged if driver cannot make trip in allotted hours in day/cycle).

Mobile Energy Systems dispatch must ensure that drivers are only dispatched when the driver has a sufficient number of on-duty hours available for use. A system to monitor driver on-duty time is essential.

Hours of Service regulations are easily and readily available to drivers (either in book form or bookmarked on the internet)

Everyone who operates a commercial vehicle or monitors hours of service at the company is aware of and understands the hours of service regulations and how they apply to their operations.

Drivers who are employed by more than one company submit daily logs to each of those companies to ensure compliance in hours.

Mobile Energy Systems Must Monitor the Driver Hours

Dispatchers and drivers should be working together. The driver should call into the dispatch daily with the accumulated hours for the day or previous day and the dispatcher keeps a record of these hours. From the hours the driver has provided, the dispatcher can calculate the available hours in the drivers' days and cycle and arrange trips accordingly.

Mobile Energy Systems Must Be Able to Prove That They Are Monitoring Their Drivers

If Mobile Energy Systems determines that there has been non-compliance with the regulations shall take immediate action and record the dates on which the non-compliance occurred, the date the notice of non-compliance was given to the driver and dispatcher and the action taken to ensure that it does not happen again.

Mobile Energy Systems Must Be Able to Prove They Did Something About the Non-Compliance

Training of new drivers and retraining of drivers and dispatchers who have demonstrated a pattern of violations. Repeat offenders may be required to take time off without pay or other forms of disciplinary actions may be enforced. All of these must be documented.

Hours of Service Records

- Hours of service records are filed in a neat and orderly manner (date order) and they are readily available.
- Hours of service records are kept for a minimum of 6 months for each driver.

Logbooks

Drivers must complete daily logbooks while operating commercial vehicles and drivers will submit those daily logs and supporting documentation within 20 days from the day of completion.

Every day must be accounted for. Days off must be stated on log of first day back to work.

Drivers shall only maintain one set of logs

Mobile Energy Systems must require every driver to fill out and every driver must fill out a daily log each day that accounts for all of the driver's on-duty time and off-duty time for that day.

This Section Does Not Apply if:

- the driver operates or is instructed by Mobile Energy Systems to operate a commercial motor vehicle within a radius of 160 km of the home terminal. Shift-start and shift-end times are accurately recorded by company on all drivers who operate within the 160km radius.
- the driver returns to the home terminal each day to begin a minimum of 8 consecutive hours of off-duty time, and
- Mobile Energy Systems maintains accurate and legible records showing, for each day, the driver's duty status and elected cycle, the hour at which each duty status begins and ends and the total number of hours spent in each status and keeps those records for a minimum period of 6 months after the day on which they were recorded.

The logbook requirement applies to all oil well service vehicles whether or not the above are met by the driver of and Mobile Energy Systems for the oil well service vehicle.

Reviews are completed to verify log and time records to verify the completeness of the daily records and ensure that driving and on duty limits or cumulative cycles are not exceeded.

Driver Files

The registered owner of every commercial vehicle must maintain, for each of that owner's drivers, a driver record file. Mobile Energy Systems retains copies of specific driver's records in accordance with the regulation.

Driver files should contain a five-year snapshot of a driver's licence, containing information while operating heavy commercial vehicles as listed below.

Mobile Energy Systems will have a recall system in place to ensure the licenses of all company drivers remain current.

All driving records are retained in accordance with regulation.

The following must be entered into the driver files:

- Completed application form
- Employment History for past 3 years prior to working here
- Copy of Driver's license – (showing license number, name, class, condition, expiry and medical due dates)
- Driver's abstract – current to within 30 days of being hired and minimum annual updated abstract from date of hire
- Copy of any convictions of safety laws in the current year and each of the preceding 4 years
- Record of all administrative penalties imposed on the driver under safety laws
- Record of all collisions reportable to a Peace Officer, in any jurisdiction, involving a motor vehicle
- Record of all training completed with respect to the operation of a commercial vehicle and compliance with safety laws.
- Record of all training taken by employee and copies of all training certificates (if issued) Including but not limited to H2S, TDG, First Aid, WHMIS.
- Copy of a valid training certificate under the Transport Dangerous Goods Control Act. (if applicable)
- Copy of a current medical certificate required for a driver's license or have a valid class 1, 2, 4 or have a valid abstract dated within past 12 months.

Vehicle Files

Each vehicle file includes:

- Unit/plate or VIN number
- Make and Year of Vehicle

These can be an electronic database, copy of registration or label on file

If the vehicle is leased for more than 30 days each file must contain the name of the person/company furnishing the vehicle.

Each vehicle has a file with the trip inspections for the past 6 months, longer if defects are found and repairs made. These inspections must include:

- Date
- Vehicle Identification
- Odometer/hub or hour meter reading
- Description of work performed on vehicle

Repair records are kept for each vehicle. Each record includes the following information:

- Date
- Vehicle Identification
- Odometer/hub or hour meter reading
- Description of work performed on vehicle
- Work completed must state whether in-house or outside service
- Repair bills are included in the file or a reference to who completed the work by indicating a provider, invoice # or work order #

Each vehicle has a file with lubrication records for the past 6 months. Each record includes the following information:

- Date
- Vehicle Identification
- Odometer/hub or hour meter reading
- Description of work performed on vehicle
- Work completed must state whether in-house or outside service

All modifications to the vehicles that affect their weight capacity have been recorded and are in the individual vehicle files.

All manufacturers' recalls have been recorded and a copy of the recall notice and date work was completed and by who are in the individual vehicle files.

All vehicle files contain records of all CVIP inspections for the past 5 years. (current year plus 4 previous calendar years)

All vehicle files contain records of all CVSA Commercial Vehicle Inspection Reports for at least 6 months.

All notices of defects are recorded when identified on the pre/post trip inspections. These notices are filed in appropriate file.

In-Vehicle Documentation Requirements

Mobile Energy Systems safety designate will inspect the company vehicles quarterly to ensure all of the following documents are located in the vehicles. The original certificate of registration and proof of insurance documentation must be carried in all vehicles.

A copy of the Mobile Energy Systems Safety Fitness Certificate must be carried in all vehicles operating under the NSC

Each vehicle has a valid CVIP inspection certificate and decal within/on each qualifying (NSC) commercial vehicle.

Compliance Checks

Mobile Energy Systems must maintain a stats record of driver's records including:

- Number of records reviewed
- Names of drivers reviewed
- Documents used for verification
- Hours of Service violations

Stats have to be reviewed by safety officer and signed off as part of the PIC quarterly Safety Performance Report Management will driver's abstracts and operating profiles

Drivers Abstracts: drivers will be required to submit a current driver's abstract on an annual basis

Carrier Profiles: carrier profiles will be pulled at least annually. Results will be compared to incidents in files. All incidents must be accounted for.

Logbooks: sampling will be checked for form and manner monthly and hour discrepancies every 6 months

Files: will be checked annually. Safety Ticket expiration dates checked and renewal dates entered in training calendar. (calendar can be hard copy or electronic, checked monthly) Driving violations checked against carrier profile and drivers abstract.

If the status check reveals that a person's license has been suspended or revoked, or if vehicle insurance coverage in force is inadequate, operation of any vehicle to conduct company business is prohibited until the license, registration or insurance issue is resolved.

Logbook Checks

Log and time records are checked to verify the accuracy of the daily records (against a time marker such as fuel receipts, toll receipts, enforcement forms or other documents that confirms the drivers' location at a given time).

Form and Manner:

Is everything on the log filled out and filled out correctly before filing them

- *Days* - every day must be accounted for (including the days off).
- Times - Day
- Work shift
- Work cycle
- ***Time*** - ***Distance*** – ***Fuel Receipts*** should be compared when auditing the logs

(See Logbook Checks under Training Documentation Samples)

10 Reference Points:

- Day
- Work-shift
- Deferral of off duty
- Driving Cycle (7 days -14 day)
- Reset
- Sleeper Birth – Single and Team Drivers
- 14-day requirement
- Personal Use
- Log Page
- Time Records for local drivers

Vehicle Inspections

Commercial vehicles, when operated, must be inspected every 24 hours. The driver or a person specified by Mobile Energy Systems shall satisfy himself or herself that the commercial motor vehicle is in a safe operating condition including, but not limited to, the operating condition of the following items:

- service brakes, including trailer brake connections and brake adjustments;
- parking brake;
- steering mechanism;
- lighting devices and reflectors;
- tires;
- horn;
- windshield wipers;
- rear vision mirrors;
- coupling devices;
- wheels and rims;

- emergency equipment;
- load securement devices.

The inspection shall be performed daily before the first trip of the day. If a trip lasts more than one day, the inspection shall be carried out on the second and every subsequent day of the trip no later than the first rest stop of the day.

Inspections will be conducted on components: daily, recorded, signed by the operator, and the document provided to an administrator and retained in company files.

Mobile Energy Systems shall NOT permit a person and no person shall drive a commercial vehicle on a highway when a major defect is present on the vehicle.

Defects observed during daily inspections are documented. The trip inspection report shall specify any defect in the operation of each item, specify any defect in the operation of the commercial motor vehicle if that defect may affect the safe operation of the commercial motor vehicle, or state that no defect was discovered or came to the attention of the driver, should that be the case.

Defects that might affect the safe operation of a vehicle are repaired before the vehicle is operated on a public road. Mobile Energy Systems shall not permit a driver to drive, and a driver shall not drive, a commercial motor vehicle unless, before doing so, Mobile Energy Systems or the agent of Mobile Energy Systems has repaired or corrected items listed on the trip inspection report which may affect the safe operation of the commercial motor vehicle and certified on the trip inspection report that the defect has been corrected or certified on the trip inspection report that correction is unnecessary. *(See Section 4-Inspections and Maintenance)*

Vehicle Incident Reporting

All vehicle incidents must be reported immediately to the appropriate law enforcement agency, Mobile Energy Systems supervisory personnel, risk management and HSE personnel. The appropriate incident report forms must be filed as soon as possible.

Carrier Profiles will be pulled at least annually and compared to the incident records filed.

Passenger Safety

The number of passengers carried in a vehicle must be strictly limited to the number of functioning seat belts. Transportation of passengers in the back of trucks must be avoided. If, because of emergency reasons this cannot be avoided, personnel must not be allowed to ride on the sides of the vehicles. All personnel must remain seated at all times while the vehicle is in motion.

Transporting hitchhikers is prohibited.

Parking of Vehicles

Vehicles must not be left running when a vehicle is parked in an enclosed space, i.e. closed garage, shop or warehouse. Vehicles otherwise left unattended must have the engine off, in gear or park and emergency brake applied.

If weather conditions warrant leaving the engine running, the vehicle must be in “park” or out of gear (standard shift vehicles) with emergency brake set.

When driving vehicles into areas having high grass, the driver must take extra precautions to avoid hazards and hidden obstacles that may be present. Also, a hot catalytic converter can create a fire hazard and this exposure should be taken into consideration.

Avoid backing vehicles/machines whenever possible.

Safety Equipment

All company owned/leased vehicles must be equipped with a suitable fire extinguisher, first aid kit and spill kit. Vehicles used in extreme weather conditions (hot or cold) must be equipped with the necessary survival equipment, i.e., communications equipment, ice scraper, shovel, water, flares, reflective triangles, pylons, jumper cables, blankets, candles, matches, extra clothing, non-perishable food, etc.

Maintenance of Vehicles

Company owned/leased vehicles and those permitted for use on company projects must be maintained in safe condition. Documented vehicle inspections will be conducted at a minimum on a monthly basis. Any significant mechanical defects found during maintenance checks must be repaired before the vehicle is placed back into service. Repairs for vehicles must be documented for future reference. *(See Section 4-Inspections and Maintenance)*

Training

Employee orientation and training includes information about the safety laws and their application.

On-going performance evaluations for driving skills will be conducted. These include periodic knowledge testing and/or road tests.

All training records and training certificates will be entered into the employee files. Including but not limited to H2S, TDG, First Aid, WHMIS.

All drivers are given instruction on how and when to use safety equipment, as well as care and maintenance of the required equipment and vehicles.

Copies of all training certificates new and old will be included in the employee files. This ensures Mobile Energy Systems has proof that training is repeated as certificates expire. New certificates will be issued as retraining takes place.

