HEALTH & SAFETY MANUAL

OUR GOAL IS SIMPLE
EVERYONE GETS HOME SAFE

We work to deliver a superior construction experience to our General Contractors and an electrical system that will stand the test of time. We value hard work, freedom and our closely knit team that cares about one another. To this end we rely on you, experienced, skilled and hard working team members to get the job done right.

To download this manual visit tech-electric.ca and click “Guide-to-Success”

3318 Millar Avenue Saskatoon, SK S7K 7G9
T 306.242.6401 **F** 306.933.2317 **E** info@tech-electric.ca

Saskatoon Emergency Contact Information

Site Name & Address:

*****NOTE:** **If there is an emergency, assign someone to wait for the emergency response team to guide them to the scene**

EMERGENCY SERVICES – Spill Reporting: Provincial Transportation 1-800-222-6514 and Dangerous Goods 1-800-272-9600

	SITE (Outside of Saskatoon area)	**Saskatoon City:**	
AMBULANCE:		911	
POLICE:		306-975-8300	911
FIRE DEPARTMENT:		306-975-2520	911
WATER: (trouble)		306-975-2491	
GAS: (trouble)		Sk Energy	306-975-8500
ELECTRICAL:(trouble)		City	306-975-2621
		Sk Power	306-310-2220
HOSPITALS:		City	306-655-8000
		University	306-655-1000
		St. Paul's	306-655-5000

OH&S Saskatoon:			306-933-5052 / 1-800-667-5023
OH&S Regina:			306-787-4496 / 1-800-567-7233
TECH SITE:		HEAD OFFICE:	PHONE: 306-242-6401 FAX: 306-933-2317

GENERAL CONTRACTOR:	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	

OTHER:

Prince Albert Emergency Contact Information

Site Name & Address:

*****NOTE:** **If there is an emergency, assign someone to wait for the emergency response team to guide them to the scene**

EMERGENCY SERVICES – Spill Reporting: Provincial Transportation 1-800-222-6514 and Dangerous Goods 1-800-272-9600

	SITE (Outside of Prince Albert area)	**Prince Albert City:**	
AMBULANCE:		911	
POLICE:		306-953-4222	911
FIRE DEPARTMENT:		306-953-4200	911
WATER: (trouble)		306-953-4284	
GAS: (trouble)		Sk Energy	306-922-8533
ELECTRICAL:(trouble)		City	
		Sk Power	1-888-757-6937
HOSPITALS:		Victoria	306-765-6000

OH&S Saskatoon:	306-933-5052 / 1-800-667-5023
OH&S Regina:	306-787-4496 / 1-800-567-7233

TECH SITE:		HEAD OFFICE:	PHONE: 306-242-6401 FAX: 306-933-2317

GENERAL CONTRACTOR:	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	

OTHER:

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SECTION 1 - HEALTH AND SAFETY POLICY

HEALTH AND SAFETY POLICY

Our goal is simple. Everyone gets home safe.

Everyone at TECH Electric has the right to a safe and healthy working environment, an environment that Management is committed to providing. Through consultation and cooperation with our team, Management will maintain an occupational health and safety program to ensure the goals of this policy are met.

All Owners, Managers, Supervisors and Employees of TECH Electric Limited must integrate good occupational health and safety practices in their daily activities. All Employees are required to support the occupational health and safety program and are accountable for implementing this program. Supervisors must ensure their Employees are trained in safe work practices and procedures. Managers and Owners are responsible for enhancing safety consciousness.

Active participation by everyone, on every job is essential to reaching our goal of sending everyone home safe.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

RESPONSIBLE AND ACCOUNTABLE PARTIES - SAFETY

Every person in the workplace has responsibilities under Occupational Health and Safety legislation. These responsibilities include:

Employers & Senior Managers

- To protect the health, safety and welfare of workers
- To train workers in all matters necessary to protect their health and safety by establishing and maintaining an effective health and safety program and obtaining input from the occupational health committee
- Ensuring that workers have the means to allow them to participate effectively in health and safety training, meetings and discussions
- Providing a safe and healthy workplace
- Ensuring that legal health and safety requirements are met
- Allocating enough resources (money, time, equipment and people) to implement the program
- Making sure that managers and supervisors are trained, supported and held accountable for fulfilling their workplace health and safety requirements
- Making sure workers have the information, training, certification, supervision and experience to do their jobs safely
- Making sure medical/first aid facilities are provided as needed
- Cooperating with other parties in dealing with health and safety issues

Managers & Supervisors

- To ensure that workers know and understand health and safety policies, practices and procedures
- To ensure that workers follow these health and safety policies, practices and procedures
- Cooperating with the occupational health committee to promote health and safety awareness and ensure all workers support the committee members in their health and safety activities
- Inspecting work areas and making sure hazards are identified and proper steps are taken to control the risks
- Ensuring that only authorized, competent workers operate equipment and that workers are properly using the necessary personal protective equipment provided
- To understand and be prepared to implement emergency procedures

Workers

- To understand and follow safe work procedures, legislation and workplace health and safety requirements
- To report any hazards, concerns, accidents, near accidents, injuries or illnesses immediately, correct unsafe conditions and refuse to do unsafe work.
- Using safety equipment, machine guards, safety devices and personal protective equipment
- Cooperating with the occupational health committee and others on health and safety issues
- To take required training courses, obey all signs and warnings posted on the worksite and participate in safety meetings

- To ask questions and to seek assistance when unsure of how to do assigned tasks safely and to assist new workers to learn the safe way to perform assigned tasks and set a good example

Owners

- providing a plant that does not endanger the health and safety of anyone working in, on or near the plant; and
- knowing and following health and safety requirements.

Subcontractors & Self-employed

- ascertaining what their responsibilities are in relation to the health and safety of all workers affected by their activities in the workplace;
- cooperating with the contractor, other subcontractors and self-employed people, and occupational health committees in protecting the health and safety of everyone in the workplace;
- conducting their work in a way that does not endanger anyone's health and safety;
- providing information that could affect the health and safety of others to the contractor, other subcontractors and self-employed people, and to their occupational health committees;
- knowing and following applicable parts of the contractor's health and safety program; and
- knowing and following the legislation.

DEFINITIONS

For the purpose of this safety manual the following role definitions apply.

Supervisor
A person, who instructs, directs and controls workers in the performance of their duties. This could be a Manager, Supervisor, Foreman, or Lead hand.

Worker
A person employed to perform a function or duty. For the purposes of this Program, worker means any permanent, temporary, casual, contract and student workers, managers and supervisors.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

LEGISLATION POLICY

All personnel will take every reasonable precaution to protect the safety, health and welfare of themselves and others. All work is to be conducted in accordance with the minimum standards outlined in the OH&S Act & Regulations.

Management, Supervisors, Worker Safety and Health Representatives and Employees will be informed of their legal duties and responsibilities and are expected to participate and apply safe work practices in accordance with applicable legislation.

A copy of our safety manual and applicable legislation will be readily available online (tech-electric.ca, click "Guide-to-Success") at head office or on the jobsite (if not practicable to be on the jobsite, in the company vehicle) for all employees to read and/or refer to.

In addition, our company will develop the following guidelines in accordance with legislation:

- Hearing Conservation Program will be implemented for work areas where exposure to noise is in excess of 80 dBA
- No employee will work alone unless a Working Alone Procedure is developed between the employee and supervisor – a system of contact is to be developed and adhered to
- Lock-Out/Tag-Out procedure must be developed if performing any type of work in which the release of energy could inadvertently start up or cause injury to a worker
- Where cranes, forklifts, critical or sensitive equipment is used, applicable training/certification will be provided/verified prior to start-up
- Any person working with or in the proximity of a controlled product will receive WHMIS training prior to job start-up
- For all tasks which pose the potential for a musculoskeletal injury, a risk assessment will be conducted and appropriate control measures to eliminate, reduce or control injury to workers will be implemented

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

CONTRACTOR COMPLIANCE DECLARATION

With respect to the objects and purposes of ensuring, so far as reasonably practicable, that all construction, demolition and maintenance work undertaken by contracted parties of TECH Electric Limited will be undertaken in a safe manner, the following declaration must be signed and submitted.

Submitted To:_____

Company Name: _____

Address: _____

Safety Program Information

COR Certification # _____

Safety Program Registration # _____

DECLARATION

As required by all persons in the province of Saskatchewan, I will share required information with the prime contractor, and those affected, necessary to identify and control existing and potential hazards.

Instruct and train all workers how to wear and take care of, a hard hat, safety footwear, safety glasses, shirts with a minimum 5-inch sleeve and work grade long pants. All of which are to be worn at all times. This is in addition to any other PPE as required following applicable OH&S regulations

Every worker or proxy will undergo a TECH Electric safety orientation before commencement of work activities. The highest health and safety standards will take precedent and be followed whether found in our comprehensive Health and Safety Program, the owner requirements or applicable legislation.

Provide competent supervision for your workers, first aid supplies and personnel as required by Part V, of the OH&S Regulations.

Complying with all fall protection requirements specified by section 116 of the OH&S Regs.

To the best of my knowledge, I and my company employees meet the minimum safety training requirements as outlined in OH&S Act & Regulations.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

RIGHT TO REFUSE DANGEROUS WORK POLICY

Imminent (unusual) Danger - means in relation to any occupation a danger that is not normal for that occupation, or a danger under which a person engaged in that occupation would not normally carry out.

Responsibilities

The General Manager is responsible for the overall administration of this policy and is specifically responsible to:

- Monitor and evaluate compliance to this policy.
- Review all work refusal situations and deal specifically with those which cannot be resolved at the project location.
- Meet with government, client, and any other outside agency directly affected by or involved in a refusal to work situation.
- Ensure any legislated requirements are incorporated into company procedures.

The Supervisor is responsible to:

- Review the standard practice and train new employees on the work refusal procedures at the time of hire and at least annually all employees in his or her area of responsibility.
- Immediately investigate, in the presence of the employee, any work refusal situation.
- Take the necessary corrective actions to remedy the situation.
- Seek the assistance of an HSE professional or any other specialist, (professional engineer, occupational hygienist, vendor representative, etc.) that may be required to resolve the situation.
- Create and maintain a written record of all the facts and circumstances identified during the investigation.
- Advise the Client of all work refusal situations as soon as reasonably practicable.
- Provide the written report to the affected worker(s).
- Assign workers to other work activities pending investigation.

The Employee is responsible to:

- Promptly notify the Supervisor of any situation where it is believed imminent danger exists.
- Cooperate in the investigation of all imminent danger situations.
- Advise the Supervisor if there are reasonable grounds to believe a danger still exists after the initial investigation and subsequent corrective action.
- Return to work after corrective action has been taken.

No worker will:

- Carry out any work if, on reasonable and probable grounds, the worker believes that there exists an imminent danger to the health or safety of that worker,

- Carry out any work if, on reasonable and probable grounds, the worker believes that it will cause to exist an imminent danger to the health or safety of that worker or another worker present at the work site, or
- Operate any tool, appliance or equipment if, on reasonable and probable grounds, the worker believes that it will cause to exist an imminent danger to the health or safety of that worker or another worker present at the work site.

Notification of Refusal of Work

All workers are provided training in the work refusal procedures. Once a worker has decided to stop work based on the task, conditions of site or tools, and/or hazards they must as soon as practicable, notify TECH Electric Limited of the refusal and the reason for the refusal to do the work. At this point the work must stop, and may not resume, until the unsafe work concern has been addressed.

Depending on the circumstances you may be required to remain at the work site and be temporarily assigned to other work; only accept work you are capable of performing. There will be no deduction of pay and TECH Electric Limited will not tolerate any form of retribution or intimidation directed at any individual for exercising their right to refuse unsafe work.

SECTION 2 – JOB HAZARD ASSESSMENT

JOB HAZARD ASSESSMENT

TECH Electric Limited completes a hazard assessment relevant to the type of work performed by the company by completing the following Job Hazard Assessment. Hazard assessments will be completed prior to commencing work as well as any time the work changes or is unfamiliar.

Hazard assessments are done to identify potential risks;

- ***before any work begins*** (it deals with what could go wrong)
- ***critical tasks*** (a task not previously identified) and
- ***milestones*** (an introduction to new hazards and not less than quarterly during the job)

Both supervisors and workers should be involved in the hazard assessment process, follow the steps below.

Identify the Hazards

Identification of hazardous conditions may be accomplished at the planning and design stage, as a result of workplace inspections, or by worker reports.

- what kinds of jobs, tasks or processes are involved?
- what equipment, tools and materials are involved?
- what people are involved? (consider all individuals who may come in contact with the work process, including workers, visitors, clients, suppliers, subcontractors, the public, etc.)
- what types of safety issues have we encountered, or may we reasonably expect to encounter, in connection with these things?

Evaluate the Risk

Severity: **How serious could the consequences be?** 3 – Could kill or cause permanent disability, today or over time. 2 – Could send you to the hospital. 1 – Could make you uncomfortable.	**Likelihood:** **How likely is this going to happen?** 3 – It is highly likely. 2 – It might happen. 1 – It is unlikely.	**Risk:** **Calculate the risk of hazards to prioritize preventative actions.** Severity x Likelihood = Risk

Communicate the Results

Communicate the results of your hazard assessment and evaluation to involved workers and to management.

Develop and Implement Controls

Develop and implement controls to eliminate or lessen the risk. Prioritize corrective action based on degree of risk.

