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Disclaimer

This manual contains various excerpts from the Ontario Occupational Health and Safety Act and applicable Regulations, Standards, and Guidelines. The most current version of the Act and related Regulations, Standards, and Guidelines should be relied upon.

Should any procedure outlined in this manual conflict with any Canadian Federal, Provincial, or Municipal Law or any prescribed standard then the most stringent set of standards shall apply.

This manual has been reviewed on the following dates:

February 19, 2026

- Updated procedure on page 12 to include electronic version of H&S documents to be available on site

March 14, 2024

- Updated the Health and Safety Policy
- Added Naloxone Kits to the Drug and Alcohol Program
- Updated Personal Protective Equipment
- Updated the section on WHMIS
- Updated and repaired formatting issues



Health and Safety Policy

We place the utmost importance on the health, safety and well being of our employees and others who may be affected by our work. To achieve and maintain a safe working environment, we have developed a health and safety program which is designed to promote workplace safety, provide specific health and safety training for all employees, monitor the workplace for compliance with legislative requirements and attain compliance at all times.

We will strive to eliminate all foreseeable hazards in the workplace.

We will give support and assistance to our safety committee at all times.

We will provide the proper safety equipment and materials to all employees and train all employees in the proper use of such equipment.

We will respect our workers right to know about any potential hazards to which they may be exposed.

We will respect the right to stop work by a "certified" member of our Joint Health and Safety Committee.

We will respect and encourage our workers to be a part of the process of identifying and resolving workplace health and safety concerns.

We encourage all workers to report all health and safety hazards immediately.

Supervisors will adhere to section 27 of the OHSA. Furthermore ensure all employees work safely and are knowledgeable of the legislated and company safety policies.

No penalties, suspensions or disciplinary action will be taken over legitimate health and safety concerns of our employees in our job sites.

A handwritten signature in blue ink, appearing to read 'D. Zafrani', is written over a horizontal line.

David Zafrani, P.Eng.
President

JAN. 21, 2020

Date

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Chapter 1 General

Purpose

This Standard Operating Procedure (S.O.P.) establishes Zerem ELECTRICAL SERVICES LTD Occupational Health and Safety Program, and provides a complete consolidated handbook for safety policies, procedures, and compliance, in addition to detailed guidance contained in the Ontario Occupational Health and Safety Act and Regulations It has been developed to define safe working practices and provide personnel with basic occupational injury and occupational illness prevention requirements.

Scope

This S.O.P. applies to all employees and contractors employed by ZEREM ELECTRICAL SERVICES LTD.

Policy

- It is ZEREM INC's policy to prevent accidents, thus providing more efficient utilization of resources, creating safe and healthful conditions of operations and employment, and promoting safe practices by employees and contractors on and off the job.
- Accordingly, ZEREM ELECTRICAL SERVICES LTD has established a safety program that involves the conduct of a continuing vigorous effort toward the prevention of accidents in all operations and activities at the work site and ensuring that safe practices and physical standards are incorporated into our training program. All personnel are required to comply with all health and safety acts, regulations, and codes and adhere to safety procedures at all times.
- Continuous enforcement of safety rules and procedures is mandatory for effective supervision. Supervisors are key personnel in any health and safety program and are expected to lead the way for their subordinates in order that all personnel will do an effective job in fulfilling their health and safety responsibilities.
- On projects where there is an established Health & Safety Program in place either by the Owner, Constructor, or both, the more stringent of the following shall apply:
 1. Occupational Health & Safety Act (OHSA) and Regulations for Construction Projects and/or Industrial Establishments
 2. Owner's Health & Safety Program
 3. Constructor's Health & Safety Program
 4. ZEREM ELECTRICAL SERVICES LTD Health & Safety Program

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act and all applicable regulations, codes, and standards

Roles and Responsibilities

The responsibility for health & safety is shared:

- The employer is responsible for the leadership in the health and safety program, its effectiveness and improvement, and the safeguards to ensure safe conditions.
- Management and Supervisors are responsible for developing good attitudes towards safety, and for ensuring that all operations are performed with the utmost regard for the health and safety of everyone.
- Employees are responsible for cooperating with all aspects of the health and safety program, including compliance with all acts, regulations, and ZEREM policies.

Owners:

The Owner shall determine whether any designated substances are present at the project site, prepare a list of all designated substances that are present at the site, and provide written notice of the designated substances to the constructor/contractor before requesting tenders for demolition, alteration, or repair of a building.

Duties of Constructor:

A constructor shall ensure, on a project undertaken by the constructor that,

- a. The measures and procedures prescribed by this Act and the applicable regulations are carried out on the project;
- b. Every employer and every worker performing work on the project complies with this Act and the regulations; and
- c. The health and safety of employees on the project is protected.

Employer (includes a contractor or contractor):

As found in Sections 25, and 26 of the Occupational Health and Safety Act (OHS), the key responsibilities of ZEREM ELECTRICAL SERVICES LTD senior management include:

An employer shall ensure that,

- a. The equipment, materials, and protective devices are provided as prescribed;
- b. The equipment, materials, and protective devices provided by the employer are maintained in good condition;
- c. The measures and procedures prescribed are carried out in the workplace;
- d. The equipment, materials, and protective devices provided by the employer are used as prescribed; and
- e. A floor, roof, wall, pillar, support, or other part of a workplace is capable of supporting all loads to which it may be subjected without causing the materials therein to be stressed beyond the allowable unit stresses established under the Building Code Act.

Without limiting the strict duty imposed by subsection (1), an employer shall,

- a. Provide information, instruction, and supervision to a worker to protect the health or safety of the worker;
- b. In a medical emergency for the purpose of diagnosis or treatment, provide, upon request, information in the possession of the employer, including confidential business information, to a legally qualified medical practitioner and to such other persons as may be prescribed;
- c. When appointing a supervisor, appoint a competent person;

- d. Acquaint a worker or a person in authority over a worker with any hazard in the work and the handling, storage, use, disposal, and transport of any article, device, equipment, or a biological, chemical, or physical agent;
- e. Afford assistance and cooperation to a committee and a health and safety representative in the carrying out by the committee and the health and safety representative of any of their functions;
- f. Only employ in or about a workplace a person over such age as may be prescribed;
- g. Not knowingly permit a person who is under such age as may be prescribed to be in or about a workplace;
- h. Take every precaution reasonable in the circumstances for the protection of a worker;
- i. Post, in the workplace, a copy of this Act and any explanatory material prepared by the Ministry, both in English and the majority language of the workplace, outlining the rights, responsibilities, and duties of workers;
- j. Prepare and review at least annually a written occupational health and safety policy and develop and maintain a program to implement that policy;
- k. Post at a conspicuous location in the workplace a copy of the occupational health and safety policy;
- l. Provide to the committee or to a health and safety representative the results of a report respecting occupational health and safety that is in the employer's possession and, if that report is in writing, a copy of the portions of the report that concern occupational health and safety; and
- m. Advise workers of the results of a report referred to in clause (1) and, if the report is in writing, make available to them on request copies of the portions of the report that concern occupational health and safety.
- n. The Project Manager must make the Owner aware of any change in process that may cause unforeseen hazards or concerns to employees. Where required, information notices will be supplied to employees regarding hazards.

Contractors Responsibilities:

- Planning the safety program in accordance with the Ontario Occupational Health and Safety Act and applicable Regulations and implementing applicable provisions of regulatory Guidelines and standards.
 - Providing proof of good standing with the Workplace Safety and Insurance Board coverage (WSIB Clearance Certificate) and/or adequate general liability insurance coverage. WSIB Clearance Certificates are valid for 60 days.
 - Completing "Registration of Employers" forms for every employer on a project as required under O. Reg. 231/91 sections 6 and 7
 - Submitting a "Notice of Project" to the Ministry of Labour
- Conducting work-site hazard analysis of operations and processes, detect hazards involving procedures, equipment, and machinery used in that operation or process. Make recommendations to eliminate or effectively control the identified hazards.
- Conducting safety training programs, and publishing specific safety standards, and operating procedures (SOPs) applicable to specific jobs.
- Preparation of a master accident prevention plan that provides specific safety actions to be conducted monthly and programmed to offset accident trends revealed by analysis of accident experience, and to eliminate accident potentials in high-risk areas, including objectives in the plan to eliminate the conditions that have caused the majority of accidents and the potential for accidents.

- Complying with provisions pertaining to accident investigation, analysis, and reporting. Investigate accidents in accordance with Ontario Health and Safety Legislation, determining cause and effect of accident; suggest recommendations for corrective action to prevent recurrence. Report any accident of a serious nature as defined by O. Regulation 213/91 sections 52 and 53 to the Ministry of Labor.
- Maintaining an adequate inspection and follow-up program for the purpose of:
 - Identifying unusual and uncommon hazards.
 - Provide inspection data that will allow assessment of the performance of supervisors in their assigned task of identifying and correcting hazards normally associated with their operations.
 - Prepare written reports to supervisors responsible for the operations and follow up to ensure compliance. Evaluate progress on corrective measures.
- Accomplish special analysis of operations involving safety considerations generated from requests by supervisors, accident case studies, hazardous conditions discovered by preventive inspections, and/or unusual operations.
- Conducting safety review of all plans and specifications of building, construction, modification, and layout of operating facilities.
- Formulating a safety award program to recognize outstanding safety performance.
- Maintaining liaison with local government agencies. Coordinate and monitor implementations of applicable Health and Safety legislation for _____. Conduct inspections to determine noncompliance with Ontario Health and Safety Legislation and applicable policies and programs and initiate reports for corrective actions as required.
- Overall management of the health and safety program for _____ and their employees and _____ contractors.
- Preparing and conducting safety training courses for supervisors and employees.
- Where work on a project will last more than three consecutive months, the constructor or contractor shall:
 - Where the number of regular workers exceeds 5, cause the workers to select at least one health and safety representative from the workers who do not exercise managerial functions.
 - Where there are more than 20 regularly employed workers, establish, and maintain a joint health and safety committee as required by the Ontario Occupational Health a Safety Act.

Supervisors are responsible for the following:

- The prevention of injuries to employees, including training workers to work safely, and correcting unsafe acts and hazardous mechanical or physical conditions immediately. Enforcing safety legislation, preliminary accident investigation, and taking other actions necessary to ensure the safety of employees. Ensure workers report all injuries and illnesses including all reportable accidents under Section 51 – 53 in the Ontario Health and Safety Act to the supervisor.
- Arrange an orientation of all new employees in ZEREM Safety Policy, ZEREM Hazard Communication Program, and General Safety on the Job Site (e.g. Ladder Safety, Usage of Personal Protective Equipment (PPE), and Emergency Procedures for the particular Job Site, New Employee Orientation as per Regulation 297/13, and Fall Protection if needed for the job).
- The supervisor must ensure that workers have the necessary training, qualifications, and experience to perform the work or use or operate tools, machinery, or equipment safely. Proof of training may be required.
- Holding monthly safety meetings with all supervisory personnel on the job including contractors. Current safety procedures and safety activities should be discussed at these meetings. Conducting

daily safety and housekeeping checks, as they inspect their project, and correct unsafe conditions or practices.

- Ensuring that adequate first aid supplies are maintained on the job as per Regulation 1101 First Aid Requirements.
- It is beyond the scope of this program to cover every operation that may be conducted on a given project. For this reason, supervisors should take every precaution reasonable in the circumstances for the protection of a worker.

Procedure

Employee Training

Before any new employee is assigned work or a current employee is assigned new or unfamiliar work and/or equipment, Management and supervisors shall make sure the employee knows the specific safety rules and regulations of the activity appropriate to the work performed. The employee shall be thoroughly instructed in the efficient, safe method of performing their assigned task before being permitted to work on their own. The personal benefit to the employee conforming to these rules shall be explained.

Chapter 2 Occupational Health and Safety Program

Purpose

This chapter describes the policies, responsibilities, and procedures required to implement a Health and Safety Program.

Scope

This chapter applies to all ZEREM ELECTRICAL SERVICES LTD employees.

Policy

- All employees shall be provided with an effective health and safety program consistent with the Occupational Health and Safety Act and applicable Regulations.
- All workers must report any hazards or contraventions of the Occupational Health and Safety Act and regulations to their supervisor of which they are aware.
- The excellence or culpable failure of supervisors and employees in performing occupational health and safety responsibilities will be considered in the evaluation of the performance or potential of that individual.
- Employees will not be subject to or threatened with dismissal, discipline, suspension, intimidation, or coercion because the worker has acted in compliance with the Act or has sought enforcement of this act or its regulations as per Section 50 of the Occupational Health and Safety Act.

Definitions

Competent person: A person who,

- is qualified because of knowledge, training, and experience to organize the work and its performance,
- is familiar with this Act and the regulations that apply to the work, and
- has knowledge of any potential or actual danger to health or safety in the workplace

Construction: includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine

Constructor: A person who undertakes a project for an owner and includes an owner who undertakes all or part of a project by themselves or by more than one employer

Dangerous Circumstances: A situation which,

- A provision of the OHS Act or the regulations is being contravened;
- The contravention poses a danger or a hazard to a worker; and
- The danger or hazard is such that any delay in controlling it may seriously endanger a worker.

Employer: A person who employs one or more workers or contracts for the services of one or more workers and includes a contractor or contractor who performs work or supplies services and a contractor or contractor who undertakes with an owner, constructor, contractor, or contractor to perform work or supply services

Industrial Establishment: An office building, factory, arena, shop, or office, and any land, buildings, and structures appertaining thereto.

Owner: Includes a trustee, receiver, mortgagee in possession, tenant, lessee, or occupier of any lands or premises used or to be used as a workplace, and a person who acts for or on behalf of an owner as an agent or delegate

Prescribed: Required by a regulation made under this Act

Project: A construction project, whether public or private, including,

- The construction of a building, bridge, structure, industrial establishment, mining plant, shaft, tunnel, caisson, trench, excavation, highway, railway, street, runway, parking lot, cofferdam, conduit, sewer, water main, service connection, telegraph, telephone or electrical cable, pipeline, duct or well, or any combination thereof.
- The moving of a building or structure.
- Any work or undertaking, or any lands or appurtenances used in connection with construction.

Supervisor: A person who has charge of a workplace or authority over a worker

Worker: Any of the following, but does not include an inmate of a correctional institution or like institution or facility who participates inside the institution or facility in a work project or rehabilitation program:

- A person who performs work or supplies services for monetary compensation.
- A secondary school student who performs work or supplies services for no monetary compensation under a work experience program authorized by the school board that operates the school in which the student is enrolled.
- A person who performs work or supplies services for no monetary compensation under a program approved by a college of Applied Arts and Technology, university, or other post-secondary institution.
- A person who receives training from an employer, but who, under the Employment Standards Act, 2000, is not an employee for the purposes of that Act because the conditions set out in subsection 1 (2) of that Act have been met.
- Such other persons as may be prescribed who perform work or supply services to an employer for no monetary compensation.

Workplace: Any land, premises, location, or thing at, upon, in, or near which a worker works

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act

Roles and Responsibilities

Management is responsible for:

- Overall management of the health and safety provisions of employees working for ZEREM ELECTRICAL SERVICES LTD.
- Managing the reports and record keeping required by Ontario Occupational Health and Safety Act and applicable Regulations.
- Conduct the health and safety inspections.

- Coordinate inspections and surveys conducted by the Ontario Environmental Protection legislation and the Occupational Health and Safety Act and applicable Regulations.
- Take every precaution reasonable in the circumstances for the protection of a worker.

Employee Duties and Responsibilities:

Employees shall,

- Work in compliance with the provisions of this Act and the regulations;
- Use or wear the equipment, protective devices, or clothing that the worker's employer requires to be used or worn;
- Report to their employer or supervisor the absence of or defect in any equipment or protective device of which the employee is aware and which may endanger themselves, or another employee; and
- Report to their employer or supervisor any contravention of this Act or the regulations or the existence of any hazard of which they become aware.

No employee shall,

- Remove or make ineffective any protective device required by the regulations or by their employer, without providing an adequate temporary protective device and when the need for removing or making ineffective the protective device has ceased, the protective device shall be replaced immediately;
- Use or operate any equipment, machine, device, or thing or work in a manner that may endanger themselves or any other worker; or
- Engage in any prank, contest, feat of strength, unnecessary running, or rough and boisterous conduct.

Procedure

General

- ZEREM ELECTRICAL SERVICES LTD will maintain the occupational health and safety data.
- Health and Safety postings may be provided through physical safety boards or approved electronic systems (e.g., QR code or barcode), provided required information remains readily accessible to all workers at the workplace and access is communicated during site orientation
- No later than 30 calendar days after the closing of the calendar year, ZEREM ELECTRICAL SERVICES LTD Management shall provide the President and other managers a copy of the annual summary of injuries and illnesses, which shall be posted on Zerem's official bulletin boards.
- The head office shall maintain a performance appraisal system that, where appropriate, will allow evaluation of the excellence or culpable failure of Supervisors and employees in performing occupational health and safety responsibilities.
- Should the employee or representative of the employee be dissatisfied with the action taken by the Supervisor, relative to an alleged hazard, he/she shall report the alleged hazard to Management, in writing. Within three (3) working days of receipt of the request. The Management shall investigate the alleged hazard and submit their findings. A copy of the investigative report shall be furnished to the employee and their supervisor within ten (10) working days from receipt of the complaint.

Inspections

- A designated safety person and Supervisor shall inspect the workplace and project work sites at least weekly, or during site evaluation. Office areas shall be inspected monthly. Supervisors shall be advised of the inspection results and provided with the abatement dates for all violations of the Health and Safety Program. Supervisors shall furnish Management with a summary of steps to correct the circumstances.
- Dangerous circumstances as defined will be corrected immediately. If immediate correction is not possible, the operation will be shut down or personnel removed from the danger area. In the latter case, the Supervisor and Management will be notified immediately.
- Upon notification of a Health and Safety inspection, and arrival of a Health and Safety Specialist, Management will arrange a briefing with the president. After the briefing, Management will notify all Supervisors that representation is desired for the inspections. Health and Safety Inspectors are authorized to deny participation to any person whose involvement interferes with the fair and orderly inspection. After the inspection, an exit briefing with the owner and or their representative to discuss the inspection findings will be arranged.
- Upon receipt of a notice of an unsafe or unhealthy working condition the notice will be posted unedited at each work site where such condition(s) exists or existed.

Chapter 3 Safety Requirements and Standards

Purpose

These standards are established for Zerem ELECTRICAL SERVICES LTD Health and Safety Program and provide a complete procedure and compliance guide for Zerem.

Scope

These standards apply to all employees and contractors employed by ZEREM ELECTRICAL SERVICES LTD.

Policy

Work undertaken by ZEREM ELECTRICAL SERVICES LTD must be undertaken in a healthy and safe manner in consideration of all hazards present at the site or associated with the work to be performed.

Definitions

Safe Work Practice: A generally written method outlining how to perform a task with minimum risk to people, equipment, materials, environment, and processes.

Safe Work Procedures: A series of specific steps that guide a worker through a task from start to finish in chronological order. Designed to reduce the risk by minimizing potential exposure.

Legislation and Standards

Some Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 213/91, Construction Projects
- Reg. 851/90, Industrial Establishments
- Reg 278/05 – Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations
- Regulation 833 – Control of Exposure to Biological or Chemical Agents
- Regulation 860 – Workplace Hazardous Materials Information Systems (WHMIS)
- Regulation 632/05 – Confined Spaces
- Regulation 381/15 - Noise
- Reg. 1101, First Aid Requirements
- Ontario Building Code
- Ontario Electrical Safety Code
- Ontario Fire Code

Relevant Standards:

- CSA Z462-18: Workplace Electrical Safety
- CSA Z432-16: Safeguarding of Machinery
- CSA Z142-10 (R2014): Code for Power Press Operation, Health, Safety and Safeguarding requirements
- CSA Z460-13 (R2018): Control of Hazardous Energy – Lockout and other methods
- Z1006-16: Management of work in confined spaces

Roles and Responsibilities

See Procedures

Procedure

Machinery, Tools, and Machine Guarding

- This standard is designed to prevent injury to machine operations and employees in machine areas by requiring guarding devices and methods. When power-operated tools are designed to accommodate guards, they shall be equipped with such guards when in use.
- Guards are required whenever a machine poses a hazard at its point of operation, ingoing nip points, rotating parts, or with flying chips or sparks. The general requirement includes specifications for the design, machine controls, and machine guards. Guarding shall meet the requirements as outlined in Z432-16 - Safeguarding of Machinery Z142-10 (R2014) - Code for power press operation: Health, safety, and safeguarding requirements. The point of operation is the area on a machine where work is performed upon the material being processed. Guards shall be so designed and constructed as to prevent the operator from having any part of their body in the danger zone during the operating cycle.
- Only personnel specifically authorized shall operate, repair, or clean any Machine. No one will be authorized to operate, clean, or repair any machine without the Supervisor having assurance that the individual is fully qualified and adequately trained to safely accomplish the assignment.
- Machine Maintenance: Before oiling, cleaning, or repairing a machine, the machine shall be stopped, switches and other controls locked out and the machine tagged out of service as outlined in Z460-13 (R2018) - Control of Hazardous Energy - Lockout and other methods. All machine guards that were removed shall be replaced upon completion of repairs and/or adjustments before switches or other controls are again made operational.

Walking/Working Surfaces

- This section applies to all temporary and permanent places of employment. The intent is to ensure that good housekeeping procedures are practiced, floors and working surfaces are maintained in a clean, and dry condition. Work areas where wet processes are used will have provisions for effective drainage as well as false floors, platforms, or dry-standing places where practical.
- Health and Safety legislation sets out requirements for passageways, aisles, handrails, guarding devices for floor and wall openings, and elevated areas, including fixes and portable ladders, stairways, fixed and movable scaffolding. The general requirements include specific designs for toe boards, height and construction of guardrails, etc.
- Aisles shall be wide enough to walk, without getting run over by motorized vehicles and/or material handling equipment. Aisles shall be marked permanently so that employees shall be encouraged to keep, them clear of obstruction.
- Passageways shall be kept clear and in good repair with no obstruction across or in the aisles that could create a hazard. Where mechanical handling equipment is used, there shall be sufficient safe clearance provided at loading docks, through doorways, and wherever turns or passage must be accomplished.
- Housekeeping: All places of employment, passageways, storerooms, and service rooms shall be kept clean, orderly, and in sanitary condition, this includes all job sites. The floor of every workroom shall be maintained in a clean and dry condition. Where wet processes are used, drainage shall be maintained.

- False floors, platforms, mats, or other dry-standing areas shall be provided where practicable. To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.
- Ladders: When ladders are placed in front of doors, adequate means to divert traffic shall be taken. When operations are such that the security of a ladder may be endangered, the ladder shall be securely tied in position, or an employee shall be stationed at the base to steady and prevent it from falling. Zerem may follow the Ladder Use in Construction Guideline.
- No one shall stand on the top or first step from the top of a stepladder. Metal ladders shall not be used when working on energized electrical equipment. Ladders will not be placed on boxes, pallets, barrels, etc., to increase the working height of the ladder. A longer ladder will be used.
 - Manufactured ladders used on the job must be the heavy-duty industrial type as per CSA Z11-12 - Portable ladders.
 - Broken or damaged ladders must not be used. Ladders to be repaired must be tagged "DO NOT USE" and returned to the shop.
 - All straight ladders must be made secure top and bottom against tipping or falling.
 - Ladders should not be placed against moveable objects.
 - The base of the ladder must be set back a safe distance from vertical, approximately 4 to 1 ratio working length of the ladder.
 - Ladders used for access to floor or ground, and platform must extend at least 3 feet above the landing.
 - The areas around the top and base of ladders must be free of tripping hazards such as loose materials, trash, and electrical cords.
 - Ladders, which project into passageways or doorways, where they could be struck by personnel; moving equipment, or materials being handled, must be protected by barricades or guards.
 - Stepladders must be fully opened to permit the spreader to lock in place.
 - All employees and contractors are prohibited from standing on or sitting on the top two steps of the stepladder.

Means of Egress

- These sections of the regulation are applicable to and set out the requirements for ensuring that there is a safe means of egress to and from a work area and in the event of an emergency requiring evacuation of personnel from the facility and work projects sites.
- There are requirements that there be a sufficient number of exits to permit an emergency evacuation in case of fire or other emergency. Exits and exit paths are to be clearly visible and appropriately marked.
- Every building or structure shall be so constructed, arranged, equipped, maintained, and operated as to avoid undue danger to the lives and safety of its occupants from fire, smoke, fumes, or resulting panic during the period of time reasonably necessary for escape from the building or structure, in case of fire or other emergency: Exits shall be marked by a readily visible sign in all cases where the exit or way to reach it is not immediately visible to the occupants.
- Any door, passage, or stairway which is neither an exit nor a way of exit or access, and which is so located or arranged as to likely be mistaken to be an exit, shall be identified by a sign reading "no exit" or similar designation or shall be identified by a sign indicating its actual character such as "Store".

- There shall be a pre-designated area on all ongoing job sites of over one week's duration where employees should report in case of an emergency. The Supervisor shall designate this area so that all involved shall know where to go in case of an emergency.
- There will be no locks or fasteners to prevent free escape from inside any building. Exception: mental, penal, or corrective institutions where supervisory personnel are continually on duty.

Occupational Health and Environmental Control

This section contains provisions for employee protection from environmental hazards and includes requirements for ventilation and hearing, and lead protection.

- Ventilation
 - Ventilation requirements outline the conditions where local exhaust ventilation is necessary to reduce harmful concentrations of dust and fumes.
 - Air shall be of such purity that it will not harm or cause discomfort to an individual if it is inhaled for extended periods of time. When dust leaks are noted, repairs shall be made as soon as possible.
 - If a new exhaust duct is installed, the static pressure drops at the exhaust ducts leading from the equipment shall be checked when the installation is completed and periodically thereafter to assure continued satisfactory operation.
 - Whenever an appreciable change in the pressure drop indicates a partial blockage, the system shall be cleaned and returned to normal operating condition.
 - With construction, hazardous substances shall not exceed concentrations of limits specified in Ontario Regulation 833.
 - When ventilation is used as an engineering control method, the system shall be installed and operated according to the Ontario Building Code.
- Occupational Noise Exposure
 - Noise Regulation 381/15; applies to any workplace where a worker is exposed to a sound level greater than an equivalent sound exposure level of 85 dBA, Lex, 8. The legislation contains specifications for permissible noise exposures and methods for calculating daily exposure levels.
 - This regulation (O. Reg. 381/15) replaces the noise protection requirements set out in the regulations for Industrial Establishments, Mines and Mining Plants, and Oil and Gas-Offshore. It extends the noise protection requirements contained in the regulations below to all workplaces under OHS. The key changes are:
 - Prescribing, for workers exposed to noise, a maximum time-weighted exposure limit of 85 decibels over an eight-hour work shift;
 - Requiring employers to put in place measures to reduce workers' exposure based on a "hierarchy of controls", which could include engineering controls, work practices, and the use of personal protective equipment in the form of hearing protection devices; and
 - Requiring employers who provide a worker with a hearing protection device to provide adequate training and instruction on that device.
 - Posting notice in noise hazard areas is required.

Hand-held and Portable Tool

- General requirements, Construction Regulation 213/91 Section 93, assign responsibility for the safe operating condition of all workplace tools whether furnished by the employee or employer.

Tools will be maintained in safe working conditions. The use of compressed air, over 30 psi, for cleaning purposes is not allowed.

- All powered tools and portable machines (power saw, drills, pneumatic tools, portable belt sanders, portable abrasive wheels, portable grinders, etc.) shall be equipped with guards above and below the base plate.
- Competent workers designated by Supervisors shall inspect all tools frequently. Defective tools shall be removed from service to be either repaired or discarded. Hammers with highly tempered steel heads shall not be used on hard steel; hammers with soft material heads will be used. Heads of chisels, punches, nail sets, and other tools of this type that will mushroom shall be kept grounded off. Knives and similar tools shall be equipped with guards at the hilt; files in use shall be equipped with suitable handles.
- Small parts being repaired with files, screwdrivers, or like tools, should be placed in a holding device to avoid injuries occurring as a result of holding the object in one hand and the tool in the other.
- Hand tools with wooden handles shall be free of splinters and/or cracks and handles will be kept tight in the head.
- Electric tools will not be permitted to hoist or lower other tools or materials. Electrical cords will not be used as a hoisting device for any tool.
- Only authorized personnel shall make repairs to electric tools and/or equipment. All portable tools equipped with guards shall not have them removed. All electric tools shall be grounded (GFCI) or double insulated.
- Ground Fault Circuit Interrupters will be used on 120-volt, single phase 5- and 20-ampere receptacle outlets on construction sites.
- Tools will be not used in an explosive or flammable atmosphere.
- Only trained and authorized personnel will use powder-actuated tools. Manufacturer's recommended procedures will be followed for use and daily testing of personal protective equipment will be used according to manufacturer's recommendations.
- PPE shall be used when exposed to hazards of falling, flying, abrasive, and splashing objects or exposed to dust, fumes, vapors, or gases.

Material Handling and Storage

The Regulations for Construction Projects and Industrial Establishments contain the specifications for the handling of workplace materials, including requirements for industrial trucks, cranes, mobile scaffolding, slings, and aerial lifts.

- CSA B335-15 - Safety standard for lift trucks specifies the key elements of a lift truck safety program and provides recommended qualifications for lift truck trainers, maintenance technicians, and personnel.
- All materials shall be stacked in such a manner that assures stability and facilitates removal. Whether the material is in a stationary stack or on equipment to be moved, it shall be secured, checked, and/or tied to prevent tipping or slipping in movement.
- Circumstances permitting all gasoline or propane-powered material handling equipment shall be refueled outside of buildings. Refueling shall be accomplished at least 15.23 m (50 feet) from the warehouse or other inert building and loading docks, and at least 30.5 m (100 feet) from hazardous material storage areas. A bonding wire will be connected between the equipment being refueled and the fuel-dispensing unit to prevent static electricity. No source of ignition can be within 3 m (10 feet) of the dispensing point.

- Riders, lunch boxes, newspapers, extra clothing not being worn, etc. shall not be permitted on lift trucks at any time. No one shall ride on any equipment not specifically designed to accommodate operators or passengers.
- Lifting of workers shall not be allowed unless proper equipment and PPE are used.
- Charging batteries will be done in authorized and designated areas. Eyewash stations shall be located within 7 m (25 feet) of the charging location. Proper PPE shall be used when charging or transferring batteries.
- Avoid storage of materials or equipment near/under an energized bus, energized line, or near energized equipment.
- Unloading of steel, poles cross arms and similar material requires an examination to ascertain the load has not shifted, bound and stakes have not been broken or the load is not hazardous to employees.
- Tag lines shall always be used to control loads being handled by hoisting equipment.
- Rigging equipment will be inspected before each shift and as necessary. Defective equipment will be removed from service immediately. Rigging equipment shall not exceed its recommended safe working load.
- Knots shall not be used in place of splices.
- Ropes and slings will be removed from service if any of the following conditions exist:
 - Acid or caustic burns.
 - Melting or charring of any part of the surface.
 - Snags, punctures, tears, or cuts.
 - Broken or worn stitches.
 - Distortion of fittings.

Motor Vehicle Safety

Motor vehicle safety is designed as an incentive to encourage the development of safe driving performance among those individuals who drive/operate ZEREM motor vehicles and/or material handling equipment. It provides criteria for recognizing these individuals for driver/operator safety recognition.

- Vehicles shall be inspected before each shift to ensure parts, equipment, and accessories are in safe operating condition and free of apparent defects.
- All cab glass will have free and clear visibility.
- Loads will be adequately secured and not allowed to roll or slide about.
- Compressed gas cylinders will be stored upright (vertical) with safety caps and secured to prevent any movement while the vehicle is in motion.
- Passengers and operators shall use seat belts at all times.
- Refer to Chapter 21 – Safe Use of Communication and Electronic Devices regarding the use of handheld Communication and Electronic Devices while operating any vehicle.

Medical Services and First Aid

This section applies to all workplaces requiring medical and first aid services, as well as emergency eye and face washes and deluge showers. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

All employees and contractors shall report injuries immediately, no matter how minor to the Supervisor before leaving the job site because of an injury whether personal or work-related. All accidents must be

reported immediately. If they are over two days late reporting, a special investigation will be conducted by the Supervisor.

Emergency phone numbers are posted at all job sites. All employees and contractors shall become familiar with phone locations and emergency call procedures. Safety Data Sheets are not required for medical supplies.

Also see Accident/Incident Reporting Procedures, Chapter 6.

At ZEREM ELECTRICAL SERVICES LTD your safety is Management's first consideration. Safety is not the sole responsibility of the Supervisor, the experienced employee, or the new employee alone. Through the Internal Responsibility System, everyone has direct responsibility for health and safety as an essential part of their job. It does not matter who or where the person is in the organization, they achieve health and safety in a way that suits the kind of work they do. Each person takes initiative on health and safety issues and works to solve problems and make improvements on an ongoing basis. They do this both singly and co-operatively with others.

Access to Employee Medical and Exposure Records

Zerem will refer to the Occupational Health and Safety (OHSA) and legal counsel when looking to access Employee Medical and Exposure Records.

In addition to the duties imposed by section 25, an employer shall,

- a) Establish an occupational health service for workers as prescribed;
- b) Where an occupational health service is established as prescribed, maintain the same according to the standards prescribed;
- c) Keep and maintain accurate records of the handling, storage, use, and disposal of biological, chemical, or physical agents as prescribed;
- d) Accurately keep and maintain and make available to the worker affected such records of the exposure of a worker to biological, chemical, or physical agents as may be prescribed;
- e) Notify a Director of the use or introduction into a workplace of such biological, chemical, or physical agents as may be prescribed;
- f) Monitor at such time or times or at such interval or intervals the levels of biological, chemical, or physical agents in a workplace and keep and post accurate records thereof as prescribed;
- g) Comply with a standard limiting the exposure of a worker to biological, chemical, or physical agents as prescribed;
- h) Establish a medical surveillance program for the benefit of workers as prescribed;
- i) Provide for safety-related medical examinations and tests for workers as prescribed;
- j) Where so prescribed, only permit a worker to work or be in a workplace who has undergone such medical examinations, tests, or x-rays as prescribed and who is found to be physically fit to do the work in the workplace;
- k) Where so prescribed, provide a worker with written instructions as to the measures and procedures to be taken for the protection of a worker; and
- l) Carry out such training programs for workers, supervisors, and committee members as may be prescribed.

Personal Protective Equipment

This standard requires protective equipment to be worn wherever there is a hazardous process or environment, which may cause harm to employees not wearing such equipment. Employees may be exposed to hazards via ingestion, inhalation, injection, or absorption through physical contact with hazards. These hazards include energy hazards: electrical, radiation, pneumatic, hydraulic, gravitational, chemical, and thermal hazards.

Personal protective equipment includes eye, face, and head protection, protection of the extremities, and protective clothing and respiratory equipment. Whether such equipment is provided by ZEREM ELECTRICAL SERVICES LTD or by the employee, ZEREM ELECTRICAL SERVICES LTD shall in both cases ensure its adequacy, maintenance, sanitation, and proper use.

ZEREM ELECTRICAL SERVICES LTD is required to provide employees as prescribed the required PPE to wear or use, the necessary personal protective equipment training in the proper use, care, and storage of such equipment. Such equipment includes protection for eyes, face, head, and extremities, protective clothing, respiratory devices, shields, and barriers.

All ZEREM ELECTRICAL SERVICES LTD employees working in areas where there is a possible danger of head injury from impact, falling, or flying objects or bumps shall wear a protective hard hat.

Hard hats are to be worn where a customer requires employees to wear protective covers. These provisions apply to all contractors. Regulation 213/91 Section 22(1) requires all workers shall wear protective headwear at all times when on a project. Hard Hats will meet the requirements of Z94.1-15 - Industrial Protective Headwear — performance, selection, care, and use.

Employees involved in eye hazardous operations must be provided with appropriate protection that meets the standards of Z94.3.1-16 - Selection, use, and care of protective eyewear.

If operations are such that hazardous dust, fumes, mists, gases, smoke, or vapors can contaminate the air, employees shall be protected by appropriate engineering controls to eliminate the conditions or, as an alternative, be provided with respiratory protection that meets the standard of Z94.4-11 (R2016)- Selection, use, and care of respirators.

Persons shall not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work and have been trained in the use of the equipment. The respirator user's medical status shall be reviewed annually. All Workers wearing respirators must take fit test training to ensure there is a proper seal and may not have facial hair as per Z94.4-11 (R2016). If workers are required to wear a respirator there must be a written Respirator Protective Program in place as per Z94.4-11 (R2016).

Prescription safety glasses meeting the requirements of Z94.3.1-16 - Selection, use, and care of protective eyewear are acceptable for eye protection. These safety glasses must have proper side shields attached firmly to the frames.

Employees are responsible for keeping personal protection equipment and lifesaving equipment clean and in good repair, including PPE owned by employees.

Leather Boots shall be worn at all times in construction, warehouses, and manufacturing areas. Leather boots shall meet the requirements of Z195-14 - Protective footwear.

All protective equipment, such as respirators, must be maintained in a sanitary and usable condition.

ZEREM ELECTRICAL SERVICES LTD recommends wearing jewelry as minimally as possible, i.e. rings and necklaces. Sleeve length on shirts should be no less than 4 inches from the top of the shoulder. Earrings are limited to post and shall not exceed a maximum of 1/2-inch in diameter. Beards should not exceed four (4) inches in length. Clothing shall be cotton as much as possible. Due to the burning capacity of synthetic clothing (polyester), these materials shall not be allowed to be worn by employees. Conductive articles shall not be worn near energized or potentially energized equipment. This shall include items such as rings, watches, metal-framed eyewear, key chains, dangling jewelry, and metallic belt buckles.

Hazardous Materials

This standard relates to the safe handling of hazardous materials, including compressed gases; flammable and combustible liquids; liquefied petroleum (LP) gas; anhydrous ammonia; and hazardous waste.

ZEREM ELECTRICAL SERVICES LTD shall determine that compressed gas cylinders under its control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Regulations for Construction Projects, Industrial Establishments, TSSA, and Transportation of Dangerous Goods Act. The in-plant and on-worksites handling and storage, and utilization of all compressed gases in cylinders, portable tanks, rail tank cars, or motor vehicle cargo tanks shall be in accordance with the Ontario Fire Code Section 5.6 Compressed Gas Cylinders.

Flammable and combustible liquids having a flash point below 100 °F are flammable; those with a flash point above 100 °F are combustible liquids: The Supervisor and employee shall understand and be aware of the difference.

When transferring flammable liquids from one container to another, both containers must be bonded and grounded to eliminate the possibility of static build-up. All containers for flammable and combustible liquids shall be of approved type in accordance with NFPA 30: Flammable and Combustible Liquids Code. Flammables must be kept in closed containers except when actually in use. Combustible waste materials, such as oily shop/paper towels must be stored in covered metal containers and disposed of daily.

Storage cabinets shall be of such design that they comply with the requirements of the National Fire Protection Association (NFPA 30: Flammable and Combustible Liquids Code). All storage cabinets must be labeled with the appropriate caution signs.

W.H.M.I.S.

A copy of Zerem ELECTRICAL SERVICES LTD Workplace Hazardous Materials Information System (WHMIS) shall be available to everyone involved at the job site.

The Workplace Hazardous Materials Information System (WHMIS) is Canada's hazard communication standard. The key elements of the system are:

- hazard classification
- cautionary labelling of containers
- the provision of safety data sheets (SDSs)
- worker education programs

Employers must:

- educate and train workers on the hazards and safe use of hazardous products in the workplace.
- ensure that hazardous products are properly labelled.
- prepare workplace labels and SDSs (as necessary).

- ensure appropriate control measures are in place to protect the health and safety of workers.

Workers must:

- participate in WHMIS and chemical safety training programs.
- take necessary steps to protect themselves and their co-workers.
- participate in identifying and controlling hazards.

All employees shall be given training annually and documentation of the training shall be kept on file at the head office. See the attached policy for responsibilities and precautions to take when working with chemicals.

Electrical Wiring and Equipment Installation

The Ontario Electrical Code and relevant CSA Standard Z462-18 cover the electrical safety requirements that are necessary to ensure employee protection, including design safety standards, work practices, maintenance requirements, and special equipment requirements. This standard applies to all workplace electrical installations and utilization equipment in or on buildings, structures, construction sites, and other premises.

Covers for junction boxes, outlets, switches, and other fittings must be in place at all times, except when they are being repaired. Grounding connections to fixed equipment should be periodically inspected, and/or checked. Each circuit breaker shall be marked to indicate what equipment it controls.

Before beginning work on electrical circuits, switches must be open, tagged, blocked, or locked out. Passageways to switch centers and electrical control panels shall be kept free from obstructions, with no less than a three (3) foot clearance.

Safety-related work practices shall be employed to prevent shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits, which are or may be energized. Z462-18 provides details on recognized methods for identifying electrical hazards and risk assessment, defines best safety practices and training for work on and around electrical equipment.

Fire Protection

The Regulations for Construction and Industrial Establishments, as well as the Ontario Fire Code, outline requirements for fire protection.

ZEREM ELECTRICAL SERVICES LTD shall provide portable fire extinguishers for all project work sites and work facilities. Extinguishers shall be mounted, located, and identified so they are readily accessible to employees without subjecting the employees to possible injury. Only approved extinguishers shall be used according to the above standards.

Portable fire extinguishers shall be provided for employee use, selected, and distributed based on the classes of anticipated workplace fires and on the size and degree of hazard that would affect their use.

ZEREM ELECTRICAL SERVICES LTD shall distribute portable fire extinguishers for use by employees on all Class A, B, C, D, and/or K Hazards based on the appropriate pattern for the existing class hazard.

Portable fire extinguishers for use by employees at the workplace shall not be more than 7.6m (25 feet) from the area at which work is performed.

A supervisor shall be responsible for the inspection and maintenance of all portable fire extinguishers in the workplace. A third party shall test and inspect every fire extinguisher that is in use annually.

Whenever five (5) gallons or greater of flammable or combustible liquids are present, fire extinguishers not less than 10 pounds shall be provided within 15.25m (50 feet) at any job site. For Class A fires, extinguishers will be located within 22.86m (75 feet). Class C hazard (electrical) extinguishers will be distributed based on appropriate patterns for existing hazards. Class D (combustible metals) shall be distributed for use with 22.86m (75 feet) or less.

At construction welding sites fire extinguishers shall be within visual means and no more than 15.25m (25 feet). Internal combustion engine-powered equipment shall be located so that exhausts are well away from combustible material.

Access/driveway areas shall be at least 15 feet wide at ZEREM facilities and job sites. These ways shall be maintained free from accumulation of rubbish, equipment, or other articles or materials.

Materials shall not be stored within 36 inches of fire doors opening and other egress means.

No more than 95 litres (25 gallons) of flammable or combustible liquids shall be stored in any room outside an approved storage cabinet.

Storage of Liquefied Petroleum (LP) Gas shall follow standards in ONTARIO REGULATION 211/01.

At least one portable extinguisher with proper rating shall be located outside of but not more than 10 feet from the door opening into any room used for storage of more than 60 gallons of flammable or combustible liquids.

ZEREM ELECTRICAL SERVICES LTD employees involved in welding and cutting from a JLG, or other aerial lift equipment, shall have within the lift the proper rated fire extinguisher at all times.

Safety Training

All ZEREM ELECTRICAL SERVICES LTD field employees shall be trained in the following areas:

- Health and Safety Orientation
- Workplace Hazardous Materials Information Systems (WHMIS)
- Personal Protective Equipment
- Biohazards and sharps
- Lock out/Tag out Procedures
- Fire Protection and Prevention
- Electrical Hazards
- Working at Heights
- Ladders and Slips, Trips and Falls
- Asbestos Awareness
- Noise Exposure
- Workplace Violence and Harassment
- Musculoskeletal Hazards

Other selected employees might be trained on the following topics if a particular project requires it.

Employee Safety Training/Orientation

- Motor Vehicles and Mechanized Equipment
- Confined Space Entry Procedures

All new employees shall receive orientation safety training before the start of job. This training shall include but not be limited to the following list:

- Workplace Hazardous Materials Information Systems (WHMIS)
- Working at Heights for the specific job site
- Slips, Trips, and Falls
- Personal Protective Equipment (PPE)
- Ladders, Scaffolding
- Electrical Safety
- Emergency Procedures
- Musculoskeletal Hazards

Employee Safety Training/Orientation

Print Name: _____

Date: _____ Project/Facility: _____

Conduct/Right to Know Training

- _____ Review any chemical hazards in the workplace.
- _____ Review the location and availability of the Safety Data Sheet Binder.
- _____ Explain the safety procedure for non-routine jobs.

Acknowledgment

_____ I hereby acknowledge that I have been informed of the chemical hazards associated with my workplace and of the appropriate protective equipment to be used. I understand the information given to me and agree to work with the required protective equipment.

Review Safety Guidelines and Program

- _____ Safety glasses with side shields
- _____ Hard Hats
- _____ Footwear
- _____ Procedures for reporting injuries (what and where to report)
- _____ Biohazards and Sharps
- _____ Emergency Procedures
- _____ Musculoskeletal Hazards

Safety Procedures

- _____ Lockout/Tag-out
- _____ Confined Space
- _____ Working at Heights
- _____ Ladder Safety
- _____ Forklift/Aerial Devices or Mobile Elevating Work Platforms

Personal Protective Equipment

- _____ Safety Harness with Lanyard
- _____ Hearing Protection
- _____ Hand Protection
- _____ Fire Extinguishers
- _____ Goggles/Face Shields/Welding Hoods

Employee Signature_____
Date_____
Location_____
Supervisor

Chapter 4 Disciplinary Policy and Procedure

Purpose

ZEREM ELECTRICAL SERVICES LTD has adopted a policy of Progressive Discipline to ensure that employees have the opportunity to correct any performance or behavioural problems that may arise. ZEREM ELECTRICAL SERVICES LTD has established a set of reasonable rules and guidelines for employees to follow. These have not been put in place to restrict the freedoms of our employees, but rather in consideration of their safety and the overall protection of ZEREM ELECTRICAL SERVICES LTD employees, property, and business practices.

Scope

This procedure applies to all ZEREM ELECTRICAL SERVICES LTD employees. The purpose of this document is to set out the procedures to be followed when standards of conduct give rise to problems that cannot be resolved by advice, encouragement, training, or increased support. ZEREM ELECTRICAL SERVICES LTD will implement disciplinary action against employees only in accordance with the provisions of this procedure.

Policy

All safety rules, procedures, and plans are to be followed. When formal disciplinary actions are necessary, the form titled “Corrective Action Notice” will be utilized by the Supervisor to document the record of discipline and the corrective action plan. In the event of early warnings, the employee will also be notified of the action to be taken to correct their behaviour.

Roles & Responsibilities

Management

It is the supervisor’s responsibility to:

- Observe and monitor employee’s activities.
- Provide appropriate direction, focus, and resources to employees.
- Monitor and recognize good performance.
- Ensure that employees are provided with clear expectations and standards including but not limited to federal, provincial, and local legislation.
- Complete performance reviews that document performance and conduct.
- Consult with Human Resources prior to initiating Progressive Discipline.
- Address unacceptable behaviour/performance in a timely manner.