All drivers will be orientated and trained in the governing laws including Highway Act, Commercial Vehicle Inspections and National Safety Code related aspects:

- pertinent paperwork requirements
- correct vehicle operations
- loading and unloading procedures
- cargo handling, positioning and securement
- logbooks
- hours of service regulations
- weights and dimensions - vehicle max gross weight, vehicle tare weight, cargo weight
- truck routes, road and bridge restrictions
- seasonal axel allowance
- permit requirements and procedures
- trip inspections and maintenance of vehicles (vehicle and load)
- correct loading and unloading procedures
- accurate completion of documentation

Instructions for Completing Paperwork Requirements

Instructions for filling out the following documentation can be found under Documentation Training Samples in this manual.

- Bills of Lading
- Manifests
- Dangerous Goods Documents
- Employee Time Records
- Logbooks
- Inspection Checklists
- Fuel and Mileage Documentation
- Maintenance Records
- Weigh Slips
- Invoices

Records That Need to Be Retained and Maintained

Records must be retained. Mobile Energy Systems shall maintain the records and shall keep the records readily accessible for inspection and audit purposes for the calendar year in which they were made and the following 4 calendar years. Records to be retained include:

Logbook records– in date order and separated into an individual driver file - held for 6 months

Employee Files – all pertinent information as in driver file requirements are held for 7 years.

Maintenance Records – in date order and separated into an individual unit folder held for life of machine/truck. Includes everything that was completed including repairs and maintenance.

Inspection Reports – in date order and separated into an individual unit folder for each of:

- Pre-trip
- post trip
- 300hr maintenance
- annual

Safety Communication Documentation: in date order and separated into individual categories or into employee files:

- Monthly safety meeting minutes
- Dispatcher/Driver Pre-Trip Meetings
- Trip Sheets
- Warnings and follow-up (entered into individual employee files)
- Traffic Violations (entered into individual employee files)
- Safety Concerns
- Incidents and/or Accidents
- Copies of communications between supervisors and employees

Hazard Assessments: separated per job/ location in date order

Fuel and Mileage Reports: in date order and separated into an individual unit folders

Machine/Truck Individual Unit: folders with pertinent information about each

Records will be maintained at the corporate office.

Instructions for Driving on Unpaved Roads

Serious injuries and even fatalities have occurred while driving on unpaved roads. There are a variety of situations that may affect the precautions that will need to be taken. Each operation must assess its own individual situation and take the appropriate steps to eliminate driving hazards, while using the following information as a guide:

- Vehicles must be driven with headlights on at all times.
- Seat belts must be worn at all times while driving or riding in vehicles.
- A vehicle must not pass other vehicles when dusty conditions are present.
- Vehicles must not follow other vehicles at a distance that would put their vehicle inside the “dust trail” of the vehicle in front of them, which significantly reduces the driver’s visibility.
- Other items such as: terrain, type of vehicles, number of vehicles, type of load, weight of load, vehicle speed, etc., must be taken to consideration.

Summary of Alberta Logbook Rules

Driving Time Shift	13 hours driving shifts (no rule for day limits) • May not drive after 13 hours of driving without taking a required 8 consecutive hour rest. • May not drive more than 4 consecutive hours. If driver has driven for 4 hours, then he must take a minimum 10-minute non-driving break. • May be extended to 6 hours consecutive driving time if a 30 consecutive minute break is taken following the 6 hours.
On-duty Time Shift	15 hours May consist of both on-duty and driving but driving cannot be more than 13 hours of the 15 total hours.
Off-duty Time	8 consecutive hours. • The 8 consecutive hours may be a combination of off-duty and sleeper berth time. • May also take the required eight consecutive hours’ rest in the sleeper berth or split the sleeper berth time into 2 periods. Shifts restart after the 8 consecutive hour break.
Length of day	No daily limits regulated
Duty Cycles	No cycle limits regulated
Cycle Reset	The Alberta regulations do not include any daily limits or cycle limits

Split-sleeper (single person)	8 hours can be split into 2 periods.
	• Neither is less than 2 hours
	• The time spent in the sleeper berth is at least 8 hours
	• Reduced rest provision if
	  ○ The total driving time before and after each sleeper berth rest time does not exceed 13 hours.
	  ○ Reduced rest provision is available once in every 7-day period. Reduced rest exemption- reduce required rest of 8 hours to 4 if:
	  ○ Has not been on-duty for more than 15 hours
	  ○ The 4 hours taken is added to the next 8 consecutive rest period
	• Reduced rest provision is NOT available if:
	  ○ driver is in violation of driving or on-duty limits
	  ○ Truck does not have a legitimate sleeper berth (truck seats do not qualify)
	• Sleeper berth and off-duty time can be combined to obtain the required 8 consecutive hours.
	• There are no cumulative hour limitations specified in the Alberta rules

Split-sleeper (team)	8 hours can be split into 2 periods of no less than 4 hours each

43.0 VEHICLE SAFETY POLICY

Driving Safety Requirements

Drivers must possess a valid driver's license. Operators of Mobile Energy Systems or client vehicles are responsible for possessing a valid driver's license for the type of motor vehicle they operate.

Driver abstracts are obtained and reviewed for all drivers of Mobile Energy Systems owned vehicles or drivers of client vehicles. A driver abstract contains information on the operator's license, conviction information, demerit points and suspensions.

Drivers shall have 3 years of driving experience on the vehicle he/she is licensed to drive and regularly drives.

Backing is prohibited whenever practicable. Pull-through (pulling through a space so the vehicle is facing outwards in the next space) parking techniques are to be employed in parking lots wherever practicable. Where pull-through techniques cannot be utilized operators of motor vehicles should back into the parking spot. This provides the operator an easier exit from the parking area as well as a quick exit in case of an emergency. A spotter should be used if required to back up.

Drivers must have either a reversing alarm, use a spotter or walk around the truck/trailer prior to backing.

Cargo must be adequately secured. Passenger compartments are to be free from loose objects that might endanger passengers in the event of an incident. Any cargo on or in motor vehicles must be adequately stored and secured to prevent unintentional movement of the equipment which could cause spillage, damage to the vehicle or injury to the operator.

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.

Employees driving vehicles must:

- Be expected to obey all local and provincial traffic laws and rules of the road as well as requirements of clients while on company business;
- Immediately report any motor vehicle incident, citation, warning, vehicle damage or near miss associated with employer or client owned or leased vehicles to the Mobile Energy Systems supervisor. The general procedures include:
- Immediately call for medical assistance if there are any injuries associated with the incident.
- Then notify local law enforcement if on public roads or property. Stay at the scene.
- Then notify Mobile Energy Systems supervisor of the situation and if directed also notify the client if on client property.
- Following any vehicle incident there shall be a drug and alcohol screening.
- Immediately report any restriction or change to their driving privileges to the supervisor.
- Seat belts shall always be worn by the driver and all passengers. Seat belt use is mandatory for the driver and passengers while operating a motor vehicle.
- All vehicles capable of more than 10 mph/15 kmh shall have seat belts installed.
- 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;
- Handheld use of cell phones and/or texting devices while driving is prohibited. All cell phone use, including hands-free, is prohibited while operating a vehicle on any road including when on owner client property.
- Slow down around construction, large vehicles, wildlife, fog, rain, snow, or anything else that adds a hazard to your driving;
- Drive for conditions, not just the speed limit;
- Operators of motor vehicles must not drive while under the influence of alcohol or drugs. Employees are strictly prohibited from operating a motor vehicle while under the influence of drugs or alcohol. This includes alcohol level at or above the local legal limit, illegal drugs and prescription medications that cause drowsiness or other conditions that may cause impairment.

Pre-Use Inspections

Pre-Use inspections must be completed before operating motor vehicles and regular maintenance performed as per manufacturer guidelines. Elements of the pre-use inspection shall include:

- Perform 360° walk around – report new damage or defects;
- Check windshield for cracks that could interfere with vision;
- No barriers blocking the path;
- 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 driver is rested and alert for driving;
- Employees are not to perform repairs or maintenance other than routine fluid additions.

Small Vehicles Inspections

Pre-Trip

Form to be Used: Pre-trip inspection

Conducted by: driver

Inspection Frequency: before each trip

The inspector will be looking for defects in the required following items:

- Lights
- Tires
- Wheels and Rims
- Brakes
- Gauges
- Fluid levels
- Steering
- Horn
- Windshield wipers
- Rear vision mirrors
- Emergency equipment
- Body condition

Maintenance

Form to be Used: Service provider form

Conducted by: Qualified Service inspector

Inspection Frequency: 3000 km/ or manufacturer's specifications

The inspector will be looking for defects in the required following items:

- Lights
- Tires
- Wheels and Rims
- Brakes
- Gauges
- Steering
- Horn
- Windshield wipers
- Body condition
- Fluid levels & conditions
- Grease
- Hoses, Belts

Maintenance and Vehicle Requirements

- All company vehicles shall be outfitted with an adjustable steering column.
- All company vehicles shall be outfitted with an independently adjustable driver's seat (at a minimum, moveable forward and rearward).
- All company vehicles will be outfitted with a functional air conditioning/heating system that is able to maintain an in-cab temperature range of 5°C/41°F to 30°C/86°F under all local climatic and driving conditions.
- All drivers of light vehicles shall carry a high visibility jacket for use in case of emergency stops.
- All instrumentation will be in the local unit of measurement (e.g. speedometer, fuel gauge).
- All light duty vehicles (including buses) are to be equipped with an adjustable left, right and central rear view mirrors
- All light duty vehicles carry a minimum of one collapsible hazard warning triangle.
- 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.
- All light vehicles registered after July 1, 2006 will be equipped with Anti-Lock Braking Systems (ABS).
- All light vehicles shall be equipped with a securely stowed first aid kit.
- All seats are to be fitted with headrests. Where practical all company vehicles will be outfitted with a radio, cassette or cd player (or equivalent) to help reduce driver fatigue.
- All vehicle door locking systems will be equipped with an override in order that occupants can open the doors after the vehicle has been locked externally.
- 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 vehicles shall have a mobile phone, 2-way radio, or other such communication device that allows communication with emergency response personnel or Mobile Energy Systems managers.

- All vehicles will be outfitted with an adjustable steering column and the vehicle steering wheel will be located on the left hand side of the vehicle.
- Any vehicle with non-segregated storage shall be equipped with a cargo net or equivalent to separate the storage area.
- Driver shall ensure that passenger compartments are free from loose objects that might endanger passengers in the event of an incident.
- Drivers are prohibited from backing whenever practicable.
- Drivers must have a reversing alarm, use a spotter or walk around the truck/trailer prior to backing.
- Drivers shall have 3 years of driving experience on the vehicle he/she is licensed to drive & regularly drives. All vehicles will be equipped with a mobile phone, 2-way radio, or other such communication device that allows communication with emergency response personnel or company managers.
- No passengers are allowed on trucks used to deliver goods.
- No vehicle less than 1000 kg is to be used on public roads. All company vehicles (light, heavy and trailers) shall be suitable for operation in local climate conditions
- Only seats fitted with three-pointed inertia-reel type seatbelts shall be used.
- 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.
- Tire type and pattern is to be recommended by the vehicle or tire manufacturer for use on the vehicle in the area of operation.
- Tires are to be radial with a minimum tread depth of 1.6mm [1/16 inch], 2.0mm across 75% of the tire width and tread-pattern visible across 100% of the tire.
- 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.
- Vehicles (light vehicles, heavy vehicles and trailers) may not be modified without the endorsement of the manufacturer.
- Vehicles are to be fitted with a spare wheel and changing equipment to safely change a wheel, or a suitable alternative.
- Vehicles longer than 6 meters/20 feet or with restricted rear view (i.e. pickup trucks that are fully loaded) are to be fitted with an audible reversing alarm.
- Vehicles must be safety parked prior to using a mobile phone or 2-way radio.
- Vehicles shall be outfitted with an independently adjustable driver's seat (at a minimum, moveable forward and rearward).
- 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.

Distracted Driver Regulations

All employees & contractors of Mobile Energy Systems will follow the Distracted Driver regulations. The following activities are not allowed while driving:

- talking on a hand-held cell phone
- texting/e-mailing
- using electronic devices like laptop computers, video games, cameras, video entertainment displays and programming portable audio players
- manually entering information on GPS units

- reading printed material like a book or a magazine
- writing, printing or sketching
- personal grooming like combing your hair, applying makeup or brushing your teeth
- using a 2-way radio or what is commonly referred to as a CB (Citizen's Band) radio (some exemptions apply)

44.0 WHMIS 2015

Definitions

Hazardous Materials

- Can harm people, plants, animals and the environment.
- Long term exposure, even small quantities, may be harmful or cause permanent damage.
- Immediate exposure may cause acute symptoms.