- Identify the measures necessary to prevent the known negative circumstances from arising (how can things be prevented from going wrong).
- Identify the measures necessary to protect resources from harm or loss in the event of potentially uncontrollable hazards, who is responsible to complete the actions and by when.

Monitor and Follow up

The following control measures should be considered for prevention or reduction of hazards:

- Avoiding, eliminating, or reducing deficiencies by engineering design, material selection or substitution;
- Periodically reviewing tasks to identify any new hazards, including ergonomic ones
- We will implement appropriate control measures to reduce the risk of musculoskeletal injuries and provide workers with ergonomics training.
- Isolating hazardous substances, components, and operations from other activities, areas, workers, and incompatible materials;
- Incorporating "fail-safe" principles where failures would disable the system or cause a catastrophe through injury to workers, damage to the equipment, or inadvertent operation of critical equipment;
- Guarding equipment/components so that worker access during operation, maintenance, repair or adjustment will not result in exposure to hazards such as chemical burns, electrical shock, cutting edges, sharp points, or toxic atmospheres;
- Providing suitable warning and notes of caution concerning required protection in operation, assembly, maintenance, and repair instructions;
- Providing distinctive markings on hazardous components, equipment, or facilities;
- Requiring use of personal protective equipment when other controls do not reduce the hazard to an acceptable level;
- Monitoring exposure to ensure that engineering controls effectively reduce the hazard; and training workers to recognize hazards, take appropriate precautionary measures and provide ergonomic training where required.

Any potential exposure to harmful substances will be assessed by qualified staff or sub-contractors before work is commenced by conducting a hazard assessment and air quality tests where required, to ensure exposure does not exceed OH&S exposure limits

JOB HAZARD ASSESSMENT FORM

JOB HAZARD ASSESSMENT	
Project:	Project #:
Specific Task Location:	Date:
Completed by:	Reviewed by (Supervisor):

ITEM	HAZARDS	DESCRIPTION	Severity	Likelihood	Risk	CORRECTIVE ACTION	CORRECTIVE ACTION BY WHO?	DATE TO BE COMPLETED
			S	x L	= R			
1	Housekeeping & Material Storage							
2	Lighting & Ventilation							
3	Hazardous Materials (WHMIS)							
4	Electrical Hazards							
5	Overhead Hazards							
6	Underground Hazards							
7	Confined Space Entry							
8	Excavation							
9	Ladders and Work at Heights							
10	Hoisting/Lifting							
11	Personal Protective Equipment							
12	Mobile Equipment							
13	Power Tools							
14	Working Alone							
15	Weather Conditions							
16	Other:							
17	Other:							

Severity: **How serious could the consequences be?** 3 – Could kill or cause permanent disability, today or over time. 2 – Could send you to the hospital. 1 – Could make you uncomfortable.	**Likelihood:** **How likely is this going to happen?** 3 – It is highly likely. 2 – It might happen. 1 – It is unlikely.	**Risk:** **Calculate the risk of hazards to prioritize preventative actions.** Severity x Likelihood = Risk

All member(s) of crew **MUST** sign card before starting work. **DO NOT** sign until you understand and agree with the JHA

Name: (please print)	Signature:	Name: (please print)	Signature:
1.		5.	
2.		6.	
3.		7.	
4.		8.	
Supervisor:	**Supervisor:**	9.	

Critical Tasks
A job practice or procedure should be developed for any critical task performed. The following types of work (among others) often include specific tasks that would qualify as a “critical task” as defined here:

> A task which, if not identified (or if the practice or procedure is absent or performed incorrectly) has significant potential for loss (people, property or financial).

Critical Task List:

- Lockout/Tagout for Positive Energy Hazard Control
- Fall Protection for Working from Heights
- Confined Space Entry and Rescue
- Excavation and Trenching Activities

SECTION 3A - SAFE WORK PRACTICES

MOBILE PHONE USAGE – SAFE WORK PRACTICE

GENERAL	Protecting workers from injuries associated with the IMPROPER use of cell phones while operating a motor vehicle.
APPLICATION	Using a cell phone improperly while operating a motor vehicle may be hazardous to the worker and general public.
PROTECTIVE MECHANISMS	Safe work procedure Highway Traffic Act Local Regulations Manufacturers Recommendations
SELECTION AND USE	Safe work procedure Manufacturer's recommendations
SUPERVISOR RESPONSIBILITY	To facilitate and/or provide proper instruction to their workers on protection requirements and training Enforcement Compliance
WORKER RESPONSIBILITY	1. When vehicle is in motion calls may only be made or answered utilizing a Bluetooth hands free enabled device as per local, provincial and federal legislation allows. 2. Otherwise if an employee driving a vehicle must make a phone call, the vehicle must be parked and in a safe location. 3. If making an emergency call (911) without utilizing a Bluetooth hands free device, the vehicle must be safely parked before making the call.

*The information presented in this publication is intended for general use and may not apply to every circumstance. It is not a definitive guide to government regulations and does not relieve persons using this publication from their responsibilities under applicable legislation. TECH Electric Limited does not guarantee the accuracy of, nor assume liability for, the information presented here. Individual counseling and advice are available from the Saskatchewan Construction Safety Association.

DRIVING - SAFE WORK PRACTICE

GENERAL

Protecting workers from injuries associated with driving operations.

APPLICATION

Operation of motor vehicles must be performed according to all vehicle codes, traffic laws, company procedures, and manufacturer's recommended operating guidelines.

PROTECTIVE MECHANISMS

Safe work procedure
Highway Safety Act
Company Rules
Manufacturers Recommendations

SELECTION AND USE

As per safe work procedure Company Rules
Manufacturers Recommendations

SUPERVISOR RESPONSIBILITY

To facilitate and/or provide proper instruction to their workers on protection requirements and training Compliance Enforcement

WORKER RESPONSIBILITY

1. Ensure you have a valid operator's license.
2. Be conversant with traffic laws and applicable regulations.
3. Drive defensively.
4. Back in when practical.
5. Ensure the vehicle has an emergency road kit.
6. Ensure you are not under the influence.
7. Avoid driving when fatigued.
8. Ensure seatbelts are worn at all times when the vehicle is being operated.
9. Be familiar with the vehicle and its' capabilities.
10. Offering rides to strangers or hitchhikers is prohibited.
11. Perform a "walk around" inspection prior to traveling.
12. Use good judgment and understand of the basic recovery skills appropriate to the vehicle you are driving.
13. Do not operate a mobile phone while driving. See safe work practice for mobile phone usage.

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MANUAL LIFTING AND CARRYING - SAFE WORK PRACTICE

GENERAL

Protecting workers from injuries associated with material lifting and carrying.

APPLICATION

Most lifting accidents are due to improper lifting methods. All manual lifting should be planned and safe lifting procedures followed.

PROTECTIVE MECHANISMS

Permit system
Safe work procedure
Safe lifting procedures
PPE
ERP (Emergency Response Plan)

SELECTION AND USE

As per safe work procedure
Safe lifting procedure

SUPERVISOR RESPONSIBILITY

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Selection of lifting equipment

WORKER RESPONSIBILITY

1. Ensure that you know your physical limitations and the approximate weight of materials.
2. The use of power equipment or mechanical lifting devices should be considered and employed where practical.
3. Obtain assistance in lifting heavy objects.
4. Ensure a good grip before lifting and employ proper lifting technique.
5. Avoid reaching out.
6. Pipes, conduit, reinforcing rods and other conductive materials should not be carried on the shoulder near exposed live electrical equipment or conductors.
7. Be aware of hazardous and unsafe conditions.

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OFFICE SAFETY - SAFE WORK PRACTICE

GENERAL	Protecting workers from injuries associated with office environment
APPLICATION	To ensure employees are aware of the potential and existing hazards in the office environment
PROTECTIVE MECHANISMS	Safe work procedures ERP (Emergency Response Plan) Manufacturers recommendations SASKATCHEWAN Fire Code Local Legislation MSDS Working Alone Policy
SELECTION AND USE	As per safe work procedure ERP MSDS
SUPERVISOR RESPONSIBILITY	Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training

WORKER RESPONSIBILITY

1. Ensure you are conversant with emergency evacuation.
2. Ensure that all electrical cords are in good condition.
3. Ensure that computer monitors are adjusted to correct height and kept clean.
4. Ensure fans/space heaters are used to manufacturer specifications.
5. Ensure floors and aisles are kept clear and not cluttered.
6. Ensure that only one drawer of filling is open at one time and those drawers are closed when not in use.
7. Ensure proper type of fire extinguisher is available.
8. When transporting materials of a heavy nature ensure that handcarts and trolleys are used properly.
9. Operate microwave according to manufacturer's specifications.
10. Ensure coffee makers are used according to manufacturer specifications.
11. Ensure photocopier is maintained according to manufacturer's specifications.
12. Ensure chairs are in good repair.
13. Ensure rugs are kept clean and in good repair – free of tripping hazard.
14. Ensure paper cutter blade is placed in closed lock position.
15. Ensure all loose clothing is tied back when using paper shredder.

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POWER AND HAND TOOLS USE - SAFE WORK PRACTICE

GENERAL

Protecting workers from injuries associated with the use of power and hand tools

APPLICATION

Power tools and hand tools to be used and maintained in compliance with manufacturer's guidelines.

PROTECTIVE MECHANISMS

Safe work procedures PPE Manufacturers specifications ERP (Emergency Response Plan)

SELECTION AND USE

As manufacturers safe job procedures

SUPERVISOR RESPONSIBILITY

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection and training requirements for tools.

WORKER RESPONSIBILITY

1. Electrical tools must have 3 wire (grounding) cord and plug, excluding double insulated tools.
2. Grinder discs buffers and stones to be used only for designed application and at rated speed.
3. Stationary grinders must have properly adjusted tool rests and stones to be properly dressed.
4. Angle grinders to have Original Equipment Manufacturer (O.E.M.) guard.
5. On/off switches must be functional and positioned so Operator has access.
6. Accessories can only be used that are designed for use with the tools specified.
7. Saw blades must be designed for the product being cut and at the rated speed, O.E.M. guards must be in place and functional.
8. Chisels, punches, hammer, wrenches, etc. to have all burrs ground from striking area.
9. Chisels, punches, screwdrivers, etc. to have tips properly dressed.
10. Cracked a/o splintered handles to be replaced.
11. All tools must be cleaned after use and repairs made before being properly stored.
12. Tools to be used for designed purpose only.
13. Repairs to tools must be performed by qualified personnel, using O.E.M. parts or equivalent.
14. Follow tool safe work procedures step by step.

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REFUELING EQUIPMENT - SAFE WORK PRACTICE

GENERAL	Protecting workers from injuries associated with refueling operations
APPLICATION	Refueling of equipment is a daily task in construction industry which may be hazardous if not carried out properly
PROTECTIVE MECHANISMS	Safe work procedure Saskatchewan Fire Code Applicable Legislation PPE MSDS ERP (Emergency Response Plan)
SELECTION AND USE	As per safe work procedure Applicable Legislation
SUPERVISOR RESPONSIBILITY	Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
WORKER RESPONSIBILITY	Ensure you are conversant with regulations Refueling area is ventilated Ensure equipment is shutoff prior to refueling Ensure there is no smoking or open flames in vicinity Avoid spillage on equipment or ground Ensure cellular phones are turned off Ensure no hot work is taking place nearby

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PORTABLE FIRE EXTINGUISHERS - SAFE WORK PRACTICE

GENERAL

Protecting workers from injuries associated with IMPROPER use of fire extinguishers

APPLICATION

Portable fire extinguishers must be installed, inspected and maintained on a regular basis to ensure proper operation in an emergency.

PROTECTIVE MECHANISMS

Safe work procedure
SASKATCHEWAN Fire Code
Manufacturers recommendations
PPE

SELECTION AND USE

As per safe work procedure
SASKATCHEWAN fire code
Manufacturers recommendations

SUPERVISOR RESPONSIBILITY

Supervisors are responsible to facilitate and/or provide proper instruction to their workers on protection requirements and training
Proper selection of equipment
Conversant with proper regulations

WORKER RESPONSIBILITY

1. Ensure you are fully trained with operation and maintenance of fire extinguishers.
2. Check Cylinder.
3. Inspect cartridge puncture cap.
4. Weigh cartridge.
5. With cartridge removed, check action of puncture lever.
6. Check hose and nozzle for obstruction.
7. Check date of manufacture.
8. Check level and condition of powder.
9. Check fill-cap threads and gasket.
10. Attach visual seal.
11. Check Pressure Gauge.

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ANNUAL REVIEW FORM - SAFE WORK PRACTICE

Safe Work Practices	Development				Review				Review			
	Date			By Whom	Date			By Whom	Date			By Whom
	M	D	Y		M	D	Y		M	D	Y	
Mobile Phone Usage	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Driving	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Manual Lifting And Carrying	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Office Safety	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Power and Hand Tool Use	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Refuelling Equipment	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Use Of Portable Fire Extinguishers	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Other:_____	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Other:_____	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Other:_____	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Other:_____	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			
Other:_____	Name: _____ Date:_____				Name: _____ Date:_____				Name: _____ Date:_____			

SECTION 3B - SAFE WORK PROCEDURES

ANGLE GRINDERS – SAFE WORK PROCEDURE

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

PERSONAL PROTECTIVE EQUIPMENT REQUIRED

Safety glasses must be worn at all times in work areas.
Long and loose hair must be contained.
Appropriate footwear with substantial uppers must be worn.
Close fitting/protective clothing must be worn.
Rings and jewelry must not be worn. Only wedding rings and watches are allowed when operating grinders. No other jewellery is allowed (Eg: chains, earrings, etc.)
Gloves and hearing protection must be worn when using this machine.