Employee

Employees are responsible for advising their manager if they are having difficulty in carrying out the duties of the job, or if they lack the proper resources to do so.

It is the employee’s responsibility to:

- Safely perform assignments.
- Be aware of required standards including but not limited to federal, provincial, and local legislation.

- Be aware of the consequences of persistent unacceptable behaviour/performance as outlined in this Policy.
- Participate in interviews/investigations.

Definitions

Confidentiality: Discretion in the release or dissemination of private or potentially damaging information.

Counseling Session: An informal discussion with the employee to ensure they understand Zerem rules, policies, and procedures relating to the improper conduct, what they need to do to correct the behaviour, and advise them of the next step in the disciplinary process should the improper conduct occur again.

Dismissal/Termination of Employment: The permanent separation of an employee from Zerem, initiated for disciplinary reasons or safety misconduct.

Misconduct: Conduct that is unacceptable, in violation of ZEREM rules, policies, or procedures, or improper or unprofessional behaviour by an employee.

Suspension: A written, formal, elevated form of disciplinary action. This action requires unpaid time away from work activities.

Verbal Warning (Documented): A formal discussion of the inappropriate behaviour should take place as soon as possible after the supervisor has knowledge of the employee misconduct.

Written Reprimand: A written form utilized to document the employee misconduct. This level of reprimand indicates a status of probation for the employee.

Progressive Discipline Process

If an employee violates ZEREM policy or exhibits problematic behaviour, a system of progressive discipline shall be utilized. Progressive discipline can be issued on either: attendance, conduct, health & safety, or performance concerns.

With each step in the disciplinary process, the employee will be provided with written documentation that:

- Alerts them to the violation and provide a reiteration of the correct ZEREM policy regarding the violation,
- Advises them of the consequences associated with further infractions, and
- Provides a corrective action plan to prevent future occurrences of this and similar violations.
- Informs them of the consequences of failure to meet the expectations of the corrective action plan.

Degrees of discipline shall be used in relation to the problem at hand. As the situation dictates, based on the past performances of the employee, and the seriousness of the violation, ZEREM ELECTRICAL SERVICES LTD reserves the right to skip the four-step disciplinary process and move directly to the most closely appropriate level of disciplinary action up to and including termination.

Investigation and Documentation

All alleged violations will be properly investigated and documented by a manager, and/or by Human Resources. All formal measures that have been taken within the progressive discipline process will be documented and kept in the employee's personnel file.

Information relating to an allegation of misconduct will not be divulged to any parties not involved in the disciplinary process. Statements, letters, emails, texts, and other communications will be kept strictly confidential among those involved in the disciplinary process.

Stages of Progressive Discipline

Employees will be given 2 opportunities to correct the improper behaviour, unless the behaviour or concern is one of a severe nature, in which case, progressive discipline can be accelerated to appropriately match the violation. Typically, progressive discipline will progress through the following steps:

Coaching - (Counseling Session) - informal

- An informal discussion with the employee to ensure they understand Zerem rules, policies, and procedures relating to the improper conduct, what they need to do to correct the behaviour, and advise them of the next step in the disciplinary process should the improper conduct occur again.
- The supervisor has some discretion in advancing to the formal stages of discipline depending on the cooperation and understanding of the employee. A counseling session is never an appropriate level of discipline for careless, insubordinate, or willful disregard of the expected behaviour.

Verbal Warning - formal with documentation of verbal warning having taken place.

- This reprimand will be documented and filed in the employee's personnel record. A verbal warning applies to the progressive disciplinary process for no more than 12 months but the record will remain in the employee's personnel file unless removed through the appeals process.
- If there are no repeat occurrences of like or similar conduct within that time period, the warning will become inactive. If further offences relating to the issue occur within that time period, the warning will be attached to the next set of progressive disciplinary actions (written reprimand).

Written Reprimand - This level of reprimand indicates a status of probation for the employee. The employee must understand the changes necessary for restoration and that failure to meet these expectations may be grounds for continued progressive discipline up to and including termination.

- This form is to be presented to the employee and filed in the employee's personnel record. A written reprimand applies to the progressive disciplinary process for no more than 12 months but the record will remain in the employee's personnel file unless removed through the appeals process.
- If there are no repeat occurrences of like or similar conduct within that time period, the warning will become inactive. If further offences relating to the issue occur within that time period, the warning will be attached to the next set of progressive disciplinary actions (suspension).

Final Written Warning with Possible Suspension - formal

- This action requires unpaid time away from work activities, typically three (3) days. The employee must be informed and must understand that any further disciplinary action brought against them may result in immediate termination of employment.

- A record of suspension applies to the progressive disciplinary process for no more than 12 months, but the record will remain in the employee's personnel file unless removed through the appeals process.
- If there are no repeat occurrences of like or similar conduct within that time period, the warning will become inactive. If further offences relating to the issue occur within that time period, the warning will be attached to the next set of progressive disciplinary actions (up to and including termination).

Suspension and Review Period

At the third stage of progressive discipline, an employee may be suspended and/or put on review.

Suspension without Pay

Employees put on suspension will be excluded without pay from the workplace for a period of 5 days depending on the violation. Typically, suspension will be for three (3) days unless the employee is required at work to complete projects or perform required duties.

Suspension with Pay – Pending Investigation

If an employee is placed on suspension pending the results of an investigation, the employee will be notified of the decision, a stated timeline for the investigation, and the actions that predicated the decision.

This form of suspension is not disciplinary but is intended to allow ZEREM ELECTRICAL SERVICES LTD to perform a thorough and proper investigation and to determine appropriate action. Every reasonable effort shall be made to complete the investigation within the stated timeline, but should the investigation not be completed during that period, ZEREM ELECTRICAL SERVICES LTD will reserve the right to extend the suspension, as necessary.

During the investigation, the suspended employee will be provided with the details of the allegations and given an opportunity to respond. The suspended employee must ensure that they are available for interviews during this period. If the suspended employee fails to make themselves available, ZEREM ELECTRICAL SERVICES LTD will document the lack of cooperation, proceed with the investigation to its conclusion, and make a determination based on the available information.

The suspended employee has the right to legal representation, union representation, or a ZEREM ELECTRICAL SERVICES LTD representative present at any such interview for the purpose of witness and will be given at least 24-hour notice prior to any interviews taking place.

As the suspended employee is suspended with full pay, they are required to be available for interviews during this period. Should the suspended employee need to leave town or are otherwise unavailable for interviews, they must submit a request and be approved for leave.

Any ZEREM ELECTRICAL SERVICES LTD employee who is placed on suspension with pay is required to temporarily relinquish their office keys, access passes, and ZEREM ELECTRICAL SERVICES LTD identification and credit cards. All ZEREM ELECTRICAL SERVICES LTD property, business information, and confidential information shall remain at the worksite. If any suspended ZEREM ELECTRICAL SERVICES LTD employee maintains any files or equipment at their residence that are the property of ZEREM ELECTRICAL SERVICES LTD, they are required to relinquish these items to a ZEREM ELECTRICAL SERVICES LTD representative, until the investigation is completed.

ZEREM ELECTRICAL SERVICES LTD employees placed on suspension with pay should not have contact with anyone from Zerem other than their designated point of contact.

Review

After serving a suspension, employees may be put on a review period. If so, the review period will last 12 months. During the review period, the employee will be excluded from wage increases and advancement and is discouraged from taking vacation.

Termination - formal

In the event the progressive disciplinary process and corrective action plan are ineffective in correcting the unacceptable behavior, the supervisor will coordinate with HR and conduct a review to ensure the plan is appropriate, and the behaviour is uncorrected due to the employee's failure to meet the conditions of the plan. If it is determined that the uncorrected behavior is due to the lack of cooperation and follow-through by the employee, the employee may be terminated.

In some cases, the behavior may be so egregious that termination may be the first and only appropriate step. Examples may include (but not be limited to) insubordination, illegal activity, threatening or violent behavior, or other such conduct that endangers the organization or its members.

Appeals

If an employee feels that they have been wrongfully accused, or disciplined, they may file a written appeal with Human Resources. Written appeals must contain:

- Details of the discipline;
- Events surrounding the discipline;
- Why the employee feels the discipline is not warranted or appropriate.

Human Resources shall review and respond to all written appeals within ten (10) business days.

Training

Initial

Employees will receive initial training through new hire orientation.

Refresher

Any changes to the original or current disciplinary policy.

Appendix

- Disciplinary Policy and Procedure Acknowledgement
- Corrective Action Notice

Disciplinary Policy and Procedure Acknowledgement

Acknowledgment and Agreement

I _____, acknowledge that I have received, read, and understand Zerem ELECTRICAL SERVICES LTD Disciplinary Policy and Procedure. I have been given the opportunity to ask questions and gain clarification of any points of the policy that were not clear. I agree to adhere to this policy and will ensure that employees working under my direction adhere to this Policy. I understand that if I violate the rules established by this policy, I may face legal, punitive, or corrective action.

Name: _____

Signature: _____

Date: _____

Witness: _____

Corrective Action Notice

Employee: _____ Employee ID#: _____ Date: _____

Department: _____ Position: _____

Supervisor: _____ Date of Incident: _____ Time of Incident: _____ AM / PM

Description of Incident or Behaviour: _____

Witnesses (if any): _____

Supporting Evidence (if any; attach copies of any documentation): _____

_____Employee Comments: _____

_____Corrective Action Plan: _____

_____**Stage of Progressive Disciplinary Action**

- Verbal Warning (department file only)
 Written Reprimand
 Suspension: Begins: _____ Ends: _____
 Termination: Effective: _____

Follow Up

- Two Weeks One Month Three Months Six Months

I acknowledge receipt of this disciplinary action and that its contents have been discussed with me. I understand that my signature does not necessarily indicate agreement and that refusal to sign will not invalidate the disciplinary action. I understand that failure to meet the expectations of the corrective action plan can result in further progressive disciplinary action up to and including termination. I understand that this form will be filed in my personnel file. I further have been informed that I may submit a written response to the information in this form and that my written response will also be kept in my personnel file.

Employee Signature: _____ Date: _____

Supervisor Signature: _____ Date: _____

Copies of this form shall be provided to the employee and supervisors. The original document shall be submitted to Human Resources and placed in the employee's personnel file

Chapter 5 Office Safety

Purpose

Office safety is as important to successful operations as is safety for industrial or construction operations. Office labor is commonly considered a non-hazardous occupation, which is only true for office workers who understand the injury exposure involved, know the safe work practices to follow, and work in offices where specific and constant attention is given to eliminate the physical conditions that cause many accidents.

Scope

The scope of this policy applies to Zerem ELECTRICAL SERVICES LTD workplace and all persons on the premises.

Policy

ZEREM ELECTRICAL SERVICES LTD is committed to providing a safe and healthy environment for its employees.

Definitions

Workplace: Any land, premises, location, or thing at, upon, in, or near which a worker works.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 851/90, Industrial Establishments

Roles and Responsibilities

Supervisors are responsible for:

- The health and safety of employees engaged in activities under their direction or supervision.
- Inspecting the office workplace monthly.

Employees are responsible for:

- Complying with the applicable legislation, regulations, standards, codes, and guidelines established by governing authorities.
- Following Zerem Health and Safety Policies and Programs.

Procedure

Physical Conditions and Employee Actions

The following list indicates some of the physical conditions and employee actions often associated with the occurrence of office accidents and actions to be taken for their correction. Vigilance on such conditions should indicate any need for possible corrective action by the supervisor.

- Office furniture, equipment, aisles, floors, and stairs:
 - Office furniture, equipment, and electrical appliances should be arranged to obtain the maximum, safe utilization of these installed facilities, such as overhead lighting, wall outlets, telephones, and personal computers with their paraphernalia.

- Wastebaskets, briefcases, or other objects should never be left in aisles or other places where a tripping hazard could occur.
- Desks, file cabinets, etc., should be arranged so that drawers will not be opened into aisles or walkways. Desk and file drawers shall never be left open.
- Distribute weight in file cabinets so that the drawer contents are evenly distributed throughout the filing cabinet and avoid having more than one file drawer open at a time.
- Any splintered or other faulty conditions of desks, chairs, or other office equipment should be promptly corrected.
- Desk, workplaces, walkways, stairways, and storage areas should be well-lighted.
- Unauthorized persons should not be permitted to operate office equipment and only maintenance personnel should be permitted to repair or adjust the equipment.
- Minimum clear aisle widths, adequate for two-way traffic and unobstructed access to all parts of the office, should be maintained.
- Floors should be kept clear of paper, boxes, and other loose objects.
- Tripping hazards from electrical or telephone outlets on the floor should be protected by an arrangement of furniture or by other means.
- Power bars should be attached to a vertical surface to prevent damage to cords and eliminate trip hazards.
- Floor holes, loose boards or tiles, splinters, or depressions should be promptly repaired.
- Slip-resistant preparation should be used for polishing floor surfaces.
- Carpeting that is torn, badly worn, or has curled edges should be replaced or fastened down.
- Stairways should be provided with suitable handrails. Used and/or severely worn stair treads should be replaced.
- Running on stairs and in corridors shall be prohibited.
- Multi-tasking should be discouraged as should using handheld communication and electronic devices (other than at a desk) should be prohibited.
- Worn electrical cords or plugs should be promptly replaced and loose outlet plates or connections promptly repaired.
- Electrical fans must be protected with guards of not over a 1/2-inch mesh, to prevent fingers getting inside guard. Fans should not be handled until the power is turned off and the blades have stopped turning.
- Miscellaneous:
 - Windows that are hard to open should have corrective adjustments made by qualified personnel.
 - Good housekeeping should be maintained to minimize accident exposure.
 - CSA approved ladders and stools should be provided for reaching material or stocking shelves and be kept in safe, serviceable conditions.
 - Biohazardous materials and sharps will be stored and disposed of in proper containers. Containers will be designated with the proper labels. See Chapter 9 – Exposure Control Plan – Biohazards and Sharps.
 - Only authorized employees may clean/decontaminate areas with blood and/or other potentially infectious materials using the appropriate PPE.
 - An employer has a duty and shall take all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous biological or chemical agents Regulation 833, Control of Exposure to Biological or Chemical Agents.

Chapter 6 Working Alone or in Isolation

Purpose

While it is not always hazardous to work alone, it can be when other circumstances are present. Whether a situation is a high or low risk will depend on the location, type of work, interaction with the public, or the consequences of an emergency, accident, injury, etc. This wide variety of circumstances makes it important to assess each situation individually.

This chapter applies only to those working elements where the degree of risk is present as defined herein, or on other operations requiring only one person operation or working in isolation from other workers.

Scope

This chapter applies to all field personnel who will be working solely alone on a job site or working in an area where they are isolated from other workers.

Policy

Policy Pertaining to Other Operations Requiring Only One Person to Perform

- It shall be the policy that in those operations with greater than normal risks, which are being conducted by only one person in a location where the worker's voice would not be audible to another person, arrangements shall be made by the supervisor to monitor the person.
- The person shall be in communication with other workers or the supervisor every hour on the hour. This communication can be by electronic means, safety line, or personal contact. In the event of failure to make this contact at a predetermined time, the designated person or supervisor with whom the contact was to be made, or who is responsible for making the contact, shall take action to check or have checked the work site and the individual.

Policy for Operations Necessitating Additional Personnel

The following policy is established for operations necessitating additional personnel as a safeguard because of the degree of risk involved.

Ladders

At any time, ladders are required to be used on an uneven or unstable base, a minimum of two individuals will be present unless the ladder can be tied or secured safely.

Confined Space

- Confined spaces include sewer systems, manholes, furnaces, vulcanizers, tanks, pits, and tunnels. Before entering a confined space area, the safety supervisor shall be contacted to determine if a hazardous atmosphere is suspected or present one person, in addition to those required to perform the necessary work, shall be positioned on the outside and shall monitor and observe the personnel inside the confined space area for unusual hazards.
- Personnel entering hazardous confined areas shall be equipped with suitable approved monitoring equipment, respiratory protective equipment, life belts, or harnesses, and lifelines were determined to be necessary.

Additional High-Risk Activities include:

- With electricity;
- With hazardous substances or materials;
- With hazardous equipment such as chainsaws or firearms;
- With materials at great pressure; or
- With the public, where there is a potential for violence.

Definitions

Working Alone: At work and you are on your own; when a worker cannot be seen or heard by another person.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act

Roles and Responsibilities

See Procedure

Procedure

Employers and supervisors must:

- Assess the hazards of your workplace and identify possibilities for working alone.
- Avoid having a lone worker whenever possible, especially for jobs with a recognized risk.
- Take corrective action to prevent or minimize the potential risks of working alone.
- Provide appropriate training and education on the hazards of working alone in addition to any Job Safety Analysis documentation for the work being performed.
- Establish a check-in procedure. Make sure that regular contact is kept with all employees. Establish ways to account for people (visually or verbally) while they are working.
- Schedule higher risk tasks to be done during normal business hours, or when another worker capable of helping in an emergency is present.

Workers must:

- Report all situations, incidents, or 'near-misses' where being alone increased the severity of the situation. Help Supervisors and Management analyze this information and make changes to ZEREM policy where necessary.

Chapter 7 Accidents and Injuries

Purpose

It may not be realistic to expect a perfect record in preventing accidents within your workplace, but by following all safety precautions, close observance of operations to detect unsafe practices, and frequent inspections within your areas, you have an excellent chance of keeping accidents to a low level of frequency. Procedures may vary due to the specific requirements of our customers.

Ensure that all accidents and incidents are reported, investigated, and documented in a timely and proper manner.

Scope

This chapter applies to all ZEREM ELECTRICAL SERVICES LTD employees.

This procedure is intended for all employees and those involved in investigating and reporting accidents/incidents that involve property damage, require medical treatment, result in critical injury, or other reportable incidents as outlined in the Occupational Health and Safety Act, Section 53.

In the event of an emergency consisting of a personal injury or incident, Management shall be contacted as soon as possible by the Supervisor.

Miscellaneous: This procedure is to be followed when investigating and reporting any other accidents/incidents including but not limited to:

- Near-Miss
- First Aid
- Material Spill/Release
- Fire or Explosions
- Cave in, flood, inrush of water (at a project Section 53, OHSA)
- Failure of any equipment, device, or thing (at a project Section 53, OHSA)
- Other incidents detailed in Reg. 213/91 Section 11
- Vehicle Accidents

An accident investigation shall be conducted by Management following a recordable injury or potentially hazardous incident. The purpose of an investigation is to determine the root cause and recommend corrective actions to reduce or eliminate a repeat accident/incident.

Policy

It is Zerem ELECTRICAL SERVICES LTD policy to work towards zero injuries, illnesses, and fatalities on the job.

Definitions

Accident: An unplanned event that results in harm to people, damage to property, or loss of process.

Accident Investigation: The process of systematically gathering and analyzing information about an accident. This is done to identify causes and make recommendations to prevent the accident from happening again.

Incident: An unwanted event that, in different circumstances, could have resulted in harm to people, damage to property, or loss to a process. Also known as a near miss.

First Aid: The immediate care given to a person who is injured or who suddenly becomes ill. It can range from disinfecting a cut and applying a bandage to helping someone who is choking or having a heart attack.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Workplace Safety and Insurance Act
- Reg. 213/91, Construction Projects
- Reg. 851/90, Industrial Establishments
- Reg. 1101, First Aid Requirements

Roles and Responsibilities

- It is the responsibility of Management to maintain a reliable accident/incident reporting program. Management will also be responsible for the investigation process and the communication of the program.
- The Supervisor is responsible for communicating this program to all employees and ensuring that immediate attention is given to all employees on the job.
- The Supervisor is responsible for communicating this program to all assigned new hires. The Supervisor is also responsible for ensuring that immediate attention is given to all injuries and that Management is contacted as soon as possible if an accident/incident should occur.
- It is the responsibility of the employer (or an agent of the employer) to report to the Ministry of Labour, Health and Safety Representative, JHSC, or Trade Union, if any immediately in the event of a critical injury of other incidents as detailed in Reg. 213/91 Section 11.

Procedure

Steps to take in the event of an accident

In the event of an accident; the following steps shall be taken:

- Care of Personnel – Assure that all injured personnel get proper first aid and medical attention.
- Care of Property – Protect property against further damage, safeguard against theft or loss, and prevent disturbing or moving any materials (Ontario Occupational Health and Safety Act Section 52) from the scene in the event of a critical injury (as defined in Reg. 834) or when vital to other investigations.
- Investigation of Accidents – Supervisors will do the preliminary investigation, and secure assistance from Management if needed. Management must assist in the investigation of all accidents resulting in a disabling injury or if property damage is in the amount of \$500.00 or more and determine if operations under the Supervisor's control contributed to the accident. In certain cases, a job safety analysis will be required to evaluate the hazards associated with jobs where accidents or incidents with serious potential have occurred.
- Critical Injury Investigation – The employer is required to immediately contact the Ministry of Labour by telephone or direct means as per the Ontario Occupational Health and Safety Act, Section 51.

The employer is also required to contact the Health and Safety Representative, Joint Health and Safety Committee, and Trade Union, if any, immediately by telephone or direct means as per the Ontario Occupational Health and Safety Act, Section 51.

- **Written Report of Accident** – On all reportable accidents, the supervisor will submit a written report. This report will be as accurate as possible including the time, date, and person injured. The report will also include a detailed description of the injury and the accident will then be submitted to Management. The employer is required to notify the WSIB within 3 days of the occurrence if a person is disabled from performing their usual work or required medical attention because of an accident, explosion, fire, or incident of workplace violence or within 3 days of being notified of an occupational illness (Ontario Occupational Health and Safety Act, Section 52).
- **Critical Injury Reporting** – In the event of a critical injury the employer is required, within 48 hours, to submit a written report containing the information required in Reg. 851 Industrial Establishment Section 5, or Reg. 213/91 Section 8 to 12.
- **Countermeasures After Accident** – Initiate corrective actions to preclude a similar accident from happening. This may also require coordination with other Supervisors and Managers. Repair physical or mechanical defects and when appropriate, initiate preventive: action on a group level, and implement appropriate recommendations to assure compliance.

Critical Injury Definition (Regulation 834)

For the purposes of the Act and the Regulations, “critically injured” means an injury of a serious nature that:

- Places life in jeopardy;
- Produces unconsciousness;
- Results in substantial loss of blood;
- Involves the fracture of a leg or arm but not a finger or toe;
- Involves the amputation of a leg, arm, hand, or foot but not a finger or toe;
- Consists of burns to a major portion of the body; or
- Causes the loss of sight in an eye. R.R.O. 1990, Reg. 834, s. 1.

Occupational Injury Definition (Occupational Health and Safety Act Section 52(1))

If a person is disabled from performing their usual work or requires medical attention because of an accident, explosion, fire, or incident of workplace violence at a workplace, but no person dies or is critically injured because of that occurrence.

Occupational Illness Definition (Occupational Health and Safety Act Section 52(2))

If an employer is advised by or on behalf of a worker that the worker has an occupational illness or that a claim in respect of an occupational illness has been filed with the Workplace Safety and Insurance Board by or on behalf of the worker.

Procedure for Employee

The employee reports all injuries, accidents, incidents and if they sought first aid or medical attention immediately to their supervisor. If employee is available, they must fill out part I of Zerem ELECTRICAL SERVICES LTD Accident/Incident Form.

Procedure for Supervisor

Accompanies the employee to first aid station or medical personnel on site if applicable; if not, determines if the employee should be taken to hospital or medical center.

If the employee must be taken to a hospital or medical center, the Supervisor will arrange transportation for the employee via area ambulance or ZEREM vehicle. If transporting in Zerem vehicle there must be two (2) able bodied workers (preferably with first aid training) with the injured worker at all times.

Inform Contacts Management, letting them know what happened, who it happened to, where it happened, and how the situation is going to be addressed. The supervisor also asks Management for information and assistance in all situations.

The Supervisor then fills in with detail:

1. Zerem ELECTRICAL SERVICES LTD Incident/Accident Report.
2. Employer's Report of Injury or Disease Form 7, if required
3. In the event of a Critical Injury as defined in Reg. 834, contact the employer or the designated agent of the employer immediately by telephone.

The employer or designated agent must report to the Ministry of Labour immediately and issue a written report within 48 hours containing information detailed in Regulation 213/91 Section 8 or 9.

All forms should be sent to Zerem ELECTRICAL SERVICES LTD head office.

Establish a file on every employee (recordable or first aid) by copying and maintaining all pertinent/documentation relating to the case. This shall be done only if a field office has been set up for the job. After copies have been made the Supervisor will forward all information/documentation to Zerem ELECTRICAL SERVICES LTD head office.

Accident Investigations

The Supervisor at the job site will immediately start an investigation on all injuries to obtain the information required to be reported to the WSIB and may be required to report the Ministry of Labour in the event of a critical injury (refer to attached injury form). In the event of a critical injury the designated Joint Health and Safety Committee member, Health and Safety Representative or a Trade Union, if any, will also be investigating as will the Ministry of Labour Inspector.

The Supervisor should identify:

- a) Employee's name, address, and other related information.
- b) Time, date of injury and where injury occurred.
- c) Were there any witnesses.
- d) Extent of injury.
- e) Where the employee was taken for treatment. (Note: Employee should be taken to a physician or to a medical treatment center for initial treatment).
- f) What was the cause of the injury?
- g) Were all safety precautions taken?
- h) The steps taken to prevent a recurrence.

Employees, besides the Supervisor may be interviewed by all parties to assist in an accident investigation and to help identify the root cause of the accident to prevent the accident from reoccurring (Did they hear or see anything, do they have any other information regarding the task that the worker was performing,

the equipment or materials that worker was using or handling etc.). The purpose of these interviews is to discover the root cause (not fault finding) and ensure that it does not happen again.

After employee's injury has been attended to, a review of the accident will be performed by the Supervisor and Management and if required, changes will be made to the safety policy and procedures.

First Aid/Medical Services

The Supervisor must post the emergency phone numbers for the medical services for that job. The emergency plan should also include specific details on who to contact in the event of a critical injury and the information will be posted in a conspicuous place and all employees are to receive training.

Immediately, contact the trained first aider at the job site to attend to the injured worker. Use the first aid kits to perform initial medical attention at the job site. If there is a first aid facility at the job site, take the employee there if not take the affected employee to an off-site medical facility (see transportation of injured worker above).

If the employee requires more than first aid, take the employee to the emergency room, or call an ambulance.

Goals/Evaluation/Recognition/Enforcement

ZEREM ELECTRICAL SERVICES LTD is always concerned about all levels of safety. Each accident report is reviewed by management to determine if the existing policies are adequate, if a new policy is required, or if equipment, material, or process changes are required.

The office staff keeps statistics on the type(s) of injuries to determine the work activities with the highest frequency. A follow-up of the injuries is investigated to determine the root cause and the findings of these investigations will be conveyed to all Supervisors to eliminate possibilities of similar accidents. Information from annual safety reviews will be posted in all work areas.

If it is determined that specific job tasks or processes contribute to the majority of accidents, the Supervisor will monitor and discuss with employees who are exposed at their job site due to the proximity to a hazard.

Supervisor's Report of Accident or a Near Miss

Every accident and near-misses should be investigated, and the causes corrected so that more accidents will not occur. Do not overlook the so-called "unimportant" cases because except for "chance", they could also have been serious. It is only by thorough investigation that many of the real causes can be determined and corrected. A near-miss describes an incident where, given a slight shift in time or distance, injury, ill-health, or damage easily could have occurred, but did not.

Employee Name	ZEREM	Department
Date of Incident	_____ : _____ AM / PM	Time incident occurred

Did the employee miss time from work? (If so a Form 7 must be completed and sent the WSIB)

Was this a critical injury? (If so, immediately contact the employer)

Hours lost on date of accident _____ Has employee returned to work? YES / NO

Job Title	Service with ZEREM	Years in Current Job
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Give us your honest comments on questions below. We are not trying to blame anyone. Your opinion may help us to prevent repetition. Please answer the following:

1. Was the injured person properly instructed in the safe methods to perform the task?
YES NO

2. Did the injured person follow their assigned task? YES NO

3. Was the required protective equipment worn? (if applicable) YES NO

4. Could poor housekeeping have contributed to the accident? YES NO

5. If equipment was involved, was it in need of repair or maintenance? YES NO

6. If a tool or machine was involved, was it sufficiently guarded? YES NO

7. In your opinion is the accident caused by an unsafe act, material, or equipment?
YES NO

8. Did the injured person report the injury to you, the supervisor, immediately? YES NO

Describe the accident: (describe what the injured employee was doing at the time of the accident, what happened, who was involved, equipment or material involved, type of injury and the part(s) of injured employee's body affected).

Number of Employees at Work Site. _____ Witness Names.

Unsafe Process: What was the worker (or other workers in close proximity) doing with the equipment and material in the work environment and was there a hazard in the process?

Unsafe Conditions: Was unguarded or unsafe condition of machinery, equipment, building, or premises was involved? Describe the workplace environment.

Remedy: What should be done to prevent another accident like this?

Action Taken: What steps were taken to prevent a reoccurrence? What has been done to correct the conditions which caused this accident?

9. Medical Care: Did the employee go to the doctor or hospital? YES NO

If yes, complete the following:

Name of doctor or hospital: _____

Address: _____

Date of initial visit: _____ Phone Number: _____

Report submitted by: _____

Accident Report for Employees

Name of Injured: _____

Home Address: _____

Job Classification: _____

SSN: ____ - ____ - _____ Date of Birth: ____ / ____ / _____

Length of Service with Employer: _____

Name of Supervisor: _____

Date of Accident: ____ / ____ / _____

Name(s) of eyewitness(s) : _____

Nature & Location of injury: _____

NOTES:

Report completed by: _____ Date: ____ / ____ / _____

Reviewed by: _____ Date: ____ / ____ / _____

Approved by: _____ Date: ____ / ____ / _____

Witness Statement

Did you report the accident? YES NO

If YES, when did you report it and to whom?

Did you see or hear the accident? YES NO

If YES, what did you see or hear?

Who else witnessed the accident?

Did the injured employee describe the injuries to you? YES NO

If YES, how were the injuries described?

Are you aware of any concerns from other workers who do the same job task or work in the same area?

YES NO

If YES, please describe them.

Can you think of any factors that could have contributed to this accident? Was the injured party focused on this job or were there other issues affecting them that could have contributed? YES NO

Please relay any additional information which you have about the accident.

True and correct to the best of my knowledge and belief.

Witness Name: _____

Witness Signature: _____ Date: ____ / ____ / ____

Chapter 8 Near Miss Program

Purpose

This chapter describes policy and responsibilities required to implement a Safety Management Technique called "Near-Miss" at ZEREM ELECTRICAL SERVICES LTD.

This procedure directs ZEREM ELECTRICAL SERVICES LTD to take corrective action to prevent occurrence rather than wait for an accident and then take action to prevent recurrence.

A near-miss as an incident in which no property was damaged, and no personal injury was sustained, but were given a slight shift in time or position, damage or injury easily could have occurred. Near-misses also may be referred to as close calls, near-accidents, accident precursors, and injury-free events and in the case of moving objects, near-collisions.

Near-miss reports are critical. As a ZEREM we look at trailing indicators, but the beauty of a near-miss report is that you had an incident, and nothing was damaged, and no one was hurt which tells us the health of our ZEREM now.

Scope

This chapter is applicable to all employees.

Policy

- Prompt attention will be given to reports by employees of a near-miss, to aid in holding manpower and monetary losses due to accidents to a minimum.
- Employees will not be subject to restraint, interference, coercion, discrimination, or reprisal by virtue of employees' participation in the Near-Miss Program.

Definitions

Accident: An unplanned, undesired event, not necessarily injurious or damaging, that disrupts the completion of an activity.

Close Call: An unplanned, undesired event, or example of an incident, resulting in neither an injury nor property damage.

Hazard: Any existing or potential condition in the workplace that by itself, or by interaction with other variables, could result in death, injury, property damage and other losses.

Hazard Control: A preventative action involves developing a program to recognize, evaluate and eliminate the destructive efforts of hazards arising from human errors and from conditions in the workplace.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act

Roles and Responsibilities

Management and/or designated person(s)/Joint Health and Safety Committee is responsible for:

- Overall management of the Near-Miss Program.
- Training Supervisors in the near-miss technique.

- Following up on reported near-miss to ensure action has been taken to eliminate hazards.
- Assurance that Supervisor conducts the required interviews with employees.
- Review Supervisor's near-miss reports.
- Initiate actions, training, etc. to correct conditions or practices noted on the Accident/Incident Form.

Procedure

Encourage employees to report a near miss without feeling that they will get into trouble. "The key to that problem is not to look at it as, 'Who is to blame?' Ask what system flaws exists?"

Give employees as many options to report as possible to make it convenient for the employee to report a near-miss.

Remember a thorough near-miss investigation can save time and money by improving system reliability and minimizing the risk of an incident waiting to happen.

By identifying near misses and taking care of them, you can improve profits and you can prevent any potential hazards that can happen to the people or the equipment.

The following steps are necessary:

- Management and/or designated person(s)/Joint Health and Safety Committee and Supervisors will maintain written reports of near-miss data and amend any of the causes in hopes of preventing future injury, death and/or property damages or other losses.
- Supervisors will report the Near-miss in writing using the Near-miss Report Form to Management and/or designated person(s)/Joint Health and Safety Committee.
- Employees will observe conditions and practices in the work areas in order to report Near-miss either when requested or voluntarily to their immediate Supervisor in a timely manner.
- Management and/or designated person(s)/Joint Health and Safety Committee and Supervisors will prioritize reports and classify information for future actions.
- Supervisors will distribute information to the people involved in the near miss.
- If the Red level box is checked Supervisors must:
 - Analyze the causes of the problem.
 - Identify solutions to the problem.
 - Disseminate the solutions to the people impacted.
 - Management and/or designated person(s)/Joint Health and Safety Committee will resolve all actions and check any changes.

Near-Miss Report Form

RED STOP WORK AND REPORT <input type="checkbox"/>	YELLOW USE CAUTION AND REPORT <input type="checkbox"/>	GREEN CONTINUE AND REPORT <input type="checkbox"/>
Check appropriate box		
Location:	Time:	Date:
Project Name:		
Description of Near-Miss (add more information on reverse side if necessary):		
Description of Occurrence:		
Check here <input type="checkbox"/> if additional papers added.		
Ground surface and weather conditions (if applicable):		
Actions taken and by whom:		
Followed up and by whom:		

Root Cause(s) – Required for Red:	
<div style="height: 150px;"></div>	
Were pictures taken? YES <input type="checkbox"/> NO <input type="checkbox"/>	
Reported by (optional):	Date:
Supervisor Review:	Date:

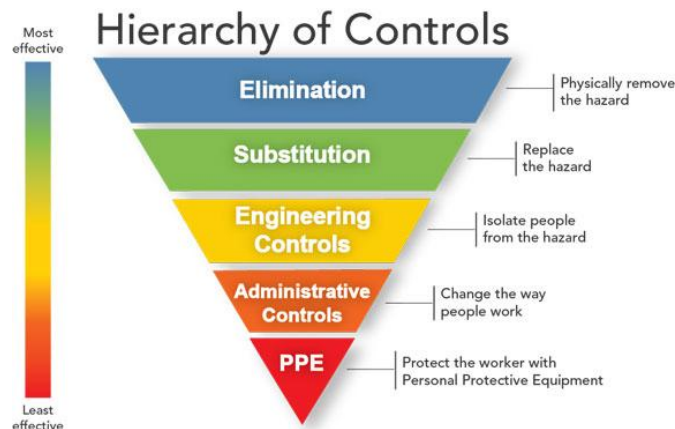
Chapter 9 Personal Protective Equipment (PPE) and Clothing

Purpose

The chapter pertains to protective clothing and equipment, which is necessary for safe work and the employee's personal health and safety.

The primary focus of ZEREM ELECTRICAL SERVICES LTD regarding workplace health and safety is hazard management through a hierarchy of control methods as depicted in the following diagram.

PPE is equipment worn by a worker to minimize exposure to specific occupational hazards. Examples of



PPE include respirators, gloves, aprons, fall protection, and full body suits, as well as head, eye, and foot protection. Using PPE is only one element in a complete safety program that would use a variety of strategies to maintain a safe and healthy occupational environment. PPE does not reduce the hazard itself nor does it guarantee permanent or total protection. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.

Hazards exist in every workplace so strategies to protect workers are essential. Controlling a hazard at its source should be the first choice because this method will eliminate it from the workplace altogether or isolate it from the worker. This approach may require substitution of a material with nonhazardous ones, isolation of hazards, addition of safety features to existing equipment, redesign of the work processes, or purchase of new equipment. When the hazard cannot be removed or controlled adequately, Personal Protective Equipment (PPE) may be used if the work process is to continue.

PPE should be considered as the last level of protection when all other methods are not available or possible.

Chemical, Physical, and Biological Resistance of Protective Clothing

Protection against the effects of workplace chemical hazards will determine the need and type of protective clothing. It is important to remember that no protective barrier affords permeation resistance and skin protection from all chemicals. The most conservative approach is to select protective clothing which has no chemical breakthrough for the duration of the task or for up to eight (8) hours (i.e. a regular shift).

Always read the material Safety Data Sheet when dealing with chemicals.

There is no one glove that is good for all situations. Read the characteristics of glove materials pertaining as thickness, permeation rate and exposure time will vary.

CHEMICALS EVENTUALLY PERMEATE ALL GLOVES' MATERIALS: CHECK PERMEATION RATE and TIME FOR EACH GLOVE TYPE.

Scope

This chapter applies to all ZEREM ELECTRICAL SERVICES LTD employees, contractors, suppliers, etc. working or visiting sites necessitating PPE requirements.

This chapter is applicable to all activities and especially those activities where noise hazardous areas exist. It applies to all employees working or visiting such areas.

Policy

- Occupational health protection must be achieved by engineered safety measures before reliance is placed upon personal protective equipment and clothing. Reference the hierarchy of control.
- ZEREM ELECTRICAL SERVICES LTD must take every precaution reasonable to protect employees from potential exposure to harmful concentrations of toxic air contaminants.
- Proper respiratory equipment designated to protect personnel from airborne environmental hazard will be available in a clean and dependable condition at all times.
- Consideration shall be given to methods for eliminating or reducing the cause of the respirator hazard, such as substituting less toxic substances, installation of local exhaust, natural or mechanical general ventilation, and segregation or isolation of the causative process.
- Respirators shall not be worn when conditions prevent a good facial seal. Such conditions may include growth of a beard, mustache, sideburns, skull cap and other facial features. To eliminate these conditions, the employee shall be required to shave facial hair, remove the skullcap, or be provided modified safety glasses that fit in the respirator.
- Persons using respirators in atmospheres immediately hazardous to life and health, (e.g., toxic or oxygen deficient) shall use self-contained breathing apparatus equipment with safety harness and safety lines for rescue. Standby person(s) with a self-contained breathing apparatus shall be at the nearest fresh air location for emergency rescue.
- Wearing contact lenses in contaminated atmospheres shall not be allowed.
- Supervisors and employees must agree before work is undertaken about the use of personal protective equipment and clothing for the protection against job-specific hazards.
- Personal protective equipment shall normally be provided by the supervisor unless PPE is explicitly required as a condition of employment (e.g., robust sunglasses, CSA-approved safety footwear).
- When safety shoes are required, the proper type (conductive, spark proof, non-conductive, etc.), must be adequately identified during orientation at the work site where exposure occurs.
- Management or supervisors must enforce the use of prescribed PPE via training and education, observation, and progressive disciplinary action plan.

Definitions

ANSI: American National Standards Institute; a no-for-profit organization that co-ordinates voluntary standards activities, approve standards, represents U.S. interests in international standardization, and provides information and access to the world's standards.

Biological Hazards: A type of occupational health hazard that may include bacteria, viruses, insects, plants, birds, animals, and humans. These sources can cause a variety of health effects ranging from skin irritation and allergies to infections (e.g., tuberculosis, AIDS), and cancer.

CSA: Canadian Standards Association; a not-for-profit, independent, private sector organization that serves the public, governments, and business as a forum for national consensus in the development of standards; offers certification testing and related services.

Ergonomics: An applied science dealing with the physical characteristics and limitations of people that need to be considered for proper workplace and job design.

Exposure: Exposure by inhalation, ingestion, injection, or skin contact (absorption).

ISEA: Industrial Safety Equipment Associations; an industry group working to develop standards and guidelines for chemical protective clothing.

Personal Protective Equipment (PPE): PPE refers to protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection.

Physical Hazards: A type of occupational hazard that involves environmental hazards that can cause harm with or without contact. Physical hazards include ergonomic hazards, radiation, heat and cold stress, vibration hazards, and noise hazards.

Prescribed: Required by regulation made under the Occupational Health and Safety Act.

Additional definitions may be found in the procedures.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act (OHSA)
- Reg. 851/90, Industrial Establishments
- Reg. 213/91, Construction Projects
- Reg. 833, Control of Exposure to Biological or Chemical Agents
- Reg. 860, Workplace Hazardous Information Systems

Relevant Standards:

- CAN/CSA-Z94.3: Eye and face protection
- CAN/CSA-Z94.3.1-16: Selection, use and care of protective eye wear
- CAN/CSA-Z94.2-14: Hearing protection devices – Performance, selection, care, and use
- CAN/CSA-Z94.1-15: Industrial protective headwear – Performance, selection, care, and use
- CAN/CSA-Z94.4-11 (R2016): Selection, use and care of respirators
- CAN/CSA-Z180.1-13 (R2018): Compressed breathing air and systems
- CAN/CSA-Z96-15: High-visibility safety apparel
- CAN/CSA-Z195-14: Protective footwear
- CAN/CSA-Z195.1-16: Guideline on Selection, Care, and Use of Protective Footwear
- CAN/CSA-Z334-14: Over-the-shoe to protectors

Roles and Responsibilities

- Employer. - An employer shall assure that,
 - the equipment, materials, and protective devices as prescribed are provided.

- the equipment, materials and protective devices provided by the employer are maintained in good condition.
- the equipment, materials and protective devices provided by the employer are used as prescribed.
- provide information, instruction, and supervision to a worker to protect the health or safety of the worker.
- Supervisors. - A supervisor shall ensure that a worker, uses or wears the equipment, protective devices, or clothing that the worker's employer requires to be used or worn.
- Employees. - Employees shall,
 - use or wear the equipment, protective devices, or clothing that their employer requires to be used or worn.
 - report the absence of, or defect in any equipment or protective device of which the worker is aware and which may endanger themselves or another worker to their employer or supervisor.
 - No worker shall, remove or make ineffective any protective device required by the regulations or by their employer, without providing an adequate temporary protective device and when the need for removing or making ineffective the protective device has ceased, the protective device shall be replaced immediately.

Additional roles and responsibilities may be outlined within procedures below.

Procedure

Selection of Personal Protective Equipment and Clothing

The selection of appropriate personal protective equipment and clothing depends on a variety of factors such as:

- Determination of hazard (physical, chemical, biological) present or likely to be present in the workplace.
- Determination of workers who work with and who work in close proximity to the hazard.
- Determination of the adverse effects of unprotected exposure.
- Examination of other applicable control measures that can be used instead of protective clothing.
- The existence of any prescribed standards (CSA, ANSI).
- Determination of the performance characteristics needed for protection. The factors to consider are:
 - Flammable solvent usage;
 - The temperature and humidity in the work environment;
 - The worker's exercise regime (i.e. sweat production and evaporation);
 - Chemical hazard and compatibility with materials from which protective clothing is made (refer to standard compatibility references available from suppliers);
 - Water vapour permeability, mechanical strength, static charging;
 - Protection against biological challenges, parasites, bacteria, viruses, proteins, etc.;
 - Conductive heat transfer through protective clothing;
 - Resistance to punctures and cuts (by coveralls, aprons, gloves); and
 - Aerosol penetration through fabric and seams.
- Determination of the need for decontamination (as applicable);
- Determination of the ergonomic constraints caused by protective clothing;
- Consideration of fit and comfort ; and

- The cost-benefit of suitable options.

Samples of protective clothing may be requested from suppliers in a variety of sizes and styles for potential customers to try in their workplaces. Enquire about the supplier's warranties and exchange or return policies. Consult with an Environmental Health and Safety consultant for advice and assistance and information about International Safety Equipment Association (ISEA) recommendations.

Hearing Conservation and Protection

Although not required by the regulations, it is considered good health and safety practice for an employer, in consultation with the Joint Health and Safety Committee (JHSC), to implement a Hearing Conservation Program that includes audiometric testing of workers regularly working in areas with noise levels exceeding 85 dBA. This benefits both workers and employers by identifying potential gaps in the noise exposure control program.

- Hearing conservation programs are the responsibility of the employer, in consultation with workers. Every employer shall take all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous sound levels. (See subsection 139(3) of Reg. 851). Program components may include sound monitoring, feasible administrative and engineering controls, audiometric testing, hearing protection, worker training and education, and record keeping.
- In hearing conservation programs for long-running productions (in excess of six months), periodic hearing assessments should be considered. The results of such assessments are the sole property of the worker and their audiologist.

Regulation 381/15 Noise Definitions:

- *Attenuation*: A reduction in sound pressure level incident upon the ear
- *dBA*: A measure of sound level in decibels using a reference sound pressure of 20 micropascals when measured on the A-weighting network of a sound level meter.
- *Decibel*: A unit of measurement of sound pressure level that is equal to 20 times the logarithm to the base 10 of the ratio of the pressure of a sound, divided by the reference pressure of 20 micropascals.
- *Hearing Conservation Program*: A program to prevent and control noise-induced hearing loss.

Applicable Legislation and Standards:

Duty to protect workers

- 1) Every employer shall take all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous sound levels.
- 2) The protective measures shall include the provision and use of engineering controls, work practices and, subject to subsection (5), hearing protection devices.
- 3) Any measurement of sound levels in the workplace that is done to determine what protective measures are appropriate shall be done without regard to the use of hearing protection devices.
- 4) Without limiting the generality of subsections (1) and (2), every employer shall ensure that no worker is exposed to a sound level greater than an equivalent sound exposure level of 85dBA, Lex,8.
- 5) Except in the circumstances set out in subsection (6), the employer shall protect workers from exposure to a sound level greater than the limit described in subsection (4) without requiring them to use and wear hearing protection devices.

- 6) Workers shall wear and use hearing protection devices appropriate in the circumstances to protect them from exposure to a sound level greater than the limit described in subsection (4) if engineering controls are required by subsections (1) and (2) and,
 - a. Are not in existence or are not obtainable;
 - b. Are not reasonable or not practical to adopt, install or provide because of the duration or frequency of the exposures or because of the nature of the process, operation, or work;
 - c. Are rendered ineffective because of a temporary breakdown of such controls; or
 - d. Are ineffective to prevent, control or limit exposure because of an emergency.
- 7) Where practicable, a clearly visible warning sign shall be posted at every approach to an area in the workplace where the sound level, measured as described in subsection (3), regularly exceeds 85dBA.

Training and instruction

An employer who provides a worker with a hearing protection device shall also provide adequate training and instruction to the worker in the care and use of the device, including its limitations, proper fitting, inspection, and maintenance and, if applicable, the cleaning and disinfection of the device.