Controlled Products

Any product, material or substance that is included in any of the six WHMIS classes:

- Compressed gas;
- Flammable and Combustible Material;
- Oxidizing Material
- Poisonous and Infectious Material;
- Corrosive Material;
- Dangerously Reactive Chemicals.

Routes of Entry

Toxic effects of the controlled product depend on how you come into contact with the hazardous material, which may enter the body through:

- inhalation – breathing in dust particles, fumes, mists or vapours can irritate or burn air passages, e.g. formaldehyde
- ingestion – eating, drinking, or smoking while handling controlled products
- eye or skin absorption – splashes or spills can cause dermatitis, inflammation, or irritation of the skin.

Degree of Hazard

The amount or degree of hazard is determined by:

- Toxicity of a substance
- Dosage
- Duration of exposure.

Acute Poisoning

Hazardous products can cause immediate harm e.g. H_2S.

Chronic Poisoning

May take hours, days, years, or even decades before you are aware of the damage that has been done, as some hazardous products slowly cause irreversible damage e.g. asbestos.

Consumer Products

Products purchased in a store for personal care or household use, not for use in the workplace. Even though it may be the same product, the intent is only to regulate controlled products in the workplace, not the home.

Responsibilities

Company

If controlled products are used in the workplace, Mobile Energy Systems, in consultation with the joint committee or employee health and safety representative, as applicable, will establish and maintain an effective WHMIS program at each work site, as part of the overall workplace health and safety program, which addresses applicable WHMIS requirements including education and training, and is reviewed at least annually, or more frequently if required by a change in work conditions or available hazard information.

Managers

It is the responsibility of each manager to ensure WHMIS requirements are met in all locations under his or her authority, which includes:

- Labelling of all containers.
- Educating employees on WHMIS
- Providing personal protective equipment (PPE) and monitoring use.
- Ensuring Safety Data Sheets (SDS) for all controlled products are current and available to employees.
- Maintaining an updated Controlled Product Inventory.
- Providing the designated supervisor with a copy of the current Controlled Product Inventory List.

Employees

- To reduce the risk of a controlled product exposure employees are expected to comply with WHMIS legislation and this program and therefore be familiar with labelling and safety data sheets (SDS) of controlled products used in the workplace.
- Employees shall follow all label and SDS requirements.
- Employees will immediately report any concerns regarding the WHMIS program to their supervisor.

Procedure

- No WHMIS controlled products or materials will be allowed to be used unless there is a valid Safety Data Sheet available on-site and there is a supplier or workplace label on the container for any controlled product that is produced, manufactured or used at a Mobile Energy Systems site.
- Mobile Energy Systems will ensure the SDS is obtained from the supplier when receiving a controlled product on each job site.
- Mobile Energy Systems will ensure that SDS are filed at the work site where they will be readily accessible to employees.
- When a supplier SDS obtained for a controlled product is 3 years old, Mobile Energy Systems must, if possible, obtain from the supplier an up-to-date supplier SDS for the controlled product if any of the product remains in the workplace.
- Mobile Energy Systems will ensure that SDS are available and posted near the work site where controlled products are used.
- Managers will ensure that employees are notified if a controlled product is to be used in an open area or where fumes may migrate.
- A Controlled Product Inventory List and Safety Data Sheets shall be kept at a main location and will be made available to employees for review.

- All hazardous waste is labeled and that workers are trained on safe handling of hazardous waste. If a controlled product is a hazardous waste generated at the work site, Mobile Energy Systems must ensure that it is stored and handled safely using a combination of any means of identification and instruction of workers on the safe handling of the hazardous waste.
- No hazardous material will be brought onto client property unless all client approval processes have been met. This may involve a needs analysis review and SDS submittal and approval. All client procedures must be followed.

Controlled Product Inventory List

- Mobile Energy Systems maintains a listing of all controlled products used at, or by each facility.
- This controlled product inventory list is updated as necessary and at least annually by the site WHMIS Coordinator or their designee.
- The facility controlled product inventory list must be available for review upon request.
- The Controlled Product Inventory List is maintained in a computer file folder in each location. The manager is responsible for seeing that the inventory is maintained, is current and is complete. He or she will review the inventory and the SDS Book at least annually. He will sign and date the Review and Update section at the front of the SDS Book when he completes his review. When a hazardous material has been permanently removed from the workplace, its SDS is to be removed from the SDS Book and the Controlled Product Inventory List. A file copy is to be maintained in a "dead file".

Storage of Harmful Substances

All containers, used or handled at a workplace, which by reason of toxicity, flammability or reactivity create risk to the health or safety of employees shall be contained, so far as is reasonably practicable in a suitable container which is clearly labelled to identify the substance, the hazards associated with its use or handling, the workplace uses for which it is intended and protective measures to be taken by employees before, during and after its use.

Mobile Energy Systems will ensure that residue or waste from the substance or materials used for cleaning or wiping it is placed into suitably labelled containers for safe disposal.

Harmful substances are to be stored in a self-contained enclosure, room or building that is isolated from work-related areas and worksites and is adequately ventilated and protected from conditions, including excessive temperature, shock or vibration that could reduce the stability or increase the potential hazard of the substance.

Safety Data Sheets

Safety Data Sheets (SDS) are readily available for all controlled products used at the worksite. If Mobile Energy Systems acquires a controlled product for use at a work site must obtain a supplier safety data sheet for that controlled product. Mobile Energy Systems must ensure that the safety data sheet is readily available at a work site to workers who may be exposed to a controlled product.

Safety Data Sheets are filed alphabetically, by material classification, in the SDS Book. A Controlled Product Inventory List is provided in the front of the SDS Book, listing all SDS's contained therein. This inventory serves as the index of the SDS Book. The SDS Book is displayed in a prominent location at the work site where it is accessible to all employees.

A copy of a SDS request form is located in the first section of the SDS Book. An employee may use a copy of this form to request an SDS or he may ask the operations manager for one. In either case the requested SDS must be given to the employee within 24 hours.

SDSs must be obtained for each required controlled product from the controlled product manufacturer, supplier or vendor. The purchasing of any potentially controlled product products from any supplier that does not provide an appropriate Safety Data Sheet in a timely fashion is prohibited.

The Safety Data Sheet must be kept in the SDS library for as long as the controlled product is used by the facility. Electronic access (telephone, fax, internet, etc.) may be used to acquire and maintain SDS libraries and archives.

SDS's for hazardous materials to which Mobile Energy Systems employees have been exposed must be maintained after the employee leaves the employment of Mobile Energy Systems. Before any non-routine task is performed, employees will be advised of special precautions. In the unlikely event that such tasks are required, the operations manager will provide SDS for involved controlled product.

The joint health and safety committee, the employee health and safety representative, and the workplace health and safety designate have the right to request SDS on any controlled product and it must be provided without any issues as well as any further hazard information of which Mobile Energy Systems is aware or ought to be aware concerning the use, storage and handling of that product.

SDS as a technical bulletin which provides detailed hazard, precautionary and emergency information on the controlled product.

Sections of SDS

1. Chemical Product and Company Identification: An identity on the SDS must be cross-referenced to the identity found on the label.
   - product identifier (name)
   - manufacturer names
   - suppliers' names
   - addresses
   - emergency phone numbers
2. Hazards Identification:
   - The health hazards of the chemical, including signs and symptoms of exposure, are listed. Medical conditions that may be aggravated by exposure to the product are also listed.
   - The route of entry (i.e. the primary pathway by which the chemical enters the body) is provided.
   - There are four principal routes of entry: inhalation, ingestion, injection, and skin absorption.
   - The SDS also supplies exposure levels that are deemed unhealthful, as determined by standards or recommended by the manufacturer.
3. Composition and Information on Ingredients
   - If the mixture has not been tested as a whole, the chemical and common names of all ingredients determined to be health hazards and comprising 1% or greater of the composition are listed.
   - Carcinogens must be listed if they are present at levels of 0.1% or greater.
4. First Aid Measure
   - What to do in case of: Inhalation, skin contact, Swallowing, Eye contact, etc. How to treat, notes to physician
5. Fire or Explosion Data:
   - The compound's potential for fire and explosion is described.

- The fire hazards of the chemical and conditions under which it could ignite or explode are identified along with recommended extinguishing agents and fire-fighting methods.

6. Accidental Release Measures
   - Steps to be taken if material is released or spilled.
   - Any applicable control measures for using the product, including engineering controls, safe handling procedures, and personal protective equipment are provided.
7. Handling and Storage
   - Precautions to be taken in handling
   - Precautions to be taken in storage.
   - Other Hazardous Conditions of Handling, Storage, And Use
8. Exposure Controls/Personal Protection
   - Ventilation/Engineering Controls: Exhaust system, exposure limits
   - Personal Protection: Types of PPE to use during handling. Respiratory equipment, skin protection, eye protection, etc.
9. Physical and Chemical Properties
   - The physical and chemical characteristics of the product are listed. These include facts such as boiling and freezing points, density, vapor pressure, specific gravity, solubility, volatility, and the product's general appearance and odor.
10. Stability and Reactivity
    - Information on the chemical instability of a product and the substances it may react with
    - Substances that the chemical is not compatible with or reacts with are listed. Information on any
    - hazardous decomposition products, such as carbon monoxide, is also included in this section.
11. Toxicological Information
    - Any known effects from acute doses of extended exposure
12. Ecological Information
    - Any known effects that can cause damage to the environment
13. Disposal Considerations
    - Explains/ gives instructions on how to dispose of the product
14. Transport Information
    - Lists hazard class, ID #, Spill instructions, shipping labels, placard required
15. Regulatory Information
    - Lists the regulatory requirements for the product such as WHMIS classes
16. Preparation Information: who is responsible for preparation and date of preparation of SDS.

Labels, Labelling and Warnings

Labels provide the following information:

- The product identifier.
- Safe handling information.
- Reference to the fact that a Safety Data Sheet (SDS) is available.

Used for the following purposes:

- Storage containers of controlled products produced on-site.
- Storage containers intended to receive bulk shipments (unless the supplier provides a label).
- Portable containers into which product has been transferred by a worker where the container will be used by other workers or for longer than a work shift.

All controlled products are labelled with either a supplier label or a work site label. Mobile Energy Systems has a procedure to ensure that a controlled product or its container at a work site has a supplier label or a work site label on it.

Mobile Energy Systems will ensure that a controlled product or the container of a controlled product that is received from a supplier at a place of employment is labelled with a supplier label. Mobile Energy Systems or any worker, shall not remove, deface, modify or alter the supplier label on the container of a controlled product as long as any amount of the controlled product remains at the place of employment in the container in which it was received from the supplier.

Supplier Labels

Distinctive border, letters, numbers which contrast distinctly from any other markings on the containers.

Includes seven categories of information:

- ***Product Identifier:*** product name or number which will be identical to the product identifier on the SDS.
- ***Supplier Identifier:*** this will include the supplier, manufacturer or importer's name and the location of the principal place of business.
- ***Reference to SDS***: will appear on the WHMIS label when an SDS is required.
- ***WHMIS Hazard Symbols:*** must meet the regulatory specifications with a distinctive circular border and must be displayed in a colour that will not be confused with TDG safety marks, such as the orange explosive symbol found in TDG regulations. Prohibited colours are contained in the WHMIS Regulations. Often these are black and white only.
- ***Risk Phrases:*** clearly indicates the risks involved when using the product.
- ***Precautionary Measures:*** safe handling, use and storage information for the product.
- ***First Aid Measures:*** clear description of the immediate steps to be taken in the event of harmful contact with the product

Supplier labels must be affixed to the original containers of controlled products. If labels are missing or illegible, they should be replaced with workplace labels.

Supplier's Label Sample

Source: Health Canada Website

Worksite Label

Provides the following information:

- The product identifier.
- Safe handling information.
- Reference to the fact that a safety data sheet [SDS] is available.
- Used for the following purposes:
    - Storage containers of controlled products produced on-site.
    - Storage containers intended to receive bulk shipments (unless the supplier provides a label).
    - Portable containers into which product has been transferred by a worker where the container will be used by other workers or for longer than a work shift.