PRE-OPERATIONAL SAFETY CHECKS

- Use only in designated grinding area – erect screens if necessary.
- Examine the power cord, extension lead, plugs, sockets and power outlet for damage.
- Ensure that the grinding disc, guard and attachments (including handle) are secure and correctly fitted.
- Inspect the grinding disc for damage. Do not use damaged grinding disc.
- Always inspect the work piece to ensure that there aren't any items which might damage the grinding wheel or cause injury to the operator.
- Secure and support the work piece using clamps, bench vices, etc

OPERATIONAL SAFETY CHECKS

- Ensure all other workers are clear of the immediate work area.
- Keep fingers and hands & power cords clear of the grinding disc.
- Never make adjustments while the angle grinder is running.
- Do not switch off the angle grinder when it is under load, except in an emergency.
- Allow angle grinder to reach operating speed before applying to work piece & increase load gradually.
- Do not lift or drag angle grinders by the cord.
- Keep flexible electrical cords clear of oil, grease, machines and sources of heat.
- Be aware of flying sparks. Hold grinder so that sparks fly away from you, other people and flammable materials.
- Do not leave the angle grinder running & only use the grinder when hand held.
- Do not touch the work piece immediately after grinding operation, as it may be extremely hot.

HOUSEKEEPING

- Avoid trip hazards & prevent damage to electrical cord/s.
- Do not walk on, wheel objects over, or drop materials / tools on flexible electrical cords.
- Clean bench and work area & place all waste material in bin.
- Return angle grinder & rolled up extension leads to storage area.

POTENTIAL RISKS AND HAZARDS

- Moving and rotating parts
- Movement of work piece
- Inhalation of fumes and dust particles
- Burns from hot materials or friction
- Electrocution from power faults, faulty equipment or incorrect use
- Blade/disc breaking apart as projectile

BENDING (POWER BENDER) PIPE/CONDUIT - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Personal Protective Equipment essential to this task include:

- Safety boots
- Gloves
- Hard hat
- Safety glasses

The following are recommended tools and materials required to perform the task:

- Bending machines
- Slings
- Level

Work Procedures, Regulations & Codes Associated with this Task:

- The following are pre-job activities that are to be performed prior to the task:

Pre-Job Activities:

- Conduct an on-site hazard assessment (overhead power lines, etc.).
- Record all hazards on assessment forms and review findings with crew prior to commencing with work activities via an on-site safety meeting.

Step By Step Procedures

Bending Pipe

- Make sure machine operates correctly
- Put pipe in machine, watch for pinch points, and secure it
- Bend pipe to desired angle
- Release tension on machine, watch for pinch points
- Remove pipe from machine
- Turn off/put away machine when complete and clean the area
-

Note: This procedure is to serve as a general instructional guide for performing a task and may not apply at all right-of-way locations.

Each site should be recognized as an individual, taking into consideration the findings of the project hazard assessment.

BENCH GRINDERS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

PPE REQUIRED:

1. Safety glasses must be worn at all times in work areas. Face shield must be worn during operation of a bench grinder.
2. Long and loose hair must be contained.
3. Appropriate footwear with substantial uppers must be worn.
4. Close fitting/protective clothing must be worn.
5. Rings and jewellery must not be worn.
6. Hearing protection must be used when using this machine.

POTENTIAL HAZARDS

1. Hot Metal
2. Sparks
3. Noise
4. Sharp edges and burrs
5. Entanglement
6. Wheels 'run on' after switching off
7. Eye injuries

PRE-OPERATIONAL SAFETY CHECKS

1. Check workspaces and walkways to ensure no slip/trip hazards are present.
2. Ensure all guards and safety shields are in position before starting the grinder.
3. Ensure that the wheels do not touch the work rest and that the gap between wheel and rest is no greater than 1.5mm.
4. Check that wheels are running true and are not glazed or loaded.
5. Locate and ensure you are familiar with the operation of the ON/OFF starter.
6. Faulty equipment must not be used. Immediately report any suspect machinery.

OPERATIONAL SAFETY CHECKS

1. Stand to the side of the wheels when starting up.
2. Let the wheels gain maximum speed before starting to grind.
3. Do not grind on the side of the wheel.
4. Small objects must not be held by hand.
5. Never leave the machine running unattended.
6. Do not bend down near the machine whilst it is running.
7. Never force the workpiece against a wheel.
8. Slowly move the workpiece across the face of the wheel in a uniform manner.
9. Coolant spilt on the floor should be immediately absorbed.

10. Workpiece must never be held with gloves, cloth, apron or pliers

HOUSEKEEPING

1. Switch off the grinder.
2. Leave the machine in a safe, clean and tidy state.

CABLE PULLING EQUIPMENT - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

What many people don't realize is that the key to a successful pull hinges on the steps you take before you even begin to feed the cable into the puller. Assuming a quality cable product has been procured and delivered safely to your job site, consider the following factors before you start the pull.

Temperature

Various conductor insulations have different operating temperature ranges for safe installation and use. Electrical construction knows no season — as many cable pulls are performed in cold climates as in warm. A common error in judgment is to pull cable when it has been stored in a cold environment. In this situation, the insulation has what is best described as a brittle condition like most any thermoplastic or rubber material. This condition is conducive to cracking or splitting, even when under minimal pulling tension or bend radii. Remember, damaged insulation is no different than no insulation at all in the long run.

Moisture

The presence of moisture more readily affects some cables than others. Moisture is just as important in the vapor state of matter as it is in liquid. Shielded cables, whether coaxial cable or medium-voltage power cable, can absorb moisture over time. This moisture level can significantly affect the insulation and capacitive characteristics of the cable. Capillary action negatively affects all types of electrical cable. No matter what the cable type is, it's best to seal the cable ends with an approved sealing method. Rubber and plastic insulation tapes suffice in many cases, but some manufacturers may require cable end sealing kits, which are typically a one-time application heat shrink device placed on the cable ends to protect them until the field termination process begins.

Raceways

Type and size of raceway are significant factors in making a cable pull installation productive. The difference in cost between any two sequential conduit sizes is negligible compared to the lost time you might incur on a delayed pull. The cable could easily be damaged during installation if the raceway is inadequately sized. Therefore, it's always best to upsize a raceway whenever possible.

Few raceways are free of debris. Therefore, it's your responsibility to know the methods and tools available to clean or clear a raceway. The most common method of clearing a raceway is to use high-pressure air or an approved clearing device (e.g., Mandrel) and rope. Occasionally, you may identify obstacles such as solid obstructions (sand, dirt, or concrete infiltration), raceway deformation or compression, or animal infestations.

Another factor to consider is the entrance and exit bends and fittings. It's beneficial to use a steel-type material at these locations. PVC often experiences rope or cable burns over long-distance cable pulls and can cause difficulty and delay during the cable installation process.

Conductor

Conductor size and type can affect the type of raceway allowed or preferred for a cable installation. For example, some rubber-type insulations are not as easily installed in a PVC raceway. Approved lubrication will help in the cable pull, but, over time, the lubrication loses some or all of its lubricating characteristics. This will make removal of the same rubber-type insulation difficult and sometimes impossible, depending on the conductor operating conditions. Cable removal is just as applicable when it comes to removing faulted cable or abandoned cable due to renovation projects. Some cable pulling tension calculations will include variables such as insulation type, conductor type, and strand type.

Pulling rope

There are all types and sizes of rope that are used in the construction process. Don't make the mistake of thinking you can just pick up a spare one lying around and use it for your next pull. You must use ropes specifically designed for use in cable pulling. The size of a rope will have a corresponding capacity for allowable pulling tension using a ¼-in. rope to install four 600kcmil conductors in a 400-ft raceway is not practical. Even when a rope is applied correctly to a calculated pulling tension, the condition of the rope is of utmost importance. The rope must be clean, dry, not kinked or knotted, free of nicks and frays, and stored in a manner that minimizes or eliminates these conditions.

Cable spools and reels

Cable spools and reels come in a variety of sizes and material types. Tin or plastic spools are often used for smaller conductors. Wood reels are typically used for larger conductors. No matter what type of material the reel or spool is made of, there are work practices you must follow to avoid damaging the cable.

Spools and reels must be free from bent or sharp edges, cracked or broken aprons, and dirt and debris. Rough handling can easily damage a small spool. Dropping a small spool on a dirt-covered construction site will only make for a potentially difficult cable pull, as dirt and mud can damage the insulation as it's pulled through the raceway.
Wood reels are often used and reused until no one wants them any longer. The wood reel must be free of splinters, well balanced, and free of protruding nails and staples. The reel flanges and center drum must be fully intact with no missing or broken planks, and support rods and nuts must be firmly tightened. Handling and installing larger conductors will be all that much more difficult with a defective reel.

Rope and cable splice

Even if you've covered all your bases and addressed the issues noted previously, one misstep here could easily destroy a cable. All too often, installers attempt to save time by using excessive amounts of electrical tape to fasten a pulling rope to a cable. Don't do it! Tapes often increase the diameter of the splice entering the raceway and create a rigid, less flexible portion of the pull assembly through the raceway. The inflexibility caused by the excessive use of tapes will only make passing the cable through

the raceway bends more difficult. A variety of cable clamping fingers (e.g., beckets, pull socks) is available on the market to secure the cable to the pulling rope. The rope, on the other hand, requires a perfect eye knot. The combination of the rope eye knot and proper cable grip device, along with an approved and rated shackle, make for a typical ideal condition. Using this type of arrangement nearly eliminates the use of tapes.

Raceway cable entrance

The raceway cable entrance is critical to a successful cable pull. There must be no tension at this point, as this area is not typically accounted for in cable pulling tension calculations. The cable must pass into the raceway perpendicular to the raceway entrance plain. There are approved raceway entrance sleeves with and without integral pulley wheels to minimize cable entrance restriction. Personnel at the sending end of the cable pull are required to assist the cable into the conduit in order to minimize the pulling tension. There are safety considerations for this task that primarily include personnel distance from the raceway entrance. Remember, cable jerk effects may cause serious injury.

Lubrication

There are a number of approved cables pulling lubricants on the market. Most contractors because of easy handling and cleanup prefer water-based lubricants. Regardless, lubricants are a necessity of productive cable installations — unless you're installing one of the newer type cables with an insulation type that doesn't require lube during installation. Generous applications of lubricant are expected at the start of a cable installation. Constant lubricant application is ideal, but periodic is acceptable, based on raceway and conductor factors. Remember: Lubrication is inexpensive compared to trying to free up a jammed cable during a pull.

Pulling tools

Jack-stands and cable reel arbors are typically used for large diameter cable installations. Jack-stands must have an adequate base dimension in order to be stable on the resting surface. In some cases, it may be necessary to anchor jack-stands to the resting surface for additional support. Jack-stand height is recommended to be just high enough to keep the cable reel from dragging on the ground. Excessive jack-stand elevation will make the reel assembly top heavy and unstable.

Arranging multiple cable reels in-line or side-by-side for a single cable pull is solely a matter of personal preference or site conditions. Reel arbors must be sized appropriately for the respective cable reels in use. There are numerous cable pulling rack assemblies for smaller conductors. These racks must also be stable and secure for each cable pull. For all multiple conductor pulls, there are also tools available to dress and feed multiple conductors into a raceway without entanglement or crossing.

A cable-pulling winch is an installer's best friend when used correctly. These devices are manufactured in various torque ratings. Cable pullers must be in good working condition, their dynamometers properly calibrated, and be securely mounted prior to use. You must also familiarize yourself with all manufacturer-operating instructions prior to the actual pull.

Overview

In some respects, cable pulling is similar to painting. All the cleaning, sanding, caulking, and taping you do prior to the actual act of painting is extremely time-consuming. But if you take that extra time to do your prep work correctly and use the proper tools, the actual painting process goes quickly and smoothly. The same holds true for a pain-free cable pulling experience.

CABLE TESTING EQUIPMENT - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE must be selected and provided by TECH Electric Limited. Selection will take into account the expected hazards, voltage levels and conditions of work. Additional factors that will be considered include;

- condition and age of the equipment
- the equipment design
- the barriers that exist around the equipment

All PPE used must be inspected in accordance with the manufacturer's instructions and at a minimum at least once before each use. Where specific instructions exist for inspection of PPE in this or other procedures they will be complied with by workers and contractors. Damaged PPE will not be used. Defective PPE must be tagged defective until repaired or destroyed.

Hand and Arm Protection

- Gloves used for flash protection must be long enough to cover body parts such as hands, wrists, and arms that are exposed to the flash hazard. Gloves shall be of sufficient length to cover these parts until they overlap other flash protection, such as the sleeve of a flash-protection garment. The glove must cover any openings in the sleeve, such as the slit for the cuff. Insulated Rubber Gloves with leather protectors provide additional arc flash protection for the hands.
- When flash protection is required for the arms beyond the distances that a glove will provide, a long sleeve FR shirt, jacket, or coverall is required. Short sleeves or rolled up sleeves are not permitted when working where there is a risk of arc flash. In addition, ensure that for tasks where arms are raised the wrist is protected from arc flash.