Hearing protection devices

A hearing protection device shall be selected having regard to,

- Sound levels to which a worker is exposed;
- The attenuation provided by the device; and
- The manufacturer's information about the use and limitations of the device.

A hearing protection device shall be used and maintained in accordance with the manufacturer's instructions.

Relevant Standards

- CAN/CSA-Z94.2-14: Hearing protection devices – Performance, selection, care, and use

Roles and Responsibilities:**Employer Responsibilities:**

- Employers are to take all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous sound levels.
- When the exposure limit prescribed by the regulations is exceeded, the employer is required to put in place measures to reduce workers' exposure. Protective measures may include engineering controls to reduce noise at the source or along the path of transmission; work practices such as equipment maintenance (to keep it quieter), or scheduling to limit a worker's exposure time; and personal protective equipment in the form of hearing protection devices, subject to the restrictions stated in the regulations

Employee Responsibilities:

- A worker required to wear protective clothing or use personal protective equipment or devices shall be adequately instructed and trained in the care and use of the clothing, equipment, or device before wearing or using it.

Table 1 – Maximum Allowable Noise Exposure

Duration	Steady Sound Level (dBA)
8 hours	85
4 hours	88
2 hours	91
1 hour	94
30 minutes	97
15 minutes	100

Resources:

There are various resources available online discussing control measures:

- CSA Standard Z107.56-13 (R2018)
- CSA Standard Z107.58-15
- NIOSH has published an extensive [Noise Control Manual](#)
- CCOHS offers an inexpensive document titled [Noise Control in Industry: A Basic Guide](#)
- NPC offers the U.S. Department of Labour, Occupational Safety and Health Administration guide [Noise Control--A Guide for Workers and Employees.](#)

Procedure for Noise Control:

- A. Noise, surveys may be conducted by Management on an every-other-month basis, if hazardous noise levels are suspected.
- B. Protective measures for protection against impulse type noise are the same as for steady state noise. All such personnel in the noise hazardous areas will wear hearing protection meeting the standards detailed in Z94.2-14 - Hearing protection devices - Performance, selection, care, and use.
- C. All personnel who are included in the hearing conservation program will conform to the requirements and wear protective devices as designated by their immediate Shop Supervisors. All personnel will be subject to unscheduled inspections by ZEREM ELECTRICAL SERVICES LTD.
- D. Personnel who are noted to have progressive hearing loss through an examination will be evaluated, at a medical facility on a case-by-case basis as to appropriateness of continuing employment in a noise hazardous area.

Respiratory Protection

Responsibilities:

- Management is responsible for ensuring compliance to the letter and intent of the OHSA, all applicable regulations and standards regarding respiratory protection.
 - Respirators will be selected based on the hazards to which the employee is exposed.
 - Employees required to wear respirators will be trained and instructed in the proper use of respirators and their limitations.

- Respirators will be cleaned and disinfected regularly, each employee requiring a respirator, will be assigned their own respirator.
- Respirators will be stored in a convenient, clean, and sanitary location.
- Respirators will be routinely inspected and maintained.
- Appropriate surveillance of work area conditions and employee. Exposure will be maintained (periodic, air sampling will be conducted by Management as applicable).
- Air samples shall be taken in accordance with the Governing Authority having jurisdiction (i.e. Ministry of Environment) and any applicable standards.
- Semi-annual inspections and evaluation of the effectiveness of the respiratory program will be performed by a competent person or by third party.
- Only approved and accepted respirators will be used.
- Perform respirator fit testing to assure the employees' respirator will provide the required protection. All fit testing shall be recorded with the individual name and work area.
- Notify the immediate supervisor in the course of safety surveys and in cases where personnel are working without protective respiratory equipment in an atmosphere which is suspected to be hazardous or lacking insufficient oxygen content.
- Provide for training of each supervisor and their employees that require respiratory equipment protection.
- Management will ensure that proper training has been recorded and documented in the employee's personnel files.
- A method to determine End of Service Life for applicable canisters shall be available at each work site.
- Other than employees using dust masks, employees shall work in teams, or as prescribed by the OHS and all applicable regulations and standards.
- Supervisors will:
 - Assure that personnel required to use respiratory equipment do so.
 - Assure that personnel adhere to instructions given by management relative to the proper use and maintenance requirements of the equipment.
 - Notify Management of protective equipment in use, which appear to be in disrepair or in an unclean or unsafe condition.
 - Give instructions as to the nature of hazards in the department, and a discussion of what may happen if respiratory protective equipment is not used.
 - Be made aware of the manner in which hazardous chemicals are introduced into the body and must take appropriate action accordingly. Hazardous materials can be absorbed into the body in the following manners:
 - a. Inhalation.
 - b. Ingestion.
 - c. Absorption through skin, eyes, and mucous membrane.
 - d. Injection
- Employee training shall include:
 - How to properly select the respirator to protect against those hazards to which the employee may be exposed.
 - A discussion of each device, its capabilities, limitations, and the instructions in the use of each device.
 - The actual handling and demonstration of the device by personnel.

Inspection of Respiratory Equipment:

- All respiratory protective equipment (except disposable dust/mask respirators) will be inspected periodically to ensure that they are in good working condition.
- Devices stored in cabinets for emergency use only shall be inspected periodically by the Safety Supervisor. This would include emergency respirators that are not used in the department.
- Respirator equipment returned for repair will be cleaned and inspected before it is returned to the employee.
- Mechanical repair of respiratory equipment may only be performed by qualified respirator equipment personnel trained in respirator equipment. Untrained personnel shall not attempt to repair or modify.

Maintenance and Storage of Respiratory Equipment:

The respirator shall be inspected, cleaned, and sanitized after each use or in accordance with the manufacturer instructions. The air-purifying elements must be removed from the respirator prior to the washing and sanitizing of the respirator. The face piece, elastic straps, inhalation valves, exhalation, valve guard, and inhalation connectors should be washed in a clear sanitized solution, thoroughly, and then dried at ordinary room temperature in a non-contaminated atmosphere. It is very important that the exhalation valve system in the face piece be inspected to ensure that it is clean, free from foreign matter and not damaged or distorted.

The respirator components should be inspected, and any worn or deteriorated parts should be discarded and replaced with new parts, which are designed for the respirator.

The respirator should be placed in its container and stored in a cool, dry, and non-contaminated atmosphere to ensure that it is protected against dust chemicals, moisture, excessive heat, and physical damage. Always follow manufacturer recommendations for safe use of respiratory equipment.

Head Protection

Applicable Regulations and Standards:

- Requirements for head protection are specified in the current edition of the construction regulation (O. Reg. 213/91) Section 22.

Section 22:

(1) Every worker shall wear protective headwear at all times when on a project.

(2) Protective headwear shall be a safety hat that,

(a) Consists of a shell and suspension that is adequate to protect a person's head against impact and against flying or falling small objects; and

(b) Has a shell which can withstand a dielectric strength test at 20,000 volts phase to ground.

The following requirement in section 80 of the Industrial Establishments Regulation regarding head protection applies:

Section 80:

A worker exposed to the hazard of head injury shall wear head protection appropriate in the circumstances.

At the present time, the Ministry of Labour (MOL) considers the following classes of hard hats to be in compliance with the regulation.

- CSA:
 - Z94.1-15: Class E, Type 1
 - Z94.1-15: Class E, Type 2
- ANSI:
 - ANSI Z89.1-14 (R2019): Class E, Type I
 - ANSI Z89.1-14 (R2019): Class E, Type II

The “Type” and “Class” of hard hat can be identified by the CSA or ANSI label. Some manufacturers also stamp the CSA or ANSI classification into the shell of the hard hat under the brim. Other markings that should be found here include:

- a. Manufacturer’s identity
 - b. Model
 - c. Class and type (e.g. Class E, Type 2)
 - d. Reverse orientation mark if applicable
 - e. Year and month of manufacture
 - f. Size or size range
 - g. The following wording
- This protective headwear is designed to absorb some of the energy of a blow through destruction of its component parts and, even though damage may not be apparent, any partial protective headwear subjected to severe impact should be replaced.
 - This protective headwear must not be painted or cleaned with solvents. Any decals applied to the protective headwear must be compatible with the surface material and known not to affect adversely the characteristics of the materials used in the protective headwear.
 - Any addition or structural modification may reduce the protective properties afforded by this protective headwear.

Styles:

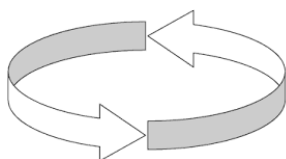
Class E hard hats come in three basic styles:

- Standard design with front brim, rain gutter, and attachment points for accessories such as hearing protection.
- Standard design with front brim and attachment points for accessories, but without a rain gutter.
- Full-brim design with attachment points for accessories and brim that extends completely.

Reversible Hard Hats:

You should normally wear your hard hat facing forward. A hard hat should be worn in reverse only if

- The hard hat has a reverse orientation mark as shown below.



- The job, task, or work environment necessitates wearing it backward (e.g. a face shield or welding helmet).

Maintenance, Use, and Care of Hard Hats:

Always consult the manufacturer's instructions for use and care instructions of your hard hat. For instance, the instructions should indicate the service life of your hard hat. You may also need to know what components of the hard hat must be inspected before each use.

Eye Protection

Applicable Legislation and Standards:

The following requirement for eye protection in section 24 of the Construction Projects Regulation applies:

- Section 24: A worker shall use protection appropriate in the circumstances when there is a risk of eye injury to the worker.

The following requirement in section 81 of the Industrial Establishments Regulation regarding eye protection applies:

- Section 81: A worker exposed to the hazard of eye injury shall wear eye protection appropriate in the circumstances.

Relevant Standards:

- CAN/CSA-Z94.3-15: Eye and face protection
- CAN/CSA-Z94.3.1-16: Selection, use and care of protective eye wear

Class of Safety Eyewear:

- Class 1 – Spectacles
- Class 2 – Goggles
- Class 3 – Welding Helmets
- Class 4 – Welding Hand Shields
- Class 5 – Hoods
- Class 6 – Face Shields

Hazard Recognition:

- Flying Objects; a piece of metal can pierce the cornea and eyeball and possibly cause the loss of an eye.
- Dust, sawdust, etc. can cause irritation resulting in a corneal ulcer which is a breakdown of corneal tissue causing a red, watery, or pussy eye.
- Heat can burn and severely damage the cornea.
- Acid splash and chemicals can burn the cornea, conjunctiva (white coat on the eye), and eyelid and possibly cause loss of sight.
- Abrasive sand can cause a corneal abrasion which can result in loss of sight.
- Glare can make it difficult to see and can cause extreme fatigue to the eye.
- Radiation or ultraviolet light from a welding arc can damage the cornea.

Hazard Controls:

Group A: Flying Objects; minimum eye protection recommended is Class 1 – Spectacles. Optimum eye protection recommended is Class 2 – Goggles worn with Class 6 – Face Shields to provide eye and face protection.

Group B: Flying particles, dust, wind, etc.; minimum eye protection recommended is Class 1 – Spectacles. Optimum eye protection recommended is Class 2 – Goggles (for dust and splash) worn with Class 6 – Face Shields to provide eye and face protection.

Group C: Heat, Glare, and Sparks; minimum eye protection recommended is Class 1 – Spectacles. Side shields must have filters equal to or greater than the front lenses. Optimum eye protection recommended is Class 2 – Goggles with filter lenses for radiation protection, worn with Class 6 – Face Shields to provide eye and face protection.

Group D: Acid splash, Chemical burns, etc.; eye protection recommended for dust and splash is Class 2 – Goggles and Class 6 – Face Shields to provide eye and face protection. Hoods may also be required for certain hazardous activities involving chemicals. Always reference the material Safety Data Sheet.

Group E: Abrasive blasting materials; minimum eye protection recommended is Class 2 – Goggles. Optimum eye protection recommended is hoods with an airline to provide eye and face protection.

Group F: Glare, Stray light; minimum eye protection recommended is Class 1 – Spectacles with filter lenses for radiation protection with side shields equal or greater than the front lenses. Optimum eye protection recommended is Class 2 – Goggles with filter lenses for radiation protection.

Group G: Radiation (low to moderate); eye protection recommended are Class 2 – Goggles with filter lenses for radiation protection.

Group H: Radiation (moderate to high); eye protection recommended are Class 1 – Spectacles worn with full welding helmets or welding hand shields. Spectacles may require suitable filter when welding helmet is in the raised position and when working near other welding operations.

Maintenance, Use and Care of Safety Eyewear:

Eyewear protection in construction is easily damaged. Therefore, care is very important.

- Lenses should be inspected regularly for pitting and scratches that can impair visibility.
- Scratched or pitted lenses and loose frames or temples should be replaced or repaired as soon as possible with components from the original manufacturer.
- Lenses should be cleaned with clear water to remove abrasive dust—cleaning dry lenses can scratch the surface.
- Anti-fog solutions can be used on glass or plastic lenses.
- Frames should be handled with care and checked daily for cracks and scratches.
- Eye protectors should never be thrown into toolboxes where they can become scratched or damaged.
- Cases should be provided and used to protect spectacle lenses when not being worn.

Contact Lenses:

Contact lenses are not a substitute for protective eyewear in the workplace. Dust and dirt can get behind the contact lenses causing sudden discomfort and impairment of vision.

Keeping contact lenses clean can present a difficult challenge when they have to be removed or inserted since there are seldom suitable washing-up facilities on a jobsite.

It is recommended that contact lenses not be worn on construction sites.

However, in cases where contact lenses must be worn to correct certain eye defects, workers should obtain written permission from their ophthalmologist or optometrist indicating the necessity of wearing contact lenses in order to function safely at work. In these cases eye protection, preferably cover goggles, must be worn with the contact lenses.

Foot Protection

One of three CSA grades, Grade 1 offers the highest protection and is the only one allowed in construction. In a Grade 1 boot, a steel toe protects against falling objects while a steel insole prevents punctures to the bottom of the foot.

Grade 1 boots can be identified by:

- A green triangular patch imprinted with the CSA logo on the outside of the boot; and
- A green label indicating Grade 1 protection on the inside of the boot.

Grade 1 boots are also available with metatarsal and dielectric protection. A white label with the Greek letter Omega in orange indicates protection against electric shock under dry conditions.



Applicable Legislation and Standards:

The following requirement for foot protection in section 23 of the Construction Projects Regulation applies.

Section 23:

- 1) Every worker shall wear protective footwear at all times when on a project.
- 2) Protective footwear shall be a safety shoe or safety boot,
 - a. With a box toe that is adequate to protect the wearer's toes against injury due to impact and is capable of resisting at least 125 joules impact; and
 - b. With a sole or insole that is adequate to protect the wearer's feet against injury due to puncture and is capable of resisting a penetration load of 1.2 kilonewtons when tested with a Deutsche Industrie Norm standard pin.

The following requirement in section 82 of the Industrial Establishments Regulation regarding foot protection applies.

Section 82:

- 1) A worker exposed to the hazard of foot injury shall wear foot protection appropriate in the circumstances.
- 2) Proper Selection and Fit of Safety Footwear
- 3) Boots should provide ample "toe room" (toes about 1/2 inch back from the front of steel box toe cap when standing with boots laced).

- 4) When fitting boots, allow for heavy work socks. If extra sock liners or special arch supports are to be worn in the boots, insert these when fitting boots.

Maintenance, Care and Use of Safety Footwear

Lacing boots military style permits rapid removal. In an emergency, the surface lace points can be cut, quickly releasing the boot.

In winter, feet can be kept warm by wearing a pair of light socks covered by a pair of wool socks. Feet should be checked periodically for frostbite.

Use high-cut (260 mm or 9 in) or medium-cut (150 mm or 6 in) CSA Grade 1 work boots. The higher cut helps support the ankle and protects from cuts or punctures to the ankle.

Skin and Hand Protection

ZEREM ELECTRICAL SERVICES LTD provides all employees with personal protection equipment to suit the task and known hazards. Equally as our commitment to safety, we hope our employees will reinforce and be proactive to their safety as well. Glove usage is required, and such will lessen the likelihood of occupational injuries and/ or illnesses. As other required personal protection equipment, gloves initially may seem awkward and inconvenient, however in a short period of times we accept the benefits versus consequences. Gloves are a tool for efficiency.

Gloves require a hazard analysis to determine what hazards are present, or likely to be present. Based on this analysis the following action will be taken:

- 1) Select and have each affected employee use the proper glove.
 - a. Skin absorption of harmful substances.
 - b. Severe abrasions.
 - c. Punctures.
 - d. Chemical burns.
 - e. Thermal burns.
 - f. Harmful temperature extremes.
- 2) Communicate selection decisions to each affected employee.
- 3) Select gloves that properly fit each affected employee.
- 4) Gloves alone shall not be relied on to provide protection, but also be used in conjunction with guards, engineering controls and sound safety practices.
- 5) Gloves shall be replaced periodically, depending on frequency of use and permeability to substances handled. Gloves overtly contaminated shall be rinsed and carefully removed from use.
- 6) Gloves should also be used whenever it is necessary to handle rough or sharp-edged objects-and very hot or cold materials. Examples of gloves include leather, welder's gloves, and aluminum-backed and other types of insulated glove material.

Careful attention must be given to protecting your hands when using tools and machinery. Power tools and machinery must have guards installed or incorporated into their design to prevent hands from contacting the "point of operation", power trains and/or moving parts. To protect the hands from injury due to contact with moving parts it is important to:

- 1) Ensure guards are always in place and used at all times.
- 2) Always lock out machines, tools or products being worked on and disconnect the power before making repairs.
- 3) Give materials you are working on or near a visual inspection before you make hand contact.

- 4) Do not wear gloves around moving machinery, such as drill presses, mills, lathes, and grinders.
- 5) Do not wear rings or bracelets.

Selection of hand PPE shall be based on an evaluation of the performance characteristics of the hand protection relative to the tasks to be performed, conditions present, duration of use and the hazards and potential hazards identified.

Again, there is no glove that provides protection against all potential hand hazards. Commonly available glove materials provide only limited protection with chemicals. Select gloves for most appropriate situation, determine how long they can be worn, and whether they can be reused.

For general use, as long as the performance characteristics are acceptable, it may be more cost efficient to regularly change less priced gloves than the more expensive types. Also, the work activities of the employee should be studied to determine the degree of dexterity required, the durations, frequency, and degree of exposure of the hazard, and the physical stresses that are applied.

Chapter 10 Exposure Control Plan – Biohazards and Sharps

Purpose

The purpose of this Exposure Control Plan (ECP) is to eliminate or minimize employee occupational exposures to the Biohazards and Sharps (e.g. hepatitis B virus (HBV), human immunodeficiency virus (HIV) and other infectious pathogens found in blood and other human body fluids) during routine operations and emergency tasks.

The Ontario Hospital Association/Ontario Medical Association (2012) estimate that after an injury in workplace situations from a needle contaminated with hepatitis B virus, there is a 6 to 30% chance that an exposed person will be infected. In a similar situation with HIV, there is about a 0.3% chance of infection, and there is about a 2% chance of infection for hepatitis C.

Scope

This ECP identifies the job classifications that may have potential exposure to blood and other potentially infectious materials. "Other potentially infectious materials" may be any fluid or solid, that is visibly contaminated with blood and/or body fluids.

In our operations, the greatest concern is blood or other body fluids that may be present in a first aid situation or medical emergency. Our secondary concern may come from biological hazards and sharps found on the job site.

Management and/or Health and Safety Coordinator are responsible for program implementation in the workplace. The ECP will be reviewed and updated at least annually to reflect any new or modified tasks that affect an employee's exposure to biohazards and sharps materials.

Policy

It is the policy of ZEREM ELECTRICAL SERVICES LTD to control and separate biohazardous waste and sharps from other trash immediately and to comply with all regulations for the storage and disposal of medical waste and all applicable infectious waste and infection control.

Definitions

Biological Hazard: Also known as biohazards, refers to biological substances that pose a threat to the health of living organisms, primarily that of humans. Sources of biohazards can include:

- Bacteria;
- Viruses;
- Insects;
- Plants;
- Birds;
- Animals;
- Humans;
- Medical waste; or
- Samples of a microorganism

Sharps: Any object with corners, edges, or projections that when inappropriately handled or disposed are capable of cutting or piercing skin or regular trash bags or waste containers. Examples of sharps include:

- Hypodermic needles, syringes, tubing;
- Blades (scalpels, lancets, razors, scissors);
- Metal wire; and
- Glassware or plastic pipette tips contaminated with an infectious agent.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Workplace Safety and Insurance Act

Relevant Standards:

- CSA Z317.13-17: Infection control during construction, renovation, and maintenance of health care facilities

Roles and Responsibilities

Employer will:

- Ensure that the equipment, materials, and protective devices as prescribed are provided;
- Ensure that the equipment, materials, and protective devices provided by the employer are maintained in good condition;
- Ensure that the measures and procedures prescribed are carried out in the workplace;
- Ensure that the equipment, materials, and protective devices provided by the employer are used as prescribed;
- Acquaint a worker or a person in authority over a worker with any hazard in the work and in the handling, storage, use, disposal and transport of any article, device, equipment or a biological, chemical, or physical agent; and
- Take every precaution reasonable in the circumstances for the protection of a worker.

Supervisor will:

- Ensure that a worker, works in the manner and with the protective devices, measures and procedures required by this Act and the regulations;
- Take every precaution reasonable in the circumstances for the protection of a worker; and
- Uses or wears the equipment, protective devices, or clothing that the worker's employer requires to be used or worn.

Workers will:

- Use or wear the equipment, protective devices, or clothing that the worker's employer requires to be used or worn; and
- Report to their employer or supervisor the absence of or defect in any equipment or protective device of which the worker is aware and which may endanger themselves, or another worker.

Procedure

Storage and Containment

General Storage:

- 1) Separate waste from other waste immediately in the beginning of trash collection.
- 2) Keep infectious waste in double red bags or other specific labeled containers.
- 3) Sharp containers or red bags obtaining infectious waste must be placed in disposable or reusable containers for storage, handling, or transport.
- 4) Bags should be tied to prevent leakage to eliminate the loss of contents during storage, handling, or transport.

- 5) All red bags and sharp containers will be kept under lock in a designated storage area for disposal by third party contracted services.
- 6) All red bags and sharp containers will be picked up and disposed of, on an as need basis but will not be kept for a period of time exceeding seven (7) days.
- 7) Warning signs with the following legible inscription must be posted: "CAUTION-BIOHAZARD MATERIALS and INFECTIOUS WASTE STORAGE AREA – AUTHORIZED PERSONS ONLY".

Control Measures:

Several methods of compliance are used to reduce the risk of exposure to potentially infectious materials in the workplace. These methods include the following:

- **Universal Precautions:** We will practice "universal precautions" to prevent contact with blood and other potentially infectious material. First aid/CPR providers, and all other employees are instructed to treat all body fluids as potentially infectious materials. First aid providers, for example, administering treatment to an employee with a cut should assume that the blood they might contact is infectious. The first aider should use recommended precautions (i.e. gloves, goggles, face shield, etc.) to prevent the victim's blood from entering a cut or splashing into their eyes, mouth, or other mucous membranes. Equipment such as gloves and CPR masks will also help protect the injured person from contact with blood and other fluids from the first aider.
- **Engineering Controls:** Engineering controls will be used whenever possible to eliminate or minimize employee exposures without relying on the employee to take self-protective action. Management will be responsible for maintaining the engineering controls used in our operations.
- **Leak Proof Containers:** Management will provide leak proof, labeled or color-coded bags (red/orange) to be used for placement of towels, disposable materials, etc. that are contaminated with blood or other body fluids. First aid responder will be responsible for placing the soiled or suspect items in the leak proof/labeled bag for transport to a secured area. It will be held for pick-up by a contractor or to our own designated area for cleaning and decontamination.

Work Practice Controls:

Approved work practices reduce the likelihood of employee exposure by requiring specific work procedures. In addition to following universal precautions and use engineering controls, the following safe work practice controls are required:

Hand washing facilities are available at our project work sites and employees who have contact with blood or other potentially infectious materials are required to wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

The hand washing shall be thorough, using non-abrasive germicidal soap, running water and friction between the hands.

Handling sharp broken glass should never be picked up by hand. A whiskbroom or scraper with a dustpan should be used to collect shards and pieces. The glass should be placed in a cardboard box or other container to help prevent injury to other employees during, waste handling. If the broken glass is contaminated with blood or other body fluids, the employee should secure the area and contact their supervisor.

First Aid Responder will pick up the contaminated glass with a scraper and dustpan and place the glass in a labeled, puncture resistant and leak proof container. The pieces will then be decontaminated and placed in a cardboard box prior to disposal by normal methods.

A First Aid Responder member will also decontaminate the surrounding area (if necessary), along with the reusable sharps container, scraper, and dustpan before returning same to the sharps storage area.

Knives, tools, and other reusable sharps contaminated with blood or other body fluids should be handled in the same manner. The employee should not touch the contaminated tool or surrounding area. The supervisor should be contacted, and they will notify a First Aid Responder.

The First Aid Responder member will wear appropriate personal protective equipment, place the contaminated knife or tool in a labeled, puncture resistant, and leak proof container.

The knife/tool will be decontaminated along with the surrounding area (if necessary) and the reusable sharps container. The knife/tool will then be cleaned again using normal methods before being returned to service, in accordance with Public Health Ontario and CSA Standards, we will only use approved cleaners for decontamination purposes. Use of these cleaners will correlate with our Exposure Control Plan and procedures recommended by the product manufacturer.

Cuts from handling sheet metal and other-sharp edged fabrication materials are a common exposure in our operations. Sheet metal and other materials contaminated with blood or other body fluids should be handled in the same manner as contaminated tools or equipment. The employee should not touch the contaminated material or surrounding area.

The supervisor should be contacted, and they will notify a First Aid Responder. The First Aid Responder will wear appropriate personal protective equipment and decontaminate the material and surrounding area, as needed. The material will then be cleaned again using normal methods before being returned to use.

Zerem will also contract services where deemed necessary to decontaminate the carpet or other contaminated furnishings. If the material is so soaked with blood or other body fluid that it is determined it cannot be reused, it will be disposed of by contacting the licensed hazardous waste handler utilized by our ZEREM.

For any task involving potential exposure to blood or body fluids, material protective gloves must be worn. Hands should be washed before putting gloves on and after taking them off. If the employee's skin or mucous membranes (i.e., eyes, mouth, etc.) should come in contact with blood or other potentially infectious materials, employees are instructed to wash with germicidal soap and/or thoroughly flush the eyes/mouth with copious amounts of water as soon after the exposure as possible.

Disposable gloves and other protective equipment that are contaminated with blood or other body fluids shall be removed in a manner that prevents direct contact of blood/fluid with the skin. A protective/contaminated glove, for example, shall be peeled/rolled off one hand (so that it is inside out) and held at the fingertips of the remaining, gloved hand. The unprotected hand can then be used to peel the second glove from the uncontaminated wristband toward the fingertips and over the first glove. This practice helps ensure all contaminated surfaces are on the inside of the removed gloves.

The contaminated gloves will then be deposited in a labeled, color-coded bag or container for handling/disposal by a First Aid Responder.

Reusable gloves such as those, for housekeepers, maintenance personnel, and plumber that may become contaminated with blood or other body fluids can be reused- provided they are

decontaminated with an approved material. This will be accomplished by a First Aid Responder. These types of gloves will be discarded if they are cracked, peeling, torn, punctured, show other signs of deterioration or when their ability to function as a protective barrier is compromised.

Employees suffering cuts or other injuries that result in potential contamination of tools, work surfaces or other materials with their blood or other body fluid will immediately report same to their supervisor.

If the cut is significant, the employee should apply direct pressure to their own wound until first aid or other medical personnel arrive. This will help reduce loss of blood and help prevent unnecessary splashing and spilling. The supervisor will contact a trained first aider. The first aider will wear appropriate protective equipment and clean/decontaminate the involved tools.

Food, drink, eating, drinking, smoking, applying cosmetics and lip balm, and handling contact lenses are prohibited in areas where there is reasonable likelihood of potential exposures.

Examples of prohibited areas include the storage area for sharps and temporary hazardous waste storage, first aid areas, and areas undergoing decontamination. Food and drink may also not be kept in any shelf, cabinet, or storage areas where potentially infectious materials are present.

We provide appropriate personal protective equipment at no cost to employees, for all personnel with occupational exposures to blood and other potentially infectious materials. Personal protective equipment helps eliminate or minimize the risk of infectious materials entering the worker's body through skin lesions or mucous membranes of the eyes, nose, and mouth.

The protective equipment required in our program will only be considered appropriate if it does not permit blood or other body fluids to pass through or reach the employee's clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time in which the equipment will be used. This personal protective equipment includes, but is not limited to, gloves, aprons/gowns (with plastic barriers), rubber rain suits and boots, face shields/eye protection and CPR mouthpieces with one-way valves.

Personal protective equipment for first aid personnel is available in appropriate sizes and will be issued by the Management. Supervisors will evaluate the condition of PPE on at least a monthly basis.

Hypo-allergenic gloves, glove liners, powerless gloves or other alternatives will also be secured by the Supervisor for employees who may be allergic to the gloves normally provided.

Plumbers working on existing wastewater systems will be provided with protective suits or rain gear, rubber boots, rubber gloves, face shields, goggles, and hard hats. This equipment will be worn whenever there is anticipated exposure to blood or other body fluids. This equipment, if subject to splash or spill, will be decontaminated by third party contractor for re-use.

The supervisor will provide protective, reusable gloves for employees involved in picking up towels, handling dirty uniforms, and other cleaning activities where an unexpected exposure to blood/fluid contaminated materials may be anticipated. Other employees who may be involved in picking up or handling used towels or other materials that may be contaminated will also be provided with protective gloves by their supervisors as a precaution.

The enforcement of personal, protective equipment use is the shared responsibility of the employee/supervisor. Failure to utilize required personal protective equipment will result in disciplinary action. Exceptions will only be allowed when it can be shown that the employee

temporarily and briefly declined to use PPE when, under extraordinary circumstances, it was the employee's professional judgment that its use would have prevented the delivery of emergency medical treatment or exposed an increased hazard to the safety of the worker or co-worker.

Personal protective equipment will also be repaired/replaced at no cost to employees. All garments penetrated by blood or other body fluids shall be removed immediately or as soon as possible. These will be placed in an approved bag/container for proper storage, disposal, or decontamination. Employees will remove all contaminated PPE before leaving our location/job site.

Protective gloves shall be worn when it is anticipated that an employee may have contact with blood or other potentially infectious materials. Disposable gloves are to be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured or when their ability to function as a barrier is compromised. They will not be decontaminated for reuse - contaminated disposable gloves must be deposited in an approved bag/container.

Masks, eye protection and face shields will be used whenever splashes or sprays of blood or other potentially infectious materials may be generated and can be expected. Situations in our operations that might require this type of protection involve emergency first aid treatment or plumbing work on live/existing wastewater systems.

Masks and eye protection will be issued by Management to each first aid responder. Masks and eye protection are also available to plumbers who work on existing wastewater.

Chapter 11 Scaffolds, Mobile Elevating Work Platforms, and Other Mechanized Equipment

Purpose

The chapter outlines general procedures for operation of aerial, scaffolding, and transportation equipment.

Scope

The following safety requirements and precautions apply to all employees and contractors employed or contracted by ZEREM ELECTRICAL SERVICES LTD

Policy

- Supervisors shall provide equipment-specific training and education about fall protection for employees required to use scaffolds and mobile elevating work platforms.
- Only trained and authorized employees shall operate powered elevating work platforms.
- Employees shall evaluate their requirements for safe access to work assignments and shall consult supervisory personnel about the use of scaffolds and mobile elevating work platforms.
- Scaffolds and mobile elevating work platforms shall be inspected for safety before use.
- The erection, alteration, and dismantling of scaffolds shall be carried out under the direct supervision of a competent person. Before scaffolding is erected, inspections shall be performed for satisfactory ground conditions, overhead electrical wires and obstructions, secure tie-ins, and outrigger stabilizers, and to assess the potential for wind loading.
- Fall protection shall be provided and used when scaffolding is being erected and dismantled.
- Workers on scaffolds more than one tier in height, that have no guardrails, shall tie off with full body harness and shock-absorbing lanyards to secure anchor points.
- Special purpose ladders and work platforms shall be used in accordance with the manufacturer's directions and only for the applications intended.
- Employees working on or from elevated work platforms shall wear securely anchored fall protection and other personal protective equipment appropriate for the job.
- Preventative maintenance programs shall be established in accordance with the manufacturer's recommendations for all ZEREM-owned mobile elevating work platforms. Permanent records shall be retained concerning all inspections, tests, service, repairs, and modifications.

Definitions

Mobile Elevated Work Platform: Also known as an aerial device, elevating work platform (EWP), or Powered Elevating Work Platform (PEWP) is a mechanical device used to provide temporary access for people or equipment to inaccessible areas, usually at height. There are distinct types of mechanized access platforms, and the individual types may also be known as a "cherry picker" or a "scissor lift".

Mechanized Equipment: Any type of motorized equipment found on the job (e.g., excavators, backhoes, and loaders).

Legislation and Standards

Applicable Legislation:

- See procedures

Relevant Standards:

- CSA B354.7: Safe Use of Mobile Elevating Work Platforms
- CSA B354.8: Training Requirements for Operators of Mobile Elevating Work Platforms

Roles and Responsibilities

See Procedures.

Procedure

Scaffolding

The safe and efficient use of scaffolding depends first on choosing the right system for the job. If the scaffold's basic characteristics are unsuited to the task, or if all the necessary components are not available, personnel are forced to make do and improvise. These conditions lead to accidents.

Scaffolding Basic Hazards:

- Erecting and dismantling
- Planks sliding off or breaking
- Improper loading or overloading
- Platforms not fully decked
- Platforms without guardrails
- Failure to install all required components
- Electrical contact with overhead wires (see Table 1)
- Moving rolling scaffolds with workers on the platform
- Table 1. Minimum distance from power lines

Voltage Rating of Power Line	Minimum Distance
750 to 150,000 volts	3 metres (10 Feet)
150,001 to 250,000 volts	4.5 metres (15 Feet)
Over 250,000 volts	6 metres (20 Feet)

Inspection:

The construction regulation (Ontario Regulation 213/91) includes the following requirements:

- A scaffold shall be provided for workers where work cannot be done on or from the ground or from a building or other permanent structure without hazard to the workers;
- Every scaffold;
 - Shall have uprights braced diagonally in the horizontal and vertical planes to prevent lateral movement;
 - Shall have horizontal members that are secured to prevent lateral movement and that do not have splices between the points of support;
 - Shall have footings, sills or supports that are sound, rigid, and capable of supporting at least two times the maximum load to which the scaffold may be subjected without settlement or deformation that may affect the stability of the scaffold;
 - Shall have all fittings and gear, including base plates or wheels, installed in accordance with the manufacturer's instructions;

- Shall have connecting devices between frames that provide positive engagement in tension and compression;
- Shall have safety catches on all hooks; and
- Shall be secured at vertical intervals not exceeding three times the least lateral dimension of the scaffold, measured at the base, to prevent lateral movement.
- Shall be provided with a means of access;
- Shall not have any unguarded openings; and
- Only a competent worker shall supervise the erection, alteration and dismantling of a scaffold.

Scaffold materials should be inspected before use for the following:

- Damage to structural components;
- Damage to hooks on manufactured platforms;
- Splits, knots, and dry rot in planks;
- Delamination in laminated veneer lumber planks;
- Presence of all necessary components for the job; and
- Compatibility of components.

Structural components which are bent, damaged, or severely rusted should not be used. Similarly, platforms with damaged hooks should not be used until properly repaired. Planks showing damage should be discarded and removed from the site so that they cannot be used for platform material.

Mobile Elevating Work Platform (MEWP)

Roles and Responsibilities:

Owner or Supplier must ensure the following:

- Is in good condition;
- Complies with regulations;
- Is maintained in good condition;
- Conforms to the appropriate CSA Standard; and
- Includes the correct load rating charts if required.

Supervisor must ensure the following:

- Ensure that the operator is competent;
- Ensure that the machine has the correct load rating capacity for the job;
- Maintain the equipment and all its protective devices;
- Maintain a logbook for each platform;
- Ensure that workers use appropriate personal protective equipment;
- Keep the manufacturer's operating manual on site; and
- Train workers on each class of equipment being used.

Workers or operators must:

- Receive adequate training to be fully competent;
- Only operate the machine when competent;
- Operate the machine in a safe manner and as prescribed by the manufacturer and Zerem's health and safety policy;
- Inspect the equipment daily before use;

- Perform function tests before use;
- Report any defects to the supervisor; and
- Read, understand, and obey the manufacturer's safety rules, including the operating manual and warning decals.

The construction regulation (Ontario Regulation 213/91) includes the following requirements:

- An elevating work platform shall be designed by a professional engineer in accordance with good engineering practice and applicable CSA Standards.
- An elevating work platform shall be inspected each day before use, in accordance with the manufacturer's instructions by a competent worker.
- An elevating work platform shall be equipped with guardrails.
- The owner of an elevating work platform shall maintain it such that the safety factors of the original design are maintained.
- The owner of an elevating work platform shall keep a permanent record of all inspections, tests, repairs, modifications, and maintenance performed on it.
- A maintenance and inspection record tag shall be provided and attached to the elevating work platform near the operator's station.
- A worker who operates an elevating work platform shall, before using it for the first time, be given oral and written instruction on the operation and be trained to operate that class of elevating work platform.
- An elevating work platform:
 - Shall not be loaded in excess of its rated working load;
 - Shall be used and moved only in accordance with the manufacturer's written instructions;
 - Shall not be loaded and used in such a manner as to affect its stability or endanger a worker; and
 - Shall not be moved unless all workers on it are protected from ejection by being attached to an adequate fixed support on the elevating work platform by a method of fall protection.
- An operator's manual for an elevating work platform shall be kept with it while it is on a project.

MEWP Basic Hazards:

- Machine tipping or overturning
- Overriding safety features
- Overhead power lines
- Makeshift extensions
- Overloading the platform
- Failing to cordon off work area
- Accidental contact
- Improper maintenance or modifications
- Improper blocking during maintenance
- Improper access
- Moving with platform raised
- Improper refueling
- Pinch points

MEWP Best Practices:

- Analyze the job hazards. Are there ventilation issues that need to be addressed? Could carbon monoxide from internal combustion engines accumulate?
- Review the work area to where the equipment is being elevated. Is there adequate lighting? Are there any obstructions above that could strike or crush a worker?
- Has specific training been provided to address identified hazards while using the elevating work platform – including training on fall protection, material handling, Workplace Hazardous Materials Information System (WHMIS), etc.?
- Specific work-related hazards must be analyzed, and relevant controls established.

For further information about scaffolds, suspended scaffolds, and mobile elevating work platforms consult with a professional engineer, Infrastructure Health and Safety Association or Ministry of Labour.

Chapter 12 Designated Substances

Purpose

Designated substances are especially dangerous when adequate controls are not put in place to protect workers. On a construction site, the project owner is legally required to identify any designated substances and make a list of them. This list must be given to contractors as part of the bidding process and before any contracts are finalized.

Scope

These safety requirements apply to all employees and contractors employed by ZEREM ELECTRICAL SERVICES LTD in a workplace or on a project where designated substances are or may be present.

Policy

It is ZEREM ELECTRICAL SERVICES LTD's policy:

- To eliminate, or minimize the potential for workers exposure to designated substances on any of the projects; and
- To maintain compliance with the legislation addressing designated substances.

It is the policy of ZEREM ELECTRICAL SERVICES LTD to eliminate workers exposure to designated substances and to protect employees and contractor personnel from these hazards. If these materials are found at a particular job site by an employee, that employee shall notify the acting site supervisor at once. All materials that look like dust, asbestos or lead are presumed to contain such matter.

Definitions

Competent Person: An individual meeting the definition of "Competent Person" under the Occupational Health and Safety Act. It means a worker who:

- 1) Is qualified because of knowledge, training, and experience to perform the work;
- 2) Is familiar with the Act and the provisions the regulations that apply to the work; and
- 3) Has knowledge of all potential or actual danger to health or safety in the work.

Designated Substances: Defined by the Occupational Health and Safety Act as "a biological, chemical or physical agent or combination thereof prescribed as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled". There are 11 designated substances.

- *Crystalline silica:* A basic component of sand', quartz and granite rock. Activities as sandblasting, cutting, drilling, hammering, chipping, and repair of various items may cause airborne dust. Even small amounts of silica are potentially dangerous. Common locations: Bricks and blocks, granite, abrasives, concrete, sandstone, cement, and mortar.

Potential health hazards include tuberculosis and lung cancer as well as silicosis. There are no known cures for silicosis. Dust, generated by other contractor workers at a job site, shall be recognized as a potential health hazard.

- *Asbestos:* a broad term applied to a group of fibrous minerals such as Actinolite, Amosite, Anthophyllite, Chrysolite, Crocidolite and Tremolite. Excessive exposure to asbestos is recognized as presenting a potential major health hazard.

- Common locations: Insulation, wallboard, asphalt, adhesives, caulking, ceiling and floor tiles, gaskets, drywall compound, plaster, and roofing shingles.
- Exposure occurs by inhalation of the asbestos fibers produced as a fine dust when asbestos is handled during fabrication, installation, or removal operation. Inhalation of even a small amount of asbestos fibers can lead to serious health impairment.
- Regulation 490 - Designated Substances does not apply to asbestos on construction and demolition projects. Instead, Regulation 278 – Asbestos on Construction Projects and in Buildings and Repair Operations comes into effect.
- Asbestos containing material is material that contains 0.5% or more asbestos by dry weight.
- **Lead:** Elemental lead, inorganic compounds of lead and organic compounds of lead.
 - Common locations: Old paint, old mortar, old water pipes, lead sheeting, and contaminated soil.
- **Mercury:** Elemental Mercury, inorganic compounds of mercury and organic compounds of mercury.
 - Common locations: Fluorescent lights, switches, pressure gauges, electrodes, and contaminated soil.
- **Isocyanates:** Organic isocyanates
 - Common locations: Spray foam insulation, sealants, finishes, paint, and auto-body materials

Legislation and Standards

Applicable Legislation:

- Reg. 490/09, Designated Substances
- Reg. 275/05 Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations.

Roles and Responsibilities

Procedure

Asbestos

- Management will, before planned operation that involves handling or working with asbestos or silica or materials containing asbestos or silica, evaluate the potential hazard and take adequate control measures to implement on site control methods, and monitor operations with air sampling techniques to satisfy requirements of determining levels of asbestos, silica, and fiber concentration.
- If dust generated by other contractors, the jobsite supervisor should notify the Management. Management shall notify the General Contractor for immediate corrective action employees shall evacuate the exposed areas-until the area is free from potentially silica dust/nuisance dust. Awareness training will be provided for all employees, including the proper usage of marking and signs.
- When asbestos is found; the material should be barricaded off to prevent asbestos exposure. The supervisor shall then contact the Site Supervisor, so that arrangements can be made to have the material sampled properly by a trained Competent Person. All shall be provided awareness training. Review and approve newly procured protective equipment prior to its initial issue and use.
- Asbestos remediation work is classified as Type 1, 2, or 3 as specified in Regulation 278/05 and appropriate work procedures are developed and implemented.

- Type 1 Operations:
 - Installing or removing ceiling tiles that are asbestos containing if the tiles cover an area less than 7.5 square metres and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated;
 - Installing or removing no-friable asbestos-containing material, other than ceiling tiles, if the material is installed or removed without being broken, cut drilled, abraded, ground, sanded or vibrated;
 - Breaking, cutting drilling abrading, grinding, sanding, or vibrating non-friable asbestos-containing material if the material is wetted to control the spread of dust or fibres and the work is done only by means of non-powered hand-held tools; or
 - Removing less that one square metre of drywall in which joint filling compounds that are asbestos-containing material have been used.
- Type 2 Operations:
 - Removing all or part of a false ceiling to obtain access to work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling;
 - Removal or disturbance of one square metre of less friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle, or ship;
 - Enclosing friable asbestos-containing material;
 - Applying tape or a sealant or other covering to pipe or boiler insulation that is asbestos-containing material;
 - Installing or removing ceiling tiles that are asbestos-containing material, if the tiles coven an area of 7.5 square metres or more and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated;
 - Breaking, cutting, drilling, abrading, grinding, sanding, or vibrating non-friable asbestos-containing material, if the material is not wetted to control the spread of dust or fibres and the work is done only by means of non-powered hand-held tool;
 - Removing on square metre or more of drywall in which joint filling compounds that are asbestos-containing material have been used;
 - Breaking, cutting, drilling, abrading, grinding, sanding, or vibrating non-friable asbestos-containing material, if the work is done by means of power tools that are attached to dust collecting devices that are equipped with HEPA filters;
 - Removing insulation that is asbestos-containing material from a pipe, duct or similar structure using a glove bag;
 - Cleaning or removing filters used in air handling equipment in a building that has sprayed fireproofing that is asbestos-containing material;
 - An operation that is not mentioned previously and may expose a worker to asbestos and is not classified a Type 1 or Type 3.
- Type 3 Operations:
 - Removal or disturbance of more than one square metre of friable asbestos containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle, or ship;
 - The spray application of a sealant to friable asbestos-containing material;
 - Cleaning or removing air handling equipment, including rigid ducting but not including filters, in a building that has sprayed fireproofing that is asbestos-containing material;

- Repairing, altering, or demolishing all or part of a kiln, metallurgical furnace or similar structure that is made in part of refractory materials that are asbestos-containing material;
 - Breaking, cutting, drilling, abrading, grinding, sanding, or vibrating non-friable asbestos containing material, if the work is done by means of power tools that are not attached to dust collecting devices that are equipped with HEPA filters; or
 - Repairing, altering, or demolishing all or part of any building in which asbestos is or was used in the manufacture or products, unless the asbestos was cleaned up and removed before March 16, 1998.
- The Ministry of Labour (MOL) is notified in advance by telephone and in writing of all Type 3 work and all glove bag work exceeding 1 square meter.
 - Outside contractors retained for asbestos abatement work and their staff are competent and possess all necessary registrations and permits before undertaking the work. All workers and supervisors involved in Type 3 work must have successfully complete and Asbestos Abatement Worker training program.
 - No employee shall remove any Presumed Asbestos-Containing Material (PACM). A Certified Asbestos Removal Contractor shall remove all asbestos.
 - Management will obtain and maintain the building asbestos record in an accessible location on-site and provide a copy to the Joint Health and Safety Committee.
 - For Type 3 work, management will ensure that a copy of clearance air test results is posted in the workplace and common area and a copy is provided to the Joint Health and Safety Committee.

Lead

This section applies to all construction work where an employee may be occupationally exposed to lead.

Lead may affect the health of workers if it is in a form that may be inhaled (i.e. airborne particles) or ingested. In order for lead to be a hazard by inhalation, lead particles that are small enough to be inhaled must get into the air. There are three types of particles: dust, fume, and mist.