Worksite Label Sample

Acetone
Extremely Flammable
Keep away from all sources of ignition
Wear butyl rubber gloves and chemical splash goggles
See SDS

If Mobile Energy Systems produces a controlled product in a workplace it shall ensure that the controlled product or the container of the controlled product has a workplace label. Employees who are unsure of the contents of any container, vessel or piping must contact their supervisor for information regarding the substance including:

- The name of the substance
- The hazards related to the substance
- The safety precautions required for working with the substance.

Labels, tags or markings on containers shall list as a minimum:

- Words, pictures, symbols or combinations.
- The trade name of the product as listed on the Safety Data Sheet.
- Appropriate hazard warnings to help employees protect themselves from the hazards of the substance.
- Labels provided by controlled product manufacturers, distributors, and importers must also list the name and address of the manufacturer, importer, or vendor responsible for the controlled product, and from whom more information about the controlled product can be obtained.

Workplace labels must be affixed to controlled products that have been transferred from the original container into another container. Where a controlled product at Mobile Energy Systems is in a container other than the container in which the controlled product was received from a supplier Mobile Energy Systems will ensure that a workplace label is applied to the container. Any container of a potentially hazardous material that will not be emptied during one shift must be labelled, without exception.

Required labels and decanted products required labels do not apply to a controlled product at a work site if the controlled product is contained or transferred in a piping system that includes valves, a reaction vessel, or a tank car, tank truck, ore car, conveyor belt or similar conveyance.

Personnel in the Shipping and Receiving Departments are responsible for proper labelling of all containers shipped by Mobile Energy Systems and for the inspection of all incoming materials to ensure correct labelling. Controlled products received from vendors that are not properly labelled must be rejected.

Training

All workers who work with or near controlled products are provided WHMIS training. Mobile Energy Systems must ensure that a worker who works with or near a controlled product is trained in the content required to be on a supplier label and a work site label and the purpose and significance of the information on the label, the content required to be on a safety data sheet and the purpose and significance of the information on the safety data sheet, procedures for safely storing, using, and handling the controlled product and the procedures to be followed in case of an emergency involving the controlled product.

Mobile Energy Systems shall review at least annually or more frequently if required by a change in work conditions or available hazard information, and in consultation with the joint health and safety committee, the employee health and safety representative or the workplace health and safety designate, the instruction and training provided to employees concerning controlled products. The documented training shall, as a minimum, include:

- Requirements and rights and responsibilities of Mobile Energy Systems and of the employee as contained in the WHMIS Regulation.
- Operations and work areas where controlled products are present.
- Location and elements of the written WHMIS Program, and the Controlled Product Inventory List.
- How to access SDS's or SDS information.

- How to read labels and Safety Data Sheets for pertinent hazard information.
- Content required on supplier labels, work site label and the purpose and significance of the information on the label.
- Content required being on a SDS and the purpose and significance of the information on the SDS.
- Procedures for safely storing, using and handling the controlled product.
- How to determine the presence or release of a hazardous substance or fugitive emissions when working with a controlled product?
- Major hazards of the controlled products in use in the workplace.
- Physical and health effects of over exposure to hazardous substances in the workplace and how to work safely with the controlled product.
- How personnel can protect themselves or prevent exposure to hazardous substances, through the use of protective equipment, proper work practices and engineering or environmental controls.
- The proactive steps Mobile Energy Systems has taken to prevent exposure to hazardous substances and non-routine tasks.
- Emergency procedures involving a controlled product and emergency first aid procedures to follow for exposure or harm caused by hazardous substances.

Additional training will be provided whenever a new controlled product hazard is introduced into the work area. To reinforce the importance of handling controlled products properly when performing new or non-routine tasks, Supervision will conduct supplementary training as needed. Formal training will be conducted by facility employees or individuals who are knowledgeable in the WHMIS program.

When an outside contractor, such as a pest control employee or a carpenter enters a Mobile Energy Systems site to perform a service for the company, he must first present SDS's for any and all controlled products he will use. These SDS's will be treated as above with the same training requirements. The operations manager will be responsible for contacting each contractor before work is started to gather and disseminate any information concerning controlled product hazards the contractor is bringing into the workplace.

WHMIS Classifications and Symbols

WHMIS 2015 Pictograms

	This pictogram is used for indicating flammable gases, aerosols, liquids and solids; pyrophoric liquids, gases and solids; self-heating substances and mixtures; substances and mixtures that produce flammable gases when in contact with water; organic peroxides; and self-reactive substances and mixtures.		For hazardous products that can cause death or acute toxicity after exposure to small amounts of the products, this Pictogram is used to warn users of the potential dangers. It is placed on labels of materials with acute oral, dermal and inhalation toxicity. For instance, the pictogram can be used on containers for cleaning chemicals
	The pictogram is flame over a circle plus a distinctive red "diamond" shaped border. It is used to indicate oxidizing gases, liquids and solids.		This Pictogram is used to indicate a product that causes or is suspected of causing serious health effects. It forms part of labels of products that cause respiratory sensitivity, skin toxicity, germ cell mutagenicity, carcinogenicity, reproductive toxicity, aspiration hazard, specific target organ toxicity after single exposure, and specific target organ toxicity after repeated exposure.
	This pictogram is used to indicate the hazard of gases under pressure such as dissolved gas, liquefied gas, compressed gas and refrigerated liquefied gas.		Used for hazardous products that cause less serious health effects, the Exclamation Mark Pictogram indicates acute toxicity (oral, dermal or inhalation), skin corrosion (irritation), eye irritation, skin sensitivity, respiratory damage, and specific target organ toxicity on single exposure.
	The corrosive pictogram indicates a substance that can irritate the skin and eyes, and damage metals. It is used for hazardous products that are corrosive to metals, cause skin irritation (corrosion), and cause serious eye irritation or damage.		Indicates the presence of organisms or toxins that can cause diseases in humans and animals, The Biohazardous Infectious Materials pictogram has been retained from WHMIS 1988. The pictogram is used on labels of biohazardous infectious materials. For instance, it is used on growths of micro-organisms like E. coli or salmonella bacteria cultures.
	Used to indicate explosion or reactivity hazards, the Exploding Bomb Pictogram is placed on the labels of self-reactive substances and mixtures, and on labels of organic peroxides.		This GHS pictogram has not been integrated into WHMIS, however it stands for Environmental Hazards.

45.0 WORKING ALONE

Objectives

To minimize risk to employees who may work alone and assistance is not readily available Mobile Energy Systems will:

- Take measures to eliminate or control the hazards of working alone at Mobile Energy Systems worksites.
- Ensure that affected employees are informed of the hazards and methods used to control or eliminate them.
- Provide an effective system for communication between any employee who work alone and persons capable of assisting the employee.
- Ensure all incidents (working related or otherwise) are reported, investigated and documented.
- Review the Work Alone Program at least annually or more frequently if 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

Safety Manager

- Conducts 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 local worksite Working Alone Plan.
- Communicate this policy and its procedures to employees who work alone
- Annually review the effectiveness of the hazard controls and procedures and make improvements as required
- Responsible for the implementation and maintenance of the Working Alone Plan for their facility 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.

Supervisor

- Responsible for the implementation and maintenance of the Working Alone Program for their facility 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.
- Ensure communications system is set up and operating effectively.

Workers

- Report all incidents to their supervisor as required by local regulatory requirements.
- Participate in work site hazard assessments and the implementing of procedures to eliminate or control hazards of working alone.
- Take every reasonable precaution when working alone.
- Shall follow the requirements of the Work Alone Plan

Safe Work Procedures

Risk Assessment and Controls

A risk assessment must be conducted to evaluate the risk of working alone and identify appropriate control measures. Where a worker is required to work alone or at an isolated place of employment, Mobile Energy Systems,

in consultation with the workers, shall identify the risks arising from the conditions and circumstances of the worker's work or the isolation of the place of employment. It shall involve:

- A review of records, past incidents and identify measures or actions needed to correct any hazards.
- Participation by the workers at the workplace, the representative at the workplace.
- Participation by employees through methods such as one-on-one interviews, focus groups, employee surveys and work site inspections.
- The assessment will also collect and document 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.

Working Alone Program

Mobile Energy Systems 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.

Mobile Energy Systems will post a copy of the safe work procedures in a conspicuous place at the workplace.

The procedure for checking a worker's well-being must include the time interval between checks and the procedure to follow in case the worker cannot be contacted, including provisions for emergency rescue. In addition to checks at regular intervals, a check at the end of the work shift must be done. The procedure for checking a worker's well-being, including time intervals between the checks, must be developed in consultation with the joint committee or the worker health and safety representative, as applicable and with the worker assigned to work alone or in isolation.

Communication and Regular Contact Person System

Workers must carry a cellular phone or electronic monitoring device at all times while working alone. Mobile Energy Systems must, for any worker working alone, provide an effective communication system consisting of radio communication landline or cellular telephone communication or some other effective means of electronic communication that includes regular contact by Mobile Energy Systems or designate at intervals appropriate to the nature of the hazard associated with the worker's work.

Each worksite's Working Alone Program shall address having an established contact person. A person must be designated to establish contact with the employee at predetermined intervals and the results must be recorded by the person.

Procedures to be Followed if Electronic Communication is Not Practicable

If effective electronic communication is not practicable at the work site, Mobile Energy Systems must ensure that Mobile Energy Systems or designate visits the worker or the worker contacts Mobile Energy Systems or designate at intervals appropriate to the nature of the hazard associated with the worker's work. Example requirements include:

- Mobile Energy Systems must ensure that a representative of Mobile Energy Systems or another competent employee visits the employee or the employee contacts Mobile Energy Systems or another competent employee. These visits or contacts shall be at intervals of time appropriate to the nature of the hazards associated with the employee's work. As a minimum, contact shall occur no less than every four hours. In addition to checks at regular intervals, a check at the end of the work shift must also be done.
- Limitations on or Prohibitions of Specified Activities
- No working at heights will occur if a work is alone and requiring a personal fall arrest system.

- No working alone outside if temperatures are low enough to pose an imminent risk to the worker (-35 C or colder.)
- Other limitations may be placed based on the site specific hazard assessment

Minimum Training or Experience

Workers are provided training on working alone procedures. 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.

Training will include:

- Any revision to the written local Working Alone Plan and safe work practices.
- Being informed of working alone hazards at the Mobile Energy Systems 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 presents 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 hazard and PPE assessment process

Safe Work Practices

Controls implemented at Mobile Energy Systems worksites shall, as a minimum:

- Office doors are to be locked when working alone after hours.
- Have employees check road reports and weather forecast before traveling and NOT allow travel if road conditions are dangerous.
- Develop a travel plan that includes rest breaks, a procedure for tracking overdue employees and emergency contact information.
- Ensure all Mobile Energy Systems vehicles are to be equipped with cell phones or radios and first aid kits and fire extinguishers.
- Advise employees to travel with another employee when possible.
- Advise employees to park close to the building in the evening.
- Post signage, emergency contact information, and develop a communication system.
- Report suspicious activity to security or a supervisor.

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 for communication devices in case of power failure, a radio for local weather conditions and other equipment as determined by the hazard assessment.

Review and Updating Working Alone Program

The Working Alone Program at each Mobile Energy Systems 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 Program shall also be revised if there is any indication or report that the program is not working effectively or needs changing.

WORKING ALONE ASSESSMENT AND GUIDELINES FOR MOBILE ENERGY SYSTEMS WORKSITES

Location:		
Evaluated by:		
Original Date:		Signature:
Revision Date:		Date:

Hazardous Activities

Hazard:	**Actions to minimize Risk:**
Indicate working alone hazards	*Indicate actions taken to minimize risks*

Emergency Phone Numbers

Number	**Contact:**	**For:**
Indicate #	*Indicate source information; i.e., security*	**ANY emergency:** medical, fire, etc.
		Suspicious Person
		General Inquiries
		Need for employee escort
		Maintenance Emergencies
		Information

Location of Resources

Indicate location	*(examples shown)*
	fire extinguisher
	first aid kit
	telephone
	telephone backup (radios or emergency buttons for worksite security)

Restricted activities when working Alone

Indicate restricted activities (no driving, locked doors, etc.)

A copy of this form shall be supplied to the Mobile Energy Systems Safety Manager and the Guidelines be reviewed no less than annually

46.0 WORKING AROUND EQUIPMENT

Purpose

To reduce onsite possible injuries when working around equipment.