Voltage-Rated Gloves

- Voltage-rated gloves (Class "0" Insulated Rubber Gloves) must be used for electrical shock prevention.
- Only Type-II gloves, which are ozone-resistant and made of an elastomer or combination of elastomeric compounds, and with a minimum class of "0", will be used. Class "0" gloves are rated to 1,000 volts and are not to be used on any circuit greater than 600 volts.
- Voltage-rated gloves must be visually inspected prior to each use for cuts, punctures, holes or damage that may affect their rating or effectiveness. Gloves must be removed from their protectors for inspection. Leather protectors must be inspected before each use and determined to be free of holes, tears, and contamination. Insides of the leather protector gloves shall also be inspected for sharp or pointed objects that may damage voltage-rated rubber gloves.

- Utilize an air test to check for small holes in rubber gloves: Fill the glove with air and roll the arm side of the glove tightly to trap the air in the glove. Listen for hissing sound and ensure gloves do not deflate.
- Cleaning and maintenance of the voltage-rated gloves and leather protectors must be done as instructed by the manufacturer. Only approved powder is recommended for use on voltage-rated rubber products to prevent deterioration of the rubber.
- Voltage-rated rubber gloves must be tested to ensure they are still effective on a regular schedule.
- Every in-service voltage-rated rubber glove and leather protector combination must be tested annually. The testing will be done by a qualified outside vendor and conducted annually.
- Employees issued voltage-rated gloves will be provided with a second pair while the first pair of gloves is in for testing.

Procedures for Safe Storage of Voltage-rated Gloves

- Voltage-rated gloves returned from testing will be held in storage until the pair in use requires testing.
- Voltage-rated gloves must be stored in a dry cool place and not exposed to sunlight or chemicals such as solvents, oils or greases. Voltage-rated gloves must be allowed to take their natural shape and must not be folded, creased, inside out, compressed, or in any manner that will cause stretching or compression while stored. They must be kept inside of protectors or in a bag, box, or container that is designed for and used exclusively for the gloves and must be inserted into their protective container with the fingers pointed upward (i.e. no pinching, bending, etc.).

Voltage-rated Glove Protectors

- Leather protectors for voltage rated-rubber gloves must be worn over voltage-rated rubber gloves for protection from abrasion, cuts or punctures.
- The leather protectors must not be used alone for shock protection at any time. Leather protectors are only used with the voltage-rated rubber gloves and are not to be used as general work glove. As much as possible leather protectors must be kept clean and free of oil, grease or solvent contamination.
- Protectors that have been used for other purposes must not be used to protect voltage-rated rubber gloves.

Safety Footwear

- Employees and contractors who conduct work under this procedure must wear safety footwear approved by CSA for impact protection with a minimum rating of Class 1 (green tag or green triangle), and displaying the Ohm symbol (Ω) on a tag indicating they have been tested for electrical shock resistance.

Eye and Face Protection

- Safety glasses must be used by all workers to protect the eyes from impact injuries due to flying or falling objects. Safety glasses must be CSA approved. Safety glasses must be worn while performing testing, troubleshooting or verification where there is a possibility of arc flash. Safety glasses worn for work conducted under this procedure must be UV and IR rated and have electrically non-conductive frames.

- Face shields may be used to provide additional protection to the face. Face shields are not a replacement for safety glasses and safety glasses must be worn with the face shield. Face shields must not be cracked or broken.

Flame Resistant (FR) Clothing

- FR clothing must cover associated parts of the body as well as all flammable apparel while allowing movement and visibility. Loose-fitting clothing is preferred as it provides additional thermal insulation due to the creation of air spaces beneath the clothing. Work clothing or arc flash suits that are contaminated, or damaged to the extent their protective qualities are impaired, must not be used.
- FR clothing shall be inspected before each use. FR clothing and any other protective items that become damaged or contaminated with grease, oil or flammable liquids or combustible materials shall not be used.
- The garments manufacturer's instructions for care and maintenance of the FR clothing must be followed. All FR clothing must be stored in a manner that prevents physical damage; damage from moisture, dust or other deteriorating agents, or contamination from flammable or combustible materials.

Procedures for Safe Working and Testing of Energized Electrical Equipment

- Clothing made from flammable synthetic materials that melt at temperatures below 315°C (600°F), such as acetate, acrylic, nylon, polyester, polyethylene, and spandex, either alone or in blends must not be worn.

Electrical Test Procedure

Wherever possible, electrical troubleshooting must be done with the power supply turned off, locked and tagged out as specified in Lockout, Tagging and Test Procedure. Where absolutely impossible, as a last resort, electrical troubleshooting including testing with a multimeter, may be conducted on energized circuits providing the following is strictly adhered to:

- The multimeter must be a minimum Category 3 (or higher where required);
- The multimeter must be equipped with appropriately rated, fused test leads and be rated for the circuit being tested;
- The appropriate PPE is worn by the person doing the testing; and
- A second worker is in the vicinity who can assist in the case of an accident.

Steps to Conduct Electrical Testing

1. Identify voltage ratings involved and any unusual characteristics of the testing to be done. (Note: Higher than 600 V must be tested by an authorized contractor with High Voltage Electrical License.) Ensure mulitmeter and fused leads are rated as high or higher than the equipment you are working on.
2. Inspect all components of the multimeter and fused leads for any signs of damage. If damaged, DO NOT USE. Inform your Supervisor and obtain another multimeter before testing.
3. Ensure multimeter is set to the proper setting and to the highest voltage possible. If multiple lead ports are infrequently used, cover or block these ports to avoid operator error.
4. Determine the appropriate PPE level for the testing. Inspect your PPE prior to putting it on. In particular:

5. Voltage-rated gloves must be visually inspected prior to each use for cuts, punctures, holes or damage that may affect their rating or effectiveness. Gloves must be removed from their protectors for inspection. Leather protectors must be inspected before each use and determined to be free of holes, tears, and contamination. Insides of the leather protector gloves shall also be inspected for sharp or pointed objects that may damage voltage-rated rubber gloves.
6. Conduct the 3-point test:
7. Test a circuit known to be live
8. Measure the target circuit
9. Re-test the live circuit; to ensure all of the multimeter components are functioning, including fuses
10. NEVER switch multimeter functions while the meter is energized. Remove the test probes from any source of energy when changing settings. When switching from different meter functions or test points, ensure that the settings on the meter match the application.

CHAINSAW - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Potential Hazards

A chain saw is a power-driven tool designed to cut wood. The saw's cutting elements are on an endless chain, powered by a gasoline engine, electric motor or hydraulics. If not used safely by a person with appropriate training, very serious injuries can occur.
Cuts are the primary hazard associated with chain saw use and can be severe or even life threatening. Even when a chain saw is not running, contact with the chain can result in cuts. In addition, eye injuries can occur from flying chips/debris, and the noise generated by the saw can contribute to hearing loss. Other safety hazards identified with chainsaw use include chains snapping / flying off of the unit and hitting the chainsaw operator; electric shock; motor exhaust, etc.

How to Control the Hazards

To help prevent injuries related to chain saw operation, employers and workers need to know these key things:

- The chain saw must meet certain requirements of the Canadian Standards Association (CSA) standard relating to chain saws.
- It must be used and maintained according to manufacturer's instructions.
- The saw must be equipped with specific safety devices.
- Use of appropriate personal protective equipment will help to reduce the risk of worker injury.
- Safe start-up procedures; safe work procedures

CSA standard

Employers must ensure that a chain saw used at the workplace is manufactured, used and maintained according to the most recent edition of CSA Standard Z62.1 Chain Saws.

Manufacturer's instructions

Chain saws must be operated and maintained according to the manufacturer's specifications. It is extremely important to read your operators manual. This will provide details on safe operating procedures, maintenance and repair of the chain saw. If you do not have the manual, contact the saw manufacturer for an additional copy

Safety devices

It is important that the chain saw is equipped with the following safety devices, and that these devices always work properly:

- Safety chain – uses side traps or drive links specially designed to reduce kickback.
- Depending on the manufacturer, either the drive link or the side trap has a high curve or rise that keeps the chain from catching in the wood.
- Chain brake - a device used to stop the saw chain.
- Throttle control trigger - part of the chain saw, usually a lever, activated by the operator's hand or finger, that controls the throttle control valve.
- Throttle trigger lock – prevents the saw from speeding up if the throttle trigger is touched unintentionally.
- Chain catcher – keeps the chain from hitting the operator in the event the chain breaks.
- Section 5.18 of CSA Z62.1 requires a chain saw to be equipped with a chain catcher.
- Rear hand guard – sometimes called a “rear handle guard,” protects the operator’s right hand if the chain breaks and flies back towards the operator. The rear handle shall be designed or positioned so that the operator's hand is protected if the chain breaks or degrooves.

Personal protective equipment

Appropriate safety clothing and equipment reduce the risk of worker injury. Ensure chain saw operators wear appropriate clothing for the job that is not damaged, baggy or loose fitting. The personal protective clothing must meet requirements outlined in the applicable standards.

Personal protective equipment required for chain saw operators, includes:

- Protective headwear –that meets CSA Standard Z94.1, Industrial Protective Headwear - Performance, Selection, Care, and Use
- High-Visibility Safety Apparel – that meets CSA Standard Z96, High-Visibility Safety Apparel.
- Hearing protection –that meets CSA Standard Z94.2, Hearing Protection Devices Performance,

Selection, Care and Use.

- Eye protection – that meets CSA Standard Z94.3, Industrial Eye and Face Protectors.
- Leg protection – safety pants or pull-on chaps (recommended) that meet the requirements of the Bureau de Quebec CAN-BNQ 1923/450 M91 class A or equivalent.
- Protective footwear – CSA Grade 1 safety footwear with non-slip soles must be worn, that meets CSA Standard Z195, Protective Footwear, and CSA Standard Z195.1,
- Guideline on Selection, Care and Use of Protective Footwear.
- Gloves or Mitts – recommended to be worn when operating a chain saw. Those with double palms and lined with ballistic nylon offer the most protection.
- First Aid – recommended that operators carry a 4-inch compress for the control of heavy bleeding. An appropriate first aid kit must be available at the work site. Refer to Part 5 of the workplace safety and health regulation (M.R. 217/2006) for complete first aid requirements.

CONFINED SPACE ENTRY AND RESCUE - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Purpose
To provide guidelines during entry and rescue operations in confined spaces.

Scope
These guidelines are designed to provide guidance for personnel during all phases of confined space entry and rescue operations.

Definition
A confined space is “any space which is not intended for continual occupancy, has limited means of access and egress, and has the potential for physical, chemical or atmospheric contamination”.

Confined space training must be taken from an accredited trainer prior to entry.

Phase One: Scene Preparation
Upon arrival at a “confined space” the Rescue Team personnel must obtain the following information from the job site supervisor or Forman.

Step One: Assessment:
- What type of space is this?
- Are there produce storage hazards?
- Locate and secure the job site supervisor or a reliable witness.
- Determine location and number of victims
- Obtain blue prints, maps or have on site personnel draw a sketch of the space.
- Determine the mechanisms of entrapment or nature of injuries/illness.
- Make a conscious decision as to whether this is “rescue or recovery”.
- Determine number of entry points and locations.
- Determine electrical/mechanical/chemical hazards.

Step Two: Manpower and Equipment:
- Ensure needed response of additional rescue team members as required.
- Ensure a full structural assessment is completed.
- Ensure at least on EMS ambulance is summoned.
- Ensure adequate air supply, Scott packs and/or Cascade tuck and bottles
- Ensure that a sufficient rehab area is established.
- Ensure that a visible operations section is established.

Step 3: Make the General Area Safe:

- Establish a perimeter with tape and assign security/designated worker or police to monitor. Ensure that the rescue team assigns an access entry monitor, preferably not a rescue team member.
- Ventilate the general area if possible.
- Ventilate the space with positive pressure. There may be times when positive pressure will not work as needed. Continually assess the effectiveness of your ventilation process by:
    a. Atmospheric monitor readings.
    b. Assessment of type and configuration of the space.
- If possible, open all additional openings into the space to assist with ventilation process, i.e.
    a. Manholes
    b. Hatches
    c. Natural openings
- Ensure fire control measures if needed.
- Do not allow sources of ignition on site.

Phase Two: Entry Preparation

1. Ensure lock out, tag out, blank out procedures are complete.
2. All fixed mechanical devices and equipment capable of causing injury shall be placed in a zero mechanical state (ZMS).
3. All electrical equipment (excluding lighting) shall be locked out in the open (off) position with a key type padlock.
4. The key shall remain with the person who places his/her lock on the padlock.
5. In cases where lockout is not possible, equipment shall be properly tagged and
6. physical security provided.
7. All locked out utilities shall also be tagged with an approved confined Space Entry Tag system.
8. Post non-essential personnel at those areas tagged and blanked or blinded.
9. If you must remove your S.C.B.A. to fit into the opening or move in the space DO NOT ENTER.
10. Ensure that all personnel who will enter the area are equipped with supplied air breathing apparatus (S.C.B.A. and/or S.A.B.A.).
    Ensure one backup team for every entry team.
11. No one shall enter a confined space alone, always work in teams (two minimum).
12. No team shall enter a space with pagers or any electronic equipment, unless approved prior to entry, based on atmospheric monitoring.
13. Each entry team shall be equipped with the following items
    One member shall have a communication, sound powered system in place, worn with the S.C.B.A. and/or S.A.B.A.
14. Hardwired package for communications if available.
15. Explosion proof lighting, or explosion proof flashlight.
16. Atmospheric monitor, personal units preferred.
17. Proper protective gear, as deemed necessary by the supervisor. At the very least, each member shall wear coveralls (flame retarding), nomex hood, boots and gloves. Helmets shall be worn whenever possible.
18. An entry/egress line shall accompany the first entry team and be anchored at their furthest point of penetration. If this line is equipped with a hard wire communication line (internal) it may function as a section (b) as well.
19. Some form of rapid extrication/retrieval harness for a victim.
20. If the entry team must enter a vertical shaft of greater than eight (8) feet, each member shall wear a personal harness and be attached to a fall arresting system upon entering.