- Lead dust consists of solid particles created through processes such as blasting, sanding, grinding, and electric or pneumatic cutting.
- Lead fumes are produced when lead or lead-contaminated materials are heated to temperatures above 500°C, such as welding, high temperature cutting, and burning operations. The heating causes a vapour to be given off and the vapour condenses into solid fume particles.
- Mists are made up of liquid droplets suspended in air. The spray application of lead-based paint can generate a high concentration of lead-containing mist.

The strategy for controlling airborne lead hazard can therefore be broken down into three basic approaches:

- Prevent lead from getting into the air;
- Remove lead present in the air;
- If present in the air, prevent workers from inhaling it.

To prevent the ingestion of lead, workers should exercise good work and hygiene practices.

To avoid the ingestion, inhalation, and unintentional transfer of lead from contaminated areas, it is essential to have the following control methods in place:

- Engineering controls;

- Work practices and hygiene practices;
- Protective clothing and equipment; and
- Training

The following is a list of general measures and procedures that should be followed for all work with lead:

- Washing facilities consisting of a wash basin, water, soap, and towels should be provided and workers should use these washing facilities before eating, drinking, smoking, or leaving the project;
- Workers should not eat, drink, chew gum or smoke in the work area;
- Drop sheets should be used below all lead operations which produce or may produce dust, chips, or debris containing lead;
- Dust and waste should be cleaned up and removed by vacuuming with a HEPA filter equipped vacuum;
- Clean-up after each operation should be done to prevent lead contamination and exposure to lead; and
- Dust and waste should be cleaned up at regular intervals and placed in a container that is:
 - Dust tight;
 - Identified as containing lead waste;
 - Cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before being removed from the work area;
 - Removed from the workplace frequently and at regular intervals;
 - The work area should be inspected daily at least once to ensure that the work area is clean; and
 - Compressed air or dry sweeping should not be used to clean up any lead-containing dust or waste from a work area or from clothing.

Even with appropriate measures to control lead, some workers may still be affected. For this reason, periodic medical examinations are important for determining if the control measures in place are effective and if workers are suffering from the effects of lead exposure. This is known as medical surveillance and can be considered to be a method for early detection and prevention of lead poisoning.

Medical Surveillance Program

The objective of a medical surveillance program is to protect the health of workers by:

- Ensuring their fitness for exposure to lead;
- Evaluating their absorption of lead;
- Enabling remedial action to be taken when necessary; and
- Providing health education.

The medical surveillance program should include the following:

- Pre-employment and pre-placement medical examinations;
- Periodic medical examinations;
- Clinical tests;
- Health education; and
- Record keeping.

Respiratory Protection

Personal protective clothing and equipment should be provided where workers may be exposed to lead. Appropriate personal protective clothing and equipment to prevent skin contamination, include but are not limited to coveralls or full-body work clothing; gloves, hats, and footwear or disposable coverlets; and safety glasses, face shields or goggles. Respirators should be provided to prevent the inhalation of lead where engineering controls and work practices do not control the concentration of lead to below the OEL.

Protective Clothing

The purpose of protective clothing is to prevent skin exposure and the contamination of regular clothing. All clothing and equipment that has been worn in a lead-contaminated area must be removed at the end of each shift and be decontaminated. Under no circumstances should these be taken home. When handling lead-contaminated clothing avoid shaking, as this can be a significant source of exposure to lead dust. Lead-contaminated clothing and equipment should be placed in sealed impermeable plastic bags with proper labels indicating lead contamination. Washing facilities and procedures must be suitable for handling lead contaminated laundry.

Respirators

Where engineering controls and work practices do not control the concentration of lead to below the OEL, workers should wear respirators.

If respirators are used, a respirator program should be implemented. The program should be developed in consultation with the joint health and safety committee or health and safety representative, if there is one, and should include written procedures for the selection, use, care, and maintenance of personal respiratory protective equipment.

Workers should be instructed and trained on the care and use of personal protective equipment before using it. Some workers may have a medical condition that causes them to have difficulty breathing when wearing a respirator. If such workers have written medical proof of their condition, they should not be required to do work that requires a respirator.

Respirator selection:

Where respirators are provided, they should be appropriate in the circumstances for the anticipated concentrations of airborne lead. Respirators should be selected in accordance with the U.S. National Institute for Occupational Safety and Health (NIOSH) assigned protection factors (APF). Measures and Procedures for Type 1, 2, and 3 Lead-Containing Operations.

Type	Operations	Required Respirator	Other Measures and Procedures
Type 1	<ul style="list-style-type: none"> • Application of lead-containing coatings with a brush or roller. • Removal of lead-containing coatings with a chemical gel or paste and fibrous laminated cloth wrap. • Removal of lead-containing coatings or materials using a power tool that has an effective dust collection system equipped with a HEPA filter. • Installation or removal of lead-containing sheet metal. • Installation or removal of lead-containing packing or similar material. • Removal of lead-containing coatings or materials using non-powered hand-held tools, other than manual scraping or sanding. • Soldering. 	<ul style="list-style-type: none"> • Respirators should not be necessary if general procedures earlier are followed and if the levels of lead in air are less than 0.05 mg/m³. However, if the worker wishes to use a respirator, a half-mask particulate respirator with N-, R- or P-series filter, and 95, 99 or 100% efficiency should be provided. 	<ul style="list-style-type: none"> • Washing facilities consisting of wash basin, water, soap, and towels should be provided and workers should use these washing facilities before eating, drinking, smoking, or leaving the project; • Workers should not eat, drink, chew gum or smoke in the work area; • Dust and waste should be cleaned up at regular intervals and placed in a container that is: <ul style="list-style-type: none"> • dust tight; • identified as containing lead waste; <ul style="list-style-type: none"> ○ cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before being removed from the work area; ○ removed from the workplace frequently and at regular intervals; ○ Drop sheets should be used below all lead operations which produce or may produce dust, chips, or debris containing lead; ○ Cleanup after each operation is encouraged to prevent lead contamination and exposure to lead; ○ Work area should be inspected at least daily to ensure that the work area is clean; and ○ Compressed air or dry sweeping should not

			be used to clean up any lead-containing dust or waste from a work area or from clothing.
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Type	Operations	Required Respirator	Other Measures and Procedures
Type 2a	<ul style="list-style-type: none"> Welding or high temperature cutting of lead-containing coatings or materials outdoors. This operation is considered a Type 2a operation only if it is short-term, not repeated, and if the material has been stripped prior to welding or high temperature cutting. Removal of lead-containing coatings or materials by scraping or sanding using non-powered hand tools Manual demolition of lead-painted plaster walls or building components by striking a wall with a sledgehammer or similar tool 	<ul style="list-style-type: none"> Half-mask particulate respirator with N-, R-, or P-series filter and 95, 99 or 100 percent efficiency 	<p>(In addition to Type 1 measures and procedures.)</p> <ul style="list-style-type: none"> Signs should be posted in sufficient numbers to warn of the lead hazard. There should be a sign, at least, at each entrance to the work area. The signs should display the following information in large, clearly visible letters: There is a lead dust, fume, or mist hazard. Access to the work area is restricted to authorized persons. Respirators must be worn in the work area. Suitable protective clothing and equipment should be worn by every worker who enters the work area.
Type 2b	<ul style="list-style-type: none"> Spray application of lead containing coatings. 	<ul style="list-style-type: none"> Powered air purifying respirator equipped with a hood or helmet, and a high efficiency filter. Or Supplied air respirator equipped with a hood or helmet and operated in a continuous flow mode. 	

Type	Operations	Required Respirator	Other Measures and Procedures
Type 3	<ul style="list-style-type: none"> • Welding or high temperature cutting of lead-containing coatings or materials indoors or in a confined space. • Burning of a surface containing lead. • Dry removal of lead-containing mortar using an electric or pneumatic cutting device. • Removal of lead-containing coatings or materials using power tools without an effective dust collection system equipped with a HEPA filter. • Removal or repair of a ventilation system used for controlling lead exposure. • Demolition or cleanup of a facility where lead-containing products were manufactured. • An operation that may expose a worker to lead dust, fume or mist that is not a Type 1, Type 2, or Type 3b operation. 	<ul style="list-style-type: none"> • Full-face piece air-purifying respirator equipped with N-, R-, or P-series filter and 100% efficiency. • OR • Tight-fitting PAPR with a high efficiency particulate filter. • OR • Half-mask or full-face piece supplied air respirator operated in a continuous flow mode. • OR • Half-mask supplied air respirator operated in pressure-demand or other positive-pressure mode. 	<p>(In addition to Type 1 and Type 2 measures and procedures.)</p> <ul style="list-style-type: none"> • For Type 3a operations conducted indoors or outdoors, enclosures should be provided in the form of barriers, partial enclosures, or full enclosures. • For Type 3b operations conducted indoors, full enclosures should be provided. • With the exception of dry abrasive blasting conducted outdoors, enclosures provided for all other Type 3b operations conducted outdoors should be in the form of barriers, partial enclosures, or full enclosures. For dry abrasive blasting outdoors, full enclosures should be provided. • Where there is an enclosure, general mechanical ventilation should be provided. • A decontamination facility (refer to 6.4.3 of the guideline) should be made available for workers carrying out the following operations: <ul style="list-style-type: none"> ○ abrasive blasting of lead-containing coatings or materials ○ the removal of lead-containing coatings or materials using power
Type 3b	<ul style="list-style-type: none"> • Abrasive blasting of lead containing coatings or materials 	<ul style="list-style-type: none"> • Type CE abrasive-blast supplied air respirator operated in a pressure-demand or positive pressure mode with a tight-fitting full-face piece 	<ul style="list-style-type: none"> • A decontamination facility (refer to 6.4.3 of the guideline) should be made available for workers carrying out the following operations: <ul style="list-style-type: none"> ○ abrasive blasting of lead-containing coatings or materials ○ the removal of lead-containing coatings or materials using power

<p>Type 3c</p>	<ul style="list-style-type: none"> • Removal of lead containing dusts using an air mist extraction system. 	<ul style="list-style-type: none"> • Supplied air respirator equipped with a tight-fitting half-mask or full-face piece and operated in pressure demand or positive pressure mode. 	<p>tools without an effective dust collection system equipped with a HEPA filter</p> <ul style="list-style-type: none"> ○ removal of lead-containing dust using an air mist extraction system ○ demolition or cleanup of a facility where lead containing products were manufactured. • When abrasive blasting is finished, dust and waste should be cleaned up and removed by vacuuming with a HEPA filter equipped vacuum, wet sweeping and/or wet shoveling. • Where a dust generating operation is carried out, local exhaust ventilation should be provided to remove dust at the source. Wet methods should also be incorporated in the operation to reduce dust generation.
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Silica

This section applies to all construction and plant work where an employee may be occupationally exposed to silica.

Workers may be exposed to silica by dust generated from chipping, blasting, hammering etc. Engineering controls, as substitution, shall be used for abrasive materials when sand blasting. Dust control methods and wet methods will also be employed.

Training on recognition of potential silica and dust will be provided annually. Warning signs for other contractors and outside personal will be utilized when the potential for silica exists. PPE and other protective measures shall also be used as applicable.

Recommended Exposure Limit:

- The occupational exposure limit for respirable crystalline silica is 0.05 mg/m³ of air by volume as an 8 hour(s) daily or a 40-hour weekly time-weighted average limit for cristobalite.

Exposure Assessment:

- Prior to beginning at the job, the Site Supervisor shall include engineering methods for anticipation of dust/silica in the initial job assessment. Accordingly, signs and poster will be placed as well as usages of proper PPE and air monitoring.
- Provide an air monitoring system for each site based on characteristics of the site including initial approach and thereafter whenever process work site, climate, control changes occur which are likely to affect free silica concentration. Monitoring will be subject to the number of employees on the work site. Monitoring will continue for 30 days until two (2) consecutive surveys indicate the recommended action level is no longer exceeded.
- Personal hygiene and housekeeping shall have prime consideration at all facilities and work sites.

Employee Protection:

Efforts to eliminate exposure shall be the implementation of engineering controls as wet methods, dust control, etc.

Chapter 13 Emergency Response Plan

Purpose

The Emergency Response Plan will help to minimize injuries and damage and to aid injured personnel. This program provides basic information to assist in the development of workplace emergency preparedness and response plans. All organizations should have an emergency response program in place. Customers and stakeholders expect it as an indication of reliable business operation. The content is presented by program components that apply to a wide range of business sectors.

Scope

This program applies to all ZEREM ELECTRICAL SERVICES LTD employees, visitors, and contractors.

Policy

An emergency is an unplanned or imminent event that affects or threatens the health, safety or welfare of people, property, and the environment. ZEREM ELECTRICAL SERVICES LTD is committed to responding swiftly, effectively, and appropriately to respond to emergencies, with the foremost goals of preserving life, protecting property, and restoring the natural environment as quickly as possible.

Definitions

Emergency Response Plan: The specific process for mitigating, responding to, and recovering from an emergency.

Emergency Response Teams: Working groups composed of individuals from all departments responsible for conducting operations of an emergency response.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 213/91, Construction Projects
- Reg. 851/90, Industrial Establishments
- Environmental Protection Act
- Reg. 224/07 Spill Prevention and Contingency Plans
- Reg. 360/90, Spills
- Reg. 833/90, Control of Exposure to Biological or Chemical Agents

Relevant Standards:

- CSA Z1600 – Emergency Management and Business Continuity
- CSA Z731 – Emergency Preparedness and Response

Roles and Responsibilities

Employer will:

- Provide on-going oversight of the Emergency Response Plan
- Implement the Emergency Response Plan in an emergency
- Supervisor will:
- Coordinate the Emergency Response Teams

- Implement the Emergency Response Plan in an emergency
- Ensure all members of the Emergency Response Team complete required training
- Complete a formal investigation of an emergency event in a timely manner and making recommendations to the Joint Health and Safety Committee and/or Management

Workers will immediately report any emergency incidents to their supervisor upon recognition of the event.

Procedure

Hazardous Substance Release or Spill

A chemical spill is defined as the uncontrolled release of a hazardous chemical, either as a solid, liquid or a gas. The challenges related to dealing with chemical spills will vary with the type and volume of chemical involved. Regardless of the type or quantity of hazardous chemical involved, all worksites must implement measures to reduce the potential for spills and have a plan for responding to chemical spills.

Chemical spills occur during five types of activities; storage, transport, transfers, usage, and disposal.

Spill Response:

When a chemical spill occurs, personnel at the spill scene must act quickly to reduce the consequences of the spill. The actions taken depend on the magnitude, complexity, and degree of risk associated with the spill. The following steps outline the actions which should be taken in response to a chemical spill.

- 1) Stay clear and warn others.

Proceed with caution and advise others that are in the immediate area of the spill of the potential danger.

- 2) Assist injured or contaminated persons.

If persons are injured, provide first-aid if you or another available individual is trained to do so. If persons have been contaminated by the spilled chemical, lead them to the nearest eyewash or emergency shower (depending on the extent / location of the contamination) and assist in washing off the material. However, do not put yourself at risk and become a casualty. Injuries resulting from chemical spills are often medical emergencies, and EMS/9-1-1 or Poison Control should be immediately notified when this occurs.

- 3) Assess the situation. Is this an emergency?

An emergency situation exists when there is a high risk to:

- Persons
- Property
- Environment

If an emergency arises, isolate the area and contact Management. When informed of an emergency situation, Management will contact the appropriate emergency response persons, team, contracted third party and/or governing authority. For this purpose, specific information is needed from the person reporting the incident. This information must include:

- Identity of the person making the report
- Nature of the incident (fire, explosion, chemical spill, gas leak)
- Location of the incident (building and room number)

- Presence of any injuries
- When and how the incident occurred

4) Get help for all but minor spills.

If an emergency does not exist, assistance from outside the immediate work area may still be required. Consider the following;

- Number and training of persons required
- Personal protective equipment required
- Spill abatement material required
- Nature of the spill (e.g. amount spilled, hazards of the spilled chemical)

Minor spills or spills of chemicals of low toxicity and/or volatility can be handled by personnel at the worksite. More serious spills may require be handled by emergency response persons, team, contracted third party and/or governing authority. If the nature, quantity, or location of the spill exceeds the capacity of the job site to deal with it safely and effectively, then outside help must be requested by contacting Management. If there is any doubt regarding the ability of a worker to handle a chemical spill always contact your supervisor or Management.

5) Control and clean-up the spill.

In all cases, consult the material Safety Data Sheet to obtain more specific information on the chemical spilled to ensure it is cleaned up safely and effectively.

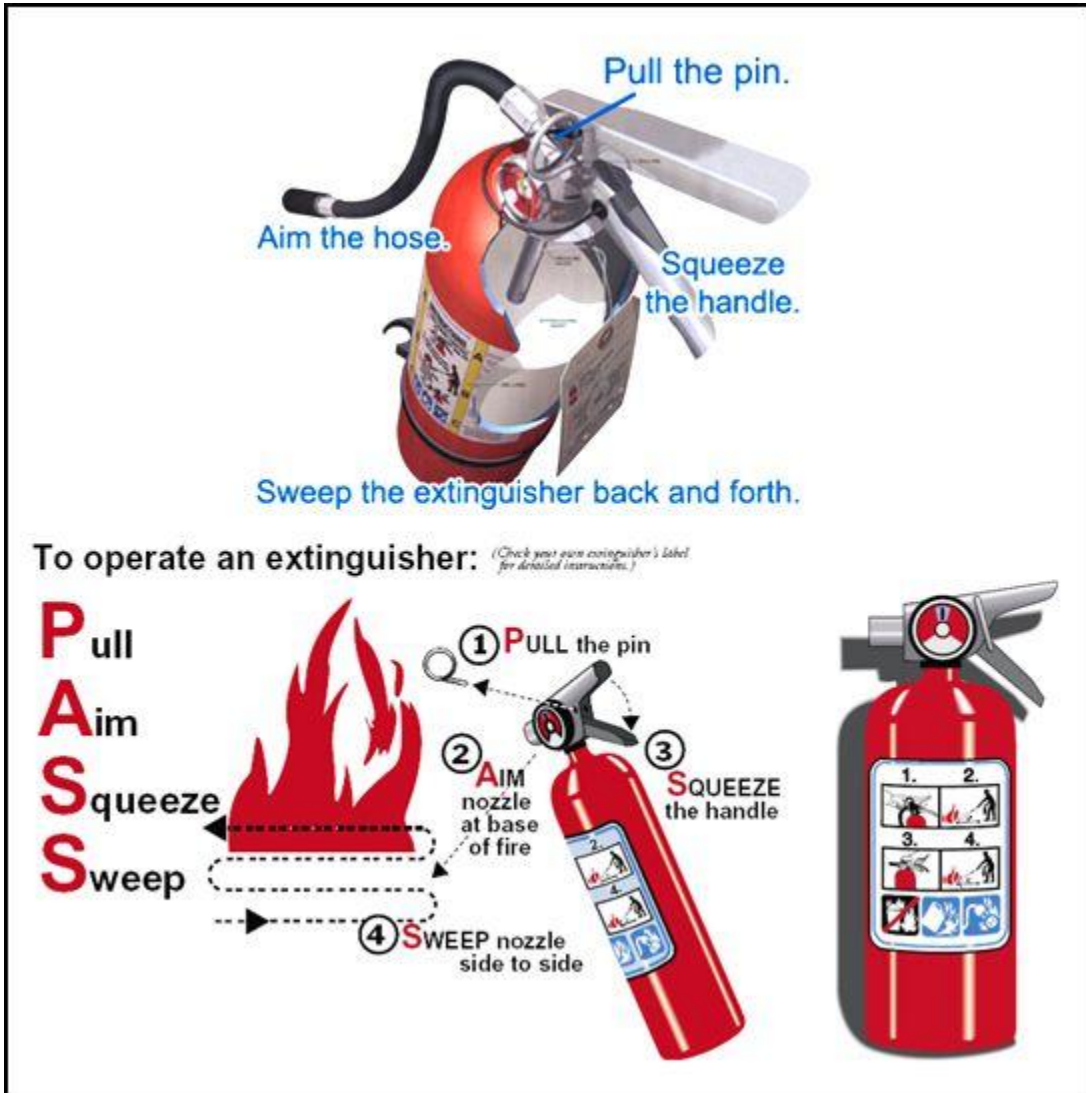
6) Report the spill.

If not already done, report the spill to your supervisor and Management. All spills, even those which do not require outside assistance, must be reported. The purpose of this reporting is not to place blame, but to identify measures that may prevent similar incidents in the future.

Emergency Procedures for Fire

Make a safe attempt to extinguish the fire using the PASS method if you cannot than evacuate the area. Activate alarm or call 9-1-1. DO NOT endanger your life. Have an employee meet the emergency services at the site entrance to direct them to the location of the fire.

- Ensure that all employees in adjoining work areas are evacuated to a safe area.
- Keep all spectators and non-essential employees away from the fire.
- If explosive type materials are involved immediately evacuate all personnel.
- Make no comments to any media representatives. Refer all inquiries to the Supervisor.



Chapter 14 Safe Work Permit

Purpose

This chapter prescribes the policy, requirements, responsibilities, and procedures for issuance of a Safe Work Permit.

When a job has the potential of causing serious injuries or death, it is necessary to formalize agreed upon work procedures. This prevents instructions from being missed, forgotten or misinterpreted. It also serves as a checklist to ensure that all hazards, protective measures, work procedures and general requirements are reviewed with and understood by the assigned worker(s).

A work permit serves as a record of the authorization and completion of specific work. The authorization must be provided by a competent person after all the necessary conditions have been met.

Scope

The following requirements apply to all employees and contractors working for ZEREM ELECTRICAL SERVICES LTD

Safe work permits are required prior to performing non-typical or highly unusual maintenance, repair, or construction operations.

Policy

- Safe Work Permits are required for situations described in paragraph 12.4 unless the work being performed is outlined in a Standard Operating Procedure (SOP), to preclude the necessity of safe work permit issuance, it is preferred that an SOP be developed to cover the work to be done if feasible.
- All affected employees and contractors will receive instruction as to the expectations of them to ensure compliance with this policy.

Definitions

Safe Work Permit: A written form used to evaluate hazards and authorize work that exposes workers to serious hazards. It identifies the work to be done, the hazards involved, and the necessary preparation and precautions for the job.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 632/05, Confined Spaces
- Reg. 851/90, Industrial Establishments
- Reg. 213/91, Construction Projects

Roles and Responsibilities

Employer will:

- Administratively assist Supervisor with application for permits.

- Train supervisors to ensure they are able to determine that working conditions are safe at all times.
- Conduct periodic audits to assure compliance with this policy.
- Brief Supervisors on safety requirements involved in the operations as required.
- Contract industrial hygiene activity when work environment involves exposures that may have adverse health effect.
- If the work is subcontracted, make sure the contractor is aware of the hazards. Ensure that the contractor understands and complies with your safety requirements and emergency procedures. Do not relax your permit policy and procedures with contractors. They are less familiar with your facilities and therefore need greater protection.
- Ensure that the policy is reviewed annually and is current with all applicable regulations.

Supervisor will:

- Submit request for safe work permits when work involves:
 - Confined space Entry
 - Hot Work
 - Lockout/Tag-out
 - Any other recognized serious safety or health hazard
- When doubt exists regarding the need for safe work permit issuance to cover a particular operation, contact Management for resolution.
- Assist in establishing safe work permit instruction for work to be done.
- Align the information in the work permit with written safe work procedures for the type of work/task.
- Design the permit to be as job specific as possible so that it is appropriate to the work. Ensure that each work permit is clearly written.
- Do not allow work to start without a permit.
- Verify that all requirements and conditions are complied with before signing the permit.
- Sign permit, indicating, he/she understands requirements of the operations.
- Issue permits in a timely manner, not too long before the job. Conditions in the work area can change easily within hours.
- Brief the workers on the safety requirements of the operations.
- Distribute copies of the permit to appropriate personnel. For example, provide one copy for the worksite, one for the authorized signer, and one for the supervisor of the work area.
- Ensure that emergency personnel (fire, first aid, rescue, etc.) are advised of the work and its exact location. Devise emergency plans for the job and have rescue equipment ready in the event of an accident.
- Supervise operations to assure compliance with safe work permit and be responsible for technical supervision.
- Post signs and use barriers in the work area to keep out unauthorized persons, pedestrians, and vehicles.
- The supervisor must verify that all post completion requirements are complied with before canceling the permit.

Workers or Authorized Person will:

- Assess the work area for potential or actual hazards.

- Before signing the permit, make sure that they understand the hazards involved and know the precautions to take.
- Know when the permit expires, and to comply with it.

Procedure

Confined Space Entry

- See Confined Space Entry Program

Hot Work

Performing Hot Work – Authorized Person:

- Authorized Person doing the Hot Work must verify that a hot work permit is in place before starting Hot Work.
- The permit is issued for one location only and is valid for no longer than 24 hours.
- If conditions change, safe work permits may become invalid.

Fire Watch:

- Assist Hot Work Authorized Person in preparation and clean-up of Hot Work area.
- Wet down surrounding areas including lower floors and beams if applicable.
- Assess 35' radius for potential fire hazards.
- Be alert to any changes and identify changes or concerns to Hot Work Operator.
- Designate Fire Watch during Hot Work. This could be anyone who has been trained as Fire Watch.
- After completion of Hot Work ensure continuous monitoring for minimum of 30 minutes or longer as determined by the Safe Work Permit. This function may be performed by a designated Fire Watch, Security Guard, Machine Operator, or maintenance person.
- At the end of the monitoring period, the completed forms are picked up and delivered to the designated area. They are stored according to ZEREM requirements.

Contractors:

- Will be trained and held to the same Hot Work Standards as Zerem employees. The supervisor who hires the contractor will ensure that this training has taken place prior to starting Hot Work and audits the process.

Other recognized serious safety or health hazard

Identify Hazards:

- Identify work activities requiring a safe work permit. Complete a job hazard analysis of all critical tasks.
- Review legislative requirements, codes, standards, and industry practices.
- Assess the level of risk with your health and safety team (e.g., Health and Safety Representative, Joint Health and Safety Committee, or Health and Safety Specialist).
- Identify resources (i.e., materials, tools, and equipment) required to perform the task.

Implementation:

- Develop and implement a strategy to complete the task safely while achieving your desired outcome.
- Define responsibilities and accountability ensuring all workplace parties understand their role.

- Develop standards against which to measure the effectiveness of the safe work permit.
- Develop procedures that explain how the permit system works:
 - When to apply for a permit (how many hours before the work is started?)
 - Where to get a permit
 - How to fill it out
 - How many copies are needed
 - Who gets copies
 - Who must be informed of the work
 - What to do with the permit when work is stopped or completed
 - Define responsibilities, for example:
 - Who fills out the form
 - Who identifies hazards
 - Who ensures precautions have been taken
 - Who is authorized to issue/revoke permits
 - Who supervises the work
 - Who ensures work is completed
- Provide training, preferably as a group, to all possible users and staff involved in the system.
- Monitor and evaluate your work permit system to ensure that it is being followed correctly and that it is effective.

General Information to include in the Safe Work Permit:

- Name(s) of worker(s)
- Exact work locations
- Work to be done
- Date and time the work is to start and end
- Hazards
- Preparatory requirements, such as testing, equipment, and machinery to be shut down/ locked out, ventilation, etc.
- Correct sequence of work procedures
- Personal protective equipment required
- Emergency equipment needed
- A telephone number and other important information to call for help, and where the nearest phone is located
- Signature of authorized person(s)
- Signature of worker(s) to indicate that they understand the hazards involved and know
- The precautions to be taken
- Date and time the permit is issued

Safe Work Permit – HOT WORK

(Supervisor Copy)

Can this job be done without hot work, or in the shop? If not, ensure precautions are in place! Make sure sprinklers (if available) are in service and fire extinguishers are readily available!

This Safe Work - Hot Work Permit is required for any operation involving open flames or producing heat and/or sparks. This includes, but is not limited to, Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch-Applied Roofing, and Welding.

The Required Precautions are not optional. They are required for safe work – hot work permit. Please explain all “No” responses below.

Instructions:

The Supervisor must:

- Verify precautions listed or do not proceed with the work;
- Complete and retain this page for filing purposes; and
- Provide the second page to the Authorized Person doing the work.

Who, When, and Where?

Hot Work being done by:	Employee <input type="checkbox"/>	Contractor <input type="checkbox"/>
Date:	Job/Work Order No.	
Location/Building and Floor:		
Nature of the Job/Object:		
Name of Authorized Person(s) doing hot work:		
I verify the above location has been examined, required precautions have been taken to prevent fire, and permission is authorized for work.		
Supervisor Signature:		

Permit Expiration

Expiration Date:	Expiration Time: AM / PM
Name of Assigned Fire Watch:	

This Permit is good for 24 hours only!

Required Precautions Checklist

General	
<input type="checkbox"/>	Available sprinklers in normal automatic mode and valve open (if available).
<input type="checkbox"/>	Hot Work equipment in good repair.

Area assessment for potential fire hazards (35' Work Radius):	
<input type="checkbox"/>	Floors, work level and below cleaned or protected.
<input type="checkbox"/>	All other combustibles removed or shielded from sparks with fire retardant blankets, shields, or curtains.
<input type="checkbox"/>	Spraying or showering of sparks to adjacent areas eliminated or protected with fire retardant blankets, shields, or curtains.
<input type="checkbox"/>	Explosive atmosphere eliminated or potential not present.

Work on walls, ceilings, or enclosed equipment:	
<input type="checkbox"/>	Construction materials verified as noncombustible and without combustible covering or insulation.
<input type="checkbox"/>	Combustibles on other side of walls relocated or protected.
<input type="checkbox"/>	Enclosed equipment cleaned and protected from all combustibles.
<input type="checkbox"/>	Containers purged of flammable liquids/vapours.

Fire watch/hot work area monitoring requirements:	
<input type="checkbox"/>	Continuous fire watch provided during and for at least 30 minutes after hot work, including all breaks.
<input type="checkbox"/>	Fire watch supplied with suitable fire extinguishers or hoses.
<input type="checkbox"/>	Fire watch trained in the use of fire extinguishing equipment and sounding alarm.

Other precautions that may be required:	
<input type="checkbox"/>	Fire watch provided for adjoining areas, above, or below.
<input type="checkbox"/>	Confined Space or Lockout/Tag-out required/used.
<input type="checkbox"/>	Area smoke or heat detection disabled to eliminate false alarm
<input type="checkbox"/>	Other:
<input type="checkbox"/>	Comments:

Safe Work Permit – HOT WORK

(Job Site Copy)

WARNING!

Hot Work in Progress

WATCH FOR FIRE!

Instructions:

The Worker or Authorized Person must:

- Indicate time started/finished and post permit at hot work location.
- Leave Safe Work – Hot Work Permit posted for Fire Watch.

The Fire Watch must:

- Prior to leaving the area, do final inspection, sign, leave permit posted and notify Supervisor.

Who, When, and Where?

Hot Work being done by:	Employee <input type="checkbox"/>	Contractor <input type="checkbox"/>
Date:	Job/Work Order No.	
Location/Building and Floor:		
Nature of the Job/Object:		
Name of Authorized Person(s) doing hot work:		
I verify the above location has been examined, required precautions have been taken to prevent fire, and permission is authorized for work.		
Supervisor Signature:		
Time Started:	AM / PM	Time Finished: AM / PM
Expiration Date:		Expiration Time: AM / PM
Work area and all adjacent areas to which sparks, and heat might have spread were inspected during the fire watch period and were found to be safe. Work area was monitored for a minimum of 30 minutes after hot work was completed and during all breaks.		
Signature of Assigned Fire Watch:		Time:

THIS PERMIT IS GOOD FOR 24 HOURS ONLY!

Required Precautions Checklist

(Must be retained as record of hot work activity for 6 months minimum)

General	
<input type="checkbox"/>	Available sprinklers in normal automatic mode and valve open (if available).
<input type="checkbox"/>	Hot Work equipment in good repair.

Area assessment for potential fire hazards (35' Work Radius):	
<input type="checkbox"/>	Floors, work level and below cleaned or protected.
<input type="checkbox"/>	All other combustibles removed or shielded from sparks with fire retardant blankets, shields, or curtains.
<input type="checkbox"/>	Spraying or showering of sparks to adjacent areas eliminated or protected with fire retardant blankets, shields, or curtains.
<input type="checkbox"/>	Explosive atmosphere eliminated or potential not present.

Work on walls, ceilings, or enclosed equipment:	
<input type="checkbox"/>	Construction materials verified as noncombustible and without combustible covering or insulation.
<input type="checkbox"/>	Combustibles on other side of walls relocated or protected.
<input type="checkbox"/>	Enclosed equipment cleaned and protected from all combustibles.
<input type="checkbox"/>	Containers purged of flammable liquids/vapours.

Fire watch/hot work area monitoring requirements:	
<input type="checkbox"/>	Continuous fire watch provided during and for at least 30 minutes after hot work, including all breaks.
<input type="checkbox"/>	Fire watch supplied with suitable fire extinguishers or hoses.
<input type="checkbox"/>	Fire watch trained in the use of fire extinguishing equipment and sounding alarm.

Other precautions that may be required:	
<input type="checkbox"/>	Fire watch provided for adjoining areas, above, or below.
<input type="checkbox"/>	Confined Space or Lockout/Tag-out required/used.
<input type="checkbox"/>	Area smoke or heat detection disabled to eliminate false alarm
<input type="checkbox"/>	Other:
<input type="checkbox"/>	Comments:

WARNING!
Hot Work in Progress
WATCH FOR FIRE!

IN CASE OF EMERGENCY:

CALL:

AT:

EMERGENCY INFORMATION FOR EMS/9-1-1 or Security:

Project/Facility:

**Location within
Project/Facility:**

Address:

FIRE WATCH TEAM/ MONITOR RECORD:

Checked by (initials):	Date:	Time:

Chapter 15 Confined Space Entry Operations

Purpose

The purpose of this program is to inform all affected persons, including employees that ZEREM ELECTRICAL SERVICES LTD is complying with Regulation 632/05 made under the Occupational Health and Safety Act.

We have determined specific construction sites need written procedures for the evaluation of permit required confined spaces, and where permit required spaces are identified, we have developed and implemented a permit required confined space entry program.

This program applies to specific ZEREM ELECTRICAL SERVICES LTD work operations where employees must enter a permit required confined space as part of their job duties.

Copies of the written program may be obtained from the Supervisor or manager. Under this program, we will identify projects where permit required confined spaces will be present and provide training for our employees according to their responsibilities in the permit space. These employees will receive instructions for safe entry into confined spaces, including testing and monitoring, appropriate personal protective equipment, rescue procedures, and attendant responsibilities.

This program is designed to ensure that safe work practices are utilized during all activities regarding permit required confined spaces to prevent personal injuries and illnesses that could occur.

Scope

This policy establishes safety requirements to be followed for work practices and procedures while entering, working in, and exiting confined spaces.

This policy will prevent employee injury, illness, or death from confined space hazards. Establish methods and procedures for controlling confined space activity while performing inspection, repair, maintenance, etc., and comply with applicable legislation for confined space activity.

Policy

A Confined Space Entry Operations Program shall be established for all projects, facilities and premises that have identified confined spaces.

Definitions

Attendant: A trained and qualified individual, stationed outside the confined space area, who monitors authorized entrants working in the confined space.

Authorized Entrant: A trained individual who is authorized to enter a confined space area to perform work.

Confined Space: A fully or partially enclosed space that is:

- Large enough to bodily enter; AND
- Is not both designed and constructed for continuous human occupancy; AND
- Has a limited means of access and egress.

Competent Worker: In relation to specific work, means a worker who,

- is qualified because of knowledge, training, and experience to perform the work,

- is familiar with the Occupational Health and Safety Act and with the provisions of the regulations that apply to the work, and
- has knowledge of all potential or actual danger to health or safety in the work.

Controlling Contractor: The employer that has overall responsibility for construction at the worksite.

Early Warning System: The method used to alert authorized entrants and attendants that an engulfment hazard may be developing. Examples of early-warning systems include but are not limited to: alarms activated by remote sensors; and lookouts with equipment for immediately communicating with the authorized entrants and attendants.

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

Entry Employer: Any employer who decides that an employee it directs will enter a permit space.

Entry Permit: A written or printed document that identifies the confined space where work is to be done and potential hazards that need to be evaluated and controlled before authorization for entry is given.

Entry Rescue: Occurs when a rescue service enters a permit space to rescue one or more employees.

Entry Supervisor: The person responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry.

Acceptable Atmospheric Levels: means that,

- the atmospheric concentration of any explosive or flammable gas or vapour is less than,
 - 25 per cent of its lower explosive limit, if paragraph 1 of subsection 19 (4) applies,
 - 10 per cent of its lower explosive limit, if paragraph 2 of subsection 19 (4) applies,
 - 5 per cent of its lower explosive limit, if paragraph 3 of subsection 19 (4) applies,
- the oxygen content of the atmosphere is at least 19.5 per cent but not more than 23 per cent by volume,
- in the case of a workplace that is not a project, the exposure to atmospheric contaminants does not exceed any applicable limit set out in Regulation 833 of the Revised Regulations of Ontario, 1990 (Control of Exposure to Biological or Chemical Agents) made under the Act or Ontario Regulation 490/09 (Designated Substances) made under the Act, and
- in the case of a workplace that is a project, if atmospheric contaminants, including gases, vapours, fumes, dusts, or mists are present, their concentrations do not exceed what is reasonable in the circumstances for the protection of the health and safety of workers.

Lead Employer: An employer who contracts for the services of one or more other employers or independent contractors in relation to one or more confined spaces that are located,

- in the lead employer's own workplace, or
- in another employer's workplace.

Monitor or Monitoring: The process used to identify and evaluate the hazards after an authorized entrant enters the space. This is a process of checking for changes that is performed in a periodic or continuous manner after the completion of the initial testing or evaluation of that space.

Non-Entry Rescue: Occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space.

Non-Permit Confined Space: A confined space that meets the definition of a confined space but does not meet the requirements for a permit-required confined space.

Permit Required Confined Space: (permit space) means a confined space that has one or more of the following characteristics:

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

Rescue: Retrieving and providing medical assistance to, one or more employees that are in a permit space.

Rescue Service: The personnel designated to rescue employees from permit spaces.

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

- A flammable gas vapor, or mist in excess of 10 percent of its Lowest Flammable Limit (LFL).
- An atmospheric oxygen concentration below 19.5 percent or above 23.5 percent.

Supervisor authorizing or In-Charge of Entry: A trained management employee who verifies that all requirements for confined space entry have been met.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 632/05, Confined Spaces

Roles and Responsibilities

Lead Employer

Before entry operations begin, the lead employer must provide the following information, if it has it, to the controlling contractor:

- The location of each known permit space;
- The hazards or potential hazards in each space or the reason it is a permit space;
- Any precautions that the host employer or any previous controlling contractor or entry employer implemented for the protection of employees in the permit space.

Controlling Contractor

Before entry operations begin, the controlling contractor must:

- Obtain the lead employer's information about the permit space hazards and previous entry operations;
- Coordinate operations with entry employer(s) when more than one entity performs permit space entry at the same time, or any other activities are performed that could foreseeably result in a hazard within the permit space.

- Provide the following information to each entity entering a permit space and any other entity at the worksite whose activities could foreseeably result in a hazard in the permit space:
 - The information received from the lead employer;
 - Any additional information the controlling contractor has regarding confined spaces on site;
 - The precautions that the lead employer, controlling contractor, or other entry employers implemented for the protection of employees in the permit spaces.
- Debrief each entity that entered a permit space regarding the permit space program followed and any hazards confronted or created in the permit space(s) during entry operations

Entry Employer:

Before entry operations begin, each entry employer must:

- Obtain the controlling contractor's information regarding permit space hazards and entry operations;
- Inform the controlling contractor of the permit space program that the entry employer will follow, including any hazards likely to encountered or created in each permit space.
- Coordinate operations with Controlling Contractor when more than one entity performs permit space entry at the same time, or any other activities are performed that could foreseeably result in a hazard within the permit space.
- Implement the measures necessary to prevent unauthorized entry;
- Identify and evaluate the hazards of permit spaces before employees enter them;
- Develop and implement the means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to, the following:
- Specify acceptable entry conditions.
 - Provide each authorized entrant or that employee's authorized representative with the opportunity to observe any monitoring or testing of permit spaces.
 - Isolate the permit space and physical hazard(s) within the space
 - Purge, inert, flush, or ventilate the permit space as necessary to eliminate or control atmospheric hazards.
- Determine that, in the event the ventilation system stops working, the monitoring procedures will detect an increase in atmospheric hazard levels in sufficient time for the entrants to safely exit the permit space.
- Provide pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards.
- Verify that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry, and ensuring that employees are not allowed to enter into, or remain in, a permit space with a hazardous atmosphere unless the employer can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee;
- Eliminate any conditions (for example, high pressure) that could make it unsafe to remove an entrance cover.
- Provide the following equipment at no cost to each employee, maintain that equipment properly, and ensure that each employee uses that equipment properly:
 - Testing and monitoring equipment.
 - Ventilating equipment needed to obtain acceptable entry conditions.
 - Communications equipment.

- Personal protective equipment when engineering or administrative controls do not adequately protect employees.
- Lighting equipment that is approved for the ignitable or combustible properties of the specific gas, vapor, dust, or fiber that will be present, and that is sufficient to enable employees to see well enough to work safely and to exit the space quickly in an emergency.
- Barriers and shields as required.
- Equipment, such as ladders, needed for safe ingress and egress by authorized entrants.
- Rescue and emergency equipment needed, except to the extent that the equipment is provided by rescue services.
- Any other equipment necessary for safe entry into, safe exit from, and rescue from, permit spaces.
- Evaluate permit space and determine if acceptable entry conditions exist, and can be maintained, before entry is made by conducting the following:
 - Perform pre-entry testing to the extent feasible before entry is authorized.
 - If entry is authorized, continuously monitor entry conditions in the areas where authorized entrants are working.
 - Provide an early-warning system that continuously monitors for non-isolated engulfment hazards. The system must alert authorized entrants and attendants in sufficient time for the authorized entrants to safely exit the space.
 - Provide each authorized entrant or that employee's authorized representative an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces.
 - Re-evaluate the permit space in the presence of any authorized entrant or that employee's authorized representative who requests that the employer conduct such re-evaluation because there is some indication that the evaluation of that space may not have been adequate.
 - Immediately provide each authorized entrant or that employee's authorized representative with the results of any testing conducted.
- Provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations.
 - Attendants may be assigned to more than one permit space provided the duties can be effectively performed for each permit space.
 - Attendants may be stationed at any location outside the permit space as long as the duties described can be effectively performed for each permit space to which the attendant is assigned.
- Designate each person who is to have an active role (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee, and provide each such employee with the training required.
- Develop and implement procedures for summoning rescue and emergency services (including procedures for summoning emergency assistance in the event of a failed non-entry rescue), for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees, and for preventing unauthorized personnel from attempting a rescue.
- Develop and implement a system for the preparation, issuance, use, and cancellation of entry permits as required by this standard, including the safe termination of entry operations under both planned and emergency conditions.

- The entry employer must inform the controlling contractor in a timely manner of the permit space program followed and of any hazards confronted or created in the permit space(s) during entry operations.
- Reviews the permit space programs, using the canceled permits retained within 1 year after each entry and revise the program as necessary to ensure that employees participating in entry operations are protected from permit space hazards.

Procedure

Hazard Control Measures

- Before beginning work at a worksite, Zerem must ensure that a designated competent person identifies all confined spaces in which one or more employees may work, and identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing, as necessary.
- Workplaces exist in many forms, and while some types of workplaces are recognized as having a higher hazard exposure, there are no workplaces that are completely hazard free. The following charts show health and safety hazards that could cause occupational illnesses and injuries that could be found in, and around the entrances to confined spaces.

Health Hazard	Definition
Chemical / Biological	
• Biological	Harmful parasites, bacteria, viruses and/or fungi.
• Corrosives	A material has a pH value below 6.5 or above 12
• Dust, Mist or Fumes	The accumulation of 40 µg/m ³ or greater of airborne materials less than 2.5 microns in diameter.
• Flammable/ Combustible Materials	Materials that become a fuel (will smoulder or burn) at or below the operating temperatures from a head source (tool or process) present in the space.
• Oxidizer	A substance or reaction that increases the flammability of a substance.
• Poisons/ Toxins	Materials when mixed with other substances generate large quantities of heat or pressure.
• Reactive Material	Materials when mixed with other substances generate large quantities of heat or pressure.
• Compressed Gas	Cylinders can explode if exposed to heat or an impact
• Lack of Oxygen (due to any cause)	When the oxygen going to the body cell tissue drops below 19.5%
• Excess Oxygen (due to any cause)	When the oxygen increases to above 23% there is an increased Fire Hazard

MSD's Hazards	
<ul style="list-style-type: none"> Fixed or Awkward Position 	An individual's stance that may create temporary or permanent injury (wound, fracture, or inflammation).
Physical Hazards	
<ul style="list-style-type: none"> Radiation 	Invisible energy waves: Radioactive Materials, Radiation emitting devices (Gamma, X-rays), UV (Solar) and radio waves)
<ul style="list-style-type: none"> Light 	When lighting, space design or process increases or decreases light from 5 Watts/m ² (.46 watts/ft ²).
<ul style="list-style-type: none"> Noise 	Sound measuring over 85 decibels.
<ul style="list-style-type: none"> Temperature 	When the temperature of a space is below 10°C or above 37°C.
Psychosocial Hazards	
<ul style="list-style-type: none"> Panic/Stress 	The unanticipated reaction of an individual(s) to an event that causes unintended consequences.
<ul style="list-style-type: none"> Choices 	When you must decide between two or more non similar views, objectives/priorities, tools, or procedures when completing a task.
<ul style="list-style-type: none"> Curiosity 	Confined spaces are what the courts would term an "attractive nuisance"

Safety Hazard	Definition
Material Handling	
<ul style="list-style-type: none"> Vehicle Traffic 	Machines being used to transport materials that move in a primarily horizontal direction and have operator direction
<ul style="list-style-type: none"> Sharps 	Edges that are sharp, pointed, grounded, angled or otherwise designed and will cause damage (e.g., friction, punctures, lacerations, etc.) when an item contracts it. (Work practice Hazard as well).

Machine Guarding	
<ul style="list-style-type: none"> Moving Equipment/Parts 	Spindles, shafts, gears, belts, arms, pulleys, or even the entire device moving intentionally or unintentionally in any direction (up/down, in/out, diagonally or rotating) that could grab, pinch, hit or trap an individual.
Work Practice	
<ul style="list-style-type: none"> Lack of Planning 	When we fail to define the job, look at the issues of the job or allocate sufficient resources to do the job.

• Clutter	The accumulation of non-permanent items without order. (Poor housekeeping).
• Blocked Pathways	Human pathways are restricted by tools, materials, or the space design (e.g., low ceilings, corners, protrusions, or small doorways) to a width of less than .9 m (3') and/or a height of 2m (6'5") and/or without a flat walking surface that prevents or slows a person from leaving.
• Structural Failure	Breakdown due to the application of either short term or long-term stress that has not been recognized and accessed.
Energy Hazards	
• Electrical Energy	Electricity greater than 50 milliamps moving from point A to B
• Pneumatic Energy	Directed force either above 15 psig or above 15mm of vacuum.
• Gravitational Energy	Different levels provide the opportunity for gravity to move an object or a person to a lower level.
• Acceleration (accidental or intentional)	A sudden increase in the speed of an object greater than .25m/sec.
• Engulfment/Entrapment (result of gravitational Energy)	When a free flowing solid or a liquid weighing more than 50 lbs/ft ³ surrounds an individual or if a structural form, defect, or similar issue could prevent a worker from leaving the space without assistance.