Guidelines

Mobile Energy Systems will ensure that the following types of powered mobile equipment weighing 700 kilograms or more have rollover protective structures:

- Tracked or wheeled bulldozers, loaders, tractors or skidders, other than those operating with side booms
- Back hoes with a limited horizontal swing of 180 degrees
- Motor graders
- Self-propelled wheeled scrapers
- Industrial, agricultural, and horticultural tractors, including ride-on lawnmowers
- Wheeled trenchers

For other powered mobile equipment where rollover is identified as a potential hazard, Mobile Energy Systems will:

- Equip the powered mobile equipment with a rollover protective structure that is either supplied by the manufacturer or certified by a professional engineer as being suited to that equipment, or
- Institute safe work procedures that eliminate the possibility of rollover. Mobile Energy Systems will also ensure that powered mobile equipment fitted with ROPS has seat belts for the operator and passengers and protective guards or overhead cabs to protect the operator from falling objects. Be aware of the potential hazards when working with and / or around equipment.

Do NOT:

- Operate the equipment unless you are properly trained to do so.
- Operate the equipment without a spotter (blind spots may occur).
- Assume everyone knows your intentions when you are running the equipment.
- Operate the equipment with tattered apparel, long hair or jewelry of any sort that could be caught or snagged by moving machinery.
- Smoke within 7.5 metres of a vehicle while it is being refueled or refuel a vehicle when there is a source of ignition within 7.5 metres of that vehicle.
- Leave the controls unless the equipment is secured against unintentional movement by an effective method of immobilizing the equipment.

Do:

- Report to the employer any conditions affecting the safe operation of the equipment,
- Operate the equipment safely,
- Maintain full control of the equipment at all times,
- Use the seat belts and other safety equipment,
- Ensure that passengers in the powered mobile equipment use the seat belts and other safety equipment,
- Keep the powered mobile equipment free of objects that could interfere with the operation or create hazards.

- Before operating any powered mobile equipment the operator must complete a visual inspection of the equipment and the surrounding area to ensure that the equipment is in a safe operating condition and that no worker, including the operator is endangered when the equipment is started up.
- Ensure that powered mobile equipment is inspected by a competent worker for defects and conditions that are hazardous or may create a hazard.
- Ensure that a record of the inspections and maintenance carried out is kept at the work site and readily available to a worker who operates the equipment.

47.0 WORKING FROM HOME

Purpose

To provide home based workers practical information in order to:

- Integrate health and safety into everyday activities
- Ensure compliance with health and safety legislation and due diligence
- Help manage a work from home position so it works best for both the employee and employer
- Understand the important of ergonomics (workstation, desk, chair, etc.), work organization (pace of work, maintaining contact, etc.), and other safety and security needs that may be unique to a working from home environment

Scope

This section will cover aspects of a health and safety program for home based workers. The main focus is integrating health and safety in home based office work through safety agreements and the actual set up of the office.

This is intended for home based office workers and related professionals, whether as an employee or self-employed.

Responsibilities

Managers and Supervisors

- Maintain a formal agreement between the Manager/Supervisor and employee
- Provide employees with the resources they will need to work at home
- Determine performance monitoring with employees (how/when work is accomplished, how the manager or supervisor will know if the employee is present, discuss forms of communication)
- Review administrative details such as hours of work

Employees

- Follow all guidelines and procedures outlined by the Manager/Supervisor
- Maintain a safe and healthy work environment at home

Guidelines for Working at Home

Daily Rituals

While workers may not have to leave the house to get to work each day, it is still important to keep a workday ritual.

- Employees should have a specific location to work. This could be a room, or just a corner of a room, but it is always a consistent place to complete work.
- Begin and finish at the same time every day when working at home.
- Maintain a professional appearance.
- Set a schedule and stick to it. Make a “to-do” list and check your accomplishments at the end of the day.
- Maintain contact with the office. Establish a routing for contact with your direct supervisor or co-workers.
- Keep your supervisor informed of your progress and any difficulties encountered.
- Attend meetings and gatherings at work as often as possible.

- Determine what interruptions are okay and which are not. Discuss with family and friends what your boundaries are when working at home.

Staying Connected with the Office

Falling "out of touch" with the office is a very common problem reported by workers when working at home.

- Be present at key meetings. If you cannot change your home schedule to be physically present, participate actively by using a conference call, video or web-based conferencing.
- Be flexible. You may have to come into the office on a day you would normally work at home.
- Make sure everyone knows when and how to contact you. Be sure to communicate hours of work with the people you will be working with. Let them know when to contact you and which method is best (email, phone, etc.)
- Be clear with your communications. Always take a minute to review emails or to pre-plan voice messages to ensure your message is received the way you intend, and not as criticism or otherwise.
- Attend social events at the office. Take advantage of special events such as the Holiday lunch or a retirement party to stay involved in an unofficial capacity.

Balance Between Work and Family Life

Many people think that working at home can help even the balance between work and family life. Working at home may or may not help with this balance. You still have work duties to accomplish, but you may find that with the time savings in commuting, for example, that more balance is established.

There are often two main aspects associated with work-life balance. The first is a lack of time and scheduling conflicts, and the other is feeling overwhelmed, overloaded or stressed by the pressures of multiple roles. Research from Health Canada indicates that there are four broad categories associated work work-life balance.

- **Role Overload:** This form of work-life conflict occurs when the total demands on time and energy associated with the prescribed activities of multiple roles are too great to perform the roles adequately or comfortably.
- **Work-to-Family Interference:** This type of role conflict occurs when work demands and responsibilities make it more difficult to fulfill family-role responsibilities. For example, long hours in paid work prevents attendance at a child's event, preoccupation with the work role prevents an active enjoyment of family life, or work stresses spill over into the home environment and increase conflict with the family.
- **Family-to-Work Interference:** This type of role conflict occurs when family demands and responsibilities make it more difficult to fulfill work-role responsibilities (e.g. a child's illness prevents attendance at work, conflict at home makes concentration at work difficult.
- **Caregiver Strain:** This can come from many sources and is often defined in terms of "burdens" in the caregivers' day-to-day lives.

Recognition of Stress and Psychosocial Concerns

Job stress can be defined as the harmful physical and emotional responses that occur as a result of undesirable working conditions. Excessive job stress can lead to poor health and even injury. Because a worker who works at home is in isolation, it may be difficult to find ways to relive stress. Be sure to stay in touch with co-workers and supervisors in order to maintain good, clear communications.

Symptoms of stress are often confused with causes of stress. Both help us recognize the problem. Common causes of stress include:

- Inadequate Job Design
    - Heavy workload
    - Infrequent rest breaks
    - Long work hours and shift work
    - Hectic and routine tasks
    - Under-utilized workers' skills
    - Lack of control
- Management Style
    - Lack of participation by workers in decision-making
    - Poor communication in the organization
    - Lack of family-friendly policies
- Interpersonal Relationships
    - Poor social environment
    - Lack of support of help from co-workers or supervisors
- Work Roles
    - Conflicting or uncertain job expectations
    - Too many responsibilities
    - Too many "hats to wear"
- Unfair Treatment
    - Employment discrimination
- Career Concerns
    - Job insecurity and lack of opportunity for growth
    - Advancement or promotion
    - Rapid changes for which workers are unprepared

Early warning signs or symptoms of stress can include:

- Headache
- Sleep disturbance
- Self-isolation
- Short temper
- Job dissatisfaction
- Loss of interest in work
- Self-blame
- Depression

Find ways to help yourself – as an employee you still have access to any programs that the employer may offer, such as employee assistance programs (EAPs), and human resource professionals.

Workstation Ergonomics

Ergonomics is the science of "fitting the work to the worker". Poor ergonomic conditions refer to situations where the work involves:

- Fixed and constrained postures (those that are awkward or maintained for too long)
- Repetitive movements by the same part of the body
- A force that it is concentrated on small parts of the body, such as the hand or wrist
- High rate of repetitive movements that do not allow sufficient time for recovery between movements

Because employees are working along, they may not get the natural breaks from the computer that regular office workers have such as attending meetings, walking to get supplies or to the printer, filing and clean-up, etc. It is even more important to be aware of the impact of poor ergonomics and try to prevent overuse injuries.

Types of Work-Related Musculoskeletal Disorders

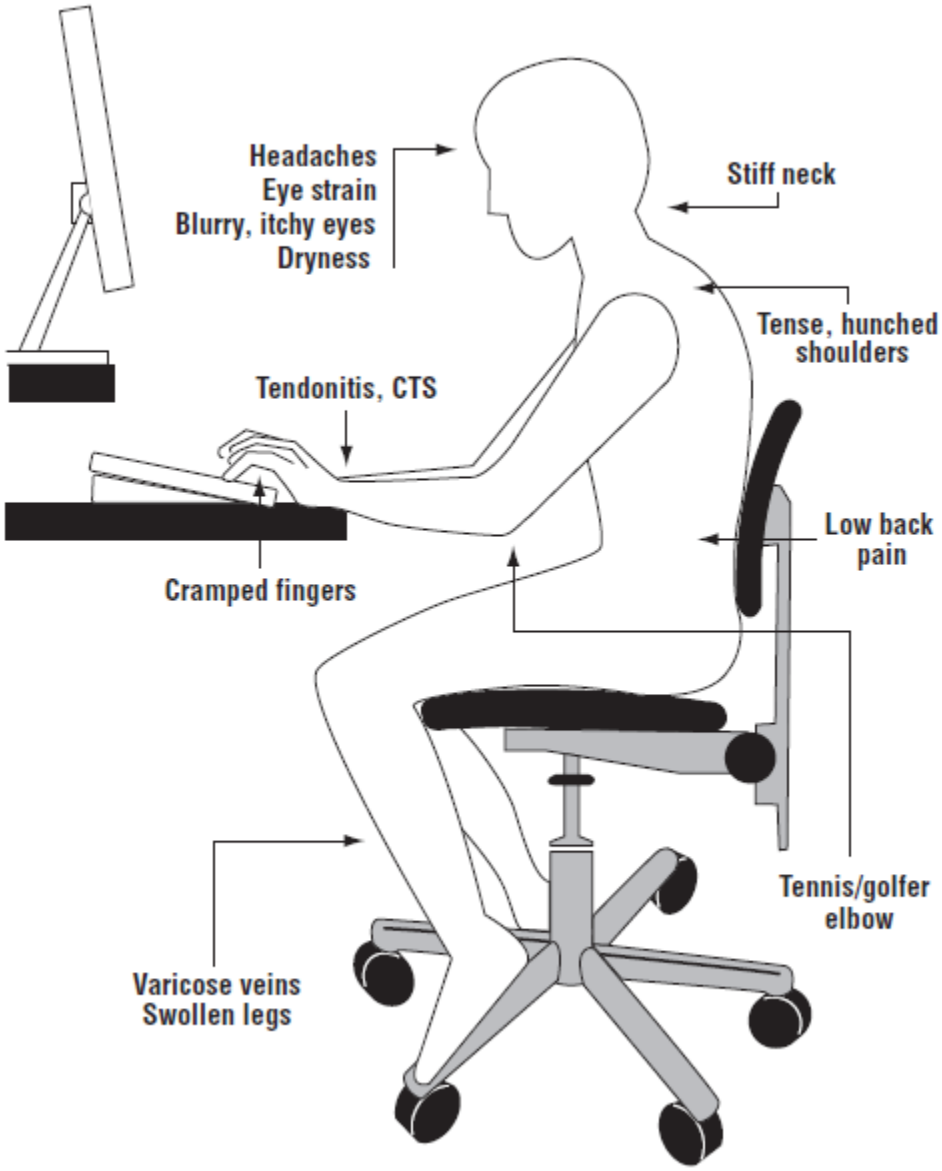
Work-related musculoskeletal disorders often affect the wrists, shoulders, neck, muscles and joints. Awkward body postures generally affect the back, legs, hips, ankles and feet.