21. A victim S.C.B.A. and/or S.A.B.A. if applicable.

Phase Three: Atmospheric Monitoring

1. Atmospheric monitoring shall occur prior to and during all entries into a confined space
2. Atmospheric monitoring should be accomplished at high, medium and low areas of the space.
3. All atmospheres shall be tested for
    a. Oxygen deficiency
    b. Oxygen excess
    c. Toxicity
    d. Flammability
4. The following levels shall be considered as immediately dangerous to life and health (IDLH) environments:
    a. Oxygen deficient - less than 19.5%
    b. Oxygen enriched - greater than 23%
    c. Flammability at 10% of Lower Flammable Limit (LEL)
    d. Toxicity shall be any limit whose numerical value exceeds their Permissible Occupational Exposure Limit. OEL
5. Atmospheric monitoring shall occur during occupancy at intervals dependent on the possibility of changing conditions, but in no case less than every 15 minutes.
6. All atmospheric readings shall be recorded on an entry permit.
7. In the event that, in the opinion of the supervisor, safety or rescue officers, the atmospheric readings become what he considers unsafe to continue operations, all entry teams shall be removed from the space immediately until such time as the atmospheric conditions are corrected.

Phase Four: Entry

1. Once the best method and location for entry has been determined, teams shall begin entry and rescue recovery operations in the space.
2. Entry decisions shall be made based on known locations of victims, safety of the opening, atmospheric readings and ease of recovery points.
3. If possible, attempt a two prong attack to reach the victim(s) if their location is know or suspected.
4. Prior to any entry, each team member shall be logged on a technical rescue work sheet with their time of entry. This function shall be assigned to a Breathing Air control supervisor, who shall keep each team apprised of their breathing air status.
5. Teams shall be limited to 30 minutes maximum in any space.
6. Each team shall be assigned to rehab upon removal from the space until rehydration and vital signs are within normal limits.
7. Once inside the space:
    a. Ensure adequate interior team communications.
    b. Ensure adequate communications with the operations exterior.
    c. Mark if necessary with chalk, cylume or other methods, entry and movement patterns to ensure egress.
    d. Move towards the suspected victim’s location as a team.
    e. Beware of elevation differences and unstable footing.

8. Once the victim has been located, decide:
    a. Is this a rescue or recovery?

b. If rescue, can an S.C.B.A. unit be placed on the victim?
c. Can the victim be easily moved towards the opening with current equipment carried by the team?
d. Is an additional team needed to make the move?
e. Communicate your decision to the outside supervisor(s).

9. Once the victim has been attached to a removal device and is in the process of being rescued/recovered:

   Ensure that if the victim is to be moved through an opening, either vertical or horizontal, which presents the team with the only way out that the following guidelines are followed:

   a. Whenever possible, ensure that all team members are stationed to the egress side of the hole/opening in the event that the victim becomes lodged.
   b. Always try to avoid being blocked in by a victim.
   c. If this is not possible, ensure the following:
      i. When the move is made, ensure that it is made quickly and smoothly, leaving the time that the space is blocked for egress as minimal as possible.
      ii. Ensure that the exterior personnel, as well as interior teams, are aware of the move and a plan is agreed upon prior to blocking the space.
      iii. Ensure that all air lines and connections are clear of the victim and his movement. Clear path to ensure that no air line problems develop as a result of the victim becoming entangled or pinching off the lines.

Phase Five: Victim Removal

1. Once the victim is set for removal, ensure the following:
   a. Ensure as much c-spine control as possible based on the space and the victim's condition.
   b. Use removal systems on the exterior, which are applicable to the size and weight of the victim.
   c. Mechanical advantage systems are much preferred over manual hauling.
   d. Do not use electric winches, hydraulic equipment, etc. to remove victims. These allow little control and could result in dismemberment or additional injury.
   e. Decide if the victim is to be removed head first or feet first.
2. Once the victim is clear from the space, remove all entry team personnel and equipment.

Phase Six: Safety Considerations

1. If rigging, hauling or use of rope hardware is needed in the space, ensure that only aluminum carabineers and hardware is used to avoid sparks.
2. In the event of an airline failure on an S.C.B.A., the entire team shall IMMEDIATELY leave the space and ensure that the rescuer with the problem is assisted.
   a. Notify the exterior immediately of the problem and identify the line and the specific problem.
   b. Never leave a partner in trouble unless you must clear the way for his exit.
   c. In the event that the five (5) minute bypass bottle runs out before you have exited and the airline problem has not been corrected:
      i. Buddy breathing by passing the mainline (which are still functional) back and forth to each other's system, is acceptable.
      ii. Do not leave the non-operational line behind.
      iii. Exit the space and correct the problem.

Phase Seven: Termination

1. Double check personnel list and ensure that all personnel are accounted for.
2. Inventory and replace all equipment.
3. Place any potentially unfit or damaged equipment out of service until repaired or replaced.
4. Have contractor or responsible party seal entry points to ensure no additional entry.

CORING - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

TITLE
Coring Operations

OBJECTIVE
To instruct workers on how to conduct safe coring operations.

APPLICABLE TO
All employees involved in coring operations.

HAZARD CONTROL MEASURES
- Safe Work Practice
- Maintenance according to manufacturer's specifications
- Pre - Use Inspection

MANAGEMENT RESPONSIBILITY

Management is responsible to ensure that:
- A Safe Work Practice is developed and implemented for the use of a coring machine.
- The coring machine is in serviceable condition and is maintained and serviced according to manufacturer's specifications; and
- Appropriate employee training processes are implemented.

SUPERVISOR RESPONSIBILITY

Supervisors are responsible to:
- Facilitate and/or provide appropriate training as necessary to their workers on the proper use of the coring machine.
- Monitor the use of coring machine by workers and ensure that all workers use safe work practices and that unsafe use of the tool is identified, and corrected.
- Monitor the condition of the coring machine and take appropriate corrective action when the tool is defective.
- Ensure that the coring machine is maintained according to manufacturer's specifications.
- Ensure that the provisions of "SWP coring Operations" are followed.

WORKER RESPONSIBILITY

Workers are responsible to:

- Read and follow the provisions of SWP Electric Tool and Equipment Use
- Read and follow all of the provisions of SWP Coring Operations.
- Get permission before beginning coring operations.
- While using a coring machine, always wear eye protection that fits closely to the face to prevent flying objects from entering the eye. When using the tool over head, also wear a face shield.
- Assess the hazards of the situation and control the hazards identified. Do not proceed where there is an uncontrolled hazard.
- Where appropriate, cordon off areas in floors below coring operations so personnel are not struck by falling cores or debris.
- Ensure that there is no chance of contacting energized electrical lines or other utility feeds while coring. If coring must be one in close proximity to electrical cables or charged piping of any type, ensure that they are shut-off or de-energized.
- Verify that there is a ground fault interrupter in the electrical supply system for the unit. Do not tamper with the electrical connections on the tool.
- Ensure that electrical connections used are fully compatible with those on the tool.
- Wear suitable respiratory protection if the drilling operation will generate harmful or irritating dusts.
- Do not wear any type of loose or dangling apparel and ensure that long hair is confined well away from the rotating parts of the tool.
- Wear hearing protection–particularly in situations of extended use.
- Do not operate the drill in excessively wet conditions or in the presence of flammable liquids or gasses. Particularly, protect the motor from being exposed to water.
- Do not force the tool. Excessive pressure will not improve the performance of the tool.
- After the electrical overload protection activates and is re-set, the motor can be cooled by running it without load for a period of time.
- Immediately after drilling, the drill bit can be dangerously hot. Do not touch it with bare hands.
- After changing bits, visually check the bit for proper positioning.
- After use, and during use when necessary, the tool should be cleaned.
- Do not use a water jet to clean the drilling system

Operation:

- Select the correct drilling speed (Change speed only when the rotation has stopped)
- Release the carriage locking device
- Guide the core bit into the water collector
- Open the water supply valve
- Select hole - starting mode.
- Switch on the motor
- Begin drilling. Switch from hole starting mode when appropriate.

Operating tips:

- Use of hole starting mode reduces vibration
- If encountering steel reinforcement, reduce speed and water flow
- The diamond bit segments can become polished if drilling feed pressure is too low.
- Inadequate water flow will damage the bit
- Reduce feed pressure if the overload current regulator is activated.

Overhead drilling:

The following equipment must be used:

- The Baseplate secured to the ceiling.
- Water collector complete with sealing disc (lubricated).
- Hose strain release clamp.
- Water removal hose.
- Wet vacuum cleaner and adapter.
- 3-way water connection.
- Rail stop.

Maintenance:

- Keep the chuck clean and well lubricated
- Clean any dust and debris from the vent slots.
- If the service indicator light activates, the carbon brushes need replacement as soon as possible.
- Check the system regularly for water leakage.
- Keep the carriage and rails clean and lubricate the rails as appropriate.

ELECTRIC SAFETY - SAFE WORK PROCEDURES

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PPE Required:
Safety Glasses, Safety Boots

Job Steps:

General
- If energy-isolating devices are not capable of being locked out, they must be modified so that they are capable of being locked out whenever major replacement, repair, renovation, or modification of the machine or equipment takes place. Whenever new machines or equipment are installed, energy-isolating devices for such machines or equipment must be designed to accept a lockout device.
- If an isolating device cannot be locked out for any reason, then additional steps must be taken to assure full employee protection such as removing fuses, blocking switches, blanking off lines, etc.
- If the machine or equipment is not capable of being locked out, a tag-out procedure must be documented and utilized. The tag-out procedure must provide full employee protection equivalent to a lockout system. For full employee protection, when a tag-out device is used on an energy-isolating device, the device must be attached at the same location that the lockout device would have been attached, and must demonstrate that the tag-out device will provide a level of safety that is equivalent to that of a lockout system.

Plug/Cord and Hose-Connected Type Equipment
- When servicing or installing plug/cord or hose connected electrical, pneumatic, or hydraulically powered equipment, the cord or hose shall be disconnected from the equipment to be worked on, prior to starting the work. A tag warning against reconnecting the plug or hose shall be affixed to the plug or hose end.
- Any stored energy (e.g., capacitor voltage, hydraulic pressure) shall be safely released prior to the start of maintenance or installation work.

Electrically Powered Equipment
- Electrically powered equipment shall be de-energized and their source of electricity manually disconnected from them prior to the removal of protective covers or the start of other maintenance or installation work. It is important to recognize that locking and tagging on/off switches is often not sufficient to prevent accidental start up or prevent voltage from being present in the equipment. If the equipment is not wired properly (i.e., the polarity is reversed) or the switch is of the single pole type, voltage can be present even if the operating switch is in the off position. For these reasons, manual disconnects must be placed in the off position and/or the equipment's power fuses removed from the motor control center.

The lock-out/tag-out procedure is as follows:

- Each person working on the circuit or piece of equipment shall place a padlock and warning tag on the electrical isolation device (e.g., disconnect switch).
- Each person working on the circuit or piece of equipment shall attempt to energize or start the piece of equipment prior to starting work. Each on/off switch capable of energizing the equipment must be "tried."
- If the try step reveals that the equipment is capable of being energized, the proper disconnects must be located and locked out and the try step repeated.

As each person completes his or her task, they shall remove their padlock and tag from the energy isolating device.

All protective covers or panels shall be securely re-attached prior to energizing the equipment after work is completed. In the event that protective covers must be removed to make adjustments on energized equipment, appropriate guards must be constructed and attached in such a manner as to prevent employee contact with live circuitry capable of causing human injury. Such guards must be of durable construction, adequate to prevent injurious contact, and remain in place at all times that the equipment is energized.

PROCEDURES FOR WORKING SAFELY

- Temporary distribution panels must be installed by qualified electricians and in compliance with the "Electrical Energy Inspections Act" of SK and the electrical code.
- Doors and covers shall be kept closed while equipment is energized.
- Ensure circuit breakers and plug-ins are numbered to correspond to each other (i.e. circuit breaker 1, plug 1, circuit breaker 2, plug 2, etc…)
- Electrical cords and appliances shall be CSA approved and maintained in good order.
- Open front plugs should be replaced with dead front plugs whenever possible.
- Only qualified electricians can repair temporary panels or install hard wired electric circuits.
- Do not overload a circuit by plugging several power cords in one outlet.
- Do not use light duty cords for any heavy load applications.
- Inspect cords and electrical fittings for damage before use.
- Ensure all three prongs on a grounded power cord are in place.
- Always keep power cords away from tools during use.
- Suspend power cords over walkways or working areas to eliminate tripping hazards.
- Always protect cords by running through electrical conduit or placing between planks, when subject to damage.
- Do not tie knots in power cords. Always loop the cords or use a twist lock plug.
- Always store electric cords in a clean dry area off the ground
- Electrical cords shall be cleaned and inspected for damage before being placed in storage.

Refer to the Electrical Safety section in the Program for Assured Grounding details.

PROCEDURES FOR WORKING SAFELY

Only qualified persons will work on or repair electrical systems, equipment or tools.
All temporary lighting must be installed and maintained in according to applicable codes.
Splices or repairs of electrical cords must retain the same mechanic and electrical strength as the original cable.