- If a jobsite contains one or more permit spaces, Zerem designated competent person who identifies, or who receives notice of, a permit space must:
 - Inform all exposed employees or those working near the hazard by posting danger signs or by any other equally effective means, of the existence and location of, and the danger posed by, each permit space. This can be accomplished by posting a sign reading “DANGER PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER” or using other similar language that would satisfy the requirement for a sign.
 - Inform, in a timely manner and in a manner other than posting, its employees’ authorized representatives and the controlling contractor of the existence and location of, and the danger posed by, each permit space.
- If the designated competent person identifies, or receives notice of, a permit space and will not authorized employees to work in that space, they must take effective measures to prevent employees from entering that permit space, in addition to complying with all other applicable requirements.
- If Zerem decides that employees it directs will enter a permit space, that employer must have a written permit space program that complies Regulation 632/05 implemented at the construction site. The written program must be made available prior to and during entry operations for inspection by employees and their authorized representatives.
 - The atmosphere within the space must be continuously monitored unless the entry employer can demonstrate that equipment for continuous monitoring is not commercially available or periodic monitoring is sufficient. If continuous monitoring is used, the employer must ensure that the monitoring equipment has an alarm that will notify all entrants if a specified

- atmospheric threshold is achieved, or that an employee will check the monitor with sufficient frequency to ensure that entrants have adequate time to escape. If continuous monitoring is not used, periodic monitoring is required. All monitoring must ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee, who enters the space, or that employee's authorized representative, must be provided with an opportunity to observe testing results.
- If a hazard is detected during entry:
 - a. Each employee must leave the space immediately;
 - b. The space must be evaluated to determine how the hazard developed; and
 - c. The employer must implement measures to protect employees from the hazard before any subsequent entry takes place.
 - To ensure that all areas of the confined space are safe, readings must be taken within various locations of the confined space using approved equipment and techniques. These readings are to be taken simultaneously or in the order shown below:
 - Oxygen deficiency or enrichment:
 - The atmosphere within the confined space should be tested with approved testing equipment to determine that the air is respirable and contains sufficient oxygen to support normal function. Employees shall not be permitted to work without approved respirator/equipment where the oxygen content of the air is less than 19.5 percent by volume. Position pressure, Self-Contained Breathing Apparatus (SCBA), or a Supplied Air Respirator (SAR) with a 10-minute escape pack are to be considered as approved equipment.
 - If the atmosphere is found to be non-respirable or does not contain sufficient oxygen to support life, the confined space is to be flushed with equipment of sufficient air ventilation. The intake of air for ventilators shall be so located as to prevent contamination of the air by the exhaust of the air compressor unit. The air supply shall also be free from harmful dusts, fumes, mists, vapors, gases, or other hazardous substances. This air supply will be tested in the same manner and with the same equipment as used to test air within the confined space itself.
 - Oxygen enrichment (equal to or greater than 23.5 percent) spaces shall not be entered until the source of the enrichment is determined and controlled and further tests reflect normal values.
 - Flammable or explosive:
 - The atmosphere within the confined space should be tested with approved testing equipment to determine the presence of combustible gases. Entry should not be permitted until the source of the combustible(s) has been isolated and the confined space flushed or purged to the extent that testing indicates less than 10 percent of the lower flammable limit is present and airborne combustible dust that meets or exceeds its LP (approximated if vision is obscured at five feet or less).
 - Hot Work: When work to be done within the confined space involves the use of flame, arc, spark or other sources of ignition, frequent testing or continuous monitoring must be done to determine the concentration of combustible vapors as the work progresses. If the concentration reaches or exceeds 5 percent of the LEL of the vapor present, all sources of ignition shall be extinguished, and employees removed until the concentration is reduced below 10 percent of the LFL. The Atmosphere may not contain more than 23 percent Oxygen by volume.

Type of Work	Description	Allowable % of LEL
HOT WORK	Any work that could produce a source of ignition (cutting, grinding, or welding)	<5% LEL
COLD WORK	Any work that is NOT capable of producing a source of ignition	<10% LEL
INSPECTION/CLEANING	Inspecting with flashlight, cleaning with a push broom	<25% LEL

- Toxic substances: When toxic materials are determined or suspected which could result in employee exposure when entering the confined space, the following should apply:
 - The atmosphere within the confined space should be tested with approved testing equipment to determine the presence of toxic substances, in the case of a workplace that is a project, the exposure to atmospheric contaminants does not exceed any applicable limit set out in Regulation 833 of the Revised Regulations of Ontario, 1990 (Control of Exposure to Biological or Chemical Agents) made under the Act. Entry should not be permitted until the source of the toxic substances has been isolated and the confined space flushed or purged to the extent that testing indicates less than the PEL is present. Hydrogen sulfide and carbon monoxide will be specifically tested for, along with any other potentially toxic substance within the space.
 - If it is practical, the confined space should be emptied, flushed, or otherwise purged of the hazardous substance until safe limits are reached. If it is not practical to empty the confined space, the employee shall be protected from exposure by the use of appropriate protective clothing and breathing apparatus.
 - Welding, burning, or heating in a confined space may generate toxic fumes and gases and may result in hazardous atmospheric conditions. All employees in such a confined space must be protected with adequate ventilation and/or air supplied personal protective equipment.

NOTE: Air reading within the space must be taken at representative levels. Due to stratification of gases resulting from different vapor densities, readings are to be taken every four (4) feet in vertical spaces and in advance of the entrants' direction of travel in continuous space systems.

- Physical Hazards:
 - Existing or potential work area hazards such as slippery floors, unguarded openings, temperature, darkness, pinch points, sharp edges, compressed steam, gases and liquids, hot materials, etc., need to be controlled.
 - Any equipment or machinery, which if accidentally activated may create a hazard in the confined space, must be locked and/or tagged out. Pipes or lines leading into the confined space, which may accidentally discharge into the confined area must be blanked or disconnected. (Isolation of the spaces as much as is feasible.) Purging, inserting, flushing, or ventilating as necessary to eliminate or control hazards.
- Engulfment or Entrapment: A confined space where a finely divided solid substance or liquid is stored can surround and bury a person working in the area. Such materials stored in bins, hoppers,

silos, etc., can asphyxiate the entrant as the engulfing material is inhaled, or through compression of the torso. Fall protection equipment (A safety lifeline with full body harness) and mechanical advantage retrieval device shall be used by employees whenever entering confined spaces where the potential for engulfment exists.

Duties of Confined Space Entry Personnel

Confined space activity requires the teamwork of trained individuals to ensure that the work required is done safely. Work in such areas should be considered hazardous and a buddy system, using an entrant and attendant is required whenever entry is made. In addition, Management needs to periodically check on confined space work as it progresses to ensure that the safest possible conditions exist. The following assigned duties are necessary to ensure that confined space activity is controlled and performed safely.

- **Management**

Each Entry Employer shall develop an entry permit system that controls all aspects of confined space activity. The permit must have sufficient information on the characteristics of the confined space and potential hazards to implement effective controls prior to entry.

- Before entry is authorized, the employer shall document the completion of measures required by preparing an entry permit.
- Before entry begins, the entry supervisor identified on the permit shall sign the entry permit to authorize entry.
- The completed permit shall be made available at the time of entry to all authorized entrants, by posting it at the entry point or by any other equally effective means so that the entrants can confirm that pre-entry preparations have been completed.
- The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit.
- The entry supervisor shall terminate entry and cancel the entry permit when:
 - The entry operations covered by the entry permit have been completed.
 - A condition that is not allowed under the entry permit arises in or near the permit space.
- The employer shall retain each canceled entry permit for at least one year to facilitate the review of the permit required confined space program. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.

- **Duties of Entry Supervisors.**

The Confined Space Entry Supervisor shall:

- Know the hazards that may be faced during entry and the signs, symptoms, and consequences of the exposure.
- Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
- Terminates the entry and cancels the permit as required.
- Verifies that rescue services are available and that the means for summoning them are operable.
- Removes unauthorized, individuals who enter or who attempt to enter the permit space during entry operations.

- Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space that entry operations remain consistent with the terms of the entry permit and that acceptable entry conditions are maintained.
- **Duties of attendants.** The Confined Space Entry supervisor shall ensure that each attendant:
 - Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of the exposure.
 - Is aware of possible behavioral effects of hazard exposure in authorized entrants.
 - Continuously maintains an accurate count of authorized- entrants in the permit space using the co-ordinating document.
 - Remains outside the permit space during entry operations until relieved by another attendant.
 - Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
 - Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:
 - If the attendant detects a prohibited condition.
 - If the attendant detects the behavioral effects of hazard exposure in an authorized entrant.
 - If the attendant detects a situation outside the space that could endanger the authorized entrants.
 - If the attendant cannot effectively and safely perform all the duties required.
 - Summons rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards.
 - Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:
 - Warn the unauthorized persons that they must stay away from the permit space.
 - Advise the unauthorized persons that they must exit immediately if they have entered the permit space.
 - Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space.
 - Performs non-entry rescues as specified by the employer's rescue procedure.
 - Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.
- **Duties of authorized entrants.** The Confined Space Entry Supervisor shall ensure that all authorized entrants:
 - Know the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of the exposure.
 - Use equipment as designed and required.
 - Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the following:
 - Alerts the attendant whenever:
 - The entrant recognizes any warning signs or symptoms of exposure to a dangerous situation.
 - The entrant detects a prohibited condition.

- Exits from the permit space as quickly as possible whenever:
 - An order to evacuate is given by the attendant or the entry supervisor
 - The entrant recognizes warning signs or symptoms of exposure to a dangerous situation.
 - An evacuation alarm is activated.
- **Rescue and emergency services.** The following requirements apply to job sites that have employees who are trained and authorized to enter permit spaces to perform rescue. The Confined Space Entry Supervisor shall ensure that:
 - Each member of the rescue service is provided with, and is trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues from permit spaces.
 - Each member of the rescue service shall be trained to perform the assigned rescue duties. Each member of the rescue service shall also receive the training required of authorized entrants under paragraph (B) of this section.
 - Each member of the rescue service shall practice making permit space rescues at least annually, by means of simulated rescue operations in which they remove dummies, manikins, or actual persons from actual permit spaces or from representative permit spaces. Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue are to be performed.
 - Each member of the rescue service shall be trained in basic first aid and CPR. At least one member of the rescue service holding current certification in first aid and CPR shall be available.
 - When a designated third-party rescue service will be used to perform permit space rescue, The entry employer must:
 - Evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified.
 - Evaluate a prospective rescue service's ability, in terms of proficiency with rescue-related tasks and equipment, to function appropriately while rescuing entrants from the permit space or types of permit spaces identified.
 - Select a rescue team or service from those evaluated that:
 - Has the capability to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) identified;
 - Is equipped for, and proficient in, performing the needed rescue services;
 - Agrees to notify the employer immediately if the rescue service becomes unavailable; and
 - Inform each rescue team or service of the hazards they may confront when called onto perform rescue at the site.
 - Provide the rescue team or service selected with access to all permit spaces from which rescue may be necessary so that the rescue team or service can develop appropriate rescue plans and practice rescue operations.
 - Non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.
 - If an injured entrant is exposed to a substance for which Safety Data Sheets (SDS) or other similar written information is required to be kept at the work site, that SDS or written information shall be made available to the medical facility treating the exposed entrant.

- Confined Space Entry Permit

The Confined Space Entry Permit Form shall contain all the necessary information for managing safe entry into the confined space. The following minimum information requirements apply:

1. The permit space to be entered.
2. The purpose of the entry.
3. The date and the duration of the entry permit.
4. The authorized entrants within the permit space, by name or by such other means (for example, through the use of rosters or tracking systems) as will enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space.
5. The personnel, by name, currently serving as attendants.
6. The individual, by name, currently serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry.
7. The hazards of the permit space to be entered.
8. The measures used to isolate the permit space and to eliminate or control permit space hazards before entry.
9. The acceptable entry conditions.
10. The results of initial and periodic tests performed, accompanied by the names or initials of the testers and by an indication of when the tests were performed.
11. The rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services.
12. The communication procedures used by authorized entrants and attendants to maintain contact during the entry.
13. Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this section.
14. Any other information whose inclusion is necessary, given the circumstances of the confined space, in order to ensure employee safety.
15. Any additional permits, such as for hot work that have been issued to authorize work in the permit space.
16. The confined space entry permit shall be displayed prominently at the job site for visual inspection.

Sample Confined Space Entry Permit

Client/Project: _____		Date: _____	
Location/Description: _____		Shift: _____ to _____	
Project Supervisor: _____		Phone: _____	
PRE ENTRY READINGS	HAZARDS		
% Oxygen:	<input type="checkbox"/> Biological Material	<input type="checkbox"/> Blocked Pathways	<input type="checkbox"/> Clutter
% LEL:	<input type="checkbox"/> Conflict	<input type="checkbox"/> Corrosives	<input type="checkbox"/> Curiosity
CO (ppm):	<input type="checkbox"/> Electrical Current	<input type="checkbox"/> Engulfment	<input type="checkbox"/> Falling
H S (ppm):	<input type="checkbox"/> Flammable/Combustible	<input type="checkbox"/> Dust/Fumes/Mists	<input type="checkbox"/> Lack of Oxygen
PID (ppm):	<input type="checkbox"/> Lapse of Consciousness	<input type="checkbox"/> Light Extremes	<input type="checkbox"/> Moving Equipment/Parts
	<input type="checkbox"/> Muscular/Skeletal Stress	<input type="checkbox"/> Noise	<input type="checkbox"/> Panic
	<input type="checkbox"/> Poisons/Toxins	<input type="checkbox"/> Pressure	<input type="checkbox"/> Reactive Material
	<input type="checkbox"/> Structural Failure	<input type="checkbox"/> Temperature Extremes	<input type="checkbox"/> Vehicle Traffic
	<input type="checkbox"/> Synergy	<input type="checkbox"/> Energy Waves	
TIME OF TEST:	PRE-ENTRY GAS DETECTOR OPERATOR:		MONITOR BRAND:
			UNIT SERIAL NO:
HAZARD MANAGEMENT REQUIREMENTS (ensure equipment is in good working order before selecting)			
<input type="checkbox"/> Lockout Switches & Valves <input type="checkbox"/> Blanking/Blocking of Pipes <input type="checkbox"/> Depressurization of Pipes <input type="checkbox"/> Vehicle Barricades <input type="checkbox"/> Pedestrian Barricades <input type="checkbox"/> Ventilation <input type="checkbox"/> Purging <input type="checkbox"/> Mechanical/Moving Parts <i>Special Work Precautions: Lighting</i> <input type="checkbox"/> Hotwork, etc.		<input type="checkbox"/> Entrant/Attendant Communications <input type="checkbox"/> Personal Protective Equipment <input type="checkbox"/> Chemical Protective Clothing <input type="checkbox"/> Entrant Respiratory Protection <input type="checkbox"/> Retrieval System w/ Rescuer PPE <input type="checkbox"/> First Aid & Packaging Equipment <input type="checkbox"/> Chocking Mechanical/Moving Parts <input type="checkbox"/> Lighting <input type="checkbox"/> Refresh, Clean-up, Decontamination	
RESCUE ASSIGNMENTS			
Attendant:		Retrieval Personnel	
Air System Monitor:			
Certification			
I certify that I have personally examined the confined space, and I am satisfied that the particular requirements listed in the procedures have been met, AND THAT THE SPACE IS FREE FROM HAZARDS AND WILL REMAIN FREE FROM HAZARDS, making it safe to enter.			

Training

Each Entry Employer is required to train its employees so that attendants, authorized entrants, and the entry supervisor can work safely in and around the confined space and assist in rescue operations. General training should be provided annually, and specific procedures reviewed prior to authorizing confined space work. The instruction and training to be given should be developed and implemented by the employer in consultation with the Joint Health and Safety Committee or Health and Safety Representative, if any, for the workplace.

This instruction and training and the workers familiarity with that training should be reviewed annually.

- Each Entry Employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.
- Training shall be provided to each affected employee:
 - Before the employee is first assigned duties under this section.
 - Before there is a change in assigned duties.
 - Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained.
 - Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required or that there are inadequacies in the employee's knowledge or use of these procedures.
- The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section.
- Each Entry Employer shall certify that the required training has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.
- The employer shall provide the training records to the project's joint health and safety committee or health and safety representative, if any, on request.

Equipment

Each Entry Employer must provide; maintain and ensure proper Use of testing, monitoring, communication, personal protective and rescue equipment. See equipment examples following:

- Testing and Monitoring Equipment:
 - Oxygen deficiency.
 - Flammable/explosion limits.
 - Toxicity levels (CO & H₂S minimum).
- Communication/Warning Systems:
 - A voice or alarm activated explosion-proof type of system.
- Personal Protective Equipment:
 - Eye and face protection.
 - Head protection.
 - Body protection.
 - Hearing protection.
 - Hand protection.

- Respiratory Protection:
 - Respirators.
 - Positive Pressure.
 - Supplied air respirators with a 10-minute escape pack. (For Rescue if required)
- Rescue Equipment:
 - Full body or chest harness.
 - Retrieval system with mechanical advantage system lifelines.
 - Winch fall arrest capabilities.

General Instructions

- Emergency egress must be provided for employees working within the confined space and adequate fire extinguishing equipment to cope with the potential hazard shall be nearby.
- Prior to entry into a confined space, consideration must be given to life support systems in the event of equipment/power failure. A positive plan of action is required. For example, in the event of an electrical failure air supply pumps, warning systems and other electronically powered devices would be inoperative.
- A plan of action must be prepared to provide a means of rescue from the confined space in the event of emergency. Consider that the person may be unconscious or not able to assist in being rescued.
- The action plan must also protect the rescue team from exposure to the same hazards as the person being rescued.
- Prior to entry into the confined space, emergency equipment such as lifelines, safety belts, fire extinguishers, breathing equipment and other devices appropriate to the situation must be ready and available. At least one person who has been instructed in CPR techniques must be immediately available. This person's knowledge of life support systems and life saving techniques should be verified.

Record Keeping

- Records
- Documents for inspection, repair, and calibration results of all monitoring equipment must be retained for at least five (5) years.
- Medical evaluation and surveillance records must be retained for the worker's employment plus five (5) years.
- Documents for inspection and maintenance of all retrieval systems, ropes, harnesses, and other entry equipment must be retained for at least five (5) years.
- A copy of the co-ordination document shall be provided to:
 - Each employer who performs work in the same confined space or related work with respect to the same confined space;
 - In the case of a workplace that is not a project, the joint health and safety committee or health and safety representative, if any, for each employer or workers who perform work in the same confined space or related work with respect to the same confined space; and
 - In the case of a workplace that is a project, the joint health and safety committee or health and safety representative, if any, for the project.
- In the case of a workplace that is not a project, the employer shall retain every assessment, plan, co-ordination document under section 4, record of training under subsection 8 (5) or 9 (2), entry

permit under section 10, record of an inspection under subsection 12 (2) and record of a test under section 18, including records of each sample, for the longer of the following periods:

- One year after the document is created.
- The period that is necessary to ensure that at least the two most recent records of each kind that relate to a particular confined space are retained.
- In the case of a workplace that is a project, the constructor or employer, as the case may be,
 - Shall keep available for inspection at the project every assessment, plan, co-ordination document under section 5, record of training under subsection 9.1 (4), entry permit under section 10, record of an inspection under subsection 12 (2) and record of a test under section 18, including records of each sample; and
 - Shall retain the documents described in clause (a) for one year after the project is finished.
- Training must contain the following:
 - Date of training.
 - Names and signatures of instructors.
 - Location of training.
 - Objectives of training.
 - Names and signatures of students.
 - Additional miscellaneous comments section.
 - Training reports and certificates must be available for inspections by employees and authorized representatives.

Post & Label Spaces

All confined spaces must be posted and labeled as stated below:

- Must be in English and predominant language of non-English speaking workers.
- With the following signage: "Danger – Permit Required Confined Space, Do Not Enter".
- Emergency numbers are to be included.

All employees' medical surveillance records (if required due to exposure to designated substances or other recognized health hazards), and air measurement to monitor exposure to toxic chemicals will be retained and incorporated in their individual personnel file for the duration of employment and retained as per Regulation 490 Section 30.

The individual air measurement documents will include the date it was taken, operation involving exposure, sampling and analytical methods used and evidence of their accuracy. Furthermore, the number, duration and results of the sample taken, and the type of respiratory protective device worn must be documented.

Chapter 16 Lockout/Tagout

Purpose

The purpose of this program is to ensure procedures are in place to prevent injuries from the unexpected energization, activation, or release of hazardous energy during servicing or maintenance of machinery or equipment. This lockout/tag-out program has been developed to establish procedures for de-energizing machines, equipment, and processes to ensure work can be safely performed.

Scope

This program applies to all ZEREM ELECTRICAL SERVICES LTD employees and contractors who perform servicing or maintenance on machines, equipment or processes that may contain hazardous energy that, if released unexpectedly, could cause harm.

Policy

- Only authorized employees are permitted to perform lockout/tag-out procedures.
- If an energy isolating device is capable of being locked out, then it must be locked and tagged.
- If an energy isolating device is not capable of being locked out, then it must be tagged out.
- Prior to commencing servicing or work, equipment and machinery shall be inspected to verify the equipment or machinery can be effectively isolated.
- All potential sources of hazardous energy (e.g., gravity, electrical, mechanical, pneumatic, pressure etc.) must be considered when determining lockout/tag-out procedures.
- Each person performing servicing or work on a machine must apply their own lock. After the lock has been applied, the key must be retained by the person who applied the lock.

Definitions

Affected Employee: An employee who operates or uses a machine or equipment on which servicing, or maintenance is being performed under lockout/tag-out or who works in an area where such work is being performed.

Authorized Employee: An employee authorized to implement lockout/tag-out procedures on machines or equipment to perform maintenance or servicing work.

De-energized: Disconnected from all sources of energy and not containing residual or stored energy.

Electrical Disconnect Switch: A pull-type switch or circuit breaker which physically opens to disconnect the circuit.

Energy Isolating Device: A mechanical device that physically prevents the transmission or release of energy, to or from a machine or equipment. This device usually de-energizes the machine or equipment and allows a padlock to be placed on it. A lockout device is used where a padlock cannot be placed directly on the energy isolating device. Energy isolating devices include manually operated disconnect switches, circuit breakers; line valve; block. Note: Push buttons, selection switches and other circuit-control type devices are not considered energy isolating devices.

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

Equipment Locks: Locks which are used on energy isolating devices to lockout equipment in the safe position for energy isolation when performing service or maintenance.

Group Lockout: When servicing and/or maintenance is performed by a crew, department, or other group, they shall use a procedure that gives them a level of protection equivalent to that of a personal lock out to tag out device.

Hazardous Energy: Energy sources including electrical, mechanical, hydraulic, pneumatic, chemical, thermal, gravitational, or other energy that, when released, can cause harm.

Isolation: Ensuring all sources of hazardous energy for a piece of equipment or machinery are moved or controlled to prevent it from unexpected activation or energization.

Lockout: The placement of a lock on an energy isolating device or lockout device to physically neutralize all energies in a piece of equipment or machinery to ensure the energy isolating device being controlled cannot be operated until the lockout device is removed.

Lockout Device: A device that can be placed on an energy isolating device and that allows a positive means, such as a lock, to be placed on it to control the energy isolating device. Examples include plug, switch, circuit breaker and gate or valve covers.

Maintenance Work: Refers to inspection, repair, adjustment, cleaning, maintenance etc., for which a machine must be stopped. (i.e., other than “normal” operation). This includes activities such as constructing, installing, and setting up, adjusting, inspecting, modifying, lubricating, cleaning, unjamming, servicing, or repairs.

Supervisor: An individual who has charge over a workplace or authority over a worker as defined by the Occupational Health and Safety Act.

Tag-out: The act of placing a warning tag on a padlock used for lockout to communicate the equipment must not be reenergized or operated until the lock is removed.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 851/90, Industrial Establishments
- Reg. 213/91, Construction Projects

Relevant Standards

- CSA Standard Z460 “Control of Hazardous Energy”

Roles and Responsibilities

Management is responsible for:

- Drafting, periodically reviewing, and updating the written program.
- Identifying the employees, machines, equipment, and processes included in the program.
- Providing the necessary protective equipment, hardware, and appliances.
- Monitoring and measuring conformance with the program.

Supervisors are responsible for:

- Identifying machines, equipment or processes in their area(s) that possess hazardous energy and are required to be included in the lockout/tag-out program.
- Providing equipment, materials, and protective devices necessary to perform work safely.

- Ensuring written lockout/tag-out procedures are prepared for machines, equipment, and processes in their area.
- Ensuring authorized employees under their control understand and apply lockout/tag-out procedures.
- Ensuring contractors performing servicing or maintenance work in their area comply with lockout/tag-out procedures.

Employees are responsible for:

- Assisting in the development of lockout/tag-out procedures for machines, equipment or processed in their area.
- Following procedures developed for machines, equipment, or processes in their area.
- Reporting any deficiencies or problems associated with lockout/tag-out procedures.

Procedure

Lockout/Tag-out Equipment:

- Locks must be key operated and standardized for each department or trade.
- Locks must not be used for purposes other than lockout.
- Tags must be made of durable, non-conductive material and must include wording such as: DO NOT OPERATE, DO NOT START, DO NOT OPEN.

Lockout

Prepare for Shutdown:

The authorized employee will:

- 1) Identify machines, equipment, and processes to be isolated.
- 2) Inform all affected employees when machinery or piece of equipment will be locked out.
- 3) Identify the types and magnitude of hazardous energy to be controlled and understand the hazards of that energy.
- 4) Identify the methods for controlling the hazardous energy.
- 5) Identify all isolation points and energy isolation devices to be locked out. Ensure remote computer and/or programmable computer logic controllers are considered.
- 6) Identify and obtain appropriate personal protective equipment.
- 7) Identify and obtain locks, tags, lockout devices and other equipment required to perform the work.

Equipment Shutdown:

- 1) Notify all affected employees of the lockout.
- 2) Shutdown the equipment following the normal stop or rundown procedures. (e.g., push ON/OFF or START/STOP buttons or switches).

Isolation:

- 1) Locate all energy isolation devices required to control the hazardous energy.
- 2) Operate the energy isolation devices such that the machine or equipment is isolated from energy sources. This usually involves opening a disconnect switch, circuit breaker or closing valves.

Notes:

- 1) Never open a disconnect switch without first shutting down the equipment as it could result in arcing or an explosion. Use the left-hand rule when opening and closing disconnect switches. (Left hand rule: Stay to the right of the disconnect switch, face away and use your left hand to operate the switch. This positioning protects the face and body in the event of arcing or an explosion). Use your right hand and face away if the switch is on the left side of the box.
- 2) Removal of fuses does not constitute lockout since the fuse could be easily replaced. Removing a fuse and locking the box is acceptable though.

Apply Lock and Tag:

- 1) Apply locks and tags to each energy isolation device to ensure it is held in OFF position.
- 2) Where a lockout device is required for an energy isolation device, install the lockout device, and apply locks and tags to ensure it is held in the "OFF" position.

De-energization: Control or Release Stored Energy:

- 1) After application of lockout devices, all stored or residual energy must be relieved, disconnected, blocked, bled, restrained, or otherwise made safe.

Note: Remember to check that all motion has stopped. Consider energy stored in capacitors, springs, pressure lines, block or support elevated equipment.

Verification:

- 1) Ensure all affected employees are cleared of the machine or equipment.
- 2) Before beginning any work, verify the machine or equipment is isolated and cannot be activated or restarted by one or more of the following actions:
 - Manually operating control buttons or switches to start or operate the machine or equipment. Return controls to their off or neutral position.
 - Using test instruments to test circuits.
 - Visually inspecting the position or movement of parts such as gears, rotating parts, shafts, flywheels to ensure movement has ceased, inspecting gauges or other indicators.

Release from Lockout:

- 1) Ensure all non-essential equipment or parts have been removed from the machine and the machine is operationally intact and safe to be operated.
- 2) Ensure the machinery, equipment and surrounding area is clear of anyone who could be harmed by the start-up.
- 3) Ensure each person who applied a lockout device and tag removes these from each energy isolation device.
- 4) Energize the machine, but do not start it up.
- 5) Notify all affected employees the machine or equipment is ready to be started.
- 6) Re-start the machine or equipment.

Group Lockout

When maintenance or servicing work is being performed by more than one authorized employee, a primary authorized employee must be assigned responsibility for controlling all energy isolating devices for the machine, equipment, or process.

- 1) Before beginning work, the primary authorized employee will apply a multi-lock hasp and lock to each energy isolating device and verify the machine, equipment or process has been isolated.

- 2) Other authorized workers review the adequacy of the isolation and apply their own locks to the multi-lock hasp.
- 3) Authorized employees perform work.
- 4) Upon completion of work, each authorized employee removes non-essential items from the work area and remove their own personal lock(s).
- 5) The primary authorized employee is the last one to remove their lock and the energy isolating device. This can only be done after the primary authorized employee has assessed the area and is satisfied it is safe to do so.

Contractors

Whenever outside contractors perform maintenance or servicing work that requires lockout/tag-out procedures, the designated ZEREM representative and each contractor shall inform each other of their respective lockout/tag-out procedures. Zerem representative must communicate this to affected employees and ensure these respective procedures are mutually understood.

Lockout/Tag-out Lock Removal

Each authorized employee who applies a lock and tag is responsible for removing their own lock and tag. In situations where it is not possible for the employee to remove their own lock, the lock can be removed by an individual authorized to do so and by the following steps:

- 1) The authorized individual will assess the situation to determine whether it is safe to remove the lock, preferably with someone knowledgeable of the machine, equipment or process and reason for the lockout and/or the maintenance or service work being performed.
- 2) After it has been determined to be safe to remove the lock, the authorized individual will complete a "Lockout/Tag-out Lock Removal Form" before removing the lock.
- 3) The authorized individual removes the lock and ensures the person whose lock was removed is notified of the removal before they return to work.

Chapter 17 Mobile Cranes, Hoisting, and Rigging

Purpose

The crane area is a vital part of any construction operation. It is critical to handle the loads properly, safely, and with the greatest efficiency. The Check-off Inspection Report for the cranes, shovels, derricks, tractors, and pans must be inspected by a competent, authorized person.

Scope

This chapter is applicable to all ZEREM ELECTRICAL SERVICES LTD personnel.

This policy applies to mobile cranes and other hoisting equipment that have the same fundamental characteristics.

Policy

All cranes shall be operated and maintained in accordance with any and all applicable regulations and as recommended by the manufacturer.

Definitions

Critical Lift" means:

- a. a lift by a mobile crane or boom truck that exceeds 90% of its rated capacity while it is lifting the load at a load radius of more than 50% of its maximum permitted load radius, considering its position and configuration during the lift;
- b. a tandem lift if the load on any one crane, hoist or other piece of powered lifting equipment exceeds 75% of the rated capacity of that crane, hoist, or other piece of powered lifting equipment;
- c. A tandem lift involving the simultaneous use of more than two cranes, hoists, or other pieces of powered lifting equipment;
- d. A lift of a person in a work platform suspended from or attached to a crane or hoist;
- e. A lift in which the centre of gravity of the load changes during the lift;
- f. A lift in which the length of one or more sling legs changes during a lift;
- g. A lift by a crane, boom truck or hoist, supported on a floating base, that exceeds 90% of the rated capacity for the lifting system;
- h. A lift of a load over or between energized high voltage electrical conductors; or
- i. A lift of a submerged load.

Engineer's Instructions: Instructions, approved in writing by a professional engineer, for the assembly, erection, dismantling, maintenance, inspection, and operation of the component parts of a crane or hoist and of the assembled crane or hoist.

Load Bearing Component: Any component that transfers load through a crane or hoist to the surface supporting the crane or hoist.

Manufacturer's Manual: A document prepared by the manufacturer of a crane or hoist that describes the approved methods of assembly, erection, dismantling, maintenance, inspection, and operation of the component parts of the crane or hoist and of the assembled crane or hoist.

Safe Working Load: The load a crane or hoist may safely lift in a particular situation considering such factors as wind load, extremes of temperature and load sail area, and may be equal to or less than the rated capacity or rated load.

Tandem lift: A lift using:

- More than one crane or one hoist, or
- A crane or hoist and another piece of powered lifting equipment.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 213/91, Construction Projects
- Reg. 851/90, Industrial Establishments

Relevant Standards:

A mobile crane, telescoping or articulating boom truck or sign truck must meet the requirements of

- CSA Standard Z150-11, Safety Code for Mobile Cranes,
- ANSI Standard ANSI/ASME B30.5-18, Mobile and Locomotive Cranes, or
- ANSI Standard ANSI/ASME B30.22-16, Articulating Boom Cranes.

Roles and Responsibilities

Employers must ensure that all workplace parties comply with the Occupational Health and Safety Act (OHSA) and its regulations. Duties include ensuring mobile cranes are:

- Maintained in good condition and used as required by the Regulations for Construction Projects. A copy of any operating manuals and a maintenance logbook must be kept with the crane;
- Inspected by a competent worker to determine if the cranes can handle the rated capacity and to identify any hazardous conditions;
- Operated by certified hoisting engineers if the cranes can hoist more than 7,260 kg. Cranes that hoist less than 7,260 kg must be operated by workers trained in the cranes' safe operation. Workers must carry proof of certification and training; and
- Set up on firm level surfaces and operated as per manufacturers' instructions.

Supervisors must ensure all workplace parties comply with the OHSA and its regulations. General duties that may be relevant to the use of mobile cranes include:

- Ensuring workers comply with the OHSA and its regulations;
- Ensuring any equipment, protective device or clothing required by the OHSA is used or worn by workers;
- Advising workers of any potential or actual health or safety dangers known by the supervisor;
- Providing workers with any required written instructions on measures and procedures to protect them; and
- Taking every reasonable precaution in the circumstances for the protection of workers.

Workers' duties under the OHSA include:

- Being trained in safe practices and procedures;
- Working in compliance with the OHSA and its regulations;

- Only operating a crane or equipment that the worker is trained or certified to operate;
- Operating a crane or other equipment in a safe manner; and
- Reporting any known workplace hazards or OHS/A violations to the supervisor or employer.

Suppliers of rented or leased machines, devices, tools, or equipment for use in OHS/A-covered workplaces must ensure the equipment:

- Complies with the OHS/A and related regulations; and
- Is maintained in good condition.

Owners of cranes or similar hoisting devices must:

- Keep a permanent record of all inspections, tests, repairs, modifications, and maintenance;
- Prepare a logbook that includes the permanent record of whichever is greater: the past 12 months or the period the cranes or hoisting devices are on the project;
- Keep this logbook with the cranes or hoisting devices; and
- Retain and make available to the constructor, on request, copies of all logbooks and records for the cranes or hoisting devices.

Procedure

Operator Qualifications and Operation Procedures

Cranes shall be operated by the following personnel:

- Designated operators who have been licensed by an approved agency or union.
- Trainees who are under the direct supervision of the designated operator.
- Inspectors certified for crane inspection:
 - No one other than the above personnel shall be in or on the crane during operations.
 - Exceptions are oilers or Supervisors whose duties may require their presence.

Operation Procedures:

The operator shall:

- Only operate a crane or similar hoisting device if they hold a certificate of qualification issued under the Ontario College of Trades and Apprenticeship Act, 2009, that is not suspended, or the worker is a registered apprentice.
- Not engage in any practice, which may divert their attention while engaged in crane operation.
- Not operate a crane if physically or mentally unfit, or if taking prescription or non-prescription drugs that may affect judgment.
- Not respond to any signal that is unclear or given by anyone other than appointed signalman.
Exception: The operator shall respond to a stop signal given by anyone.
- Not permit trainees to make initial lifts. The operator shall perform the first lift to determine lift stability, crane function, and safety in general.
- Have final responsibility and control over the crane operations.
- Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle loads until safety has been assured.
- Be familiar with the crane and its care, the operator's manual, and load charts. Operators shall be responsible for notifying their supervisor of any needed adjustments or repairs and for logging their findings in the crane log.

- Shall, upon request, demonstrate their ability to determine total load weight and its relationship to the crane load charts.
- Be responsible for proper placement of the crane in relationship to the load to be handled and the landing area, as to obtain the best-rated lift capacity.

Handling the Load:

No crane shall be loaded beyond its rated capacity, except for test purposes. When loads which are limited to structural competence rather than by stability are to be handled, the operator and supervisor shall, concurrently, determine that the weight of the load has been determined within plus or minus 5 percent before the load is lifted.

Attaching the Load:

- The load shall be attached to hook by means of slings or other approved devices.
- No open hooks shall be used for lifts higher than two (2) feet. Hooks used for in excess of two (2) feet shall have safety latches or be safety wired to prevent slings from jumping off hook.

Moving the Load:

- The operator shall determine that the crane is level to within one degree and, where necessary, is properly cribbed and blocked.
- The operator shall be responsible for determining that the load is properly secured and balanced before making the hoist.
- The operator shall determine that the rope is properly seated on the drum and in the sheaves; the load line is not kinked; multiple part lines are not twisted around each other.

During hoisting:

- The operator shall not suddenly accelerate or decelerate a moving load.
- Permit the load to contact any obstructions.
- Swing loads over personnel.
- Permit side loading of booms.
- Lifts shall be limited to freely suspended loads.
- Cranes shall not be used to drag loads sideways.

Total Imposed Load:

The load on the tires, outriggers, wheels, or tracks is derived from the gross weight of the crane and suspended load, i.e., the sum. However, additional loading can be exerted by shock or dynamic (movement) loads due to fast hoisting, lowering, swinging, or wind forces. This total must be considered.

Ground Stability

One of the critical factors of proper crane setup is a "firm supporting surface." For maximum capacity, the crane must be level. However, to maintain a level condition, the ground surface must be adequate to support the dynamic load of a "working crane."

Four basic elements that are to be considered:

- Total imposed load.
- Supporting surface area.
- Pounds per square foot.
- Soil stability.

The amount of area in contact with the ground will determine the bearing pressure the crane and load exert on the soil. When it is determined that the bearing pressure exceeds soil stability, the bearing area of the crane must be increased through the use of cribbing.

Cribbing to be used must be:

- Total imposed load.
- Strong enough to withstand the weight of the crane without major deflection, thus actually increasing the bearing surface.
- Bolted or secured together to prevent slippage and collapsing.
- In complete contact with the soil-no voids, insupportable areas, etc.

For descriptive purposes it is convenient to distinguish between three broad groups of soil:

- In complete contact with the soil-no voids, insupportable areas, etc.
- Granular soils, including, sand and gravel.
- Fine grained soils, including silts and clays.
- Organic soils, including peat.

Different type soils will give different load-bearing pressure. When setting up a machine, the designated person should be able to distinguish between the three groups of soil, the approximate mixture of each, their moisture content, and their depth. Factors such as water tables and distance to excavations each affect, the soil's ability to withstand the pressure without collapsing must also be considered by the designated person. The project soil analysis report may be used an indicator of soil conditions.

Various tables are available which give the relative load-bearing capabilities of the soil types under static loads. The Building Code and professional engineers must be referenced as prescribed by the Occupational Health and Safety Act and applicable regulations.

Rigging Requirements:

- All rigging equipment shall have permanently affixed identification stating size, grade, rated capacity, and manufacturer.
- Rigging not in use shall be tagged and removed from the immediate work area.
- Rigging, including slings, shall be hung on a rigging frame so that bends and kinks do not set.
- Wire rope slings shall be lubricated as necessary during use. Sling shall be lubricated no less than every four (4) months when in storage.
- "Shop-made" grabs, hooks, clamps, or other lifting devices shall not be used unless proof-tested to 125 percent of their rated load by an approved testing ZEREM or professional engineer. Approval devices shall have the capacity permanently affixed.
- Slings on the job shall not be left lying on the ground or otherwise exposed to the elements.
- Eyes in wire rope bridles, slings or bull wires shall not be formed by wire clips or knots.
- Protruding ends of strands in splices on slings or bridles shall be covered or blunted. All rigging equipment in use shall have a safety factor of five (5).

Safe Rigging Practice:

- Slings in use shall not be shortened by knots, bolts, or other makeshift devices.
- Wire rope slings shall be padded, or softeners used to protect from damage due to sharp corners.
- Slings used in a basket hitch shall have the loads balanced to prevent slippage.

- Loads handled by sling shall be landed on cribbing or dunnage so that slings need not be pulled from under or be crushed by the load.
- Slings subjected to shock loading shall be immediately removed from use and destroyed.
- When U-bolt wire rope clips are used, industry recognized standards shall be used to determine number and spacing of clips.
- Wire rope cable clips shall be applied as indicated in by industry recognized standard.
- Tag Lines shall be used as long as they do not create a greater hazard.

Inspection and Record Keeping

In addition to the inspection required earlier in this portion of safety requirements, thorough inspection of slings in use will be made on a regular basis as determined by:

- Severity of service conditions.
- Frequency of sling use.
- Nature of lifts being made.
- Experience gained on the service life of sling used in similar use.

Inspection periods shall not exceed one (1) time during twelve months.

A record of inspections shall be maintained at the office.

Inspection Criteria:

Alloy steel chains will be removed from service and repaired or replaced when:

- Master links, coupling links or other components are cracked or deformed;
- Sling hooks have opened more than 15 percent of normal throat opening or twisted more than 10 degrees off center;
- Stretch exceeds five (5) percent of the original reach;
- Only the manufacturer or an equivalent entity shall repair or recondition slings covered in this section and then only in accordance with CSA Standards; or
- Mechanical coupling links or "cold shuts," bolts or clevis pins shall not be used for chain repairs.

Wire Rope Slings shall be removed from service when:

- When there is wear or scraping of one-third the original diameter of outside individual wires;
- Kinking, crushing, bird caging or similar damage results in distribution;
- End attachments are cracked, deformed, or worn;
- Exposure to temperatures in excess of 200 degrees F (fiber core) or 4,000 degrees F (non-fiber core).
- Corrosion of the rope or end attachments occurs.

Natural and synthetic fiber rope slings to be removed from service when:

- Abnormal wear is observed;
- Powdered fibers are found between stands;
- Fibers are cut or broken;
- There are variations in the size or roundness of strands;
- There is discoloration or rotting;
- There is distortion of sling hardware; or
- Exposed to temperatures in excess of 82 degrees C (180 degrees F).

Synthetic web sling shall be removed from service when:

- Subjected to acid or caustic burn;
- Melting or chaffing of any part of the sling surfaces occurs;
- Snags, punctures, tears, or cuts are observed;
- Stitches are worn or broken;
- Fittings are distorted; or
- Exposure to temperatures in excess of 180 degrees F (synthetic web) or 2,000 degrees F (polypropylene web).

Repairs:

The listed slings may be repaired in accordance with manufacturer's directions:

- Synthetic slings.
- Metal mesh slings.
- Wire rope slings.

Sling repairs must be performed by the manufacturer or any equivalent entity. Once repaired, each sling shall be permanently marked or tagged, and a record of the repair maintained.

Chapter 18 Motor Vehicle Safety

Purpose

The intent of this procedure is to establish a safe process for the reversing and/or moving of vehicles, machines, and equipment, where the line of sight of the intended path of travel is restricted.

Improper reversing or moving of vehicles, machines and equipment is a major cause of construction and industrial related fatalities.

This procedure applies to all ZEREM ELECTRICAL SERVICES LTD vehicles, where operator vision of the line of sight of the intended path of travel may be restricted.

Workers can be at risk of hazards when working around vehicles and mobile construction equipment at construction projects. These hazards can result in serious injuries, and even death, to workers.

Scope

This chapter is applicable to all ZEREM ELECTRICAL SERVICES LTD personnel.

Zerem shall provide information and assistance on proper vehicle operation requirements to allow line departments to initiate and maintain proper reversing and/or moving procedures. By implementing this procedure Supervisors will ensure, as best as possible, worker and public health and safety and compliance with applicable OHS legislation.

Policy

Management will ensure that workers, who are required to drive/operate vehicles, machines, and equipment etc. and/or who may be required to act as "Signalers", receive adequate training and information to allow for the operation of such vehicles, machines, and equipment in a safe, predictable manner, incorporating proper reversing and/or moving procedures.

Definitions

Back-Up Warning Device: A device, installed on the vehicle, machine or equipment, which emits a loud, intermittent beeping sound to provide clear warning that the vehicle has been placed in reverse gear and will be moving in reverse.

Line of Sight: The Operator of the vehicles, machines and equipment must have full, unobstructed, and clear view of any activity along the intended path of travel either forward or reverse.

Remote Location: A location where there is no imminent motor vehicle, pedestrian or similar (cyclist, etc.) activity going on or likely to go on.

Vehicles, Machines and Equipment: Any ZEREM ELECTRICAL SERVICES LTD owned, leased, or rented mobile equipment including but not limited to, "Pick-up Trucks", "Vans", "Crew Cabs", or other such similar vehicles, where the "line of sight" of the intended path of travel is restricted, even if the vehicle, machine, and equipment is equipped with a "back-up warning device".

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 213/91, Construction Projects

- Reg. 851/90, Industrial Establishments

Roles and Responsibilities

Employers have a number of duties and responsibilities under the Occupational Health and Safety Act (OHSA) and the Regulations for Construction Projects (O. Reg. 213/91).

- Provide information, instruction, and supervision to workers to protect their health and safety, including on safe work policies and procedures specific to the workplace and type of work the workers will perform [OHSA s.25(2)(a)]
- Ensure equipment operators and signalers are competent workers [Construction Reg. s.96 and 106]
- Take every precaution reasonable in the circumstances for the protection of workers [OHSA s.25(2)(h)]
- Ensure prescribed measures and procedures are carried out in the workplace [OHSA s.25(1)(c)]
- Ensure equipment, materials and protective devices required by the regulations are provided and maintained in good condition [OHSA s.25(1)(a) and (b)]
- Provide assistance to, and co-operate with, the workplace's Joint Health and Safety Committee and/or a health and safety representative [OHSA s.9(29) and 8(9)]
- Prepare and review, at least annually, a written occupational health and safety policy for the workplace, and develop and maintain a program to implement that policy [OHSA s.25(2)(j)]
- Post a copy of the OHSA in the workplace [OHSA s.25(2)(k)]

Supervisors will:

- Ensure workers comply with the OHSA and its regulations
- Ensure any equipment, protective devices or clothing required by the employer is used and/or worn by workers [OHSA s.27(1)(a)]
- Advise workers of any potential or actual health or safety dangers known by the supervisor [OHSA s.27(2)(a)]
- Where prescribed, provide workers with written instructions about measures and procedures to be taken for workers' protection [OHSA s.27(2)(b)]
- Take every precaution reasonable in the circumstances for the protection of workers [OHSA s.27(2)(c)]

Workers will:

- Wear appropriate personal protective equipment [OHSA s.28(1)(b)]
- Use or operate equipment in a safe manner [OHSA s.28(2)(b)]
- Report any defects in equipment to your supervisor or employer [OHSA s.28(1)(c)]
- Work in compliance with the OHSA and its regulations [OHSA s.28(1)(a)]
- Report any known workplace hazards or OHSA violations to your supervisor or employer [OHSA s.28(1)(d)]
- Know your OHSA rights, including the right to refuse unsafe work [OHSA s.43(3)(a) to (c)]

Procedure

The Driver/Operator is responsible for the safe operation of the vehicle, machine and equipment being operated. Since many vehicles, machines or other equipment being operated, are designed in such a manner that it is sometimes difficult to have a full and clear sight of the intended path of travel while moving or reversing, the following shall apply:

- Every work activity shall be planned and organized so that vehicles, machines, and equipment are NOT operated in reverse or are operated in reverse as little as possible.
- The Operator shall always attempt to park the vehicle in such a manner as to eliminate the need for reversing, where possible.