Type of Injury	Example of Disorder	Symptoms
Muscle	Sprains, Strains, Torn Muscles	Pain; Difficulty in turning, bending and moving the muscle.
Nerve	Carpal Tunnel Syndrome (CTS)	Compression of the median nerve as it enters the palm of the hand through the carpal tunnel. The symptoms are pain and numbness in the index and middle fingers and difficulty in gripping things.
	Thoracic Outlet Syndrome	Pain, arm weakness, and numbness in the arms and fingers as a result of the squeezing of the nerves and blood vessels between the neck and shoulders.
Tendon	Tendonitis	Pain mainly in the hands and wrist due to inflammation of the tendon as a result of overuse. Tendons are fibre bundles that attach muscles to bones.
	Tenosynovitis	Inflammation of the tendon sheath producing pain and swelling. It may result from loss of lubrication in the bone joints as a result of repetitive and excessive hand movement.
	Ganglion Cyst	An inflamed tendon sheath may swell with lubricating fluid. This swelling causes a bump under the skin called a ganglion cyst.
	Bursitis	Restriction and pain in joint movement as a result of deficient lubrication at a bone joint.

In an office workplace, work-related musculoskeletal disorders arise because of:

- Inadequate workstation design
- Inadequate work organization
- Inadequate tools, equipment, furniture design

- Manual material handling
- Inadequate work environment: temperature, humidity, lighting, noise, etc.



Ergonomic Workstations

Work Surface

The work surface is the desk, table or bench where the task is being performed. If the work surface is too high or too low for the body and the task being done, then the individual is required to perform the tasks in an awkward body position.

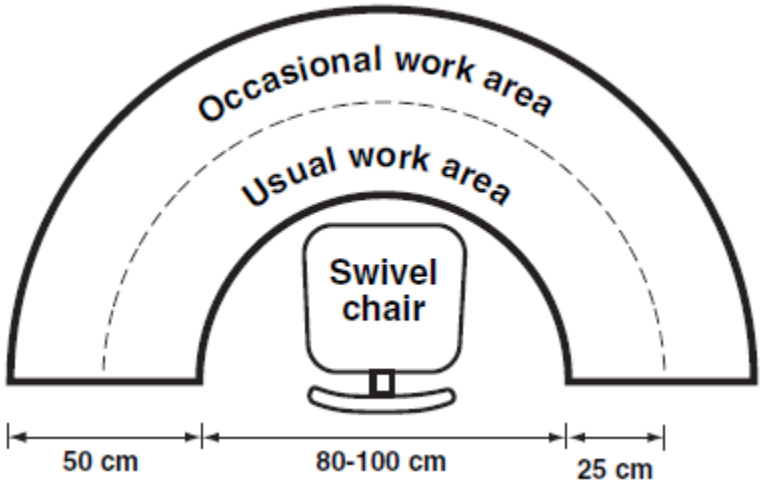
The chair and/or work surface height should be adjusted properly to suit the individual and type of work.

For typing and keyboarding, the work surface should be about the height of the elbows with the arms hanging straight by the sides. For writing and reading, the work surface should be about 5cm (2 inches) above elbow height.

If the work surface is not adjustable, then the seat height should be adjusted so that the elbows are about the same height as the top of the work surface. Thighs should be horizontal and feet should be resting flat on the floor.

Workstation Layout

Arrange work in a semi-circle. Position tasks within easy reach. Use a swivel chair to reduce body twisting, to allow easy movements and reduce side to side motions.



Tips for Using a Laptop Computer

Occasional Workers (Not at a Workstation)

- Find a chair that is comfortable and that you can sit back in
- Position your laptop in your lap for the most neutral wrist posture
- Angle the laptop so that you an see the screen without bending your neck

Full-Time Laptop Users (At a Workstation)

- Position the laptop on your desk in front of you so that you can see the screen without bending your neck.
- Use a separate keyboard and mouse.
- Use a tilting keyboard to ensure a wrist neutral posture, if necessary
- Place the mouse on an adjustable position mouse platform.

Work Organization

Employees working from home often do the same type of work for their entire workday with most of the time spent at a computer station. They also do not have the natural breaks that occur in an office environment. Maintaining a good pace of work with breaks (both work and rest breaks) that provide a range of body movements which is especially important.

In general, work organization determines what jobs to do and how to do them. It gives the individual flexibility to vary their body positions and reduces the time spent doing the same repetitive or forceful movements.

Work Pace

A work pace that is too fast does not allow the body enough recovery time between repetitive or forceful movements. This lack of recovery time increases the risk of developing work-related musculoskeletal disorders.

A good work pace should be determined by the joint efforts of management and workers. Such efforts can help to establish reasonable work quotas, schedules and goals that meet specific needs. Incentive systems that reward workers for the quality of work also tend to encourage a good work pace. On the other hand, incentives based on the amount or quantity of work only are likely to increase the risk of error, poor quality and work-related musculoskeletal disorders.

Work Breaks

Work breaks are the times when we stop working on one task and start another, allowing us to use different parts of the body. Work breaks can help prevent work-related musculoskeletal disorders by allowing us to rest, stretch or change body positions when we need to. For continuous computer work, a work break of 5 minutes per hour is generally recommended.

Rest Breaks

Rest breaks are the times we stop working. We should use this time to stretch and change body positions.

Adjustment Periods

An adjustment period is the time we need to get “in shape” when we return to our job after a long absence or when we start a new job. This time should allow us to build up muscle strength before we work at full capacity. The length of an adjustment period depends on the type of job.

Other Health and Safety Concerns and Preventative Measures

Preventing Vision Problems

- Position work so that it is easy to see. Use adjustable chairs, well-positioned computer monitors, adjustable work surfaces and task lights.
- Use legible source documents and computer monitors with good image quality.
- Maintain adequate humidity levels to prevent dry eyes.
- Ensure eyes are examined regularly to avoid problems of uncorrected or improperly corrected vision. People who work with monitors may require a special prescription to be able to read at an intermediate distance.
- Encourage frequent changes in body position by varying tasks and using good work/rest schedules.
- Position the desk so that the window is to the side of the worker.
- Position desk so that the ceiling lights are to the sides. Avoid placing desks where light fixtures are directly in front.

- Adjust window blinds or drapes to control light levels and glare.
- Use low reflective finishes and neutral colours on walls and furniture. The colour and finish of a surface determines how much light it reflects.
- Use adjustable task lights to increase light levels when needed.
- Replace flickering fluorescent tubes and maintain fixtures properly.
- Look up and away from work frequently to res the eyes.

Computer Mouse: Selection and Use

- Choose a mouse that fits your hand
- Choose a flat shaped mouse
- Choose a mouse that is shaped the same on both sides
- Choose a mouse with buttons that respond to a light touch so that you do not have to press too hard to make it work
- Choose a mouse with the buttons that neither cramp the fingers nor spread them out too far apart
- Choose a mouse with a “drag lock” or “click lock” function

A larger mouse that still fits in the palm of your hand helps you use your larger arm muscles rather than the smaller wrist muscles, which tire easily and are more likely to experience work-related musculoskeletal disorders.

Working Alone from Home

- Position your office as close to the front entrance of your house as possible.
- If you must locate your office elsewhere (e.g. the basement, upstairs, or the rear of your home), conduct business meetings with clients in the front room.
- When meeting clients, meet them away from your home office such as a coffee shop.
- Have someone contact you every day to check in.

Filing Cabinets

- Load cabinet drawers evenly, starting with the bottom ones. Never “top load” a filing cabinet. Fill the bottom drawers first with heavier material that is used infrequently.
- Secure cabinets that are not weighted at the bottom by bolting them to the floor or wall.
- Load frequently used materials in the middle drawers, between shoulder and knee height.
- Open only one drawer at a time to keep the cabinet from toppling onto you. Ensure all new filing cabinets have a built-in mechanism to prevent more than one drawer from being opened at a time.
- Close drawers when they are not in use.
- Close drawers slowly, using the handle to avoid pinched fingers.
- Arrange the cabinets so that the drawers do not open into doorways or hallways.
- Do not place heavy objects on top of cabinets.
- Do not block ventilation grates with file cabinets.

Electrical Safety

- Use extension cords only when fixed wiring is not possible. Locate extension leads and flexible cables where they are not likely to be damaged and where they are protected from damage from heat sources and liquids.
- Use Canadian Standards Association (CSA) or Underwriters Laboratories (UL) approved equipment.

- Disconnect electrical equipment from its power source before investigating cleaning, adjusting, or clearing a jam.
- Do not overload outlets.
- Never force a 3-prong plug into a 2-prong outlet
- Replace worn or frayed cords immediately
- Never pull or drag cords over sharp objects
- Never run extension cords under rugs or through high traffic areas
- Never pull a plug out by the cord
- Switch off electrical machines at night, unless specifically required to operate
- Switch off the equipment if a fuse blows and report the incident to your supervisor

Housekeeping

Good housekeeping is the first and the most important means of preventing falls. While these hazards may be easier to manage in the home, it is still important to maintain good housekeeping practices. The following are some preventative measures to minimize the risk of falls:

- Clean all spills immediately
- Mop or sweep debris from floors
- Remove obstacles from walkways and always keeping them free of clutter
- Secure mats, rugs, and carpets that do not lay flat
- Close file cabinets or storage drawers
- Cover cables that cross walkways properly
- Keep working areas and walkways well lit
- Replace burnt light bulbs and faulty switches

48.0 WORKPLACE HARASSMENT

Key Responsibilities

Safety Manager

Mobile Energy Systems has a written Workplace Harassment program. Mobile Energy Systems has developed a policy and procedures respecting potential workplace harassment in Alberta.

Site Manager

- Responsible for the implementation and maintenance of the plan for their site and ensuring all assets are made available for compliance with the plan.
- Enforcing by immediate, and with no hesitation, steps to immediately address any incident of workplace harassment.

Employees

- All shall be familiar with this procedure and the local workplace harassment plan.
- Shall immediately report any exposure to or knowledge of workplace harassment to their supervisor.

Workplace Harassment and Conduct Policy

The management of Mobile Energy Systems is committed to providing a work environment in which all workers are treated with respect and dignity. Harassment will not be tolerated from any person at or outside of the work site including managers, supervisors, workers, customers, clients, other employers, and members of the public.

Mobile Energy Systems is committed to eliminating or, if that is not reasonably practicable, controlling the hazard of harassment. Everyone is obligated to uphold this policy and to work together to prevent workplace harassment.

Workplace harassment means any single incident or repeated incidents of objectionable or unwelcome conduct, comment, bullying or action by a person that the person knows or ought reasonably to know will or would cause offence or humiliation to a worker, or adversely affects the worker's health and safety, and includes conduct, comment, bullying or action because of race, religious beliefs, colour, physical disability, mental disability, age, ancestry, place of origin, marital status, source of income, family status, gender, gender identity, gender expression and sexual orientation, and a sexual solicitation or advance.

Reasonable action taken by Mobile Energy Systems or supervisor relating to the management and direction of workers or a work site is not workplace harassment.

In support of this policy, we have put in place workplace harassment prevention procedures. It includes measures and procedures to protect workers from the hazard of harassment and a process for workers to report incidents or raise concerns.

Mobile Energy Systems will ensure this policy and the supporting procedures are implemented and maintained. All workers and supervisors will receive relevant information and instruction on the contents of the policy and procedures.

Supervisors will adhere to this policy and the supporting procedures. Supervisors are responsible for ensuring that measures and procedures are followed by workers and that workers have the information they need to protect themselves.

Every worker must work in compliance with this policy and the supporting procedures. All workers are required to raise any concerns about harassment and to report any incidents to the appropriate person.

Mobile Energy Systems will investigate and take appropriate corrective actions to address all incidents and complaints of workplace harassment in a fair, respectful and timely manner.

Mobile Energy Systems pledges to respect the privacy of all concerned as much as possible. Mobile Energy Systems will not disclose the circumstances related to an incident of harassment or the names of the parties involved (including the complainant, the person alleged to have committed the harassment, and any witnesses) except where necessary to investigate the incident, to take corrective action, to inform the parties involved in the incident of the results of the investigation and corrective action taken, or as required by law.

No workers can be penalized, reprimanded or in any way criticized when acting in good faith while following this policy and the supporting procedures for addressing situations involving harassment. This harassment prevention policy does not discourage a worker from exercising the worker's right under any other law, including the Alberta Human Rights Act.