All electrical extension cords, tools and equipment must have a ground plug or be double insulated.

Temporary electrical cords shall be kept clear of stairways and other locations where they may be subject to damage or present a tripping hazard.

When overhead lines are in proximity to the work area, the Supervisor shall contact the local power authority to ascertain the voltage of the power line and make arrangements to meet with the power authority to discuss safety procedures for the specific job.

All energized junction boxes, circuit breaker panels, etc., must have the proper cover in place to prevent accidental contact.

Damaged or defective electrical tools must be tagged “Out of Service” and handed to the supervisor for repair.

POWERLINES, TRANSFORMERS, FLAGGED WARNING LINES

Under no circumstances shall any person work or instruct workers to erect scaffolds, operate cranes, tools, and equipment or come within allowable proximity to power lines or transformers.

When the minimum distance cannot be maintained safely due to the circumstances of the work, the types of tools used or due to unplanned movement of a worker, the following steps must be taken:

Stop all associated work.

Call SaskPower, arrange for a meeting at the jobsite to decide whether the energized conductors can be:
de-energized

- effectively guarded and flagged
- displaced or re-routed

Get assurance in writing which of these actions will be taken and when. This assurance must be signed by the person controlling the electrical system (WCB **Form 30M33**).
Ensure the written assurance is communicated to everyone in the area where people, tools or equipment, can come within the minimum allowable distance.

When energized electrical conductors are GUARDED, special precautions must be taken:

1. Whenever guarding is used to allow approach to high voltage power lines, a qualified safety watcher must be posted to control the approach of and loads to stop immediately the movement when contact with the guards appears possible.

Voltage	Minimum Distance
751V to 75 KV 75 KV to 250 KV 250 KV to 550 KV	10' (3 meters) 15' (4.6 meters) 20' (6.1 meters)

2. Workers required to work in close proximity to overhead power lines shall be provided with and must be familiar with WCB electrical safety publications.

3. When high voltage conductors cannot be de-energized, re-routed or effectively guarded, no work shall commence until approval is obtained from WCB and the following precautions are taken;
    a. the area in which equipment/materials are to be moved shall be barricaded and supervised to restrict entry to only those workers necessary to complete the work
    b. a qualified person shall be designated as a watcher whose sole task shall be to;
        i. observe the position of material/equipment relative to conductors, and
        ii. order the movement stopped at any time that contact appears probable
    c. the watcher shall stop the movement of materials and equipment when conditions arise which prevents him/her from performing the task.
    d. the watcher shall be provided with a positive means to give a clear signal to stop movement and shall only use that means to stop movement.
    e. while equipment and materials are in motion in proximity to conductors, no person other than the operator shall be in contact with any part of the equipment.

PROCEDURES FOR WORKING SAFELY

This is generic and designed to give basic direction. Each piece of equipment or electrical system will have lockout procedures associated with it. Prior to commencing maintenance ensure familiarity with the lockout procedure. If in doubt, speak with your supervisor.

Identify all sources of power, which might allow for the operation of the equipment to be locked out. Power sources are not always electrical in nature. Some common power sources are hydraulic and kinetic. These types of sources may require blocking, pressure release or pinning prior to maintenance being conducted.

Ensure full awareness of power sources on the equipment/machine to service beforehand.

- Stop all drives and motors on the machine, by means of the STOP button.
- Lock out the main power to the equipment and any other power source which operates the equipment by placing a personal lock and identification tag on each power or disconnect switch while it is in the OFF position.
- Test equipment by trying to start it. If it starts the lockout was not successful and must be reviewed and re-applied. Continue with this process until the equipment does not start.
- Employees working on locked out equipment place their own lock on the power source
- On completion of the work, each worker must remove his or her own personal lock.
- The last person to remove their personal lock from the power source is responsible for the safe start-up of the equipment.
- Personal locks shall only be removed by the person who placed the lock.
- Under no circumstances shall any worker remove another worker's personal lock.
- If a lock is left on a power source, and the work is complete, every reasonable effort to locate the owner of the lock must be made so that the owner may remove their lock.
- Should the owner of a lock not be located, the Supervisor shall undertake a thorough search of the work area in order to ensure that the lock owner is not in the area and that the area is safe.
- The Supervisor ensures the equipment is safe and that the work is complete, all guards are in place and that the equipment could not accidentally start when the power is turned on.
- The Supervisor, once assured of the above, shall, along with a worker representative, remove the lock and ensure the safe start-up of the equipment.
- If the safety of the lock owner or the safe start-up of the equipment cannot be assured, the lock shall remain in place until such assurances can be made.

Electrical Safety – Hazards

Standard Protocol

- Accidental contact with electrical components can have deadly consequences. Always refer to the manufacturers recommended operating practices prior to using new electrical appliances, tools and equipment. Use the following guidelines to reduce the risk of personal injury.
- All electrical tools and appliances will be double insulated or have a three prong plug-in.
- Only qualified and authorized personnel are allowed to service and repair electrical appliances, tools and equipment.
- Prior to operating electrical powered tools and equipment, ensure that you are working on a dry surface.
- Tools with damaged cords, grounds and housing units are to be tagged “Out of Service” and sent for repair.
- Missing or damaged ground plugs of any appliance, tool or piece of equipment are to be repaired prior to use.
- Damaged extension cords shall be tagged “Out of Service”, repaired or replaced as warranted.
- Always stand to the side of a service box when resetting a breaker.
- All electrical tools must be CSA approved.
- Disconnect power tools from power source before making adjustments. Defective equipment needs to be tagged “Out of Service” and removed.
- Tools with electrical arcing brushes should be removed when you feel any tingling during use.

ERGONOMICS - SAFE WORK PROCEDURES

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Fatigue:

TECH Electric Limited recognizes that fatigue is a factor, which may affect a worker's ability to perform mental and physical tasks.

Due to the nature of our work, our industry is frequently required to extend the working hours of its employees. All management and supervisory personnel must be able to recognize and respond to the signs and symptoms that might impair the worker's performance due to fatigue.

It is the responsibility of the supervisor to make corresponding changes to work requirements if fatigue impairment signs are evident. All concerns should be communicated to management and corresponding changes should be documented for review and follow-up.

The continual monitoring of fatigue by management and supervisors will ensure that all employees are safe.

Musculoskeletal injuries (MSI)

Some of the tasks we perform at work—such as lifting, reaching, and repeating the same movements—can strain our bodies. In some situations, these tasks can result in an injury to the muscles, tendons, ligaments, nerves, blood vessels, and joints of the neck, shoulders, arms, wrists, legs, and back. This type of injury is called a musculoskeletal injury, or MSI.

To reduce the risk of musculoskeletal injuries, it is a company policy that all employees must use seatbelts at all times when operating machinery.

All workers are not to modify any equipment in hopes to minimize the risk of MSI to workers, while operating machinery.
All equipment is to be used only in accordance with manufacturers' specifications.

All workers will receive ergonomics training on the equipment they are operating, on the first day of work.

Risk Factor: The Environment

Eliminate or minimize exposure to whole-body vibration:

- Avoid sitting or standing for prolonged periods on a vibrating surface if practicable.
- Keep equipment well maintained to reduce vibration.

- Reduce total exposure to vibration by breaking up driving tasks or incorporating job rotation.
- Keep road surfaces well maintained where possible.

Keep the body warm at a comfortable temperature:

- Use local source heating.
- Wear warm clothing.
- Take rest breaks in warm areas.
- Ensure that lighting is proper for the task being performed and glare is avoided so that the worker does not assume awkward postures to compensate for glare, brightness, or inadequate lighting. (i.e. wear sunglasses if needed)

Risk Factor: Organization of Work

Ensure that if performing repetitive or demanding tasks, please allow for brief pauses to relax muscles; change work tasks; change postures or techniques). It is recommended that a brief pause is taken every 2 hours.

Control Measures to reduce risk of MSI

Workers Responsibilities*:*

To reduce the risk of musculoskeletal injuries all workers must adhere to following rules when operating machinery:

- must use seatbelts at all times
- workers not to modify any equipment, at any time, for any reason
- equipment is to be used only in accordance with manufacturers' specifications.

Supervisors Responsibilities*:*

- providing ergonomic work stations, for all workers,
- providing lifting equipment as needed on the jobsites, to eliminate risk of back injuries caused by lifting heavy loads,
- reducing repetitive movements through job rotation, whenever practicable,
- reducing repetitive movements by ensuring workers take breaks to 'stretch-out' minimum every 2 hours,
- minimizing the risk of MSI to workers by reviewing practices and procedures at the jobsites, and recommending more ergonomic procedures whenever possible.
- Implement interim control measures without delay (if the introduction of permanent control measures will be delayed)
- Implement permanent control measures without delay
- Issue appropriate PPE to control or reduce MSI when needed (PPE may only be used as a substitute for engineering or administrative controls in circumstances in which those controls are not practicable).

ELECTRICAL EXTENSION CORDS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Safety Guidelines:

Do:

- Check extension cord for UL and CSA mark or symbol
- Ensure that the extension cord is adequate for its intended use and the appliances to be plugged in
- Use a three-pronged extension cord when using heavy-duty tools
- Always match the wide blade of the plug with the appropriate outlet slot
- Check extension cords regularly for any damage or worn insulation, loose or exposed parts, or splices
- Unplug, and discard damaged cords
- Make note of extension cords that become hot when plugged in, if this occurs, then unplug immediately and use a heavier cord. If the problem persists, unplug the cord – block the outlet from being used and have an electrician assess the outlet.
- Extensions cords should only be used in dry locations. If water is introduced, turn off the appliance or equipment and unplug the cord
- Use the appropriate length of cord, a cord that is too long may become tangled which could possibly lead to overheating or become a tripping hazard
- Always unplug extension cords when they are not in use
- Always unplug an extension cord from the plug, never by pulling on the cord itself
- Always unroll or uncoil an extension cord to avoid heat retention and possible melting

DO NOT:

- Do not force a three-pronged plug into a two-pronged outlet or extension cord.
- Do not force an extension cord into small spaces (i.e., behind furniture)
- Do not put too many electrical cords together as they may overheat and cause a fire
- Do not connect more than one extension cord together. If more are needed, get a cord that is long enough to do the job without stretching it
- Do not use or store interior extension cords outside and are not to be exposed to temperatures below zero
- Do not use extension cords across areas where people walk
- Do not run an extension cord under a doorway, as the door crossing the cord may damage the insulation
- Do not run an extension cord under carpet or rugs, as the weight and friction of people walking over them may lead to damage as well as increase risk of electrical shock or fire
- Do not use a staple or nail gun to secure extension cords
- Do not plug extension cords into a power bar

ELEVATING WORK PLATFORMS (Scissor Lifts) - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

PPE Required:
Safety Glasses, Safety Boots, Hard Hat, Appropriate Fall Protection of Fall Arrest System

Job Steps:

In accordance with the current *Regulations for Construction Projects*, a worker who operates an elevating work platform shall, before using it for the first time, shall be given oral and written instruction on the operation of the elevating device.

An elevating work platform shall only be operated by a worker who has been instructed in:

- operating the machine;
- the daily inspections and maintenance required by the manufacturer;
- the types of working surface on which the machine is designed to be used;
- the maximum rated working load;
- special conditions or limitations of the machine;
- the significance of alarms; and
- the location of emergency controls

1. An elevating work platform which is not working properly or which has sustained damage to critical components must not be used until repaired by a qualified mechanic.
2. In the raised position, an elevating work platform shall only be used on surfaces specified by the manufacturer.
3. An elevating work platform must not be driven in a raised position close to holes, depressions, trenches or similar hazards.
4. An elevating work platform must not bear more than its rated working load and, where possible, the loads shall be distributed over the platform.
5. When elevating work platforms are used to lift materials, care must be taken to ensure that the materials are firmly secured to the platform.
6. Do not place makeshift platforms, such as boxes, or proper access equipment, such as ladders and scaffolds, on an elevating work platform to gain access to areas above.
7. An elevating work platform or any other part of EWP device must not be moved closer than 3 meters (10 feet) to overhead power lines, unless the device is equipped for live electrical line work and the workers on the platform are qualified for such work.
8. An elevating work platform must not be used for pulling, pushing or dragging materials.
9. The platform of an elevating work platform must not be extended by using cantilevered planks or

similar platform materials. Only manufacturers' platform extension devices shall be used.

10. Planks or similar platform materials must not be used to bridge a gap between an elevating work platform and other work areas.
11. Workers must always maintain 3-point contact (one hand and two feet or two hands and one foot) when getting on or off the platform of an elevating work platform.
12. For all types of off-slab devices, the terrain on which the device is placed or over which it will travel must be firm enough to support the device and its rated working load.
13. An elevating work platform must not be used under high wind conditions. This is especially important for smaller scissor lifts and boom-type devices.
14. When the elevating work platform is not being used, turn off the power system to prevent exhaust fumes from accumulating in an enclosed work area.
15. Elevating work platforms used on ramps or on sloping or uneven surfaces must be designed for such use and properly secured against horizontal and vertical movement.

EXCAVATION - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Policy Statement

TECH Electric Limited has implemented this policy to inform workers of the written Excavation plan in the workplace. This ensures the health and safety of workers at the work site.

Company owner is responsible for ensuring that the following policy for control, training, personal protective equipment and safe work practices is enforced.