GENERAL REQUIREMENTS FOR WORK ACTIVITIES COVERED UNDER EITHER OR BOTH THE INDUSTRIAL ESTABLISHMENTS AND/OR CONSTRUCTION PROJECTS REGULATIONS:

Vehicles, machines, and equipment shall NOT be operated in reverse INSIDE or ON the premises of ANY INDUSTRIAL ESTABLISHMENT without the assistance of a qualified "Signaler" who is;

- A competent person, other than the operator of the vehicle, who is properly trained in this procedure and proper signaling protocols and is available to direct the vehicle along its intended path of travel, staying in clear view of the operator and clear of the intended path of the vehicle, at all times.

During any WORK ACTIVITY OR PROJECT covered under the CONSTRUCTION PROJECTS REGULATIONS, vehicles, machines, and equipment shall NOT be operated in reverse without the assistance of a qualified "Signaler" who is:

- A competent person, other than the operator of the vehicle, who is properly trained in this procedure and proper signaling protocols and is available to direct the vehicle along its intended path of travel, staying in clear view of the operator and clear of the intended path of the vehicle, at all times.

EXEMPTION:

At "REMOTE LOCATIONS ONLY" (See definitions), which are NOT construction projects, where reversing cannot be avoided and a competent signaler is not available, the Driver/Operator may reverse the vehicle ONLY AFTER HAVING COMPLETED the following actions:

- The Driver/Operator must LEAVE THE VEHICLE to perform a circle check to ensure that there is no imminent traffic activity, vehicle, or pedestrian, and that the conditions are unlikely to change during the reversing operation.
- The Driver/Operator shall check both rear view mirrors carefully before putting the vehicle into reverse gear to ensure that conditions have not changed from the time of the circle check.
- The Driver/Operator must honk the vehicle horn twice before moving the vehicle, even if the vehicle is equipped with a back-up warning alarm.

In addition, all workers, engaged in construction related activities, are required to ensure that all mobile "dump-truck vehicles" are equipped with audible "back-up warning devices", as required by Section 105 of the Construction Projects Regulations.

For ZEREM vehicles other than dump-trucks, where the line of sight may also be restricted, such as "crew cabs", "Utility Vans", "Service Trucks", etc., consideration should be given to equipping these vehicles with back-up warning devices as a pro-active, preventive measure.

Some of the hazards workers could be exposed to include:

- being struck by or run over by vehicles and mobile construction equipment.
- being crushed between equipment and other objects.
- being struck by material moved by construction equipment.

Pre-job meetings should occur to review the scope of work, and safety hazards associated with the type of work that is to be performed.

Clear and precise written instructions should be given to all workers and equipment operators regarding the hazards associated with working near or adjacent to heavy equipment and when the use of a signaler is required for the safe operation of the equipment.

Employers and supervisors should encourage workers to communicate any questions or concerns they may have about vehicle and mobile equipment hazards. Supervisors involved in training workers should be familiar with any health and safety concerns faced by the workers.

Incidents can be prevented by ensuring:

- Trained signalers and competent equipment operators are in place, as required.
- Construction projects are planned and organized to eliminate or reduce the reverse operation of vehicles and construction equipment.
- Personal protective equipment (PPE), including high visibility clothing, is worn by workers, as required.
- Employers are responsible for protecting workers from hazards arising from the operation of vehicles and mobile construction equipment at construction projects.
- Workers working nearby must be sure to establish eye contact with the equipment operator.

General Vehicle Safety:

- No employee shall operate a ZEREM motor vehicle under the influence of alcohol or drugs.
- No employee shall transport alcohol or drugs in a ZEREM motor vehicle.
- Each employee shall obey all motor vehicle operating rules and regulations of the Province (e.g. Highway Traffic Act), in which he/she is operating a motor vehicle. Furthermore, he/she will observe safe driving practices at all times as well as the traffic rules of any customer in whose plant he/she is operating a motor vehicle.
- Any employee driving a motor vehicle will have in their possession a valid and current driver's license of the type required for the motor vehicle he/she is operating.
- No Employee shall operate a motor vehicle; which he/she knows or has reason to believe is not in good working condition.
- No employee shall operate a motor vehicle if he/she is disqualified from doing so by Zerem.
- Each employee who operates a motor vehicle will complete such documents as may be required by ZEREM policy.
- Each employee who operates a ZEREM motor vehicle is responsible for assuring that cargo being transported, or trailer attached to such vehicle, is properly loaded, and secured.
- Drivers shall pull off road, to a secure area, to use cell phones and/or ZEREM radios.

Any ZEREM driver will be disqualified from operating ZEREM vehicles under the following circumstances:

- Leaving the scene of an accident;
- Any criminal charge;
- A chargeable accident and a moving violation;
- Two chargeable accidents within 12 months;
- Three moving violations within 12 months; or
- Driving while license is suspended or revoked.

Chapter 19 Working at Heights – Fall Protection

Purpose

The Management of ZEREM ELECTRICAL SERVICES LTD is committed to the health and safety of its employees while working at height. The protection of employees from any fall hazard is a major continuing objective.

Fall protection, is a system designed to arrest a fall, minimizing the amount of force experienced by the system and by the fallen worker. Every effort to prevent the fall (i.e. protective floor covers, guardrails, travel restraint) following the hierarchy of control is recommended prior to choosing a fall protection system (i.e. fall restrict, fall arrest, safety nets, etc.)

If the task requires fall protection, ZEREM ELECTRICAL SERVICES LTD will provide each employee with their own personal CSA approved and up-to-date fall arrest equipment. This is to include full body harness, lifeline, lanyard with a shock absorber, and rope grab. Additional equipment provided as required based on a completed Job Hazard Analysis.

The fall arrest system must be inspected prior to each use and maintained as per manufacturer instructions to make sure there are no cuts, frays, or other signs of damage. You will find these maintenance instructions included with your equipment. If a fall occurs, all components of the fall arrest system should be tagged and removed from service immediately.

Management must ensure that a worker who may use a fall protection system is trained in its use and given adequate oral and written instructions by a competent person. In addition, the training provided will meet the Working at Heights Training Program Standard established by the Ministry of Labour.

The Working at Heights training requirement is for workers on construction projects who use any of the following methods of fall protection:

- Travel restraint systems
- Fall restricting systems
- Fall arrest systems
- Safety nets

Construction Regulations:

ZEREM ELECTRICAL SERVICES LTD and its contractors shall provide fall protection to their employees where a worker may be exposed to any of the following hazards:

- Falling more than three (3) metres or ten (10) feet.
- Falling more than 1.2 metres or 4 feet if the work area is used as a path for a wheelbarrow or similar equipment.
- Falling into operating machinery.
- Falling into water or another liquid.
- Falling into or onto a hazardous substance or object.
- Falling through an opening on a work surface.

Industrial Establishments Regulations:

- Falling more than three (3) metres or ten (10) feet.
- Cannot fall freely for a vertical distance of more than 1.5 metres or five (5) feet.

- Have sufficient capacity to absorb twice the energy and twice the load transmitted to it.
- Equipped with a shock absorber or other device to limit the maximum arrest force to 8.0 kilonewtons or 1,800 lbs. of force.

Scope

This chapter is applicable to all ZEREM ELECTRICAL SERVICES LTD personnel, contractors, and visitors.

Policy

- ZEREM ELECTRICAL SERVICES LTD management must, whenever feasible, eliminate the need for work at height that present potential fall hazards and/or must implement engineering solutions to create safe work environments for employees and contractors.
- Employees must be trained on the selection, use, care, inspection and proper storage of fall protection components and systems.
- All fall arrest system components and travel restraint system components must be CSA approved.
- Fall arrest systems must be used by all employees, contractors, and visitors where a they may be exposed to a potential fall hazard.
- Fall arrest system components and travel restraint system components must be inspected by a competent worker before each use. Damaged equipment must be tagged and removed from service immediately.
- ZEREM ELECTRICAL SERVICES LTD shall not allow the use of body belts or rope lanyards by any of their employees on their work sites.
- Temporary anchorage points for travel restraint and fall arrest must be selected by a professional engineer. Permanent anchors must be installed in accordance with the Building Code and be safe and practical to use as an anchor. In addition, a permanent anchor must be conspicuously labelled for the purpose and with the load capacity information.
- In accordance with O.Reg. 213/91, s26.1 (4), a written rescue plan must be developed for rescuing the worker after their fall has been arrested.
- All accidents and serious incidents (near-misses) will be investigated. Changes will be implemented to the fall protection plan to correct any deficiencies.
- All falls greater than three (3) metres or ten (10) feet or a worker falling and having the fall arrested by a fall arrest system other than a fall restricting system must notify Management and the Ministry of Labour immediately.

Definitions

Anchorage: A secure point of attachment for lifelines, lanyards, or deceleration devices.

Anchorage Connector: Used to join the connecting device (lanyard, lifeline, or deceleration device) to the anchorage.

Body Harness: A system of straps which is secured about a person in a manner to distribute fall arresting forces over at least the thighs, pelvis, waist, chest, and shoulders, with provisions for attaching it to other components of a personal fall arrest system. Also known as a Full-Body Harness.

Competent Person: A person who, is qualified because of knowledge, training, and experience to organize the work and its performance, is familiar with this Act and the regulations that apply to the work and has knowledge of any potential or actual danger to health or safety in the workplace.

Competent Worker: In relation to specific work, means a worker who, is qualified because of knowledge, training, and experience to perform the work, is familiar with the OHS Act and with the provisions of the

regulations that apply to the work, and has knowledge of all potential or actual danger to health or safety in the work.

Connectors: Devices that couple parts of the personal arrest system and positioning device system together. It may be an independent component of the system, such as a carabiner. Or it may be an integral component of part of the system (such as a buckle or D ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-reacting lanyard).

Equivalent: When employers can demonstrate alternative designs, materials, or methods to protect against a hazard. The alternatives must provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

Infeasible: Applicable in some situations where it is technologically impossible to perform construction work with a conventional fall protection system such as a guardrail system, safety net system or personal fall arrest system.

Lanyard: A flexible line of rope, wire rope/cable, or webbing which has a connector at each end for securing a body belt or body harness to a lifeline, deceleration device or anchorage.

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

Lifeline: A line provided for direct or indirect attachment to a body belt, body harness, lanyard, or deceleration device. Such lifelines may be horizontal or vertical in application.

Rope grab: Deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks to arrest the fall of a worker.

Shock Absorber: A component of a personal fall arrest system which allows dissipation of energy by extending deceleration distance reducing fall arrest forces.

Walking/Working Surface: Any surface, horizontal or vertical, where an employee walks or works, including, but not limited to, floor, roofs, ramps, bridges, runways, form work and concrete reinforcing steel. However, this does not include ladders, vehicles, or trailers where employees must be located to perform their job duties.

Legislation and Standards

Applicable Legislation:

- Reg. 851/90, Industrial Establishments
- Reg. 213/91, Construction Projects
- Working at Heights Training Program Standard

Relevant Standards:

- CAN/CSA-Z259.1: Body Belts and Saddles for Work Positioning and Travel Restraint.
- CAN/CSA-Z259.2.5: Fall Arresters and Vertical Lifelines.
- CAN/CSA-Z259.2.2: Self-Retracting Devices for Personal Fall-Arrest Systems.
- CAN/CSA-Z259.2.3: Descent Devices.
- CAN/CSA-Z259.10: Full Body Harnesses.
- CAN/CSA-Z259.11: Energy Absorbers and Lanyards.

- CAN/CSA-Z259.12: Connecting Components for Personal Fall Arrest Systems (PFAS).
- CAN/CSA-Z259.13: Flexible Horizontal Lifeline Systems
- CAN/CSA-Z259.14: Fall Restrict Equipment for Wood Pole Climbing.
- CAN/CSA-Z259.15: Anchorage connectors
- CAN/CSA-Z259.16: Design of active fall protection systems

From time to time, the Canadian Standards Association may review and update their standards please visit www.csagroup.org for the most current version to ensure compliance with governing authorities and local jurisdiction.

Roles and Responsibilities

Employer Responsibilities:

- The equipment, materials, and protective devices as prescribed are provided.
- The equipment, materials and protective devices provided by the employer are maintained in good condition.
- The measures and procedures prescribed are carried out in the workplace.
- The equipment, materials and protective devices provided by the employer are used as prescribed.
- Before any use of a fall arrest system or a safety net by a worker at a project, the worker's employer shall develop written procedures for rescuing the worker after their fall has been arrested.
- An employer shall ensure that a worker who may use a fall protection system is trained in its use and given adequate oral and written instructions by a competent person.
- Take every precaution reasonable in the circumstances for the protection of a worker.

Supervisor Responsibilities:

- Uses or wears the equipment, protective devices, or clothing that the worker's employer requires to be used or worn.
- Provide a worker with written instructions as to the measures and procedures to be taken for protection of the worker
- Take every precaution reasonable in the circumstances for the protection of a worker.

Employee Responsibilities:

- Must use or wear the equipment, protective devices, or clothing that the worker's employer requires to be used or worn.
- Must report to their employer or supervisor the absence of or defect in any equipment or protective device of which the worker is aware and which may endanger themselves, or another worker.

Procedures

Travel Restraint System

Travel restraint is a system which prevents a worker from physically reaching the fall hazard, thereby effectively eliminating the hazard. Key requirements for travel restraint systems can be found in section 26.4 of the Regulation for Construction Projects.

Two methods of travel restraint are commonly used in construction:

- 1) Connecting an adequately anchored lifeline directly to the D-ring of the worker's full-body harness. It is absolutely critical that the length of the lifeline, measured from the anchor point, is short enough to restrain the worker from any fall hazard.
- 2) Attaching a lanyard from the D-ring of the worker's full-body harness to a rope grab on an adequately anchored lifeline. There must be some means — such as a knot “positive stop” in the lifeline — to prevent the rope grab from sliding along the lifeline to a point where the worker is no longer restrained from falling.

Whether method 1 or 2 is used, the system must be adjusted so that the fully extended lifeline and/or lanyard prevents the worker from reaching any point where the worker may fall.

The system must also be securely anchored. Reference section 26 of the Construction Regulations covering adequate anchorage points.

Fall Arrest System

A Personal Fall Arrest System (PFAS) includes a full body harness, connector, lifeline, and certified anchorage components. Key requirements for fall arrest systems can be found in section 26.6 of the Regulation for Construction Projects and section 85 of the Regulation for Industrial Establishments.

Fall protection is the preferred choice when it is not possible to use fall prevention. A fall arrest system, fall restricting system or safety net can prevent injury or fatality to a worker that has fallen. Remember, fall protection is a system designed to protect a worker who has fallen and control or minimize the severity of injury to the fallen worker. Fall Protection does not prevent or stop a fall from happening.

Equipment Inspection, Maintenance and Storage:

- The Regulation for Construction Projects requires that a competent worker shall inspect a fall arrest system before each use [s. 26.6(6)].
- Follow the manufacturer’s instructions and recommendations for equipment, including documentation, inspection schedule, maintenance, and storage. It is the duty of the employer to ensure all equipment is inspected and maintained by a competent person. Follow the manufacturer’s warnings about retirement schedules. Replace items, even if unused, according to the manufacturer’s recommended retirement scheduling.
- If the integrity of any fall protection equipment is in doubt, it shall be retired from service permanently or repaired and re-certified by the manufacturer.
- Check with the manufacturer’s instructions before using any cleansers, markers, paint, stickers on synthetic materials or hardware.
- Store fall protection equipment to avoid moisture, abrasion, dirt, ultraviolet light, extreme temperatures, and other hazards. Use appropriate containers to store equipment.

Rescue Plan:

According to the Regulation for Construction Projects [s. 26.1(4)], written rescue procedures must be in place before any use of a fall arrest system or safety net is used. A rescue plan should be in place whenever personnel are working at height. This plan should be posted in a conspicuous place and communicated to all workers before work begins.

A rescue plan includes:

- The designated trained person(s) in charge of rescue.

- Qualified on-site first aid personnel (with contact numbers) and equipment (as per the Regulation for First Aid Requirements (Reg. 1101) under the Workplace Safety and Insurance Act, 1997).
- Names and contact phone numbers of Emergency Medical Services (EMS) or fire services resources in the jurisdiction.
- Emergency access to worksite.
- A back-up system of communications.
- All rescue or emergency control procedures for any mechanical hoisting systems or elevating devices being used in the workplace.
- Annual review and rehearsal of rescue procedures.
- Procedures to lock-out and secure activated safety devices and unsafe work areas.

Chapter 20 Cold Stress Prevention Plan

Purpose

This document is intended to provide:

- Guidance in the development of job-specific safe work procedures for the prevention of cold-stress related injuries; and
- Assistance to supervisors and health and safety staff in addressing health and safety concerns related to cold stress.

Scope

It applies to all ZEREM ELECTRICAL SERVICES LTD employees who work in low temperature, wind and/or moisture for significant time periods.

Policy

This policy is intended to protect workers from potential adverse effects of overexposure to cold.

Definitions

Acclimatization: The gradual process in which the body becomes accustomed to temperature extremes.

Conduction: The transfer of heat to the body by direct contact with a warm object.

Convection: The exchange of body heat with the surrounding air. If the moving air is cooler than the body temperature, it will cool the body; if warmer, it will increase the heat load. Air speed is an important factor in heat loss or gain.

Evaporation: Evaporation of perspiration from the skin is usually the main method of heat removal from the body. As temperature, humidity and rate-of work go up, so does the rate of perspiration. At very high humidity, sweat does not evaporate as quickly, however, high air speed and low humidity increases evaporation. If it is very hot and dry, excessive perspiration may lead to dehydration (excessive fluid loss from the body).

Frostbite: Happens when tissue freezes. Any exposed skin is subject to frostbite when temperatures fall below freezing. Frostbite can lead to scarring, permanent tissue damage, possible amputation, and disability. Symptoms of frostbite vary according to severity. Mild cases may produce prickling or burning sensations. Severe frostbite can produce extreme pain or none at all if nerve tissues are affected.

Hypothermia: A cold induced condition which results from over cooling of the body due to excessive loss of body heat.

Radiation: The transfer of heat to the body through air, from a hot source, such as a furnace, an oven, or the sun. This is important to note as heat is only lost from the body if the surrounding air is cooler than the body.

Sweating: The act of secreting fluid from the skin by the sweat (sudoriferous) glands. These are small tubular glands situated within and under the skin (in the subcutaneous tissue).

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act

Roles and Responsibilities

Employer will:

- Identify jobs with a potential risk of cold stress.
- Develop and maintain written job-specific safe work procedures which address this hazard.
- Inform workers and their supervisors where their work involves potential risk of cold stress
- Develop a process to ensure supervisors and workers are advised of:
 - Factors which can predispose them to cold stress.
 - The warning signs and symptoms of cold stress conditions (frostbite and hypothermia).
 - The measures to be taken to protect against this hazard (e.g. wearing appropriate clothing).
 - The job-specific safe work procedures.
 - Post information on cold stress in the workplaces of employees potentially exposed to this hazard.
 - If uniforms or clothing are being provided by Zerem, ensure that clothing specifications reduce the risk of cold stress (while providing appropriate protection from other hazards, where necessary).

Supervisors will:

- Be familiar with all jobs under their supervision which have been identified to have potential risk of cold stress and their associated safe work procedures.
- Ensure training/information sessions are provided to employees whose workplaces them at risk of cold stress.
- Address cold stress concerns of employees.
- Monitor environmental conditions (i.e. temperature and wind velocity and/or wind chill), as appropriate, on cold days and on days where brisk wind and cold air temperature combine to reach levels deemed as hazardous as outlined:
 - Implement safe work procedures established to prevent cold-stress related injuries
 - Advise workers to:
 - Wear multiple layers of light, loose fitting clothing.
 - Pay special attention to protecting feet, hands, face & head.
 - Report to their supervisor cold stress-related symptoms in themselves or their co-workers.
 - Adhere to the recommended work-warm-up schedule, established to prevent frostbite or hypothermia.
 - Reinforce personal protection strategies to workers verbally, on a continual basis.

Workers will:

- Be familiar with cold stress hazards, predisposing factors, and preventative measures.
- Follow safe work procedures established to prevent cold-stress related injuries.
- Report to their supervisor cold stress-related symptoms in themselves or their co-workers.
- Follow recommended schedule of rest breaks, as advised by supervisors, to prevent frostbite or hypothermia.

Procedure

Cold-stress related injuries are caused by a combination of the following factors:

- Low temperature;
- Cool high winds;
- Moisture (sweating or working near water);
- Exposure duration;
- Type of clothing;
- Work/rest schedule;
- Type of work performed;
- Use of certain medications;
- Degree of acclimatization;
- Age and physical state of the worker;
- Dampness;
- Cold water; and
- Contact with cold objects, such as metal.

Other major factors contributing to cold stress include inadequate or wet clothing, worker's age, health, physical condition, use of medication and level of acclimatization.

Cold-stress related injury is classified as either localized, as in frostbite; or generalized, as in hypothermia. The key concern in the work environment is frostbite.

Various types of control measures in different combinations can be used to prevent or minimize cold-stress related injuries.

Engineering Controls:

Engineering controls change the conditions so that the level of cold stress is reduced. They are the most effective, but sometimes the most difficult to achieve in the outdoor environment.

They include:

- Redesign and/or mechanize the task. This reduces the work time in cold environments and thus exposure to cold.
- Shield work areas from drafty or windy conditions.
- Where practical, provide a heated shelter for employees who experience prolonged exposure to low wind-chill temperatures.
- Thermal insulating material on equipment. When in direct contact with skin, metal handles conduct heat away from the body and should be insulated, where practicable, when temperatures drop below -10C. This reduces the risk of frostbite.

Administrative Controls:

Administrative controls attempt to minimize the risks through work practices. They are relatively easy to implement. Administrative controls include the following:

- Limit exposure time that worker is required to work in a cold environment.
- Some examples for reducing exposure time include:
 - Perform partial components of a task indoors/sheltered, where feasible;
 - Increase task variation and rotation;
 - Assign additional relief workers;
 - Routine maintenance and repair work in cold exposed environments may be scheduled for warmer days/seasons of the year, where practicable;

- Activities that minimize blood circulation such as static, cramped positions should be reduced/eliminated, where feasible.

Allow recovery time. It is important to provide adequate recovery time from cold stress exposures. Appropriate rest breaks should be determined based on environmental conditions (i.e. temperature and wind speed). If work is performed continuously in a cold environment than breaks should be taken in a warm environment/location as often as needed by the worker.

Initiate a Buddy System. Since individuals are less likely to notice their own symptoms, a buddy system approach would allow for earlier recognition of the risk of signs and symptoms, such as frostbite to the ears, cheeks, and nose.

Acclimatization:

Some degree of acclimatization may be possible in cold environments. With enough exposure to cold, the body does undergo some changes that increase comfort and reduce the risk of cold-stress related injuries. People who are physically unfit, older, obese, or taking medications may not acclimatize as readily.

Personal Protection:

- Workers should keep a change of clothing available in case work garments become wet.
- If a worker becomes immersed in water, the worker should immediately change to dry clothing.
- Workers should avoid wearing down-filled garments in wet environments.
- Workers should be aware that wearing dirty or greasy clothing have poor insulating properties.
- Workers should pay special attention to protecting feet, hands, face and especially head. Up to 50% of body heat can be lost when the head is exposed.
- A wool knit cap with ear protection provides the best protection.
- For employees required to wear a hard hat, provide a liner for protection from the cold.
- Face protection that does not restrict vision should be worn.
- Workers should not wear scarves when the work performed may result in the scarves getting caught in moving parts of machinery.
- Footgear should be insulated and water-resistant to protect against cold and dampness.

Supervisors should encourage workers to wear multiple layers of light, loose-fitting clothing consisting of:

- A waterproof/water-resistant outer layer to break the wind and allow some ventilation;
- A middle layer of wool or synthetic fabric to absorb sweat and retain insulation in a damp environment; and
- An inner layer of synthetic weave to allow ventilation.

Chapter 21 Heat Stress Prevention Plan

Purpose

Heat stress can happen when hot, humid conditions and physical activity overcomes your body's natural cooling system. You might suffer cramps and fainting, or even serious heat exhaustion and heat stroke. Heat stroke can kill quickly.

Scope

It applies to all ZEREM ELECTRICAL SERVICES LTD employees who work in high temperature conditions for significant time periods.

Policy

This policy is intended to protect workers from potential adverse effects of overexposure to heat.

Definitions

Acclimatization: The gradual process in which the body becomes accustomed to temperature extremes.

American Conference of Governmental Industrial Hygienists (ACGIH): An organization of industrial hygiene professionals that develops occupational health and safety programs. ACGIH develops and publishes recommended occupational exposure limits for hundreds of chemical substances and physical agents.

Conduction: The transfer of heat to the body by direct contact with a warm object.

Convection: The exchange of body heat with the surrounding air. If the moving air is cooler than the body temperature, it will cool the body; if warmer, it will increase the heat load. Air speed is an important factor in heat loss or gain.

Evaporation: Evaporation of perspiration from the skin is usually the main method of heat removal from the body. As temperature, humidity and rate-of work go up, so does the rate of perspiration. At very high humidity, sweat does not evaporate as quickly, however, high air speed and low humidity increases evaporation. If it is very hot and dry, excessive perspiration may lead to dehydration (excessive fluid loss from the body).

Heat rash: A heat-induced condition characterized by a red, bumpy rash with severe itching.

Heat cramps: A heat-induced condition characterized by painful cramps in the arms, legs or stomach which can occur at work or later at home. This condition can be a warning of other more serious heat-induced illnesses.

Heat Exhaustion: Overheating of the body. Heat exhaustion can happen when the body loses too much fluid (because of excessive sweating) or when conditions, such as physical activity in a hot environment, prevent sweat from evaporating into the air.

Heat Stress: A combination of heat with other stresses such as hard physical work, loss of fluids, fatigue, or some pre-existing medical conditions, it may lead to heat-related illness, disability and even death.

Heat Stroke: A potentially deadly condition in which over-exposure to a very hot environment breaks down the body's ability to control its temperature and cool itself sufficiently. The body temperature rises to a very high (deadly) level.

Radiation: The energy transmitted by waves through space or some medium. There are two types of radiation: ionizing (for example, X-Rays or radiation from a radioactive device), and non-ionizing radiation (for example, infra-red radiation, ultraviolet radiation).

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act
- Reg. 851/90, Industrial Establishments

Relevant Standards:

- American Conference of Governmental Industrial Hygienists (ACGIH)

Roles and Responsibilities

Management will:

- Identify jobs with a potential risk of heat stress and develop job-specific safe work procedures which address this hazard
- Inform workers and their supervisors where their work involves potential risk of heat stress
- Develop a process to ensure supervisors and workers are advised of:
 - Factors which can predispose them to heat stress
 - The warning signs and symptoms of heat stress conditions (heat rash, heat cramps, heat exhaustion and heat stroke), and
 - The measures to be taken to protect against this hazard (eg. having water available to drink during work shift, wearing appropriate clothing and pacing oneself while working)
- Post information on heat stress in the workplaces of employees potentially exposed to this hazard
- Ensure workers have access to a drinking water source for filling personal containers at the beginning of the shift, if water is not accessible throughout the shift
- If uniforms or clothing are being provided by Zerem, ensure that clothing specifications reduce the risk of heat stress (while providing appropriate protection from other hazards, where necessary)
- Allow a gradual period of acclimatization to work in hot environments for new and other non-acclimatized workers [Note: Even workers who work outside on an ongoing basis may not be acclimatized if temperatures rise steeply within a short time period early in the spring or summer.]
- Re-schedule work on hot days to cooler times of the day, when feasible
- Where feasible and necessary, reduce temperature and humidity through air cooling and conditioning of enclosed work environments or shading of open areas

Supervisors will:

- Schedule safety talks for employees whose workplaces them at risk of heat stress
- Implement safe work procedures established to prevent heat-induced illness
- Address heat stress concerns of employees
- Determine any additional rest breaks that may be required as a result of workload and local conditions
- Advise workers to:
 - Drink enough fluids to replace those lost through sweating and breathing
 - Take breaks in the shade or a cool area, as needed to avoid heat exhaustion or collapse

- Report to their supervisor heat stress-related symptoms in themselves or their co-workers
- Adhere to the recommended rest break schedule, established to avoid heat exhaustion or collapse.

Workers will:

- Be familiar with heat stress hazards, predisposing factors, and preventative measures
- Follow safe work procedures established to prevent heat-induced illness
- Drink enough fluids to replace those lost through sweating and breathing
- Report to their supervisor heat stress-related symptoms in themselves or their co-workers
- Follow recommended schedule of rest breaks, as advised by supervisors, to avoid heat exhaustion or collapse

Procedure

Controlling Heat Stress

Acclimatization:

The longer you work in a hot environment, the better your body acclimatizes to the heat. If you are ill or away from work for a week or so you can lose your acclimatization.

To become acclimatized, consider the following progressive approaches:

- If you are experienced on the job, you should limit your shift time in hot working conditions to 50 per cent on the first day, 60 per cent on the second day, and 80 per cent on the third day. You should be able to work a full shift on the fourth day.
- If you are not experienced on the job (for example, if you are a new employee), you should start off spending 20 per cent of shift time in hot working conditions on the first day and increase your time by 20 per cent on each subsequent day. You should be able to work a full shift in hot working conditions the fifth day.
- Instead of progressively increasing the exposure times on the job in a hot environment, you can become acclimatized by gradually increasing the physical demands of the job over a week or two.

If you have health problems or are not in good physical condition, you may need longer periods of acclimatization. Hot spells in Ontario seldom last long enough to allow acclimatization. However, exposure to workplace heat sources may permit acclimatization.

When there is a potential for exposure to heat stress, control measures must be taken to prevent heat exposure in the workplace. These include engineering controls, administrative controls, and protective clothing. Selection of appropriate workplace controls will vary, depending on the type of workplace and other factors. Some measures may include:

Engineering controls:

- Reduce physical demands of work task through mechanical assistance (hoists, lift-tables, etc.)
- Control the heat at its source through the use of insulating and reflective barriers (e.g. insulate furnace walls)
- Exhaust hot air and steam produced by operations
- Reduce the temperature and humidity through air cooling
- Provide cool, shaded work areas
- Provide air-conditioned rest areas
- Increase air movement if temperature is below 35°C (e.g. use fans).

Administrative and work practice controls:

The employer should:

- Assess the demands of all jobs and have monitoring and control strategies in place for hot days and hot workplaces
- Increase the frequency and length of rest breaks
- Schedule strenuous jobs to cooler times of the day
- Provide cool drinking water near workers and remind them to drink a cup about every 20 minutes, or more frequently, to stay hydrated
- Caution workers to avoid direct sunlight
- Assign additional workers or slow down the pace of work
- Make sure everyone is properly acclimatized
- Train workers to recognize factors which may increase the risk of developing a heat related illness and the signs and symptoms of heat stress and start a “buddy system” since people are not likely to notice their own symptoms
- Investigate any heat-related incidents

Trained First Aid providers should be available, and an emergency response plan should be in place in the event of a heat related illness.

Pregnant workers and workers with a medical condition – or those taking medications – should discuss with their physicians about working in the heat

Protective clothing:

- Light summer clothing should be worn to allow free air movement and sweat evaporation
- If working outdoors, wear light coloured clothing, preferably long-sleeve shirt, and pants, and cover the head to prevent exposure to direct sunlight
- In a high radiant heat situation, wearing reflective clothing to shield radiant heat may help
- For very hot environments, consider air, water, or ice-cooled insulated clothing
- Vapour-barrier clothing, such as chemical protective clothing, can significantly increase the amount of heat stress on the body. Extra caution such as heat strain (physiological) monitoring is necessary if vapour-barrier clothing is worn

Managing heat stress from process heat

For an environment that is hot primarily due to process heat (furnaces, bakeries, smelters, etc.), the employer should follow the guidance of the American Conference of Governmental Industrial Hygienists (ACGIH) as outlined in its booklet and documentation for the recommended Threshold Limit Value (TLVs) and set up a heat stress control plan in consultation with the workplace's joint health and safety committee or worker health and safety representative.

Managing heat stress caused by hot weather

A hot weather plan should establish the implementation criteria, or triggers, to put the plan into effect. The criteria may include weather/environmental indicator triggers such as:

- Humidex (local or specific site) reaching or exceeding 35
- Environment Canada humidex advisory (air temperature exceeding 30°C and humidex exceeding 40);
- Environment Canada weather reports;

- Heat waves (three or more days of temperatures of 32°C or more); and/or
- Ontario Ministry of the Environment smog alert.

Chapter 22 Safe Use of Communication and Electronic Devices

Purpose

The purpose of this policy limiting the use of handheld communication and electronic devices at work is to protect you. Inappropriate use of communication devices at work can cause injuries because it is distracting and may interfere with proper and safe use of equipment and machinery. Ear buds may prevent you from hearing an emergency signal / alarm or hear a distress call. It is not just driving that puts you at risk for the consequences of multitasking, research also shows that workers who use mobile devices while walking are less likely to spot a hazardous situation. Devices and headphones or wireless earpieces may also get tangled in machinery or interfere with the proper use of personal protective equipment.

Several provinces, including Ontario have adopted traffic safety laws that ban drivers from using handheld communication and other electronic devices while operating a motor vehicle. ZEREM ELECTRICAL SERVICES LTD recognizes these changes in Ontario legislation and have implemented a policy designed not only to address safety on roadways but to also address safety while working.

Bill 118 amended the Highway Traffic Act to bar driving while holding or using hand-held wireless communications devices or electronic entertainment devices (such as iPods). The Bill does permit the use of hands-free devices.

Scope

We expect that all ZEREM ELECTRICAL SERVICES LTD employees will respect the requirements of the Highway Traffic Act and the inclusions made in our policy to address personal safety while at work.

Policy

All workers, contractors, consultants, temporary workers, and other workers, including all personnel affiliated with third parties, who work at our facility or job site will refrain from using communication or other electronic device during work hours and while on the job site.

This policy applies not just at work but when workers are driving any vehicle on work-related business without the use of a hands-free device, again regardless of whether the vehicle is owned by Zerem or the worker.

Any violation of the policy, worker(s) will be subject to disciplinary measures up to and including dismissal, depending on the circumstances.

Definitions

Communication Device: includes but is not limited to cell phones, text pagers, two-way radios, GPS's, and other wireless devices, whether owned by Zerem or the individual worker.

Legislation and Standards

Applicable Legislation:

- Highway Traffic Act
- Occupational Health and Safety Act

Roles and Responsibilities

Employer will:

- Ensure that the measures and procedures prescribed are carried out in the workplace; and
- Take every precaution reasonable in the circumstances for the protection of a worker.

Supervisor will:

- Ensure that a worker works in the manner and with the protective devices, measures and procedures required by this Act and the regulations; and
- Ensure that a worker uses or wears the equipment, protective devices, or clothing that the worker's employer requires to be used or worn.

Worker will:

- Not use or operate any equipment, machine, device or thing or work in a manner that may endanger themselves, or any other worker.
- **Procedure**

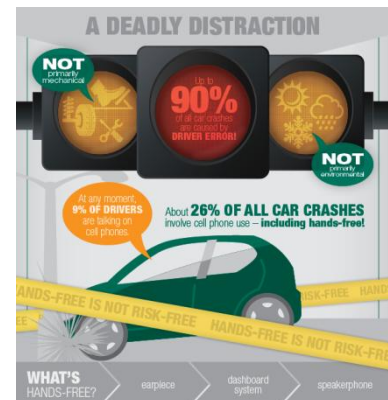
Prohibited Uses of Communication and Electronic Devices

General:

- While in the workplace during work hours, workers are expected to focus on work and may not inappropriately use any Communication and Electronic Device in the workplace for any inappropriate purposes, including but not limited to:
 - Engaging in personal conversations;
 - Playing games;
 - Surfing the internet;
 - Checking e mail; and
 - Sending or receiving text messages.

Driving:

- While operating a vehicle, workers may not answer a communication device unless they are using a hands-free device or until they pull over in a safe spot (or let a passenger answer the call).
- Hands free is not risk free.
- If it is urgent, workers may accept a call, provided that they use a hands-free device. Workers are encouraged to pull over in a safe spot until their conversation is over.
- Workers may only make outgoing calls or return a call after they pull over in a safe spot parked off the roadway.



Permitted Use of Communication and Electronic Devices

Workers may use Communication or Electronic Devices while they are not working in the following designated areas (e.g., Zerem's break room, lunchroom, and offices). Use of hands-free devices while driving is permissible but is strongly not recommended. Studies show that it is the conversation rather than the operation of the device that causes the distraction. We support and encourage everyone to avoid using Communication and Electronic Devices while operating any type of vehicle.

Violations

Workers who violate this policy will be subject to disciplinary measures up to and including termination for cause.

Chapter 23 Accessibility for Ontarians with Disability Act (AODA)

Purpose

The Accessibility for Ontarians with Disabilities Act, 2005 (AODA) became law on June 13, 2005. Under this landmark legislation, the government of Ontario has developed mandatory accessibility standards that identifies, removes, and prevents barriers for people with disabilities.

Disability impacts the lives of many Ontarians, and the numbers of people with disabilities is increasing. Today, 15.5% of Ontario's population has a disability and this number will continue to grow as the population ages.

The AODA is made up of five parts, or Standards, each covering an aspect of daily living. Deadlines for compliance range from January 1, 2010, into 2021. The Accessible Customer Service Standard was the first standard to come into effect and all of Ontario's non-profits and businesses were to be compliant as of January 1, 2012.

The purpose of the AODA is to achieve a fully accessible province of Ontario by 2025, by developing, implementing, and enforcing accessibility standards with respect to goods, services, facilities, accommodation, employment, buildings, structures, and premises. At the same time, under the AODA, organizations are required to develop policies, plans and procedures to provide accessibility which covers general topics and specific requirements. These accessibility standards apply to all organizations in Ontario that provide goods and services and/or employ Ontarians.

Scope

Companies should be aware of the standards for accommodation. The following guiding principles should be kept in mind:

- The needs of persons with disabilities must be accommodated in the manner that most respects their dignity, to the point of undue hardship.
- There is no set formula for accommodation – each person has unique needs, and it is important to consult with the person involved.
- Taking responsibility and showing willingness to explore solutions is a key part of treating people respectfully and with dignity.
- Voluntary compliance may avoid complaints under the Code, as well as save the time and expense needed to defend against them.

Policy

ZEREM ELECTRICAL SERVICES LTD is committed to improving accessibility and to training employees on Ontario's accessibility laws and on accessibility aspects of the Human Rights Code that apply to persons with disabilities.

- All employees will report to their supervisor when a person with a disability requests information in an accessible way.
- All employees and volunteers will receive accessibility training in a way that best suits their duties within the first two weeks of starting work.
- ZEREM ELECTRICAL SERVICES LTD will consult with people with disabilities to determine their information and communication needs.

- ZEREM ELECTRICAL SERVICES LTD will provide customized workplace emergency information to employees who have a disability.

Definitions

Accessible Formats: A format that is considered an alternative to standard print and are accessible to people with disabilities. Accessible formats may include large print, braille, and audio or electronic formats such as DVD's/CD's or thumb drives.

Barrier: Anything that prevents a person with a disability from fully participating in all aspects of society because of their disability, including a physical barrier, an architectural barrier, an information or communications barrier, an attitudinal barrier, a technological barrier, a policy, or a practice.

Dignity: Policies, procedures and practices that respect the dignity of a person with a disability. To be treated as customers who are valued and deserving of effective and complete service as any other customer or client. Persons with disabilities are not treated as an afterthought, nor are they forced to accept lesser service, quality, or convenience.

Disability: means,

- a. Any degree of physical disability, infirmity, malformation or disfigurement that is caused by bodily injury, birth defect or illness and, without limiting the generality of the foregoing, includes diabetes mellitus, epilepsy, a brain injury, any degree of paralysis, amputation, lack of physical coordination, blindness or visual impediment, deafness or hearing impediment, muteness or speech impediment, or physical reliance on a guide dog or other animal or on a wheelchair or other remedial appliance or device,
- b. A condition of mental impairment or a developmental disability,
- c. A learning disability, or a dysfunction in one or more of the processes involved in understanding or using symbols or spoken language,
- d. A mental disorder, or
- e. An injury or disability for which benefits were claimed or received under the insurance plan established under the Workplace Safety and Insurance Act, 1997.

Equal Opportunity: Having the same chances, options, benefits, and results as others. In the case of services it means that persons with disabilities have the same opportunity to benefit from the way goods or services are provided as they are provided to others.

Independence: Freedom from control or influence of others – ability to make your own choices. People who may move or speak more slowly should not be denied an opportunity to participate in a program or service because of this factor. An employee should not hurry them or take over a task for them if they prefer to do it themselves in their own way.

Integration: Services that allow persons with disabilities to fully benefit from the same services, in the same place and in the same or similar way as other customers. Integration means that policies and procedures are designed to be accessible to everyone including persons with disabilities. There may be times when integration does not serve the needs of all persons with disabilities; in these cases, it will be necessary to use alternative measures to provide goods or services.

Organization: Any organization in the public or private sector and includes,

- a. The Government of Ontario and any board, commission, authority, or other agency of the Government of Ontario,
- b. Any agency, board, commission, authority, corporation, or other entity established under an Act,

- c. A municipality, an association, a partnership, and a trade union, or
- d. Any other prescribed type of entity

Person (or organization or ZEREM) Responsible for Accommodation": includes individuals, partnerships, corporations, companies, unions, joint ventures, and organizations. More than one "person" may be responsible for accommodation, and where this term is used, it refers to all parties who are obliged to take part in the accommodation.

Service Animal: If it is readily apparent that the animal is used by the person for reasons relating to their disability; or if the person provides a letter from a physician or nurse confirming that the person requires the animal for reasons relating to the disability. A service animal includes a guide dog as that term is defined in the Blind Persons' Right Act.

Support person: In relation to a person with a disability, another person who accompanies them in order to help with communication, mobility, personal care or medical needs or with access to goods or services.

Timely Manner: The time frame should be negotiated with the person making the request. Timelines can be dependent upon a number of factors including:

- Amount of information
- Complexity of information
- Type of information requested
- Organizational capacity
- Urgency of information

Legislation and Standards

Applicable Legislation:

- Accessibility for Ontarians with Disability Act, 2005
- Ontario Human Rights Code - Reg. 191/11, Integrated Accessibility Standards Regulations

Relevant Standards:

- General Requirements
- Customer Services standard
- Information and communication standard
- Transportation standard
- Employment standard
- Design of public spaces standard

Roles and Responsibilities

Employer will:

- Provide training to employees and contractors (if applicable), for which a record will be maintained.
- Identify and eliminate barriers that could prevent accessibility to customer service, information, communication, and employment.
- Respond to any complaints as per the AODA procedures.
- Provide notice of disruption of service to Customers and Clients.
- Ensure that an alternative method of communication is provided when dealing with persons with disabilities if the existing provisions do not take into consideration a person's disability.

Supervisors will:

- Identify and eliminate barriers that could prevent accessibility to customer service, information, communication, and employment.
- Ensure that an alternative method of communication is provided when dealing with persons with disabilities if the existing provisions do not take into consideration a person's disability.
- Provide notice of disruption of service to Management, Customers, Clients, and the department that is being affected with the disruption.
- Record any complaints in the AODA Complaint Reporting Form within 24 hours of receipt of complaint.
- Respond to any complaints as per the AODA procedures.
- Ensure employees are in compliance with training under the AODA – Customer Service Standard and Integrated Accessibility Standard.
- Consult with the employee making the request in determining the suitability of an accessible format or communication support.

Workers will:

- Complete Accessibility for Ontarians with Disability training.
- Comply with the Customer Service Standard and Integrated Accessibility Standard as outlined in policy and training.
- Seek guidance from manager if questions arise regarding the Customer Service Standard and Integrated Accessibility Standard.
- Forward all AODA complaints to your supervisor immediately. If no supervisor is available, then call to the office and forward the complaint to Human Resources department or equivalent.

Procedure

Compliance

Filing Accessibility Reports:

Zerem must file annual Accessibility Reports outlining the organization's progress towards becoming accessible for people with disabilities. In addition, Zerem may be required to submit compliance-related information or other reports upon request and may be subjected to compliance audits or inspections.

Penalties for Non-compliance:

The Accessibility for Ontarians with Disability Act (AODA) allows for monetary penalties for any violation to the Act. The maximum penalties under the AODA include:

- A person and unincorporated organizations that are guilty of a major offence under this Act can be fined up to \$50,000 dollars for each day the violation continues.
- A corporation that is guilty can be fined up to \$100,000 dollars per day.
- Directors and officers of a corporation with fiduciary responsibility who are guilty are liable to a fine of up to \$50,000 a day.

Customer Service Standard:

- Providing Services to Persons with Disabilities

ZEREM will communicate with persons with disabilities in ways that consider their individual needs, such as:

- Using clear and plain language; and
- Alternative forms of non-verbal communication as appropriate and available.

Considering the nature of ZEREM's business, the following options may be available for persons with disabilities:

- Documentation available in large print
- ZEREM websites
- DVD/CD or Portable Drive
- In-person support
- TTY telephone system or Relay Services

In addition, ZEREM will consider options presented by persons with disability should the above not be satisfactory to accommodate the person's needs.

- **Personal Assistive Devices**

ZEREM is committed to allow persons with disabilities, to use, at all times, any assistive device. Assistive devices include, but are not limited to the following:

- Cognitive aids;
- Mobility aids such as wheelchairs, walkers, scooters, white canes; and
- Communication aids such as hearing aids, communication boards, speech generating devices or any other personal assistive device required when communicating to obtain, use, or benefit from our services.

ZEREM will provide accessible customer service regardless of the person's disability.

- **Support Persons**

ZEREM is committed to allow persons with disabilities to be accompanied by a support person. For purposes of this policy, a "support person" is, in relation to a person with a disability, another person who accompanies them in order to help with communication, mobility, personal care or medical needs or with access to goods or services.

- **Service Animals**

ZEREM is committed to allow guide dogs or other service animals to support persons with disabilities. Customers and clients are advised to provide notice in advance where in-person meetings are required, so Zerem representative can make the appropriate arrangements such as booking a meeting room for this purpose. When notice cannot be provided Zerem representative will make every effort to advise other employees sharing the same physical space with the support animal, so other measures can be taken to avoid triggering allergic reactions or sensitivities to animal dander.