Definition

"Harassment" is defined as any single incident or repeated incidents of objectional or unwelcome conduct, comment, bullying or action by a person that the person knows or ought reasonably to know will or would cause offence or humiliation to a worker, or adversely affects the workers health and safety and includes:

- Unwelcome conduct, comments, gestures, or contact which causes offense or humiliation (e.g. name calling, harassing phone calls, spreading rumors)
- Deliberate mis gendering (i.e. referring to a person using terms or pronouns that do not align with the persons affirmed gender)
- Physical or psychological bullying which crates fear or mistrust or which ridicules or devalues the individual (e.g. fist shaking, yelling)
- Exclusion or isolation of individuals
- Intimidation (i.e. standing too close or making inappropriate gestures or comments)
- Cyber bulling (e.g. posting or sending offensive or intimidating messages through social media or email)
- Deliberately setting up the individual to fail (E.g. making unreasonable demands, setting impossible deadlines, interfering with work)
- Intentionally withholding information or giving the wrong information
- Taking away work or responsibility without cause
- Displaying or circulating offensive pictures of materials in print or electronic form.

Harassment excludes any reasonable conduct of an employer or supervisor related to the normal management of workers on a work site. Reasonable actions considered to be part of a managers or supervisors work functions include changing work assignments, scheduling, assessing and evaluating work performance, inspecting workplaces, implementing health and safety measures, and taking disciplinary action such as dismissing, suspending, demoting or reprimanding with just cause. Done reasonably and fairly, these actions should not be considered workplace harassment.

Differences of opinion or minor disagreements between co-workers are also not generally considered to be workplace harassment but can turn into harassment if no steps are taken to resolve the conflict. Similarly, difficult conditions of employment such as professional practice limitations, organizational changes, or financial restrictions are not considered harassment. Work-related stress, on its own, does not constitute harassment. However, an accumulation of stress factors resulted from harassing behaviours such as those described earlier may result in a harassment situation.

Mobile Energy Systems' Responsibility to Inform Employees

- Mobile Energy Systems must inform workers who may be exposed to the risk of harassment of the nature and extent of the risk. The duty to inform workers includes a duty to provide information when a risk of harassment is identified related to the risk of harassment from other known persons who have a known history of harassing behaviour and/or whom workers are likely to encounter in the course of their work.
- Mobile Energy Systems will ensure that workers are instructed in how to recognize workplace harassment, the policy, procedures and workplace arrangements that effectively minimize or eliminate workplace harassment, the appropriate response to workplace harassment, including how to obtain assistance and procedures for reporting, investigating and documenting incidents of workplace harassment.

Risk Assessment

A risk assessment must be conducted to evaluate the risk of workplace harassment. Mobile Energy Systems must identify and assess the risk of harassment in the workplace in consultation with the committee at the workplace, the representative at the workplace or when there is no committee or representative, the workers at the workplace.

Workplace Hazard Control and Prevention

Mobile Energy Systems will identify and institute a combination of control measures designed to eliminate or mitigate the risks of harassment incidents. Traditional methods of engineering and administrative controls include the following:

Engineering Controls

Engineering controls to consider for the local workplace harassment plan include:

- Are adequate escape and access routes present and known to the workers?
- Are all unused doors locked to limit access?
- Is access to work areas controlled and are there access procedures established for visitors?
- Is there a list of "restricted visitors" or trespassers and is it maintained?
- Is entry to the area/building controlled with carded entry or security staff?
- Are physical security devices required (e.g., Closed Circuit TV, door locks, panic alarms)?
- Is there an effective means of communication between the worker and persons capable of responding to the worker's needs?

Administrative Controls

Administrative controls to consider for the local workplace violence plan include:

- Are work procedures developed?
- Is staff trained in work procedures?
- Is there sufficient and qualified staff coverage during times of greater risk?
- Can staff double-up for specific locations or situations where the probability of harassment is higher?

- Has the local workplace Working Alone Plan factored in workplace harassment threats?
- Is an escort or buddy service required for workers working after hours?
- Can hours of operation be modified to close the workplace to the public during high-risk hours (late at night and early in the morning)?

Compliance

All workers are responsible and will be held accountable for using safe work practices, for following all directives, policies and procedures, and for assisting in maintaining a safe and secure work environment.

A person must not engage in any improper activity or behaviour at a workplace that might create or constitute a hazard to themselves or to any other person. Improper activity or behaviour must be reported and investigated.

Managers, supervisors and workers will comply with work practices that are designed to make the workplace more secure and will not engage in threats or physical actions which create a security hazard for others in the workplace. Managers and supervisors will:

- Inform workers, supervisors and managers about our Workplace Harassment Prevention Program.
- Evaluate the performance of all workers in complying with our establishment's workplace security measures.
- Recognize workers who perform work practices which promote security in the workplace.
- Provide training and/or counselling to workers who need to improve work practices designed to ensure workplace security.
- Discipline workers for failure to comply with workplace security practices.
- Follow established workplace security directives, policies and procedures.

Managers and supervisors will maintain an open, two-way communications system on all workplace safety, health and security issues. Our establishment has a communication system designed to encourage a continuous flow of safety, health and security information between management and our workers without fear of reprisal and in a form that is readily understandable. Our communication system consists of the following items:

- New worker orientation on our establishment's workplace security policies, procedures and work practices.
- Periodic review of our Workplace Harassment Prevention Program with all personnel.
- Training programs designed to address specific aspects of workplace security unique to our establishment.
- Regularly scheduled safety meetings with all personnel that include workplace security discussions.
- A system to ensure that all workers, including managers and supervisors, understand the workplace security policies.
- Posted or distributed workplace security information.
- A system for workers to inform management about workplace security hazards or threats of violence.
- Procedures for protecting workers who report threats from retaliation by the person making the threats.

Reporting and Investigation Procedure

Incidents of workplace harassment must be reported and investigated. The following provides information on how to report an incident of harassment and how an incident of harassment will be investigated:

- In the event of workplace harassment related incident any worker shall immediately contact the client or contracted security staff, local law enforcement agencies and the Mobile Energy Systems Corporate Human Resources department.

- The worksite will strictly follow Mobile Energy Systems policies and procedures for a thorough investigation of the incident.
- The Mobile Energy Systems Human Resources department shall lead the investigation with the assistance of those parties designated by the Human Resources department.

Investigation

Our procedures for investigating incidents of workplace harassment include:

- Reviewing all previous incidents.
- Visiting the scene of an incident as soon as possible.
- Interviewing threatened or injured workers and witnesses.
- Examining the workplace for security risk factors associated with the incident, including any previous reports of inappropriate behaviour by the perpetrator.
- Determining the cause of the incident.
- Taking corrective action to prevent the incident from recurring.
- Recording the findings and corrective actions taken.
- The involved parties will be informed of the results of the investigation

Training and Instruction

Workers are provided workplace harassment training. When a risk of harassment in the workplace is identified Mobile Energy Systems must train workers in the harassment prevention policy. We have established the following policy on training all workers with respect to workplace harassment and security.

All workers, including managers and supervisors, shall have training and instruction on general and job-specific workplace security practices. Training and instruction shall be provided when the Workplace Harassment Prevention Program is first established and periodically thereafter. Training shall be provided to all new workers and to other workers for whom training has not previously been provided. It shall also be provided to all workers, supervisors, and managers given new job assignments for which specific workplace security training for the job assignment has not previously been provided. Additional training and instruction will be provided to all personnel whenever Mobile Energy Systems is made aware of new or previously unrecognized security hazards.

General workplace harassment and security training and instruction include, but are not limited to, the following:

- Explanation of the Workplace Harassment Prevention Program including measures for reporting any incidents of harassment.
- Recognition of workplace harassment and security hazards including the risk factors associated with the types of harassment.
- The policy, procedures, and workplace arrangements that effectively minimize or eliminate workplace harassment.
- Ways to defuse hostile or threatening situations.
- Measures to summon others for assistance.
- Employee routes of escape.
- Notification of law enforcement authorities when a criminal act may have occurred.
- Post-event trauma counselling for those workers desiring such assistance.
- Personal security measures
- Ways of preventing or diffusing volatile situations or aggressive behaviour
- How to deal with hostile persons

- Techniques and skills to manage and resolve conflicts
- The importance of reporting, how to report incidents, and who to contact for support for assistance
- Specific instructions to all workers regarding workplace security hazards unique to their job assignment, to the extent that such information was not already covered in other training.

Supervisory and Safety Staff Training

- Methods to encourage workers to report incidents of harassment
- Methods to support workers who report incidents
- Skill in handling crisis situations, identifying the warning signs of aggression
- Techniques and skills to manage and resolve conflicts
- Identifying precipitating factors (e.g., mental health issues, workplace stress, substance abuse)

Program Recordkeeping and Review

Periodic updates and reviews of the following workplace harassment reports and records will be made:

- Workplace harassment incident reports
- Information compiled for recording harassment incidents or near-assault incidents
- Insurance records
- Police reports
- Workplace survey
- Accident investigations
- Training records
- Grievances
- Inspection information
- Other relevant records or information

The Workplace Harassment Policy and Procedure will be reviewed and updated:

- Every three years, as required by legislation
- Following an incident of harassment
- When the JHSC or HS representative makes a recommendation

49.0 WORKPLACE VIOLENCE

Key Responsibilities

Safety Manager

Mobile Energy Systems has a written Workplace Violence program. Mobile Energy Systems has developed a policy and procedures respecting potential workplace violence in Alberta.

Site Manager

- Responsible for the implementation and maintenance of the plan for their site and ensuring all assets are made available for compliance with the plan.
- Enforcing by immediate, and with no hesitation, steps to immediately address any incident of workplace violence.

Employees

- All shall be familiar with this procedure and the local workplace violence plan.
- Shall immediately report any exposure to or knowledge of workplace violence to their supervisor.

Workplace Violence and Conduct Policy

The management of Mobile Energy Systems is committed to the prevention of workplace violence and is ultimately responsible for worker health and safety. We will take whatever steps are reasonable to protect our workers from the potential hazards associated with workplace violence. Violent behavior or threat of violence in the workplace is unacceptable from anyone. This policy applies to all managers, supervisors, workers, clients, customers, delivery personnel, and the general public.

Mobile Energy Systems as the employer is committed to eliminating or, if that is not reasonably practicable, controlling the hazard of violence. Everyone is obligated to uphold this policy and to work together to prevent workplace violence.

Violence, whether at a work site or work related, is the threatened, attempted or actual conduct of a person that causes or is likely to cause physical or psychological injury or harm and includes domestic or sexual violence.
In support of this policy, we have put in place workplace violence prevention procedures. It includes measures and procedures to protect workers from workplace violence, a means of summoning immediate assistance and a process for workers to report incidents or raise concerns.

Mobile Energy Systems will ensure this policy and the supporting procedures are implemented and maintained. All workers and supervisors will receive relevant information and instruction on the contents of the policy and procedures.

Supervisors will adhere to this policy and the supporting procedures. Supervisors are responsible for ensuring that measures and procedures are followed by workers and that workers have the information they need to protect themselves.

Every worker must work in compliance with this policy and the supporting procedures. All workers are required to raise any concerns about workplace violence and to report any violent incidents or threats.

Mobile Energy Systems will investigate and take appropriate corrective actions to address all incidents and complaints of workplace violence in a fair and timely manner.

Mobile Energy Systems pledges to respect the privacy of all concerned as much as possible. Mobile Energy Systems will not disclose the circumstances related to an incident of violence or the names of the complainant, the individual alleged to have committed the violence, and any witnesses, except where necessary to investigate the incident or to take corrective action, to inform the parties involved in the incident of the results of the investigation and corrective action taken, to inform workers of a specific or general threat of violence or potential violence, or as required by law. Mobile Energy Systems will disclose only the minimum amount of personal information required that is necessary to inform workers of a specific or general threat of violence or potential violence.

No workers can be penalized, reprimanded or in any way criticized when acting in good faith while following this policy and the supporting procedures for addressing situations involving workplace violence. This violence prevention policy does not discourage a worker from exercising the worker's right under any other law.

Definition

"violence" means the attempted or actual exercise by a person, other than a worker, of any physical force so as to cause injury to a worker and includes any threatening statement or behaviour which gives a worker reasonable cause to believe that he or she is at risk of injury.

"improper activity or behaviour" also includes the attempted or actual exercise by a worker towards another worker using physical force to cause injury and including any threatening statement or behaviour which gives the worker reasonable cause to believe he or she is at risk of injury. Horseplay, practical jokes, unnecessary running or jumping or similar conduct will also not be tolerated in the workplace.

"physical attack or aggression" includes hitting, shoving, pushing or kicking a worker, throwing an object at a worker, kicking an object that a worker is standing on.