Work Standards

- TECH Electric Limited ensures excavation work shall be in accordance with the written instructions of a professional engineer when:
- The excavation is more than six (6 m) metres (20 ft) deep,
- Support structures are used in the excavation,
- An improvement or structure is adjacent to the excavation,
- The excavation is subject to vibration, or hydrostatic pressure which is likely to result in ground movement hazardous to workers, or
- The ground slopes away from the edge of the excavation at an angle steeper than three (3) horizontal to one (1) vertical.

The written instruction shall:

- Be certified by a professional engineer,
- Be available at the work site, and
- Specify the support and sloping requirements, and the subsurface conditions expected to be encountered.

Underground Utilities

- Prior to excavating, or drilling with powered tools and equipment, the location of all underground utility services in

The area shall be:

- Accurately determined, and
- Any danger to workers from the services controlled.

Excavation or drilling work in proximity to an underground service shall be:

- Undertaken in conformity with the requirements of the owner of the service, and this Company.
- When powered equipment is used for, excavating it shall be:
- Operated so as to avoid damage to underground utility services, or
- Danger to workers.

Note: Pointed tools shall not be used to probe for underground gas, and electrical services.

Hazard Removal:

- TECH Electric Limited ensures the following shall be removed, or secured when they could endanger

Workers in an adjacent area to be excavated:

- Trees
- Utility Poles
- Rocks, and
- Similar Objects

Sloping and Shoring:

- Prior to a worker entering any excavation over 1.2 metres (4 ft) in depth, or while in the excavation, approaches closer to the side, or bank than a distance equal to the depth of the excavation, this

Company ensures:

- That the excavation sides will be sloped, or supported as specified by a professional engineer, or
- The sides of the excavation will be supported in accordance with the specifications of legislation.

Safe Shoring Procedures:

- It is/is not the policy of this Company to perform shoring and/or allow workers to enter a trench when shoring is used.
- Shoring materials shall be installed from the top down, and removed in reverse order.

Workers shall not enter an excavation to remove shoring materials when:

- Ground conditions have deteriorated so as to make entry for shoring removal unsafe.

Shoring, manufactured, or prefabricated support systems shall be:

- Installed in firm contact with the faces of the excavation, and
- In a manner that ensures no loss of soil from behind, below the bottom of the shield, or shoring while the excavation is open.

Voids between the shoring and the excavation face shall be:

- Backfilled or blocked, or unless otherwise indicated in writing, by the manufacturer, or a professional engineer.

Entry and Exit:

- A safe means of entry and exit shall be provided for an excavation a worker enters.

When workers are required to enter a trench over 1.2 metres (4 ft) deep, the safe point of entry and exit shall be:

- Located within eight (8) metres (25 ft) of the workers, and
- The excavation safely supported, or sloped to the entry and exit location.
  Walkways shall be secured to prevent dislodgement.
- The open side of an access route into an excavation used by mobile equipment shall have a curb.

Guarding:

- When an excavation is a hazard to workers, it shall be effectively covered or guarded.

Excavated Materials

TECH Electric Limited ensures excavated material shall be kept back:

- A minimum distance of 60 cm (2 ft) from the edge of a trench excavation, and
- 1.2metres (4 ft) from any other excavation.
- Under no circumstances may excavated material be piled so that it endangers workers.

Scaling and Trimming

- The sides of an excavation shall be scaled, trimmed or otherwise stabilized to prevent slides of material, or falls or rock, which could endanger workers.

Water Accumulation

- Water shall not be allowed to accumulate in an excavation when it might:
    a. Affect the stability of the excavation, or
    b. Endanger workers.

The erosion of slopes by surface water shall be prevented, when workers may be endangered.

Excavation

Work standards:

1. Subject to this section, excavation work must be done in accordance with the written instructions of a qualified registered professional if
    a. The excavation is more than 6 m (20 ft) deep,
    b. An improvement or structure is adjacent to the excavation,
    c. The excavation is subject to vibration or hydrostatic pressure likely to result in ground movement hazardous to workers, or
    d. The ground slopes away from the edge of the excavation at an angle steeper than a ratio of 3 horizontal to 1 vertical.

2. Despite subsection (1), excavation work described in that subsection must be done in accordance with the written instructions of a professional engineer if the excavation requires or uses support structures.

3. The written instructions required by this section must
    a. Be certified by the qualified registered professional concerned,
    b. Be available at the site, and
    c. Specify the support and sloping requirements and the subsurface conditions expected to be encountered.

Underground utilities:

1. Before excavating or drilling with powered tools and equipment, the location of all underground utility services in the area must be accurately determined, and any danger to workers from the services must be controlled.

2. Excavation or drilling work in proximity to an underground service must be undertaken in conformity with the requirements of the owner of the service.
3. Pointed tools must not be used to probe for underground gas and electrical services.
4. Powered equipment used for excavating must be operated to avoid damage to underground utility services, or danger to workers.

Removing nearby hazards

- Trees, utility poles, rocks and similar objects adjacent to an area to be excavated must be removed or secured if they could endanger workers.

Sloping and shoring requirements

1. Before a worker enters any excavation over 1.2 m (4 ft) in depth or, while in the excavation, approaches closer to the side or bank than a distance equal to the depth of the excavation, the employer must ensure that the sides of the excavation are:
    a. Sloped as specified in writing by a qualified registered professional,
    b. Sloped at angles, dependent on soil conditions, which will ensure stable faces, but in no case may the slope or combination of vertical cut and slope exceed that shown in Figure 20-1,
    c. Benched as shown in Figure 20-2,
    d. Supported as specified in writing by a professional engineer,
    e. Supported in accordance with the minimum requirements, or
    f. Supported by manufactured or prefabricated trench boxes or shoring cages, or other effective means.

2. If the end of a trench over 1.2 m (4 ft) in depth is not adequately sloped, end shoring must be installed unless
    a. A worker in the trench is not required to approach closer to the end of the trench than a distance equal to the depth of the trench at that end,
    b. Where, for the prevailing soil conditions at the end of the trench, the permissible spacing of uprights equals or exceeds the width of the trench, or
    c. Otherwise authorized in writing by a professional engineer or professional geoscientist.

3. If end shoring is required, the walers for the end shoring must be installed to bear against the walers that extend along the sides of the trench, or in a manner that will provide equivalent structural restraint.

4. End shoring must be designed by a professional engineer if the end shoring waler length exceeds 1.8 m (6 ft).

5. Shoring must extend from at least 30 cm (1 ft) above ground level to as close to the bottom of the trench as the material being installed will allow, but in no case more than 60 cm (2 ft) from the bottom.

6. Shoring need not extend above ground level where traffic-crossing plates need to be used, provided that other measures are taken to prevent excavated or other material from entering the excavation.

Safe shoring procedures

- Shoring materials must be installed from the top down and removed in reverse order.
- Workers must not enter an excavation to remove shoring materials if ground conditions have deteriorated so as to make entry for shoring removal unsafe.
- Shoring or manufactured or prefabricated support systems must be installed in firm contact with the faces of the excavation, and in a manner, which ensures no loss of soil from behind or below the bottom of the shield or shoring while the excavation is open.
- Unless otherwise indicated by the manufacturer or a professional engineer, in writing, voids between the shoring and the excavation face must be backfilled or blocked.

Spoil piles

- If the average depth of a spoil pile, which is adjacent to a supported excavation, exceeds 60 cm (2 ft), the selection of the shoring or shielding must take into account the resulting increase in lateral soil pressure.

Entry and exit

- Safe means of entry and exit must be provided for an excavation a worker enters.
- If workers are required to enter a trench over 1.2 m (4 ft) deep, the safe point of entry and exit must be located within 8 m (25 ft) of the workers and the excavation must be safely supported or sloped to the entry and exit location.
- Walkways must be secured to prevent dislodgement.
- The open side of an access route into an excavation used by mobile equipment must have a curb.

Guarding

- If an excavation is a hazard to workers, it must be effectively covered or guarded.

Excavation crossings

- A walkway across an excavation must be at least 50 cm (20 in) wide, and if crossing an excavation over 1.2 m (4 ft) deep, be equipped with guardrails, meeting the requirements of on both sides.

Excavated materials

- Excavated material must be kept back a minimum distance of 60 cm (2 ft) from the edge of a trench excavation and 1.2 m (4 ft) from any other excavation.
- Under no circumstances may excavated material be piled so that it endangers workers.

Use of skips or buckets

- If a skip or bucket is used to remove material from an excavation, horizontal shoring members must be shielded from dislodgement with vertical planking.
- Scaling and trimming
- The sides of an excavation must be scaled and trimmed or otherwise stabilized to prevent slides of material or falls of rock, which could endanger workers.

Positioning equipment

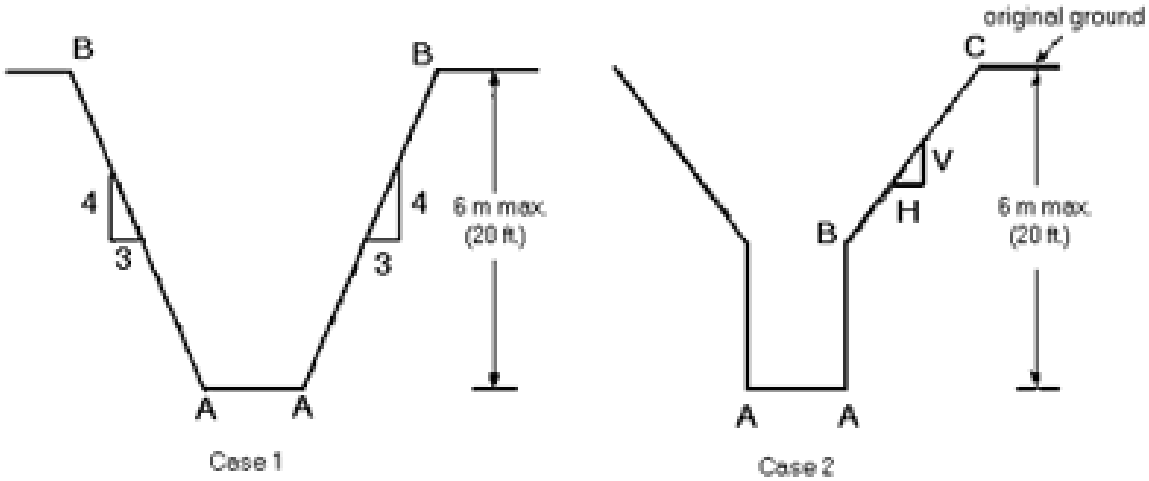
- Whenever possible, power machines excavating banks must be positioned so that the operator is on the side away from the bank and with the boom positioned closest to the side of the excavation.

Water accumulation

- Water must not be allowed to accumulate in an excavation if it might affect the stability of the excavation or might endanger workers.
- Erosion of slopes by surface water must be prevented if workers may be endangered.