Where excluded by law or for health and safety reasons, the service animal is prohibited from the premises. ZEREM will ensure that other methods of access are available to ensure accessibility.

- **Temporary Disruption of Service**

In case of a temporary disruption to services that may be used by persons with disabilities, ZEREM will notify clients and customers affected by the disruption. Notification will include:

- Providing the reason for it;
- Duration of disruption; and

- Description of alternative ways service will be provided, if applicable.

Notification can be provided by one or more methods:

- Website;
- Posting a notice in a conspicuous place;
- Other methods that notify and serve the needs of a person with disability.

ZEREM will make every effort to correct unexpected disruption of services as soon as possible.

- Feedback

ZEREM is open to receive feedback with questions, suggestions, or comments that help provide services to persons with disabilities. Feedback can be provided by any of the following methods:

- In person
- By telephone
- By email
- By mail
- By any means that consider a person's disability, as requested

- Complaint Resolution

ZEREM is committed to acknowledging all complaints received within 7 days of receipt. A worker who receives a complaint will take down the complaint and contact information. Management or designated person will follow up with all appropriate persons and departments to ensure a resolution is implemented within a reasonable amount of time. Management or a designated person will complete a "Complaint Reporting Form" and notify the person who submitted the complaint and will inform them of the action plan to be undertaken.

- Document Requirements

ZEREM will notify interested parties that the documents required under the Accessibility for Ontarians with Disabilities Act, 2005 are available upon request by publishing a notice on Zerem website. A copy of this policy will be provided upon request and in a format that meets the needs of the person with a disability.

Integrated Accessibility Standards

Introduction:

This Regulation establishes the accessibility standards for information and communications, employment, transportation, and the design of public spaces.

The requirements in the standards set out in this Regulation are not a replacement or a substitution for the requirements established under the Human Rights Code nor do the standards limit any obligations owed to persons with disabilities under any other legislation.

Accessibility Plan:

ZEREM will develop an Accessibility Plan (multi-year plan if applicable), outlining strategies to prevent and remove barriers for people with disabilities considering the legislative requirements and timelines for the phased in standards.

The Accessibility Plan shall be reviewed at least once every three years and can be provided in an accessible format upon request.

Information and Communications Standard

The Information and Communications Standard outlines requirements for organizations to create, provide and receive information and communications in ways that are accessible for people with disabilities. The standard specifically addresses the following:

- Accessible Feedback Processes

ZEREM is open to receive feedback with questions, suggestions, or comments that help provide services to persons with disabilities. Feedback can be provided by any of the following methods:

- In person
- By telephone
- By email
- By mail
- By any means that consider a person's disability, as requested

- Accessible Formats and Communication Supports

Zerem will notify the public that accessible formats are available upon request by publishing a notice on ZEREM website or via posting a notice in a conspicuous place.

A copy of this policy and any related forms will be made in an accessible format to any person who requests it, taking into consideration a person's disability.

- Accessible Website and Web Content

Zerem is committed to making its websites accessible to people with disabilities by conforming to international standards for website accessibility WCAG 2.0. This process will be on-going and as such content may not be upgraded fully. However, people with disabilities may request information to be provided in an accessible format.

Employment Standard

Introduction:

The Employment Standard requires employers to provide for accessibility across the employment process. It applies to paid employees only, including full-time, part-time, and casual. It does not apply to volunteers or other non-paid individuals. The requirements covered include the following:

- Recruitment, assessment, and selection
- Accessible formats and communication support for employees
- Documented individual accommodation plans
- Return to work process
- Performance management
- Career development and advancement
- Redeployment

Emergency Response Plan:

Zerem will develop an Emergency Response Plan for employees with disability and based on their need for accommodation due to the employee's disability. The worker will be made aware of the plan and may contribute towards improving the plan to meet any Ontario accessibility standards.

Designated support personnel will be assigned to aid a disabled employee where required and with consent. Zerem will provide training to all employees involved in the Emergency Response Plan.

Zerem will review the Emergency Response Plan when:

- The employee changes work locations or managers;
- The designated support person is no longer in the department or with Zerem;
- A change occurs in the site policy that directly affects emergency evacuation or the emergency response plan; or
- The three (3) year review date of Zerem's accessibility program.

Zerem shall provide a copy of the Emergency Response plan upon request by an employee in an accessible format.

Ontario Accessibility Standards

Zerem must follow the rules and deadlines to meet accessibility standards in Ontario. The rules you need to follow depend on the type and size of your organization. You are exempt if you are self-employed and do not have employees.

How to count your employees

Count all full-time, part-time, seasonal, and contract workers you:

- Pay wages or a salary
- Have control over the work assigned
- Have a right to control the details of the work

Do not count employees outside Ontario. Do not count volunteers or independent contractors, but you are responsible for ensuring that the services they provide on your behalf follow the rules of Ontario's accessibility standards. You may need to ensure these individuals are trained to meet the requirements.

Year	1 – 19 Employees	20 – 49 Employees	50 + Employees
2012	<ul style="list-style-type: none"> • Provide accessible customer service • train your staff and volunteers to serve customers of all abilities • welcome service animals and support persons • create accessible ways for people to provide feedback • put an accessibility policy in place so employees, volunteers and customers can know what to expect • Provide accessible emergency and public safety information • When asked, provide publicly available emergency information, like evacuation plans or brochures, in an accessible format. • Provide accessible emergency information to staff • When necessary, provide accessible and customized emergency information. You should provide this information as soon as an employee asks for it or when you become aware an employee may need accommodation in an emergency. 	<ul style="list-style-type: none"> • Provide accessible customer service • Train your staff and volunteers to serve customers of all abilities • Keep a written record of the training • Welcome service animals and support persons • Create accessible ways for people to provide feedback • Put an accessibility policy in place, so your employees, volunteers and customers can know what to expect • Provide accessible emergency and public safety information • When asked, provide publicly available emergency information, like evacuation plans or brochures, in an accessible format. • Provide accessible emergency information to staff • When necessary, provide accessible and customized emergency information. You should provide this information as soon as an employee asks for it or when you become aware an employee may need accommodation in an emergency. 	<ul style="list-style-type: none"> • Provide accessible customer service • Train your staff and volunteers to serve customers of all abilities • Keep a written record of the training • Welcome service animals and support persons • Create accessible ways for people to provide feedback • Put an accessibility policy in place so your employees, volunteers and customers can know what to expect • Provide accessible emergency and public safety information • When asked, provide publicly available emergency information, like evacuation plans or brochures, in an accessible format. • Provide accessible emergency information to staff • When necessary, provide accessible and customized emergency information. You should provide this information as soon as an employee asks for it or when you become aware an employee may need accommodation in an emergency.

2014		<ul style="list-style-type: none"> • By December 31, 2014, you need to file an Accessibility Compliance Report 	<ul style="list-style-type: none"> • Create accessibility policies and a multi-year plan • Create policies and a multi-year accessibility plan to help you achieve your accessibility goals • Tell your employees and customers about your policies • Post the multi-year plan on your website in an accessible format • Make websites accessible • This includes only new websites and old websites you significantly update and new web content you create. • By December 31, 2014, you need to file an Accessibility Compliance Report
2015	<ul style="list-style-type: none"> • Create accessibility policies • This will help you achieve your accessibility goals. • Tell your employees and customers about your policies. 	<ul style="list-style-type: none"> • Create accessibility policies • Create policies to help you achieve your accessibility goals • Tell your employees and customers about your policies 	<ul style="list-style-type: none"> • Train your staff on Ontario’s accessibility laws • Train all your employees and volunteers on the accessibility requirements that apply to their job duties and your organization. • Make it easy for people with disabilities to provide feedback • This includes surveys or comment cards.

2016	<ul style="list-style-type: none"> • Train your staff on Ontario’s accessibility laws • Train all your employees and volunteers on the accessibility requirements that apply to their job duties and your organization. • Make it easy for people with disabilities to provide feedback when asked • This includes surveys or comment cards. 	<ul style="list-style-type: none"> • Train your staff on Ontario’s accessibility laws • Train all your employees and volunteers on the accessibility requirements that apply to their job duties and organization. • Make it easy for people with disabilities to provide feedback when asked • This includes surveys or comment cards. 	<ul style="list-style-type: none"> • Make your public information accessible when asked • Work with the person to figure out how to meet their needs as soon as possible. • Make your employment practices accessible • Make how you hire, retain, and provide career development opportunities accessible • Document your processes for developing individual accommodation plan and return-to-work plans
2017	<p>Make your public information accessible when asked</p> <ul style="list-style-type: none"> • Work with the person to figure out how to meet their needs as soon as possible. <p>Make your employment practices accessible</p> <ul style="list-style-type: none"> • This includes how you hire, retain, and provide career development opportunities to all your employees. 	<p>Make your public information accessible when asked</p> <ul style="list-style-type: none"> • Work with the person to figure out how to meet their needs as soon as possible. <p>Make your employment practices accessible</p> <ul style="list-style-type: none"> • This includes how you hire, retain, and provide career development opportunities to all your employees. <p>By December 31, 2017, you need to file an Accessibility Compliance Report</p>	<p>Make new or redeveloped public spaces accessible</p> <ul style="list-style-type: none"> • Parking lots • Service counters • Fixed waiting lines • Waiting areas with fixed seating • Other public spaces <p>By December 31, 2017, you need to file an Accessibility Compliance Report</p>
2018	<p>Make new or redeveloped public spaces accessible</p> <p>This applies to:</p> <ul style="list-style-type: none"> • Parking lots • Service counters • Fixed queuing guides • Waiting areas with fixed seating • Other public spaces 	<p>Make new or redeveloped public spaces accessible</p> <p>This applies to:</p> <ul style="list-style-type: none"> • Parking lots • Service counters • Fixed waiting lines • Waiting areas with fixed seating • Other public spaces 	

2020		By December 31, 2020, you need to file an Accessibility Compliance Report	By December 31, 2020, you need to file an Accessibility Compliance Report
2021			By January 1, 2021, you need to make all websites and web content accessible
2023		By December 31, 2023, you need to file an Accessibility Compliance Report	By December 31, 2023, you need to file an Accessibility Compliance Report

Chapter 24 Workplace Violence Prevention Program

Purpose

The Management of ZEREM ELECTRICAL SERVICES LTD recognizes the potential for violence in the workplace. We will therefore make every reasonable effort to identify all potential sources of such risk to eliminate or minimize them through our workplace violence and harassment prevention program.

ZEREM ELECTRICAL SERVICES LTD will not tolerate any type of violence within the workplace or during work-related activities. ZEREM ELECTRICAL SERVICES LTD is committed to allotting whatever time, attention, authority, and resources necessary to ensure a safe and healthy working environment for all employees and clients.

ZEREM ELECTRICAL SERVICES LTD will also take every reasonable precaution to protect an employee from physical injury if we become aware or believe that domestic violence is a risk.

Scope

This policy applies to all ZEREM ELECTRICAL SERVICES LTD persons, contractors, and.

Policy

(To be posted and reviewed annually)

Date: _____

It is ZEREM ELECTRICAL SERVICES LTD's policy to promote a safe environment for its employees. Zerem is committed to working with its employees to maintain a work environment free from violence, threats of violence, intimidation, and other disruptive behavior. While this type of conduct is not pervasive at our ZEREM, no ZEREM is immune. Disruptive behavior at one time or another will affect every ZEREM.

Violence, threats, intimidation, and other disruptive behavior in our workplace will not be tolerated. That is, all reports of incidents will be taken seriously and dealt with appropriately. Such behavior can include oral or written statements, gestures or expressions that communicate a direct or indirect threat of physical harm. Individuals who commit such acts may be removed from the premise and may be subject to disciplinary action, criminal penalties, or both.

We need your cooperation to implement this policy effectively and maintain a safe working environment. Do not ignore violent, threatening, intimidation or other disruptive behavior. If you observe or experience such behavior by anyone on our premises or jobsites, whether or not they are an employee, report it immediately to a supervisor or manager. Supervisors and managers who receive such reports should seek advice regarding investigating the incident and initiating appropriate action.

Threats or assaults that require immediate attention by POLICE should be reported by calling 9-1-1. Management will support all efforts made by supervisors in dealing with violent, threatening, intimidating or other disruptive behavior in our workplace and will monitor whether this policy is being implemented effectively.

President / CEO

Definitions

Physical assault: Any physical force or threat of physical force to create fear and control another person. Some examples include hitting, blocking, shoving, choking, slapping, or biting, or pulling hair, threats of violence, and using a weapon or other objects to threaten, hurt or kill.

Sexual assault: Any unwanted sexual act done by one person to another.

Sexual harassment: is interpreted as objectionable comments or conduct of a "sexual" nature. However, sexual harassment, in the broader context of unequal treatment based on gender, may refer to instances where the behaviour is not overtly sexual in nature, but is related to the person's gender, and demeans or causes personal humiliation or embarrassment to the recipient. Examples include degrading words, rude jokes or sexual comments, name calling (e.g. "chick", "bitch"), physical contact, sexual demands, unwanted kissing or touching of a sexual nature, and insulting remarks about the person's sexual orientation.

Workplace Harassment: Engaging in a course of vexatious comment or conduct against a worker in a workplace that is known, or reasonably ought to be known, to be unwelcome.

Workplace Violence: means,

- a. The exercise of physical force by a person against a worker, in a workplace, which causes or could cause physical injury to the worker;
- b. An attempt to exercise physical force against a worker, in a workplace, which could cause physical injury to the worker; or
- c. A statement or behavior that it is reasonable for a worker to interpret as a threat to exercise physical force against the worker, in a workplace, that could cause physical injury to the worker.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act (Part III.0.1)

Roles and Responsibilities

Employer Responsibilities:

- Ensure that measures and procedures in the violence prevention program including sexual harassment are carried out. Hold management accountable for responding to and resolving complaints of violence.
- Ensure compliance by all who have a relationship with the organization, contractors, clients, etc.
- Post a copy of the policy in the workplace.
- Conduct risk assessments.
- Establish control measures.
- Establish and deliver training and education for all employees.
- Establish and deliver training to all supervisors to deal with complaints of workplace violence including sexual harassment
- Integrate safe behaviour into day-to-day operations.
- Develop a reporting process for incidents of workplace violence including sexual harassment.
- Investigate all reports or threats of violence in a prompt, objective, and sensitive way.
- Take corrective action.

- Ensure the Joint Health and Safety Committee of the hazard/accident/incident OHS Act Section 52.1

Supervisor Responsibilities:

- Enforce policy and procedures and monitor worker compliance.
- Identify and alert staff to violent persons and hazardous situations.
- Investigate all workplace violence using the organization's accident investigation procedure and form, and contact the police as required.
- Facilitate medical attention for employee(s) as required.
- Debrief those involved in the incident either directly or indirectly.
- Track and analyze incidents for trending and prevention initiatives.
- Ensure the workplace violence and harassment prevention program is reviewed at least once a year.

Employee Responsibilities:

- Participate in education and training programs so you can respond suitably to any incident of workplace violence or harassment.
- Understand and comply with the violence prevention policies and related procedures.
- Report all incidents or injuries of violence/harassment or threats of violence/harassment to your supervisor immediately. Assist in completion of the Workplace Violence Incident Report.
- Contribute to risk assessments.
- Seek support when confronted with violence/harassment or threats of violence.

Procedure

Workplace Violence Reporting and Investigation

- An employee who believes that they have been subjected to, witnessed, have knowledge of, or has a reason to believe workplace violence may occur shall report to their manager or supervisor. This report can be made confidentially at the employee's request. However, sharing information to ensure the safety of others and prevent recurrence may be necessary (e.g., contents of a police report).
- The reporting worker may make the report confidentially without leaving a copy in file indicating the need for confidentiality to their direct manager or supervisor (or in that person's absence, to another manager or supervisor).
- The manager or supervisor receiving the report investigates it immediately and ensures that measures are taken to safeguard workers and curtail the violence or harassment.
- If an allegation of workplace violence is made against a non-employee, the Manager or Supervisor shall contact the authorized representatives and inform them of the allegations made against the respondent and take appropriate action to ensure that employees are not subjected to further violence.
- No report of workplace violence/harassment or risks of violence may be the basis of reprisal against the reporting employee.
- The employer or agent of the employer reports all injuries to the MOL and WSIB as required by the Occupational Health and Safety Act and Workplace Safety and Insurance Act.

Response Procedures

All reports of workplace violence or potential incidents will be taken seriously, will be documented, and investigated. The form of investigation will depend on the circumstances and may involve appropriate law enforcement or other competent person as determined by ZEREM ELECTRICAL SERVICES LTD, taking into consideration the nature of the workplace violence and the concerns of employee(s) who experienced the workplace violence.

- Using the Violence Incident investigation form, the manager or supervisor documents all reports of workplace violence/harassment, hazards and measures taken to address them.
- If the resolution of the incident is beyond the authority of a supervisor, she/he must make the CEO or equivalent aware of the report. The CEO or equivalent involves other managers or supervisors in the investigation as appropriate (e.g., when the incident involves clients or employees under another manager's or supervisor's area of responsibility).
- Management reviews all incident reports, monitors trends, and makes recommendations to the CEO or equivalent for prevention and enhancements to the workplace violence and harassment prevention program.
- The CEO or equivalent reviews reports of workplace violence/harassment and ensures that actions are taken.
- The managers or supervisors who investigate the reported incident warn all staff who might be affected about workplace violence. They also tell the reporting employee about the outcome

Investigation of Complaints

- Upon receipt of a formal complaint of workplace violence, the manager or supervisor will determine whether to investigate the incident internally or assign the investigation to an external person.
- Management may use Human Resources for guidance in following the investigation process.
- The investigation may include the following:
 - Interviewing the complainant and the respondent as soon as possible
 - Interviewing any witnesses
 - Advising all persons interviewed to refrain from discussing the complaint as well as the possible consequences.
- The investigator may make a finding of:
 - Sufficient evidence to support a finding of violation of this Policy,
 - Insufficient evidence to support a finding of violation of this Policy, or
 - No violation of this Policy.

The investigator(s) will prepare a written report of their findings, and forward that report to Senior Management, Human Resources and Supervisor.

The Senior Management, Human Resources and Supervisor will decide whether to dismiss or act upon the report from the investigator and will advise the Complainant and Respondent in writing of the outcome.

Consequences

No employee or any other individual affiliated with ZEREM ELECTRICAL SERVICES LTD shall subject any other person to workplace violence or allow or create conditions that support workplace violence. Any ZEREM ELECTRICAL SERVICES LTD employee that subjects another employee, client, or business associate of the organization to workplace violence may be subject to disciplinary action, up to and including immediate dismissal for just cause.

Additionally, discipline, up to and including immediate dismissal for just cause, may be imposed on the following individuals in the following circumstances:

- On employees who bring forward complaints in bad faith or for vexatious reasons; and
- On employees who have made a false accusation under this Policy, knowingly or in a malicious manner.

ZEREM ELECTRICAL SERVICES LTD will not tolerate reprisals or retaliatory measures against any employee, who in good faith raises a complaint of workplace violence within the meaning of this Policy. These protections apply to anyone who cooperates in the investigation of the complaint. Disciplinary action may be taken against any person who takes any reprisal against a person who reports workplace violence.

History of Violent Behavior OHS Section 32.0.5 and 32.0.6

An employer's duty to provide information to a worker under clause 25 (2) (a) and a supervisor's duty to advise a worker under clause 27 (2) (a) include the duty to provide information, including personal information, related to a risk of workplace violence from a person with a history of violent behaviour if,

- The worker can be expected to encounter that person in the course of their work; and
- The risk of workplace violence is likely to expose the worker to physical injury.

Limit on disclosure: No employer or supervisor shall disclose more personal information in the circumstances described in subsection (3) than is reasonably necessary to protect the worker from physical injury.

Domestic Violence OHS Section 32.0.4

If an employer becomes aware, or ought reasonably to be aware, that domestic violence that would likely expose a worker to physical injury may occur in the workplace, the employer shall take every precaution reasonable in the circumstances for the protection of the worker.

Risk Assessment OHS Section 32.0.3

Management (with worker involvement) assess workplace violence hazards in all jobs, and in the workplace as a whole. It reviews policies and procedures annually, as well as when new jobs are created, or job descriptions are changed substantially.

New employees will receive orientation to the workplace violent and harassment prevention program.

Program Review

The effectiveness of the workplace violence prevention program is evaluated annually by management.

Workers, Managers and Supervisors are accountable for establishing and implementing the policy and procedures related to workplace violence and harassment. Responsibility for complying with the health and safety policy is part of a manager's, supervisor's, and worker's job description. Included in the health and safety components of job descriptions are management responsibilities for enforcing policy and procedures, investigating, and responding to workplace violence and harassment.

Accountability

All workplace parties are accountable for complying with the policy, program, measures, and procedures related to workplace violence.

Records

All records of reports and investigations of workplace violence and harassment are kept for five years.

Policy Review

This workplace violence prevention policy and program will be reviewed annually by Management.

Workplace Violence Reporting Form

Location of Incident: _____ Name of Person: _____
 Completing Report
 Date of Incident: ____/____/____ Time: ____
 AM PM Reporting Date: ____/____/____ Time: ____
 AM PM

Alleged Victim

Name: _____ Age: Male Female
 Address: _____
 Victim is: employee visitor client other (specify)

Alleged Offender(s)

Name(s): _____	Name(s): _____
Address(es): _____	Address(es): _____
Age: <input type="checkbox"/> Male <input type="checkbox"/> Female	Age: <input type="checkbox"/> Male <input type="checkbox"/> Female
Description:	Description:

Relationship of the offender to the victim (if any):
 co-worker parent/spouse client visitor other (specify)

Other details (e.g. condition of individual, weapons involved):

Apparent motive:

Are you aware of any witnesses or other employees involved in this accident/illness? Yes No
 If yes, provide name(s), address(s),

Did the worker receive health care for this injury? Yes No
 If yes, when: ____/____/____ Time: ____
 AM PM

Where was the worker treated for this injury? (Please check all that apply)
 On-site health care Ambulance Emergency department Admitted to hospital
 Health professional office Clinic Other: _____

Details of the Incident

Type of incident: (physical injury, verbal abuse, threatening behaviour, verbal threat, written threat, damage to personal/other property)

Did the accident happen on the employer's premises (owned, leased or maintained)? Yes No
Specify where (Store Room, Kitchen, Stage, Parking Lot, etc.). (attach a sketch if possible)

Outcome: (i.e. assailant apprehended, police called, time lost, emotional shock or distress, supervisors informed, medical treatment, peer support, work reassignment)

Other relevant information: (to be completed, as appropriate)

Is this a second or repeat incident involving the same individuals?

Describe what happened prior to and during the incident/illness. Include any details that may have contributed. (If more room required attach another page)

Suggested preventive or remedial actions:

Report Submitted to:

Name: _____

Title: _____

Location: _____

Chapter 25 Workplace Harassment Prevention Program

Purpose

This policy is intended to:

- Maintain a work environment that is free from all types of harassment;
- Establish a process for reporting, investigating, and responding to complaints of harassment in an effective and timely manner;
- Ensure that Management, Supervisors, and employees as well as contractors and visitors understand their roles and responsibilities as they relate to harassment prevention in the workplace; and
- Raise awareness amongst all employees about the process for dealing with and reporting incidents of harassment.

Scope

This policy applies to all persons, contractors, and employees of ZEREM ELECTRICAL SERVICES LTD.

Policy

Zerem is committed to providing a safe and healthy workplace free from harassment in compliance with the Occupational Health and Safety Act. Zerem considers workplace harassment unacceptable and will not tolerate the behaviour.

Definitions

Racial Harassment: Unwanted comments, racist statements, slurs, and jokes, racist graffiti, and literature including articles, pictures, and posters.

Sexual Harassment: A course of comment or conduct based on an individual's sex or gender that is known or reasonably ought to be known to be unwelcome. Gender-based harassment is a subset of sexual harassment. It refers to behaviour that polices and reinforces traditional heterosexual gender norms.

Forms of sexual and gender-based harassment could include:

- Gender-related comments about a person's physical characteristics or mannerisms;
- Paternalistic comment or conduct based on gender, which undermines a person's self-respect or position of responsibility;
- Unwelcome physical contact;
- Suggestive or offensive remarks or innuendoes about members of a specific gender;
- Propositions of physical intimacy;
- Gender-related verbal abuse, threats, or taunting;
- Leering or inappropriate staring;
- Bragging about sexual prowess or questions or discussions about sexual activities;
- Offensive jokes or comments of a sexual nature about an employee or client;
- Rough and vulgar humour or language related to gender;
- Display of sexually offensive pictures, graffiti, or other materials, including through electronic means; or
- Demands for dates or sexual favours.

Workplace: means any land, premises, location, or thing at, upon, in or near which a worker works.

Workplace Harassment: means engaging in a course of vexatious comment or conduct against a worker in a workplace that is known or reasonably ought to be known to be unwelcome.

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act (Part III.0.1)

Roles and Responsibilities

Management Responsibility:

- Ensure that workplace harassment prevention program is reviewed on an annual basis with all employees;
- Ensure that workplace harassment prevention program is communicated to all contractors and visitors at the workplace;
- Ensure the reporting, investigating, and documenting of incidents of workplace harassment are established and are in place;
- Inform employees of the potential risk of workplace harassment;
- Take corrective action and monitor its effectiveness;
- Consult with the Joint Health and Safety Representative or Health and Safety Representative during development and amendments of the workplace harassment prevention policy and program;
- Ensure annual evaluation of the workplace harassment prevention program; and
- Ensure an immediate evaluation after an incident or if changes in the workplace warrant.

Supervisor Responsibility:

- Ensure that all employees and contractors receive appropriate training and education regarding workplace harassment;
- Promote and encourage reporting of incidents of workplace harassment;
- Follow procedures for reporting, investigating and documenting workplace harassment;
- Provide instructions to workers on procedures for preventing workplace harassment; and
- Provide recommendations towards improving the workplace harassment prevention program.

Employee Responsibility:

- Participate in training and education regarding workplace harassment;
- Follow procedures for the prevention and reporting of incidents of workplace harassment;
- Report incidents of workplace harassment to your immediate supervisor and/or management;
- Provide recommendations towards improving the workplace harassment prevention program.

Procedure

Responsibility of Individual Employees

Each individual employee has the responsibility to refrain from harassment in the workplace. While any employee should feel free to simply ask a co-worker or an employee of a customer or vendor to stop an offensive behavior, there may be situations when this is not a comfortable or appropriate initial step. In that case, if you believe you have been the subject of harassment, you should report the alleged conduct immediately to your Supervisor or Manager.

An investigation of any complaint will be undertaken immediately. For further assistance, you can contact the Ontario Human Rights Commission.

An individual employee, who harasses a fellow worker, is liable for their individual conduct. Any employee found to have harassed another employee, or to have retaliated or discriminated against an employee for complaining about harassment; will be subject to appropriate disciplinary actions up to and including termination.

Employees are strongly encouraged to notify the appropriate person if they feel that they have been subject to harassment. By reporting the incident immediately, a complete investigation can be made, and the appropriate actions taken. Please do not assume that the organization is aware of your problem. It is your responsibility to bring your complaint or concern to our attention so that we can help you resolve it.

Employees are prohibited from using any of Zerem's electronic data systems for the purpose of sending or distributing any materials that may reasonable be considered offensive based on race, sex, or any other protected category. Similarly, employees are prohibited from using the Internet during work time, while on ZEREM business, or on ZEREM equipment to access Internet sites, which contain offensive material, related to sex, race, or other protected categories. Employees who violate these prohibitions will be subject to discharge.

Responsibility of Supervisors

Each supervisor is responsible for maintaining the workplace free from harassment. This is accomplished by promoting a professional environment and by dealing with harassment as with all other forms of employee misconduct.

Specifically, a supervisor must address an observed incident, of harassment or a complaint with seriousness, take prompt action to investigate it, report it and end it, implement appropriate disciplinary action, and observe strict confidentiality. This also applies to cases where an employee tells the supervisor about behavior that constitutes harassment but does not want to make a formal complaint.

In addition, supervisors must ensure that no retaliation will result against an employee making a harassment complaint.

False and Frivolous Complaints

ZEREM ELECTRICAL SERVICES LTD recognizes that the issue of whether harassment has occurred requires factual determination based on all the evidence received. We also recognize that false accusations of harassment can have serious effects on innocent people.

False and frivolous charges refer to cases where the accuser is using a harassment complaint to accomplish some end other than stopping harassment. It does not refer to charges made in good faith that cannot be proven.

Given the seriousness of the consequences for the accused, a false and frivolous charge is a severe offense that can itself result in disciplinary action. We trust that all employees will continue to act in a responsible and professional manner to establish a harassment-free work environment.

Response Procedures

All reports of workplace harassment will be taken seriously, will be documented, and investigated. The form of investigation will depend on the circumstances and may involve appropriate law enforcement or other competent person as determined by ZEREM ELECTRICAL SERVICES LTD, taking into consideration

the nature of the workplace harassment and the concerns of employee(s) who experienced the workplace harassment.

- 1) Using the Violence Incident investigation form, the manager or supervisor documents all reports of workplace harassment, hazards and measures taken to address them.
- 2) If the resolution of the incident is beyond the authority of a supervisor, she/he must make Management aware of the report. Management may involve other managers or supervisors in the investigation as appropriate (e.g., when the incident involves clients or employees under another manager's or supervisor's area of responsibility).
- 3) Managers, Supervisors or JHSC reviews all incident reports, monitors trends, and makes recommendations to Management for prevention and enhancements to the workplace harassment prevention program.
- 4) Management reviews reports of workplace harassment and ensures that actions are taken.
- 5) The managers or supervisors who investigate the reported incident warn all staff who might be affected about workplace harassment. They also tell the reporting employee about the outcome.

Investigation of Complaints

- 1) Upon receipt of a formal complaint of workplace harassment, the manager, site manager or supervisor will determine whether to investigate the incident internally or assign the investigation to an external person.
- 2) Management may use Human Resources for guidance in following the investigation process.
- 3) The investigation may include the following:
 - a. Interviewing the complainant and the respondent as soon as possible;
 - b. Interviewing any witnesses; and
 - c. Advising all persons interviewed to refrain from discussing the complaint as well as the possible consequences.
- 4) The investigator may make a finding of:
 - a. Sufficient evidence to support a finding of violation of this Policy;
 - b. Insufficient evidence to support a finding of violation of this Policy; or
 - c. No violation of this Policy.

Chapter 26 Drug and Alcohol Program

Purpose

ZEREM ELECTRICAL SERVICES LTD is committed to promote a healthy, productive, and safe workplace free from impairment. In order to emphasize this commitment and to provide for prompt, effective management to any drug and/or alcohol use, which has or could have a negative impact, Zerem has a program regarding drug and/or alcohol use in the workplace:

ZEREM ELECTRICAL SERVICES LTD expressly prohibits use of drugs and/or alcohol while on ZEREM premises, in ZEREM vehicles, or while otherwise engaged in ZEREM business.

All employees are expected to comply fully with this program; failure to do so may subject an employee to disciplinary action, up to and including termination for just cause. Zerem will cooperate with law enforcement agencies in the investigation of conduct involving illegal drugs, as well as any other conduct prohibited by this program, as appropriate.

Scope

This policy and procedure apply to ZEREM premises at, upon, in or near which a worker and/or subcontractor works in the workplace.

Policy

Zerem is committed to providing a safe, healthy, and productive workplace where Employees are protected from the adverse effects of inappropriate use of medical drugs, non-medical drugs and/or alcohol. Employees are expected to perform their work duties safely, competently, and efficiently, without limitation arising from medical drugs, non-medical drugs and/or alcohol use or the impairment from medical drugs, non-medical drugs and/or alcohol use that risks their health or safety or that of any other person. This Policy is designed to promote cooperation among all Employees to prevent and address medical drugs, non-medical drugs and/or alcohol use and impairment in the workplace.

Employees shall report fit for duty for scheduled and unscheduled work.

Employees are required to inform their supervisors about the use of medical drugs, non-medical drugs and/or alcohol that may impact performance or compromise safety in the workplace.

Employees shall advise their supervisors whenever they witness concerns about a co-worker's fitness for duty.

Zerem shall assist and accommodate employees who voluntarily disclose a medical drug, non-medical drugs and/or alcohol dependence.

Assistance and accommodation shall be coordinated by Management.

Employees needing rehabilitation for medical drugs, non-medical drugs and/or alcohol abuse shall be encouraged to seek professional care and support through the Employee Assistance Program (if applicable) or through a qualified health care professional.

Employees who present unfit for work due to medical drugs, non-medical drugs and/or alcohol use shall be asked by their supervisor to leave the workplace and the incident shall be reported to management. Transporting the employee to their home will be provided by the Employer.

The possession, use, distribution and sale of medical drugs, non-medical drugs and/or alcohol and drug paraphernalia on ZEREM property is strictly prohibited.

Definitions

Addiction: The term “disability” covers a broad range and degree of conditions.

- Any degree of physical disability, infirmity, malformation or disfigurement that is caused by bodily injury, birth defect or illness and, without limiting the generality of the foregoing, includes diabetes mellitus, epilepsy, a brain injury, any degree of paralysis, amputation, lack of physical coordination, blindness or visual impediment, deafness or hearing impediment, muteness or speech impediment, or physical reliance on a guide dog or other animal or on a wheelchair or other remedial appliance or device;
- A condition of mental impairment or a developmental disability;
- A learning disability, or a dysfunction in one or more of the processes involved in understanding or using symbols or spoken language;
- A mental disorder; or
- An injury or disability for which benefits were claimed or received.

Alcohol: The intoxicating agent in beverage alcohol, ethyl alcohol or other low molecular weight alcohols, including methyl and isopropyl alcohol.

Drug: A medical drug, non-medical drug or other substance which has a physiological effect when ingested or otherwise introduced into the body.

Employee Assistance Program (EAP): An employer-sponsored benefit that provides confidential, professional counselling and advisory services for employees and immediate family members. The program provides access to services provided by a variety of professionals including psychologists, social workers, and addiction specialists.

Fit for Duty: An Employee is able to perform the duties of the job with efficiency, competence and in a safe manner not under the impairment of any medical drugs, non-medical drugs and/or alcohol that will hinder job performance or compromise the safety of the employee or others.

Impaired/Unfit for Duty: The inability to perform work duties safely, competently, or efficiently without limitation resulting from Substance use, aftereffects of medical drugs, non-medical drugs and/or alcohol use or otherwise being under the impairment of medical drugs, non-medical drugs and/or alcohol.

Medical Drug: Prescribed or approved medications used to treat and cure diseases, and to promote health.

Non-Medical Drug: Non-medical use of prescription opioids and other substances and/or controlled substances.

Reasonable Suspicion: A legitimate reason, based on logic and facts or training, to believe that an employee is impaired. Examples of reasonable suspicion might include but are not limited to:

- Direct observation of drug use or physical symptoms of drug use (slurred speech, uncoordinated movement, etc.)
- Abnormal conduct
- Evidence that an employee has tampered with their drug results
- Erratic behavior while at work or significant deterioration in work performance
- Evidence that the employee has used drugs during work or in the workplace

Legislation and Standards

Applicable Legislation:

- Occupational Health and Safety Act

Roles and Responsibilities

Responsibility for the success of the Drug and Alcohol Policies across Zerem is shared by visitors, contractors, employees, supervisors, and Managers.

Management Responsibilities

- Provide a safe and fair workplace.
- Provide prevention programs that emphasize awareness, education, and training regarding the use of medical drugs, non-medical drugs and/or alcohol.
- Ensure Zerem's Drug and Alcohol Policy supports other performance management systems.
- Ensure employee assistance services are available to workers (where applicable).
- Assist workers in obtaining confidential assessment, counselling, referral, and rehabilitation services.
- Actively support and encourage treatment programs and re-employment opportunities when applicable.
- Provide supervisory training and awareness in recognizing and dealing with the use of medical drugs, non-medical drugs and/or alcohol in the workplace in accordance with the employer guidelines.
- Ensure that all employees understand the content of the policy by including the policy in the employee orientation packages.
- Ensure Drug and Alcohol testing are performed in accordance with current standards as set by a credible third-party lab.
- Identify safety-sensitive positions within the organization.

Supervisor Responsibilities

- Know and understand the Drug and Alcohol Policy and Procedures
- Ensure safe operations and effectiveness of the program
- Participate in "Reasonable Suspicion" training to become knowledgeable about the use of medical drugs, non-medical drugs and/or alcohol and be able to recognize behaviours and other indicators.
- Guide employees who voluntarily seek assistance for drug and/or alcohol addiction to the appropriate resources and maintain, under all circumstances, confidentiality.
- Make the necessary arrangements, if in the course of any performance related discussion, an employee states they have an addiction with medical drugs, non-medical drugs, or alcohol.
- Take the appropriate steps to investigate any violation, or suspected violation of this Program.
- Request and arrange for a drug and/or alcohol test in a pre-access, post-incident /near miss, or reasonable suspicion (as and when required to do so under this program).
- Report to management in the event of a breach in policy.

Employee Responsibilities

- Each employee is responsible to perform their job safely and responsibly, in all ways consistent with established ZEREM policies and procedures.

- Read and understand this program and perform their responsibilities under it.
- Report and remain fit for duty throughout the workday or shift, and when “on call” status is scheduled.
- Report any conditions which may affect their ability to perform work safely to their supervisor.
- Seek advice and follow appropriate treatment in the event of a current or emerging alcohol or drug addiction and follow the recommended treatment and monitoring programs.
- Intervene, if appropriate, to encourage a co-worker to access assistance before an alcohol or drug addiction impacts performance or safety.
- Notify your supervisor or management if there is suspicion that an employee, subcontractor, or visitor is not fit for duty.
- Co-operate with an investigation regarding a violation of this program, including any request to submit for testing when required to do so under this program.

Contractor Responsibilities

All contractors are expected either to adopt this Policy and its Procedures as their own or to develop and enforce their own Drug and Alcohol Policy as it relates to their and their subcontractors’ employees (if any) when engaged in work on behalf of Zerem or while on ZEREM projects/workplaces.

Training, Education and Assistance

Zerem is committed to educate its employees regarding the safety risks associated with the use of alcohol, medical drugs and non-medical drugs and the assistance available under the Employee Assistance Program (EAP) where available. This Program stresses the importance of prevention and early identification ensuring all supervisors and managers participate in “Reasonable Suspicion” training.

An employee request for assistance from EAP (where available) before drug or alcohol testing required under this program will not in of itself be used as the basis for disciplinary action. An employee’s request for assistance from EAP (where available) after drug or alcohol testing will not be a defense to the imposition of disciplinary action where a violation of this Program has already occurred.

Zerem recognizes that drug and/or alcohol addiction are treatable illnesses, and that early intervention can significantly improve the probability of a lasting recovery. Individuals who suspect they have a substance addiction or emerging alcohol, or drug addiction are expected to seek advice and to follow appropriate treatment promptly before job performance is affected or violations of this program occur.

Zerem will accommodate an employee, in appropriate circumstances, who has an alcohol or drug addiction. Such accommodation may include a leave of absence to seek treatment.

Naloxone Kits

Where ZEREM ELECTRICAL SERVICES LTD becomes aware, or ought reasonably to be aware, that there may be a risk of a worker having an opioid overdose at a workplace where that worker performs work for the employer, or where the prescribed circumstances exist, the employer shall,

- provide and maintain in good condition a naloxone kit in that workplace;
- provide training to recognize an opioid overdose, to administer naloxone and to acquaint the worker with any hazards related to the administration of naloxone, and shall meet such other requirements as may be prescribed; and
- Ensure that, at any time there are workers in the workplace, the naloxone kit is in the charge of a worker who works in the vicinity of the kit and who has received training.

Procedure

In any work situation where an employee is suspected of being under the impairment of medical drugs, non-medical drugs and/or alcohol, the employee may be required to undergo a Fitness for Duty Assessment, which may include testing for alcohol and/or specified drugs.

If during the Fitness for Duty assessment, the employee is found to be unfit for duty, or if an assessment cannot be performed, the employee will be provided with transportation appropriate in the circumstances.

Safety Sensitive Positions

Safety Sensitive Positions will be identified by Management (i.e. driving, operating equipment or tools),

Identified Safety Sensitive Positions will include:

- Any position having a direct role in operations or construction where impaired performance could reasonably be expected to result in an incident having significant negative effects upon the health and/or safety of ZEREM ELECTRICAL SERVICES LTD employees, contractors, customers, or the public, or a significant negative impact to the environment;
- Positions without direct involvement at the operational level but in which decisions, failures to act, or inappropriate action could reasonably be expected to result in an incident having significant negative effects upon the health and/or safety of ZEREM ELECTRICAL SERVICES LTD employees, contractors, customers, or the public, or a significant negative impact to the environment; and
- The temporary performance of any of the above roles.

Testing

All testing must be performed by an approved Drug/Alcohol Testing Service via Third Party Administration that uses a Substance Abuse and Mental Health Services Administration (SAMHSA) certified laboratory. Specimens are either collected and tested at the same site or collected at an independent collection site.

If an employee refuses to submit to drug or alcohol testing in accordance with the procedures set out in this program, the employee may be subject to discipline up to and including termination of employment for cause.

ZEREM ELECTRICAL SERVICES LTD reserves the right to modify, amend, revise, or replace this program at any time in its sole discretion without notice to employees.

Drug and Alcohol Work Rule

An employee's proper use of medical drugs prescribed by a qualified physician for that employee, is not prohibited by this Program. It is each employee's responsibility to check with a qualified physician regarding whether the use of any medication may adversely affect performance or safety at work.

Employees who are using medical drugs or non-medical drugs which impairs, or which may reasonably be expected to impair, the employee's ability to perform work in a safe and productive manner, are required to report the use of such drugs to their supervisor and/or Management. Such disclosures will be treated confidentially by Zerem.

Upon such a disclosure set forth in this Program, Management, and where appropriate, the employee and the employee's physician, will determine the appropriate response consistent with applicable law.

Zerem does not unlawfully discriminate against employees on the basis of disability or addiction. Employees who seek a reasonable accommodation due to an underlying disability or addiction are encouraged to submit any requests to Management.

Where applicable employees have access to an Employee Assistance Program (EAP) that can offer assistance with substance use. Specifically, the EAP can provide confidential information concerning the dangers of substance use and to help in obtaining counseling, treatment and/or rehabilitation for drug and/or alcohol use. EAP eligibility information and EAP contact information can be obtained through management.

Fit for duty is a requirement of employment. All employees must maintain the ability to perform assigned duties safely and acceptably without any limitations due to the use or after-effects of alcohol, medical and/or non-medical drugs. Employees are strictly prohibited from:

- Possessing, misusing, selling, purchasing, using or being under the impairment of alcohol, medical drugs, or non-medical drugs while on ZEREM premises, in ZEREM vehicles, or while otherwise engaged in ZEREM business; and
- Failing a duty to proactively disclose being impaired in the workplace by alcohol, medical drugs, or non-medical drugs.

Medications

When an employee is taking prescribed or approved medications, it is expected that those are used responsibly and in accordance with the pharmacist's or physician's instructions.

All employees are expected to:

- Report if medication they are using will cause the employee to be impaired in the workplace; and
- Report any conditions which may affect their ability to perform work safely to a supervisor.

Note: Herbal supplements and other non-medical drugs may, either alone or in combination with medical drugs, have an adverse effect on performance and/or cause an employee to be impaired in the workplace.

WHO, WHEN, AND WHAT WILL BE TESTED

- Employees may be tested for drug and/or alcohol:
 - where required as a condition of accessing a customer jobsite.
 - after an accident or incident involving the employee (e.g., motor vehicle accident, equipment accident or a near miss);
 - where there is Reasonable Suspicion;
 - as a condition of reinstatement to active employment or continued employment after a breach of the Drug and Alcohol Policy;
- If a customer requires Zerem Electrical Services Ltd employees be drug and/or alcohol tested for access to the customer's jobsite, the customer's requirements must be reviewed and approved by Management.
- If an employee is involved in an accident/incident (e.g., motor vehicle accident, equipment accident or a significant near miss) or a manager/supervisor has
- Reasonable Suspicion, the Supervisor must notify Management immediately with the grounds for Reasonable Suspicion.

In the case of Reasonable Suspicion, the Manager, may direct the employee be drug and alcohol tested, as follows:

- 1) The employee must be taken immediately to (either by a supervisor/manager or by paid transportation (e.g., taxi) to the testing facility.
 - 2) After the test, the employee must also be taken from the testing facility to the workplace and/or home.
 - a. If the Supervisor and, if necessary, Manager conclude there is no Reasonable Suspicion, then the employee may not be tested.
 - b. The alcohol test must be administered within a maximum eight (8) hours following a post incident and/or reasonable suspicion determination. The controlled substance test must be administered within a maximum of 32 hours following a post incident/near miss and/or reasonable suspicion determination.
- How tested:
 - Controlled Substances must be tested from a urine specimen taken from the individual at the testing facility.
 - Alcohol testing must be performed by the individual giving a breath, saliva, or urine sample.
 - All tests will be performed by licensed technicians at licensed testing facilities.

Medical Accommodation - Marijuana (Cannabis Plant)

Employees will be required to supply medical proof of prescription with sufficient medical indication that the Employee actually has to ingest marijuana during working hours, together with sufficiently detailed information regarding the frequency, volume and method of ingestion relating to such prescribed medical use.

All Employees shall disclose any use of medical marijuana in the workplace.

Impaired Driving

Charges, Suspensions, or Convictions

Any employee charged with or convicted of an impaired driving related offence while operating a ZEREM vehicle must immediately report the incident to their supervisor.

In addition, any employee whose operator's licence is suspended or who is charged with or convicted of an impaired driving related offence as a result of roadside testing must immediately report such suspension and/or charge/conviction to their supervisor if within the period of suspension, they are required to drive a ZEREM assigned vehicle. The supervisor will contact their supervisor for the determination of whether a *Fitness for Duty* assessment should be arranged.

Accommodation

If reasonable and possible, employees may be temporarily accommodated in an alternative position. Any such accommodation should not be considered absolute or indefinite. If driving is an essential part of the employee's work duties and an alternative placement is not feasible, the employment contract may be treated as terminated.

Failure to Report

Failure to immediately report an impaired driving or related charge, conviction, or suspension or resulting effect upon the employee's operator's license may result in discipline up to and including termination for cause.

Consequence of Non-Compliance

The employee may be temporarily suspended with pay and be removed from the workplace pending one or more of the following:

- Receipt of an evaluation from an appropriate professional as to whether the employee has a drug or alcohol problem;
- The approval of management, after considering the job functions to be performed, the safety of the work environment, and any appropriate conditions governing the employee's return to work; or
- A determination of whether a breach of this Policy has occurred and if so, the appropriate disciplinary action to be taken.

Disciplinary action

Any individual reporting for duty or during work is affected by medical drugs, non-medical drugs and/or alcohol will not be permitted to remain on the premises and may be subject to disciplinary action up to and including termination for cause.