"threatening behaviour" includes shaking a fist in a workers face, wielding a weapon at work, trying to hit a worker, trying to run down a worker using a vehicle or equipment such as a forklift, destroying property or throwing objects.

"verbal or written threats" such as verbally threatening to attack a worker, leaving threatening notes or sending threatening emails to express an intent to inflict harm on a worker.

"domestic violence" is a pattern of behaviour used by one person to gain power and control over another with whom a person has or had a personal relationship with. This can range from subtle, coercive forms of violent acts that result in physical harm or death.

"sexual violence" refers to any sexual act, attempt to obtain a sexual act, or other act directed against a workers sexuality using coercion, by any person regardless of their relationship to the victim in a workplace or work related setting. Sexual violence exists on a continuum from obscene name-calling to rape and/or homicide and includes online forms of sexual violence and sexual exploitation.

Mobile Energy Systems' Responsibility to Inform Employees

- Mobile Energy Systems must inform workers who may be exposed to the risk of violence of the nature and extent of the risk. The duty to inform workers includes a duty to provide information when a risk of

violence is identified related to the risk of violence from other known persons who have a known history of violent behaviour and/or whom workers are likely to encounter in the course of their work.

- Mobile Energy Systems will ensure that workers are instructed in how to recognize workplace violence, the policy, procedures and workplace arrangements that effectively minimize or eliminate workplace violence, the appropriate response to workplace violence, including how to obtain assistance and procedures for reporting, investigating and documenting incidents of workplace violence.

Risk Assessment

A risk assessment must be conducted to evaluate the risk of workplace violence. Mobile Energy Systems must identify and assess the risk of violence in the workplace in consultation with the committee at the workplace, the representative at the workplace or when there is no committee or representative, the workers at the workplace.

Workplace Hazard Control and Prevention

Mobile Energy Systems will identify and institute a combination of control measures designed to eliminate or mitigate the risks of violence incidents. Traditional methods of engineering and administrative controls include the following:

Engineering Controls

Engineering controls to consider for the local workplace violence plan include:

- Is lighting adequate to eliminate dark areas and heavy shadows and deter potential incidents from occurring?
- Are adequate escape and access routes present and known to the workers?
- Are all unused doors locked to limit access?
- Is access to work areas controlled and are there access procedures established for visitors?
- Is there a list of "restricted visitors" or trespassers and is it maintained?
- Is entry to the area/building controlled with carded entry or security staff?
- Are physical security devices required (e.g., Closed Circuit TV, door locks, panic alarms)?
- Is there an effective means of communication between the worker and persons capable of responding to the worker's needs?

Administrative Controls

Administrative controls to consider for the local workplace violence plan include:

- Are the duties that create a safety risk necessary? Can modification or elimination of these duties be made?
- Are work procedures developed?
- Is staff trained in work procedures?
- Is there sufficient and qualified staff coverage during times of greater risk?
- Can staff double-up for specific locations or situations where the probability of violence is higher?
- Can money handling be reduced or improved?
- Has the local workplace Working Alone Plan factored in workplace violence threats?
- Is an escort or buddy service required for workers working after hours?
- Can hours of operation be modified to close the workplace to the public during high-risk hours (late at night and early in the morning)?

Compliance

All workers are responsible and will be held accountable for using safe work practices, for following all directives, policies and procedures, and for assisting in maintaining a safe and secure work environment.
A person must not engage in any improper activity or behaviour at a workplace that might create or constitute a hazard to themselves or to any other person. Improper activity or behaviour must be reported and investigated.

Managers, supervisors and workers will comply with work practices that are designed to make the workplace more secure, and will not engage in threats or physical actions which create a security hazard for others in the workplace. Managers and supervisors will:

- Inform workers, supervisors and managers about our Workplace Violence Prevention Program.
- Evaluate the performance of all workers in complying with our establishment's workplace security measures.
- Recognize workers who perform work practices which promote security in the workplace.
- Provide training and/or counselling to workers who need to improve work practices designed to ensure workplace security.
- Discipline workers for failure to comply with workplace security practices.
- Follow established workplace security directives, policies and procedures.

Managers and supervisors will maintain an open, two-way communications system on all workplace safety, health and security issues. Our establishment has a communication system designed to encourage a continuous flow of safety, health and security information between management and our workers without fear of reprisal and in a form that is readily understandable. Our communication system consists of the following items:

- New worker orientation on our establishment's workplace security policies, procedures and work practices.
- Periodic review of our Workplace Violence Prevention Program with all personnel.
- Training programs designed to address specific aspects of workplace security unique to our establishment.
- Regularly scheduled safety meetings with all personnel that include workplace security discussions.
- A system to ensure that all workers, including managers and supervisors, understand the workplace security policies.
- Posted or distributed workplace security information.
- A system for workers to inform management about workplace security hazards or threats of violence.
- Procedures for protecting workers who report threats from retaliation by the person making the threats.

Workplace Security Inspections

Inspections to identify and evaluate workplace security hazards and threats of workplace violence will be performed on the following schedule:

- Monthly
- When new, previously unidentified security hazards are recognized
- When occupational injuries or threats of injury occur, and
- Whenever workplace security conditions warrant an inspection.

Periodic inspections for security hazards consist of identification and evaluation of workplace security hazards and changes in worker work practices, and may require assessing for more than one type of workplace violence. Our establishment performs inspections for each type of workplace violence by using the methods specified below to identify and evaluate workplace security hazards.

By Strangers (Type 1)

- The exterior and interior of the workplace for its attractiveness to robbers.

- The need for security surveillance measures, such as mirrors or cameras.
- Posting of signs notifying the public that limited cash is kept on the premises.
- Procedures for worker response during a robbery or other criminal act.
- Procedures for reporting suspicious persons or activities.
- Posting of emergency telephone numbers for law enforcement, fire and medical services where workers have access to a telephone with an outside line.
- Limiting the amount of cash on hand and using time access safes for large bills.
- Staffing levels during evening hours of operation and at other high risk times.
- The use of work practices such as "buddy" systems, as appropriate, for identified risks (e.g., walking workers to their cars or mass transit stops at the end of the work day).
- Adequacy of lighting and security for designated parking lots or areas.

By Clients (Type 2)

- Access to and freedom of movement within, the workplace.
- Adequacy of workplace security systems, such as door locks, security windows, physical barriers and restraint systems.
- Frequency and severity of threatening or hostile situations that may lead to violent acts by persons who are service recipients of our establishment.
- Employees' skill in safely handling threatening or hostile service recipients.
- Effectiveness of systems and procedures to warn others of a security danger or to summon assistance e.g. alarms or panic buttons.
- The use of work practices such as "buddy" systems, as appropriate, for identified risks (e.g., walking workers to their cars or mass transit stops at the end of the work day).
- Adequacy of lighting and security for designated parking lots or areas.
- The availability of worker escape routes.

By Co-Workers (Type 3)

- How well our establishment's anti-violence policy has been communicated to workers, supervisors and managers.
- How well our establishment's management and workers communicate with each other.
- How well our workers, supervisors and managers know the warning signs of potential workplace violence.
- Access to and freedom of movement within, the workplace by non-workers, specifically recently discharged workers.
- Frequency and severity of worker-reported threats of physical or verbal abuse by managers, supervisors or other workers.
- Any prior violent acts, threats of physical violence, verbal abuse, property damage or other signs of strain or pressure in the workplace.
- Employee disciplinary and discharge procedures.

Personal Relations

- Access to and freedom of movement within, the workplace by non-workers, specifically personal relations with whom one of our worker's is having a dispute.
- Frequency and severity of worker-reported threats of physical or verbal abuse which may lead to violent acts by a personal relation.
- Adequacy of workplace security systems, such as door locks, security windows, and physical barriers.
- Any prior violent acts, threats of physical violence, verbal abuse, property damage or other signs.

- The use of work practices such as "buddy" systems, as appropriate, for identified risks (e.g., walking workers to their cars or mass transit stops at the end of the work day).
- Adequacy of lighting and security for designated parking lots or areas.
- Warnings or police involvement to remove personal relations of workers from the worksite and effectiveness of restraining orders.
- All workers who obtain a protective restraining order, which lists Mobile Energy Systems or client premises as being a protected area, must provide to their immediate supervisor a copy of any temporary or permanent protective or restraining order.
- Mobile Energy Systems understands the sensitivity of the information requested and has developed confidentiality procedures, which recognizes and respects the privacy of the worker(s).

Physician Consulting

Victims of workplace violence are advised to consult a health professional. Mobile Energy Systems must ensure that a worker is advised to consult a health professional of the worker's choice for treatment or referral if the worker reports an injury or adverse symptom resulting from workplace violence or is exposed to workplace violence. Employers cannot make any deductions from the workers wages and benefits if the treatment sessions occur during regular working hours.

Reporting and Investigation Procedure

Incidents of workplace violence must be reported and investigated. The following provides information on how to report an incident of violence and how an incident of violence will be investigated:

- In the event of workplace violence related incident, assistance must be summoned immediately. This includes:
    - Calling out for someone nearby to come help,
    - Summoning law enforcement
    - Finding a secure place to wait for assistance to arrive.
- All instance of workplace violence must be reported to a supervisor or manager.
- The worksite will strictly follow Mobile Energy Systems policies and procedures for a thorough investigation of the incident.
- The Mobile Energy Systems Human Resources department shall lead the investigation with the assistance of those parties designated by the Human Resources department.

Investigation

Our procedures for investigating incidents of workplace violence—threats and physical injury—include:

- Reviewing all previous incidents.
- Visiting the scene of an incident as soon as possible.
- Interviewing threatened or injured workers and witnesses.
- Examining the workplace for security risk factors associated with the incident, including any previous reports of inappropriate behaviour by the perpetrator.
- Determining the cause of the incident.
- Taking corrective action to prevent the incident from recurring.
- Recording the findings and corrective actions taken.
- All involved parties will be informed of the investigation results.

Training and Instruction

Workers are provided workplace violence training. When a risk of violence in the workplace is identified Mobile Energy Systems must train workers in the violence prevention policy. We have established the following policy on training all workers with respect to workplace violence and security.

All workers, including managers and supervisors, shall have training and instruction on general and job-specific workplace security practices. Training and instruction shall be provided when the Workplace Violence Prevention Program is first established and periodically thereafter. Training shall be provided to all new workers and to other workers for whom training has not previously been provided. It shall also be provided to all workers, supervisors, and managers given new job assignments for which specific workplace security training for the job assignment has not previously been provided. Additional training and instruction will be provided to all personnel whenever Mobile Energy Systems is made aware of new or previously unrecognized security hazards.

General workplace violence and security training and instruction include, but are not limited to, the following:

- Explanation of the Workplace Violence Prevention Program including measures for reporting any violent acts or threats of violence.
- Recognition of workplace violence and security hazards including the risk factors associated with the types of violence.
- The policy, procedures, and workplace arrangements that effectively minimize or eliminate workplace violence.
- Ways to defuse hostile or threatening situations.
- Measures to summon others for assistance.
- Employee routes of escape.
- Notification of law enforcement authorities when a criminal act may have occurred.
- Emergency medical care provided in the event of any violent act upon a worker.
- Post-event trauma counselling for those workers desiring such assistance.
- Personal security measures
- Ways of preventing or diffusing volatile situations or aggressive behaviour
- How to deal with hostile persons
- Techniques and skills to manage and resolve conflicts
- The importance of reporting, how to report incidents, and who to contact for support for assistance
- Specific instructions to all workers regarding workplace security hazards unique to their job assignment, to the extent that such information was not already covered in other training.

Supervisory and Safety Staff Training

- Methods to encourage workers to report incidents of violence
- Methods to support workers who report incidents
- Skill in handling crisis situations, identifying the warning signs of aggression
- Techniques and skills to manage and resolve conflicts
- Identifying precipitating factors (e.g., mental health issues, workplace stress, substance abuse)

Program Recordkeeping and Review

Periodic updates and reviews of the following workplace violence reports and records will be made:

- Workplace violence incident reports
- Information compiled for recording assault incidents or near-assault incidents (i.e. Threat and Assault Log)
- Insurance records
- Police reports
- Workplace survey
- Accident investigations
- Training records
- Grievances
- Inspection information
- Other relevant records or information

The Workplace Violence Policy and Procedures shall be reviewed and revised:

- Every three years, as required by legislation
- Following an instance of workplace violence
- When the JHSC or HS representative makes a recommendation