Confidentiality

Unless otherwise authorized by law, confidentiality of employee medical information will be maintained to the greatest extent possible, and disclosure will be restricted to where it is necessary for related health and safety concerns. Only information relating to the level of impairment (e.g., fit for duty and any restrictions that may apply) may be shared with Zerem as necessary for determining fit for duty, return to work, and/or appropriate work accommodations.

Guidelines

The Canadian Centre on Substance Abuse (CCSA) disseminates information on the nature, extent, treatment, and prevention of substance abuse. Visit their web site at www.ccsa.ca

Appendix

Drug and Alcohol Policy Statement

Drug and Alcohol Policy Statement

ZEREM ELECTRICAL SERVICES LTD is firmly committed to providing its employees with a safe workplace and to promoting employee health.

Particularly given the nature of our business, employees impaired by drugs and/or alcohol in the workplace present a safety hazard to themselves, their co-workers, our customers, our workplace guests, the general public, the environment, and Zerem's assets.

For the purposes of this policy, "workplace" means ZEREM ELECTRICAL SERVICES LTD premises and any other place where ZEREM ELECTRICAL SERVICES LTD employees perform their work or are otherwise carrying out Zerem's business, including when driving ZEREM vehicles.

Employees are prohibited from:

- a) misusing, possessing, selling, purchasing, soliciting, or distributing medical drugs, non-medical drugs and/or alcohol in the workplace¹;
- b) reporting unfit for duty when impaired by medical drugs, non-medical drugs and/or alcohol;
- c) being impaired in the workplace by medical drugs, non-medical drugs and/or alcohol.;

¹ Moderate consumption of alcohol may be permitted at ZEREM sanctioned social events.

Individuals properly using medical drugs that may impair their job performance are required to make their supervisor aware, so the Supervisor can consider appropriate measures.

Employees who abuse drugs and/or alcohol or who are otherwise at risk of breaching this policy are encouraged to make use of Zerem's Employee Assistance Program (if applicable).

Any breach of this policy is grounds for disciplinary action, up to and including termination of employment for cause.

In accordance with applicable law, ZEREM ELECTRICAL SERVICES LTD will accommodate an employee with a drug and/or alcohol addiction.

Employees may be tested for alcohol and drugs:

- a. where there is Reasonable Suspicion;
- b. after an accident or incident (e.g., a near miss);
- c. where required as a condition of accessing a customer jobsite. ("Pre-Access")

If you have any questions regarding any aspect of this policy, please ask your supervisor or contact Management.

PLEASE NOTE ALL RESULTS ARE KEPT CONFIDENTIAL

Chapter 27 Infectious Disease Control Program

Purpose, Scope, and Policy

Purpose

ZEREM ELECTRICAL SERVICES LTD has established this program to provide guidance in the protection of our employees during exposure to an infectious disease event.

It is the goal of ZEREM ELECTRICAL SERVICES LTD during an infectious disease event to operate effectively and ensure all essential services are continuously provided while keeping employees safe within the workplace.

ZEREM ELECTRICAL SERVICES LTD is committed to providing information from authoritative sources about the nature and spread of infectious diseases, including informing of signs and symptoms as well as required steps to follow in the event of an infectious disease outbreak.

This program is NOT a disease-specific Exposure Control Plan. This program provides general direction to begin protecting the workplace against an infectious disease outbreak. A disease-specific Exposure Control Plan must be established to protect workers against specific hazards and identify specific control measures for implementation.

This document has been developed in accordance with the Ministry of Health and Health Canada guidelines to keep employees safe and must be updated by the user as guidelines and recommendations change.

Scope

This program applies to all employees and all operations during an epidemic or pandemic infectious disease event identified by federal, provincial, and local authorities requiring extraordinary measures for containment and mitigation.

Policy

ZEREM ELECTRICAL SERVICES LTD will take proactive steps and define measures for implementation in an effort to protect the workplace in the event of an infectious disease outbreak.

Roles & Responsibilities

Employer Responsibilities

Management shall provide continually updated information from recognized sources such as Health Canada, the Ministry of Health, the Ministry of Labour, Training and Skills Development, and others as applicable to the specific event. These sources should be accessed regularly to identify and comply with any required posting or informational requirements.

ZEREM ELECTRICAL SERVICES LTD will provide employees with information, education, training, personal protective equipment, and control measures to reduce employee exposure to an infectious disease as much as reasonably achievable.

Employee Responsibilities

Employees are responsible for following safety precautions and policies set forth by management and will attend all safety training as outlined in this program.

Employees shall follow all established ZEREM policies related to reducing exposure to and spread of a potential infectious disease. Employees who are infected or exposed, or suspect they are infected or have been exposed must inform their supervisor immediately upon recognizing the potential infection or exposure.

Definitions

Disinfection: The process of cleaning something, especially with a chemical, in order to destroy infectious organisms.

Epidemic: An outbreak of disease that spreads quickly and affects many individuals at the same time.

Infectious Disease: infectious diseases are caused by pathogenic microorganisms, such as bacteria, viruses, parasites, or fungi; and can be spread, directly or indirectly, from one person to another.

Isolation: A process used to keep an infected person separate from others to prevent the spread of disease.

Pandemic: A type of *epidemic* (one with greater range and coverage), an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population.

Quarantine: A process used to keep a person exposed to an infectious disease away from others to prevent the possible spread of disease.

Physical Distancing: Also called “social distancing”, means keeping space between yourself and other people outside of your home.

Program Elements

The following elements are addressed in this program:

- Monitoring guidance from federal, provincial, and local agencies
- Evaluating the risk of exposure at the workplace
- Developing contingency plans
- Implementing basic infection control measures
- Developing policies and procedures for reducing spread of infection
- Implementing hazard control measures
- Training

Hazards

Infectious diseases may spread at different rates and have different effects on individuals. The same infectious disease may show no signs or symptoms on one individual and be fatal to another. Some diseases are easily spread, others have a low rate of infection. There are different routes of exposure as well; some diseases are airborne and can be caught by breathing in the germs, others require ingestion or skin contact.

Regardless of the likelihood of infection and rate of spread, infectious diseases can have a toll on both the infected individual and their family.

Hazard Control Measures

The following measures must be implemented to reduce and/or eliminate the dangers associated with an infectious disease epidemic or pandemic event. This program will be reevaluated on an on-going basis to ensure all applicable requirements can effectively and consistently be implemented. Health Canada and

Ministry of Health requirements should be covered in each daily safety briefing prior to the start of the shift. These topics should include physical-distancing, hand-sanitizing, identifying symptoms of the disease, and the items identified for site-specific plans.

Recognizing Signs and Symptoms

Signs and symptoms of infection vary depending on the infectious disease. Health Canada and provincial websites should be visited daily to ensure the most recent information and updates are available. As information and recommendations change, update any information bulletins, procedures, policies, or guidelines to reflect the change(s).

The following signs and symptoms are indicative of a serious infection. **Immediate Medical Attention** should be requested for anyone experiencing these signs and symptoms:

- Difficulty breathing or shortness of breath in severe cases
- Persistent pain or pressure in the chest
- Loss of consciousness
- Bluish lips or face due to breathing difficulty

Call emergency medical services (911) for any medical emergency: When calling, notify the operator that the emergency may be related to an infectious disease. Have the patient don a facemask or face covering before medical help arrives.

Some signs and symptoms related to infectious disease can include (but are not limited to):

- Fever
- Cough and/or sore throat
- Fatigue
- Runny or stuffy nose
- Body aches
- Headache
- Chills
- Nausea and/or vomiting

Monitoring Guidance

Information pertaining to any current epidemic or pandemic infectious disease event can be obtained from the following sources:

- Health Canada – www.canada.ca/en/health-canada.html
- Infrastructure Health and Safety Association – www.ihsa.ca
- Public Service Health and Safety Association – www.pshsa.ca
- Workplace Safety North – www.workplacesafetynorth.ca
- Workplace Safety and Prevention Services – www.wsps.ca

Local and provincial requirements are region specific and may be more stringent than those implemented by federal authorities. Provincial and local agencies should be consulted for information, recommendations, and requirements beyond those established by the federal government.

Evaluating Risk of Exposure

An evaluation of the risk of exposure must be conducted in order to develop contingency plans to address:

- Likelihood of exposure/infection due to Interaction with:

- General Public
- Persons known to be infected
- Persons suspected of being infected
- Increased absenteeism
- Worker susceptibility to the disease
- Non-occupation risk factors at home and in community settings
- Conducting operations with reduced workforce
- Interrupted supply chains

Most workplace operations present a low risk of exposure to an infectious disease with the greatest exposure risk coming from an infected employee or a visitor bringing the disease to work.

Regardless of the outcome of the risk evaluation, any protective measures established must follow all established federal, provincial, and local recommendations and requirements.

Exposure Control Plan

ZEREM ELECTRICAL SERVICES LTD will develop and implement an infectious disease-specific Exposure Control Plan that identifies the disease, the risks of exposure, and the specific control measures to be implemented to reduce the risk of exposure and spread of infection to the work force.

ZEREM ELECTRICAL SERVICES LTD is committed to providing authoritative information about the nature and spread of infectious disease including symptoms and signs to watch for, as well as required steps to follow in the event of an infectious disease outbreak.

When developing an exposure control plan the following considerations must be addressed.

- Signs and Symptoms of infection
- Action Steps
- Limiting the Spread of Infection in the Workplace
- Reducing Transmission Among Employees
- Protecting Employees with Personal Protective Equipment
- Supervision of Protective Measures
- Evaluation of Employee Health Status
- Implementing Hazard Control Measures
- Suspected or Confirmed Infection
- Sanitizing the Work Area After Possible Exposure
- Medical Information
- Recordkeeping
- Training

Infection Control Measures

The following control measures may be established to reduce and control the risk of infection:

- General housekeeping
- Hygiene – best practices
- Physical distancing
- Personal Protective Equipment
- Flexible work policies
- Action Steps

Staying Home When Ill

Many times, with the best of intentions, employees report to work even though they feel ill. During an infectious disease outbreak however, it is critical that employees not report to work while they are ill and/or experiencing signs and symptoms of infection.

Stay-at-home instructions should be developed taking federal, provincial, and local recommendations under consideration. Instructions should be tailored to the specific disease as a single approach for all exposures may not be the most effective method of reducing exposure or the spread of the disease. The Exposure Control Plan should address and identify stay-at-home contingencies for the duration of the epidemic or pandemic event.

Currently, the Centers for Disease Control and Prevention (CDC) recommends people with an infectious illness such as the flu remain home until at least twenty-four (24) hours after they are free of fever 37.8° C (100° F) or above or signs of a fever without the use of fever-reducing medications. Employees who report to work ill will be sent home in accordance with these health guidelines. Infected employees are required to stay home except to get medical care.

Call emergency medical services (911) for any medical emergency: When calling, notify the operator that the emergency may be related to an infectious disease. Have the patient don a facemask or face covering before medical help arrives.

Seeking Medical Attention

If you are having trouble breathing, seek medical attention immediately, but call first.

Call your doctor or emergency room and inform them of your symptoms before going in. They will advise you of recommended actions.

Wear a facemask: If available, put on a facemask before coming in contact with medical personnel including emergency medical technicians and ambulance personnel. If a facemask is not available don another face covering such as a bandana or scarf that can control the spread of fluids when coughing.

If you cannot put on a facemask or face covering, cover your coughs and sneezes and maintain established physical distance from others. This can help protect the people in the office or waiting room.

Follow care instructions from your healthcare provider and the Ministry of Health: Your local health authorities may give instructions on checking your symptoms and reporting information.

Home Isolation

In some cases, the medical care provider may recommend staying at home until signs and symptoms have passed.

In all cases, **follow the guidance of your healthcare provider and the Ministry of Health.** The decision to stop home isolation should be made in consultation with your healthcare provider and provincial guidelines. Local decisions depend on local circumstances.

Home isolation may be discontinued only under the guidance of your health care provider or parameters established by federal and/or, provincial government.

Caregivers

The following recommendations apply to those who are exposed to an infected person. These steps can reduce the risk of acquiring the disease or spreading it to others.

Those who are caring for others who are ill or may be infected should take all reasonable measures to protect themselves from exposure and infection. Whenever possible the ill person should wear a mask to reduce the spread of droplets or disease.

If the ill person is unable to wear a facemask (for example, because it causes trouble breathing), then the caregiver should wear a facemask when in the same room with them.

When leaving the room, wash hands with soap and water for at least twenty (20) seconds. Then remove the facemask and use a hand sanitizer having at least 60% alcohol content to sanitize the hands.

If you are feeling ill but are not experiencing signs or symptoms of infection, call ahead before visiting your doctor.

- Call ahead:
 - During an outbreak, medical visits for routine care may be postponed or done by phone or tele-medicine.
 - If a medical appointment cannot be postponed call your doctor's office and tell them you have been or may have been exposed. This will help the office protect themselves and other patients.
- **Wear a facemask:** If available, put on a facemask before you enter the building. If a facemask is not available don another face covering such as a bandana or scarf that can control the spread of fluids when coughing.

Note: During a public health emergency, facemasks may be reserved for healthcare workers.

General Housekeeping

ZEREM ELECTRICAL SERVICES LTD will ensure a clean workplace, including the regular cleaning of objects and areas which are frequently used, such as break rooms, conference rooms, door handles, etc. We require all employees to cooperate in taking steps to reduce the transmission of infectious disease in the workplace. The best strategy remains the most obvious—frequent hand washing with warm, soapy water; avoiding touching your face; covering your mouth whenever you sneeze or cough; and discarding used tissues in wastebaskets.

Alcohol-based hand sanitizers, anti-bacterial wipes and disinfectant spray will be made available in designated locations, but not limited to the break rooms and common areas in the workplace.

Limiting the Spread of Infection

Personal protective equipment (PPE) will be provided such as gloves, goggles, face shields and face masks as appropriate for the activity being performed.

Physical distancing or physical distancing measures may be implemented based on recommendations and guidance from federal, provincial, and local authorities having jurisdiction.

Unless otherwise notified, normal attendance and leave policies will remain in place.

Employees may face challenges in reporting to work during an infectious disease outbreak. Affected employees should take steps to develop any necessary contingency plans. For example, employees may need to plan for alternative sources of family care or transportation, and/or speak with supervisors about the potential to work from home temporarily or on an alternative work schedule.

Evaluating Employee Health Status

Prior to starting work each day, a daily safety briefing should be conducted to review updated information relating to the status of the epidemic/pandemic emergency, and updated requirements and recommendations for treatment and disease spread control.

Worker health status should be established. A questionnaire should be established to determine whether workers:

- Are experiencing signs or symptoms indicating an infection
- Have been in direct contact with someone known to be infected
- Have returned from travel to an area considered to have widespread concern for the infectious disease according to Health Canada
- Other questions specific to the disease that may assist in identifying the health status of the worker.

Most persons infected with an infectious disease present with elevated body temperature or fever. Consider also conducting temperature checks to ensure worker's body temperature is within normal limits (typically between 97°F [36.1°C] and 99°F [37.2°C]).

An elevated temperature (temperature above 100.4° F [38° C]) may be an indication of infection and may warrant additional assessment including clearance from a medical professional to report to work.

Reminder: A normal temperature reading is not a confirmation that the subject is disease free, only that they are not currently experiencing fever. An infected person may be symptom free and still be a carrier/spreader of the disease. Report elevated temperature to your supervisor.

Health Canada and Ministry of Health requirements must be covered in each daily safety briefing prior to the start of the shift. These topics should include physical distancing, hand-sanitizing, identifying signs and symptoms of the infectious disease and other items identified for site-specific plans.

Physical Distancing

ZEREM ELECTRICAL SERVICES LTD may implement the physical distancing guidelines found at the end of this program to minimize the spread of the disease in the workplace. Determination of implementation and specific guidelines will be made in accordance with federal, provincial, and local requirements. If implemented, the guidelines will remain in effect until rescinded by ZEREM ELECTRICAL SERVICES LTD.

The purpose of physical distancing is to reduce exposure to employees and others as much as possible to reduce the likelihood of disease transmission. Therefore every feasible effort must be made to keep close contact to a minimum. As much as feasible, worker positioning will be staggered as necessary to reduce density and maintain minimum physical distance separation between employees.

Where physical distancing is infeasible, worker proximity restrictions must be maintained as much as possible and a Job Hazard Analysis and PPE Hazard Assessment must be performed by a qualified person to identify associated hazards, alternative control measures, and PPE requirements to prevent transmission of the disease. Any alternative measures and PPE choices implemented must be at least as effective in preventing the transmission of disease as those established by federal, provincial, and local requirements or guidance.

When employees are required to work closely together, masks, or other acceptable face coverings as recommended by federal, provincial, or local requirements must be worn. In all instances however, requirements set forth by federal, provincial, or local authorities having jurisdiction must be followed.

'Choke points' and areas where high worker density is likely shall be identified and communicated to all employees. Communication can be accomplished through training or posting of signage in these areas reminding workers of the physical distancing requirements. Areas of limited capacity should be identified with an occupancy limit, and occupancy monitored and enforced. Examples of high-risk areas include elevator lobbies, elevators and hoists, stairways, hallways, break areas, and other areas of limited space and high traffic.

Security and Access

It is critical that potential exposures and sources of exposure are identified in order to control the spread of disease and to inform all employees, vendors, and visitors of possible exposure to the infectious disease in the workplace.

In order to maintain accountability and tracking of persons possibly exposed or sources of exposure, ZEREM ELECTRICAL SERVICES LTD requires all persons visiting the workplace to sign in on the Daily Attendance Log.

Visitors

A metered approach should be implemented to limit contact with outside visitors and vendors. In order to maintain business operations it may not be advisable to implement a blanket ban on visitors, vendors, suppliers, contractors, or workers from outside the organization.

A policy should be established that identifies the purpose and necessity of the visit. If your business is authorized to remain in operation, then support services should be prioritized for access over non-essential activities such as a scheduled visit with a prospective client or sales representative.

Service technicians may need access to perform service, maintenance, or repairs on a piece of equipment necessary for operation. Delivery personnel may need to drop off materials and pick up products. Other support personnel may include safety support services, inspectors, emergency services personnel, and other services that maintain and support essential operations.

Activities not related to business operations such as social visits, or a group tour should be deferred until the epidemic/pandemic event has ended.

Visitors deemed essential to the performance of safe and efficient work activities should be granted access.

A visitor access authorization form is provided at the end of this document to assist in determining access priority and authorization.

In all cases, visitors must be informed of and comply with the established control measures including PPE usage and physical distancing guidelines for the prevention of disease spread.

Meetings and Travel

All nonessential travel should be avoided. Employees who travel as an essential part of their job should consult with management on appropriate actions. Employees should avoid crowded areas and maintain physical distancing when using public transportation.

Telecommuting

One method of limiting travel is to work remotely when possible. Telework requests will be handled on a case-by-case basis. While not all positions will be eligible, all requests for temporary telecommuting

should be submitted to your manager for consideration. This approach is subject to change and may be modified to align with federal, provincial, and/or local guidance and proclamations.

Food Handling

Handle food carefully:

- Wash hands before eating food
- Limit food sharing
- Prepare meals at home for consumption
- Eat separately and maintain physical distancing from others rather than congregating in groups

Reducing Transmission Among Employees

ZEREM ELECTRICAL SERVICES LTD will keep all employees informed as to the latest information available from federal, provincial, and local authorities regarding the use of personal protective equipment, physical distancing, good hygiene practices, and other measures to employ specific to the disease.

In order to reduce disease transmission between employees, all employees who show signs and/or symptoms of infection shall immediately inform their supervisor and stay home. If already at work, employees should inform their supervisors whereupon the employee will be immediately separated from others and sent home.

All employees have a responsibility to limit the spread of disease. Continual vigilance should be exercised when monitoring your condition as well as the condition of others. If another worker is observed displaying possible signs or symptoms of infection, the supervisor must be informed so that protective actions can be taken. This is for the health and welfare of the worker showing signs of infection as well as all affected workers in the area.

Employees showing signs of infection should follow disease-specific recommendations by Health Canada and the Ministry of Health.

Employees who are not showing signs of infection but have an infected family member at home should notify their supervisor and follow disease-specific Health Canada and Ministry of Health recommendations.

If an employee is confirmed to be infected, employers should inform employees of the possible exposure to the disease in the workplace but maintain confidentiality as required by the Canadian Charter of Rights and Freedoms. Exposed employees should self-monitor for symptoms.

Hygiene

Germ transmission is often accomplished through poor personal hygiene practices.

- Avoid touching your face, mouth, nose, or eyes. Unwashed hands or gloves may transfer germs from your hands to your face and from there into your mouth, nose, or eyes eventually leading to infection. If you are infected, even unknowingly, you could be transferring your germs to commonly touched surfaces leading to the infection of others.
- Cover all coughs and sneezes using a tissue, if available, or the inside of your elbow rather than your hand. Properly discard all used tissues upon use, do not save them for later use or leave them laying around. Doing so can increase risk to others.
- Avoid phone to face contact to prevent germ transfer.
- Increase ventilation by opening windows or adjusting air conditioning

Hand Sanitation

Practicing hand hygiene is a simple yet effective way to prevent infections. Cleaning your hands can prevent the spread of germs, including those that are resistant to antibiotics and are becoming difficult, if not impossible, to treat.

- Wash your hands frequently with soap and water for at least twenty (20) seconds. This is especially important after blowing your nose, coughing or sneezing, using the restroom, and before eating or preparing food.
- If soap and water are not available, use an alcohol-based hand sanitizer having at least 60% alcohol content, covering all surfaces of your hands and rubbing them together until they feel dry.
- Avoid touching your eyes, nose, and mouth with unwashed hands.

Cross-contamination

Do not share dishes, cups, eating utensils, towels, food, or other objects that may have come in contact with the mouth and/or nose. For any commonly used appliances, wash them thoroughly with soap and water before restoring them for use.

Surfaces and objects that are commonly touched by others such as, telephones, guard and handrails, machines and machine controls, shared tools and equipment, hand tools, elevator control buttons, tabletops, doorknobs, light switches, countertops, desks, keyboards, toilets, faucets, sinks, handles, towels, dispensers, and other items should be frequently sanitized with approved sanitizing products such as alcohol-based hand sanitizers, anti-bacterial wipes, and disinfectant spray.

Assign designated personnel to wipe down these and other identified commonly touched surfaces at the end of the day prior to leaving the facility/premises.

Personal Protective Equipment

Personal Protective Equipment (PPE) can be an effective method of reducing risk of exposure to infectious disease. Depending on the type of disease exposure and the type of work being performed this may include the use of disposable medical or chemical protective gloves, splash shields, protective eyewear or goggles, and respirator masks.

ZEREM ELECTRICAL SERVICES LTD will follow recommendations established by governmental guidance when requiring PPE use. Where guidelines are limited or lacking ZEREM ELECTRICAL SERVICES LTD will perform a PPE Hazard Assessment to identify whether PPE is needed and what type will be used.

ZEREM ELECTRICAL SERVICES LTD will refer to the latest information from federal, provincial, and local guidelines and instructions for proper PPE selection and usage. Provincial and local recommendations may also apply, and applicable health and safety associations should be consulted for more information. In all instances however, requirements set forth by federal, provincial, or local authorities having jurisdiction must be followed.

When employees are required to work in close proximity, masks or other acceptable face coverings as recommended by federal, provincial, and local guidance must be worn.

Personal protective equipment (PPE) identified as necessary either by federal, provincial, or local requirements or through Job Hazard Analysis and PPE Hazard Assessment for protection against disease exposure will be provided as appropriate for the activity being performed.

When requiring the use of PPE in the workplace employers bear certain responsibilities including (but not limited to):

- PPE hazard assessment
- PPE selection
- Employee training:
 - Selection of appropriate PPE
 - Use and care of PPE
 - Maintenance and storage of PPE.

If PPE recommendations established by governmental guidance prevent work operations or make work operations infeasible, an assessment must be made to identify alternative measures. A Job Hazard Analysis and a PPE Hazard Assessment must be performed to identify associated hazards, alternative control measures, and PPE requirements to prevent transmission of the disease. Any alternative measures and PPE choices implemented must be at least as effective in preventing the transmission of disease as those established by federal, provincial, and local guidance.

If alternative measures cannot be established, or do not provide an effective level of protection, it may be necessary to cease those operations until the emergency is over. For example, the alternative measure selected exposes employees to another risk, or necessary equipment (such as recommended masks) is not available.

Respirators

Respirator use can cause medical distress in some workers and when required, respiratory protection program requirements apply. A written respiratory protection program must be implemented, and medical surveillance must be made available to all employees who are required to wear a respirator. Other requirements include the employer providing respirators, medical surveillance, training, and fit testing before permitting employees to use the respirator.

When required, an engineered respirator mask recognized to be effective against exposure should be used. Respirators may range from an N95-rated respirator mask to cartridge filter face masks to supplied-air respirators and self-contained breathing apparatus. An N95-rated respirator is typical but always refer to federal, provincial, and local guidance when selecting PPE for breathing protection. When using N95-rated respirators, medical respirators are best and are available from medical supply sources. If an N95-rated medical mask is not available, then another N95-rated mask can be used. These masks can be acquired from business and home-supply stores, hardware stores, or online.

If an N95-rated mask is not available, then ZEREM ELECTRICAL SERVICES LTD will provide alternative options designed to protect against fluid exposure following recommendations established by recognized agencies such as Health Canada or the Ministry of Health.

Voluntary Use of Respirator Masks

When used voluntarily, workers should be advised that if they experience any medical distress while wearing a respirator, they should discontinue use and seek medical attention before resuming respirator use.

When permitting voluntary use of respirator masks, employers must establish and implement those elements of a written respiratory protection program necessary to ensure that any employee using a respirator voluntarily is medically able to use that respirator and that the respirator is properly cleaned, stored, and maintained.

Exception: Employers are not required to include in a written respiratory protection program, those employees whose only use of respirators involves the voluntary use of filtering facepieces (dust masks).

Improvised Face Coverings

In some cases, Health Canada or the Ministry of Health has recommended the use of improvised face coverings to reduce droplet spread for the protection of others from disease exposure when physical distancing cannot be maintained. Improvised face coverings may be self-manufactured masks using common materials, scarfs or bandanas, or other masks such as winter facemasks or balaclavas. Wearing a face covering over your mouth and nose may reduce your exposure as well as reduce exposure to others to any droplets you may expel.

NOTE: Follow all federal, provincial, and local guidance as it pertains to the use of face coverings.

When respirators or surgical masks are not available then improvised face coverings may be considered. Health Canada and the Ministry of Health have advised the use of simple cloth face coverings to slow the spread of infection by providing a barrier against outside exposure and containing any droplets expelled by the infected person.

Improvised face coverings should fit snugly but comfortably against the sides of the face and be secured with ties or ear loops. They should be made with multiple layers of fabric and allow for breathing without restriction. Face coverings should be able to be laundered and machine-dried without damage or change to the shape of the mask.

The use of respirators, masks, or face coverings may introduce other hazards into the workplace. Barrier device usage may lead to:

- **Obstructed vision** – face masks may obstruct vision or “fog up” safety glasses or glasses. If an employee is unable to resolve vision obstructions, especially for machine and equipment operation or driving activities, the face masks may create a greater hazard and should not be used.
- **Caught-in / entanglement hazards** – loose fitting barriers and/or their ties could become caught in moving machine parts. Extra care should be exercised to ensure the barrier device used is secure from entanglement.
- **Disease vector / respiratory hazards** – barrier devices (respirators, masks, face coverings) may become a growth environment for viruses and other pathogens.
 - Employees must be trained to safely remove the barrier device without touching their eyes, nose, or mouth, and wash their hands and face after use.
 - Barrier devices should be frequently cleaned or replaced to reduce contamination accumulation.
- **Asphyxiation hazards** – homemade face coverings or barrier devices that are not cleaned or replaced frequently may excessively limit an employee’s breathing. This restriction can place stress on the cardio-pulmonary system of the body. Employees with underlying respiratory or cardiac health conditions may be particularly susceptible to this hazard.
- **False sense of security** – employees may presume that they cannot spread or contract an infectious disease while wearing a face mask. For example, the use of improvised face coverings is not intended to protect the wearer from exposure to infectious material but rather to keep the wearer from spreading the droplets further.

Barrier Device Usage

Barrier devices include respirators, masks, and improvised face coverings.

- If using a respirator or mask, read and follow the manufacturer provided directions for use.
- Wash your hands before donning and after removing the barrier device.

- Don the barrier device properly ensuring it completely covers your mouth and nose. Adjust it as necessary throughout the day without touching your face, mouth, or nose.
- Secure any ties or loose material and keep the barrier device away from running machinery or equipment to prevent entanglement.
- Do not allow the barrier device to obstruct your vision or wear it if it causes your safety glasses or reading glasses to fog up and impair your vision. Adjustment or a different barrier device may be needed.
- After removing the barrier device clean and store it properly in a clean and dry location and wash your face. Do not lay the barrier device on any surface where it may contaminate or be contaminated.
- If the barrier device adversely affects your ability to breathe replace it. A different barrier device may be needed. If the problem persists, seek medical attention.
- When contaminated or unsanitary, replace or clean the device according to manufacturer recommendations.
- Do not use the barrier device if it is damaged; replace the barrier device and dispose of it at the workplace, do not bring it home.

Supervision of Protective Measures

ZEREM ELECTRICAL SERVICES LTD will designate a site-specific Infectious Disease Supervisor to enforce this guidance. The designated Infectious Disease Supervisor will be present at all times during work activities and may be any authorized worker designated to carry this role. The Infectious Disease Supervisor has Stop-Work Authority and may exercise that authority for the purpose of correcting any disease control exposures before allowing work to resume.

The designated Infectious Disease Supervisor will be responsible for ensuring the following guidelines in this policy are in compliance at all times:

- Physical Distancing** – If physical distancing protocols are implemented, physical distancing will be maintained as recommended by federal, provincial, and local authorities.
- Health Status** – During the safety briefing confirm that no one present is ill, displaying signs of being ill, or believed to have come in contact with someone who has tested positive for an infectious disease.
- Workplace Cleanliness** – Ensure that work areas are clean and sanitized.

Workplace postings and guidelines identifying required hygienic practices including the Physical Distancing Guidelines and Infectious Disease Workplace Mitigation Guidelines listed in the appendices below shall be posted in areas visible to all workers. Check the Ministry of Labour, Training and Skills Development websites for any established posting requirements.

Employee Reporting of Confirmed Exposure

If an employee of ZEREM ELECTRICAL SERVICES LTD tests positive for infection to the disease, has been exposed to a known case of the disease, has traveled to or through a country Health Canada has recommended not visiting, or has been in contact with someone from another contractor or supplier who thinks they may be infected, **they will follow current Federal or Provincial Guidelines for isolation.**

ZEREM ELECTRICAL SERVICES LTD will report this potential exposure to any site contact and other trades that may have been in contact with the employee.

Suspected or Confirmed Infection

In the event an employee at work reports they believe they are experiencing symptoms of infection the following steps should be taken.

- Provide the employee with a mask or face covering to contain droplet spread due to coughing or sneezing.
- Keep employees assisting the infected worker to a minimum. Assisting employees should wear masks, medical gloves, and other PPE as indicated to protect from exposure.
- Maintaining physical distancing relocate the employee to a safe area away from others for evaluation.
- Evaluate the employee to determine whether emergency services are needed. If emergency services are required, inform emergency dispatch of the possibility of disease infection.
- Make note of employee information, date, time of day, and area where the worker was working.
- Once information is obtained and it is determined that emergency services are not needed the employee may be released from work with instructions to seek medical advice and treatment as well as clearance to return to work once recovered.
- Inform all affected workers in the area and advise them to seek medical attention for guidance and testing.
- Stop work in the affected area and isolate the area for cleaning and sanitization. Follow provincial guidelines and label instructions when performing sanitizing measures.

Sanitizing the Affected Area

In the event a worker has been confirmed to be infected, the work area may need to be sanitized to prevent the spread of the disease.

Follow established provincial disease-specific guidelines for sanitizing the work areas affected by the infected worker.

Cleaning staff or an outside cleaning service should clean and disinfect all common areas that may have been used by the infected person including offices, restrooms, shared electronic equipment such as phones, keyboards and computer controls, tablets, touch screens, and remote controls, etc. focusing on frequently touched surfaces.

Controls, surfaces, tools, equipment, and other items known to or likely to have been used by the infected person should receive special attention.

Dirty surfaces should be cleaned with soap and water before disinfection.

Medical Information

Requests for Medical Information and/or Documentation

If you are out sick or show symptoms of being ill, for more than three (3) days, it may become necessary to request information from you and/or your healthcare provider. In general, we would request medical information to confirm your need to be absent, to show whether and how an absence relates to the infection and to know if it is appropriate for you to return to work. As always, we expect and appreciate your cooperation when medical information is sought.

Confidentiality of Medical Information

Our policy is to treat any medical information as a confidential medical record. In furtherance of this policy, any disclosure of medical information is in limited circumstances with supervisors, managers, first aid and safety personnel, and government officials as required by law.

Recordkeeping

Under OHSA's notice requirements, a work-related infection to an infectious disease may be a recordable illness, and employers may be responsible for recording cases of and filing notice of work-related illness.

If informed that a worker has an occupational illness, or that a claim for an occupational illness has been filed with the Workplace Safety and Insurance Board (WSIB) in respect of an occupational illness, the employer must:

- Provide written notice to a Director of the MOL, the JHSC (or health and safety representative), and the trade union, if any, within four days; and
- Make sure that the notice contains any prescribed information and particulars [subsection 52(2)]; and
- Provide the written notice not only for current workers of the employer but also to former ones [subsection 52(3)].

Training

ZEREM ELECTRICAL SERVICES LTD understands the importance of providing a safe and healthful working environment. This is done only through the building of a positive culture of safe work practices.

It is understood that this type of culture must be visible from the beginning of a worker's experience with the workplace. Therefore, ZEREM ELECTRICAL SERVICES LTD will engage its employees and sub-contractors in training for this program. The safety policies and procedures training serves to familiarize all employees with the workplace, its culture, and its programs and practices as they relate to everyone's safety.

Employee Training

Employees will be trained on the recommendations and requirements implemented in the Infectious Disease Control Program. Special attention should be placed on the Physical Distancing Guidelines and Infectious Disease Workplace Mitigation Guidelines. These are included as separate pages at the end of this program.

Using the Infectious Disease Program Training Checklist, employees will mark each item as understood once that topic is discussed. If you have any questions or concerns, please discuss them with Zerem ELECTRICAL SERVICES LTD representative.

Once you have completed the training, sign, and date the checklist form and submit the form to Zerem ELECTRICAL SERVICES LTD representative.

Supervisor Training

Supervisors must receive training informing them of their roles and responsibilities in ensuring the infectious disease program and exposure control plans are followed. Supervisors must be provided with a copy of the infectious disease program and any associated exposure control plans and informed of Zerem policies and procedures related to reducing the spread of infection in the workplace.

Once the training has been completed, sign and date the Infectious Disease Program Supervisor Training Checklist and submit the form to Zerem ELECTRICAL SERVICES LTD representative.

Retraining

Retraining shall be provided whenever the infectious disease program is implemented due to an epidemic or pandemic infectious disease declaration.

Additional retraining shall also be conducted whenever management has reason to believe that the employee's practice, knowledge, or understanding of the infectious disease program or exposure control plan is deficient. The retraining shall be designed to reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

Reference

Health Canada - www.canada.ca/en/health-canada.html

Ministry of Health - www.health.gov.on.ca/en/

Public Health Agency of Canada – www.canada.ca/en/public-health.html

Public Health Ontario – www.publichealthontario.ca

Infection Prevention and Control Canada (IPAC) – www.ipac-canada.org

Appendix

- Physical Distancing Guidelines
- Infectious Disease Workplace Mitigation Guidelines
- Visitor Access Authorization Form
- Infectious Disease Supervisor Inspection Checklist
- Daily Attendance Log

Physical Distancing Guidelines

ZEREM ELECTRICAL SERVICES LTD has implemented the physical distancing guidelines found below to minimize the spread of disease among the staff. Determination of physical distancing requirements has been made in accordance with federal, provincial, and local requirements. These guidelines will remain in effect until rescinded by ZEREM ELECTRICAL SERVICES LTD.

Work Activities

During the workday, employees are requested to:

- 1) Avoid meeting face-to-face. Employees are encouraged to use the telephone, online conferencing, email, or instant messaging to conduct business as much as possible even when participants are in the same building.
- 2) Preclude gatherings and whenever two or more people must meet, ensure physical distance separation. If face-to-face meetings are unavoidable minimize the meeting time, choose a large meeting room, and sit apart from each other as much as possible. Avoid person-to-person contact such as shaking hands.
- 3) Avoid any unnecessary travel and cancel or postpone nonessential meetings, gatherings, workshops, and training sessions.
- 4) Do not congregate in the break room or any other areas where people socialize.
- 5) Bring your lunch and eat at your desk or away from others (avoid lunchrooms and crowded restaurants).
- 6) Encourage members and others to request information via phone and e-mail to minimize person-to-person contact. Have materials and information ready for fast pick-up or delivery.
- 7) Using other workers' phones, desks, offices, work tools, and equipment is highly discouraged. If necessary, clean and disinfect them before and after use.
- 8) Stagger work activity as necessary to reduce density and maintain minimum physical distance separation.
- 9) Anyone with an infected family member at home must inform the Infectious Disease Supervisor.

Outside Activities

Employees are encouraged to adhere to the following guidelines to the extent possible when engaging in all outside activities:

- 1) Avoid public transportation (train, bus, taxi) and walk, cycle, or drive your own car. If the use of public transportation is necessary, consider beginning your commute early or late to avoid rush-hour crowding.
- 2) Avoid recreational or other leisure classes, meetings, activities, etc., where employees might meet people contagious with the infectious disease. When out in public consider covering your mouth and nose with a mask.

Employee Reporting of Confirmed Exposure

If an employee of ZEREM ELECTRICAL SERVICES LTD tests positive for the infectious disease, has been exposed to a known case of the infectious disease, has traveled to or through a country Health Canada has recommended not visiting, or has been in contact with someone from another contractor or supplier who thinks they may be infected with the infectious disease, **they will follow current Health Canada and Ministry of Health Guidelines for isolation.**

Following the Canadian Charter of Rights and Freedom requirements for patient confidentiality, ZEREM ELECTRICAL SERVICES LTD will report this potential exposure to any site contact and other trades that may have been in contact with the employee.

Infectious Disease Workplace Mitigation Guidelines

ZEREM ELECTRICAL SERVICES LTD has implemented the following measures to reduce and/or eliminate the dangers associated with infectious diseases. This plan will be reevaluated on an ongoing basis to ensure all applicable requirements can effectively and consistently be implemented. Health Canada and Ministry of Health requirements will be covered in each daily safety briefing before the start of the shift. These topics should include physical distancing, hand sanitizing, identifying signs and symptoms of the disease, and the items identified for site-specific plans.

Hygiene – Best practices

- Avoid touching face, mouth, nose, or eyes with unwashed hands or with gloves
- Routinely wash your hands with soap and water for at least twenty (20) seconds. If soap and water are unavailable use a hand sanitizer having at least 60% alcohol content
- Refrain from shaking hands - use other non-contact methods of greeting
- Wear gloves appropriate for your job tasks to reduce skin contact exposure
- Routinely disinfect frequently touched surfaces such as telephones, guard and handrails, machines and machine controls, shared tools, elevator control buttons, tables, doorknobs, light switches, countertops, desks, keyboards, toilets, faucets, sinks, handles, and hand tools, etc.
- Cover coughs and sneezes using the inside of your elbow rather than your hand
- Avoid phone-to-face contact
- Increase ventilation by opening windows or adjusting air conditioning

Meetings and Travel

- Practice physical distancing and maintain a minimum established distance from others
- Use phones or other electronic methods such as video chat to meet rather than engaging in face-to-face conversations
- Avoid sitting in close proximity to others
- Use a handkerchief or tissue when coughing, sneezing, or blowing your nose. Then wash your hands with soap and water for at least twenty (20) seconds. If soap and water are unavailable use a hand sanitizer having at least 60% alcohol content
- Avoid close contact with people who are sick or are displaying signs and/or symptoms of illness
- Take responsibility for yourself, your work area, and your co-workers as much as achievable
- Where workers are forced to stand together in 'choke points' and high-risk areas such as in hallways, hoists and elevators, break areas, and buses; they shall maintain physical distancing
- Minimize interactions when picking up or delivering equipment or materials, maintaining physical distance separation
- When physical distancing cannot be maintained other mitigation practices should be used i.e., requiring all workers to use face coverings

Food Handling

Handle food carefully:

- Wash hands before eating food
- Limit food sharing
- Prepare meals at home for consumption
- Eat separately and maintain physical distancing from others rather than congregating in groups

Illness

Stay home if...

- you are feeling ill
- you have an ill family member at home

Visitor Access Authorization Form

Access to the work area is restricted to essential employees. Essential employees are defined as employees performing duties essential to the safe and efficient performance of operations including (but not limited to) those listed below.

To maintain safe and efficient operations, access will be granted to the following persons. (check all that apply)

<input type="checkbox"/>	ZEREM employees and sub-contractor/vendor employees engaged in activities essential to the performance of operations.
<input type="checkbox"/>	Transport personnel delivering tools, equipment, and materials essential for continued operation including fuel delivery services necessary to keep equipment running.
<input type="checkbox"/>	Transport personnel removing waste, surplus materials, non-essential equipment
Support Personnel Including:	
<input type="checkbox"/>	Technicians performing emergency service, maintenance, or repair essential to resume or maintain continued operation. Equipment service and maintenance not essential at the time of the visit should be deferred until after the epidemic/pandemic event unless doing so would lead to an equipment failure or an unsafe condition.
<input type="checkbox"/>	Consultant services to maintain safe operations including safety program development, site safety surveys, job hazard analysis, PPE hazard assessments, and other services intended to promote and maintain employee safety.
<input type="checkbox"/>	Inspectors require access to inspect and approve work prior to proceeding to the next phase of operation. Other inspectors requiring access may include safety inspectors and investigators, health inspectors, building inspectors, etc.
<input type="checkbox"/>	
<input type="checkbox"/>	Training personnel to provide on-site training for new equipment, hazardous work activities, non-routine tasks, etc. necessary for safe production
<input type="checkbox"/>	Utility services such as electric, water, gas, utility locate services, etc. to secure distribution systems for safe operations.
<input type="checkbox"/>	Emergency services personnel.
<input type="checkbox"/>	

Authorization: _____
(Name) (Signature)

Date: _____ Time: _____

Daily Attendance Log

Date	Print Name	Signature	ZEREM	Contact Information	Time In	Time Out
				Phone: _____ Email: _____		
				Phone: _____ Email: _____		
				Phone: _____ Email: _____		
				Phone: _____ Email: _____		
				Phone: _____ Email: _____		
				Phone: _____ Email: _____		
				Phone: _____ Email: _____		
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				Phone: _____ Email: _____		
				Phone: _____ Email: _____		
				Phone: _____ Email: _____		
				Phone: _____ Email: _____		



Infectious Disease Supervisor Inspection Checklist

This checklist is used to aid in ensuring the health and well-being of all workers and the availability of all listed applicable measures and to identify measures not applicable for implementation. Continually monitor and check Health Canada and provincial websites for current data and changing conditions, recommendations, and requirements.

Name:		Date:	
ZEREM:			

<input type="checkbox"/>	Copies of this Protocol have been distributed to all employees.
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The Physical Distancing Protocol must be posted at each public entrance to the facility and all 'choke points' and high-risk areas such as hallways, elevators, break areas, etc.

Signage must be posted at each entrance that informs all entrants that they must:

<input type="checkbox"/>	not enter the facility if they have a cough or fever;
<input type="checkbox"/>	maintain physical distance from one another;
<input type="checkbox"/>	sneeze and cough into a cloth or tissue, or if not available, into one's elbow;
<input type="checkbox"/>	not shake hands or engage in any unnecessary physical contact.

Corrective Actions for Deficiencies:

Measures to Protect Employee Health (Facility)

<input type="checkbox"/>	Everyone who can carry out their work duties from home has been directed to do so.
<input type="checkbox"/>	All employees have been told not to come to work if sick.
<input type="checkbox"/>	Symptom checks are being conducted before employees may enter the workspace.
<input type="checkbox"/>	Work activities are separated by established physical distance.
<input type="checkbox"/>	Daily attendance log is being maintained.
<input type="checkbox"/>	Break rooms, bathrooms, handles, desks, phones, switches, and other commonly touched surfaces are being disinfected frequently.

Corrective Actions for Deficiencies:

The Following Guidelines are Being Followed by All Workers:

<input type="checkbox"/>	Workers are routinely washing hands with soap and water and/or hand sanitizer.
<input type="checkbox"/>	No handshaking – use other noncontact methods of greeting.
<input type="checkbox"/>	Gloves and face coverings to reduce the risk of infectious exposure as deemed appropriate for job tasks are being worn.
<input type="checkbox"/>	Hand tools and work areas are routinely cleaned.
<input type="checkbox"/>	Face touching is avoided.
<input type="checkbox"/>	Workers are covering coughs and sneezes.
<input type="checkbox"/>	Phone-to-face contact is avoided.
<input type="checkbox"/>	Workers are asked daily if they are sick or have someone at home that is sick. If YES, steps outlined in the Exposure Control Plan are being followed.
<input type="checkbox"/>	Ventilation is increased in work areas by opening windows or adjusting air conditioning.

Corrective Actions for Deficiencies:

Meetings and Work Areas - Measures to Prevent Crowds from Gathering

<input type="checkbox"/>	Physical distancing is maintained.
<input type="checkbox"/>	Phones or other electronic methods such as video chat are being utilized to communicate or conduct meetings rather than engaging in face-to-face conversations.
<input type="checkbox"/>	Sitting and/or working in close proximity to others is being avoided.
<input type="checkbox"/>	Close contact with people who are sick and/or showing symptoms is avoided.
<input type="checkbox"/>	Worker density is limited and workers are forced to stand together in 'choke points' and high-risk areas such as in hallways, hoists and elevators, break areas, and buses.
<input type="checkbox"/>	Interactions when picking up or delivering equipment or materials are minimized by maintaining physical distance.
Corrective Actions for Deficiencies:	

Food Handling

<input type="checkbox"/>	Employees wash their hands before eating food.
<input type="checkbox"/>	Employees are not sharing food.
<input type="checkbox"/>	Employees are eating separately and maintaining physical distance rather than congregating in groups.
Corrective Actions for Deficiencies:	

Supplies

Soap and water, hand sanitizer, disinfectant, and related supplies are available to all employees at the following location(s):

<input type="checkbox"/>	Break rooms
<input type="checkbox"/>	Restrooms
<input type="checkbox"/>	Other:
Corrective Actions for Deficiencies:	

Inventory of Available Supplies

An adequate inventory of each item must be maintained for worker use. Monitor supply usage to identify replacement schedule. Any time an item gets low request replenishment supplies.

<input type="checkbox"/>	Disinfectant spray and paper towels
<input type="checkbox"/>	Disinfectant wipes
<input type="checkbox"/>	Hand sanitizer
<input type="checkbox"/>	Respirators, face masks, face coverings, face shields
<input type="checkbox"/>	Gloves
Corrective Actions for Deficiencies:	

Supervisor Signature: _____

Date: _____