Figure 20-1 Sloping in lieu of shoring

Trench excavation



Bulk excavation

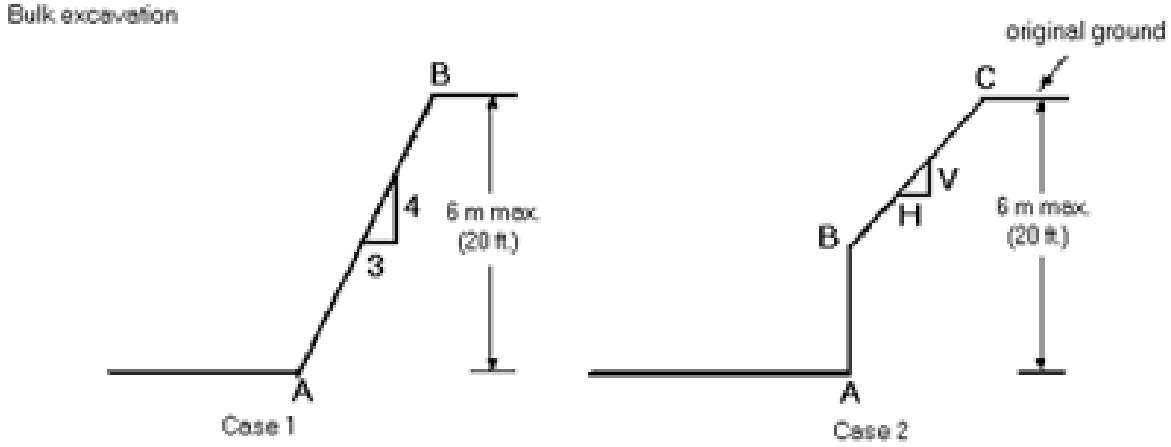


Figure 20-2: Benching in lieu of shoring

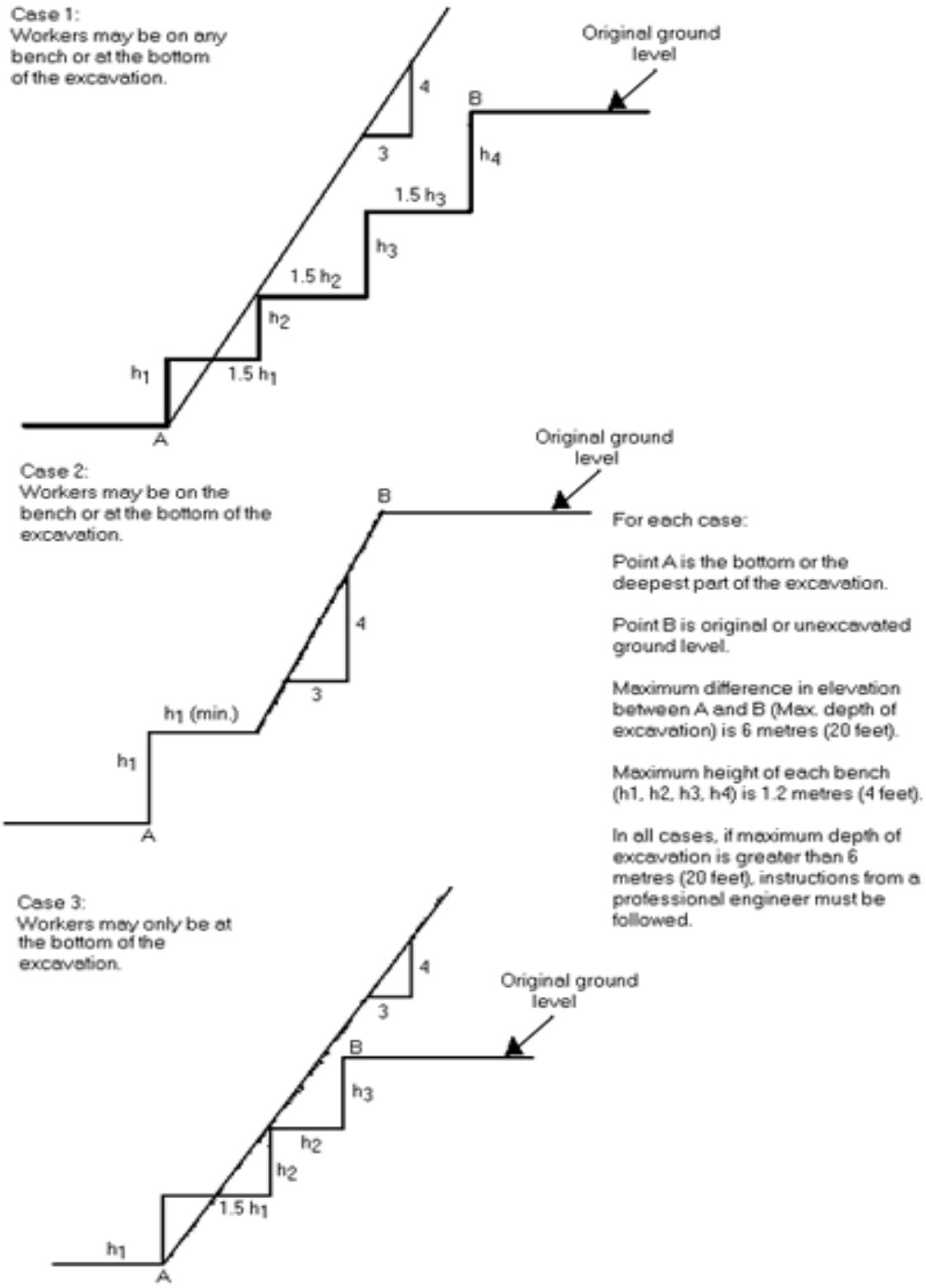
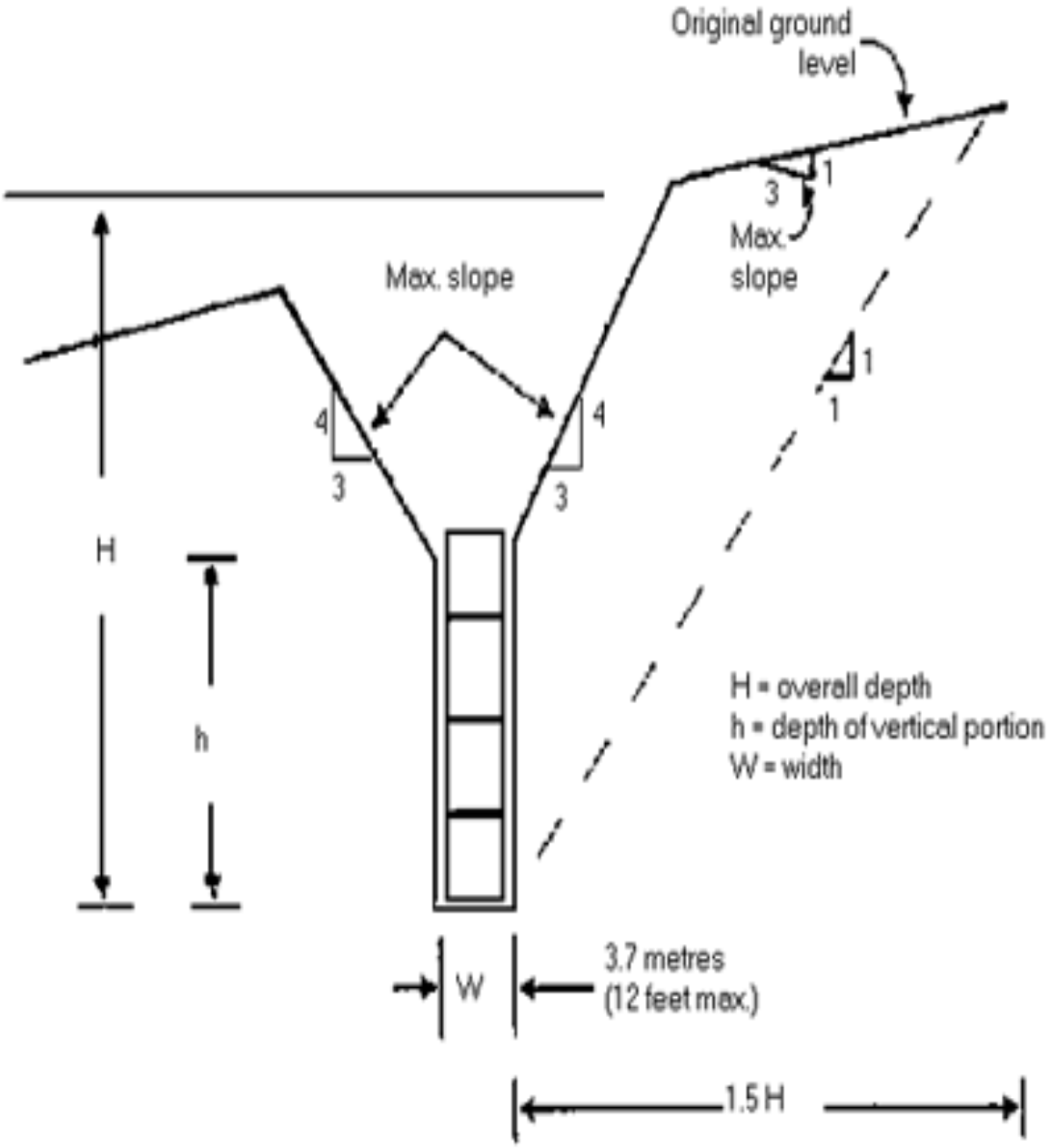


Figure 20-3: Combined supporting and sloping



Shoring must be adequate for excavation depth H.
Depth H cannot exceed 6 metres (20 feet).

FALLING OBJECRTS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

SAFETY EQUIPMENT REQUIRED

The following PPE is required by all workers while working on site;

- CSA approved safety boots. Boots must be in good repair.
- CSA approved hard hat. Hard hat must be in good repair with no modifications.
- Adequate clothing to protect from routine hazards on site. Check with your supervisor for additional PPE requirements.

PRELIMINARY ACTIVITIES

Prior to any work commencing, supervisors must conduct a hazard assessment of work areas. Any hazards found during the hazard assessment must be addressed prior to any work commencing.

PROCEDURES FOR WORKING SAFELY

- Ensure all top-rails, mid-rails and toe boards are in place as required.
- Always pre-plan tasks like guardrail placement and replacement as well as site cleanup.
- Ensure all entrances required to work or travel under are adequately covered.
- Ensure that procedures for slab stripping near the edge include methods of preventing materials from falling to the ground.
- Ensure all workers on the job are aware of overhead hazards on the site.
- Ensure a procedure is in place for material movement over work areas including audible.
- Ensure site inspection procedure includes the review of all guardrails, overhead movement of materials as well as cleanup and housekeeping with regards to falling objects.
- Whenever workers move around the jobsite they shall become familiar with the overhead hazards.
- Ensure guardrails, including toe boards, are in place when working in elevated areas.
- If there is a need to temporarily remove guardrails and/or toe boards on the jobsite, ensure that they are replaced as soon as the need for their removal is completed.
- All materials transported or stored above grade level must be properly secured during transportation and shall be adequately secured in storage so as to prevent movement. REMEMBER, plywood, gyproc, Q-deck, etc. can be lifted and moved by the wind.
- Never leave loose materials on scaffolds, swing stages or any elevated work area. Always ensure that elevated work areas have adequate guardrails and toe boards when required.
- Whenever you are required to work at or near the edge of an unprotected elevated work area,

always ensure that you wear proper fall protection. You can also become a falling object on the jobsite if the proper precautions are not taken.

- Falling Objects training will be done by your supervisor or safety manager as required. Proof of training is required and must be readily available on site. Use Tool Box or Safety Meeting Form to record the names of all workers who have participated in a crew talk on this SWP.

FALL PROTECTION (choosing method) - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

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When you think about staying safe while working at heights, you probably think of wearing your harness and tying off. In other words, you probably think of a fall-arrest system. Fall arrest certainly is an effective method of protecting you and your workers from falls, but using a fall-arrest system should be your last resort.

There are several different ways you can protect yourself and your workers from falls:

- Guardrails,
- Floor-opening covers,
- Travel-restraint systems, and
- Fall-arrest systems.

Here are some key points to help you choose the best method for your job.

Guardrails

- Guardrails should be your first choice when it comes to preventing falls. They provide workers with the best protection because, when erected properly, they actually eliminate the fall hazard. With guardrails in place, workers can't fall because there is no open edge.
- Another reason guardrails are the preferred method of fall protection in construction is that they protect all workers that come into the area. Protection is not dependent on each worker remembering to tie off, as is the case with fall-arrest or travel-restraint systems. Once guardrails are up, workers can move freely through the work area as though they were on the ground with no risk of falling.
- From time to time, you may have to remove some guardrails to allow for material delivery or access to certain equipment. Remind your workers that before guardrails are removed, they must all be protected by another form of fall protection (e.g., a fall-arrest system). As soon as it's possible, put the guardrails back in place.

Opening covers

A significant number of the workers, who are injured by a fall, fall through an opening in a roof or floor rather than off the edge of a structure. That is why floor-opening covers are so important.

Here too, guardrails are still your best option. Ideally, you should build guardrails around all floor openings. However, we know that's not always possible. Depending on the size and position of the opening, you may need to use a floor-opening cover in place of guardrails. If this is the case, the cover must completely cover the opening and be

- securely fastened
- adequately identified as an opening cover
- made from material that is strong enough to support all loads to which it may be subjected
- Capable of supporting a live load of at least 2.4 kilonewtons per square meter without exceeding the allowable unit stresses for the material used.

When you label opening covers, make it stand out. Use brightly colored paint and make the wording clear. It should say "**DANGER! FLOOR OPENING—DO NOT REMOVE! DO NOT LOAD!"**

Skylights

- Remind your workers to be careful around skylights. Before the skylight has been installed, you should treat the skylight opening the same as all other roof or floor openings (i.e., use guardrails or an opening cover).
- Once the skylight has been installed, there may be a perception among workers that it is safe to walk on.
- Skylights, however, are weak and a worker could easily break them and fall through.
- To be safe, treat skylights as roof openings and build guardrails around them – even after the skylight has been installed.

Fall-arrest and travel-restraint systems

If you can't use guardrails or opening covers, fall-arrest and travel-restraint systems are your next best option.

In many cases, travel restraint may be the better option over fall-arrest, here's why:

- A fall-arrest system prevents you from hitting the ground if you fall.
- In contrast, a travel-restraint system restrains you so that you can't fall.

With travel restraint, the lifeline is measured to be just long enough to allow you to reach the edge of a work area, but not long enough to let you go over.

Despite this big difference, travel-restraint systems are still similar to fall-arrest systems. They both use the same equipment: CSA-approved full body harness, lanyard, lifeline rope, and rope grab. Plus, both types of systems require you to tie off to an anchor point.

Both fall arrest and travel restraint are forms of personal fall protection—they protect only one person from the fall hazard. A guardrail, as mentioned earlier, protects everyone who is working in the area from the hazard.

FALL PROTECTION - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

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REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

- TECH Electric Limited will ensure all employees, including subcontractors, comply with legislated requirements including, but not limited to, provisions for training, use, inspection, maintenance, and storage of fall protection equipment; and implementation of a written Fall Protection Plan.

- All TECH Electric Limited employees required to use Fall Arrest and/or Fall Restraint to perform assigned duties will be trained and qualified, as evidenced by a certified training certificate/card issued by a professional training facilitator.

- A comprehensive, written, Fall Protection Plan is required when work is being done at a location where workers are not protected by permanent guardrails, and from which a fall of 3 metres or more may occur. Included in this plan will be evidence of certified fall protection training for any trade worker required to use a personal fall protection system.

FALL PROTECTION - STANDARD PROTOCOL

OH&S regulation requires that:

- Employers ensure that workers using a fall protection system are trained in its use and given adequate oral and written instructions.
- Training and instruction records are kept, including training and instruction dates and workers' names.
- Employers make training and instruction records available to inspectors on request.
- Supervisors verify that appropriate fall protection systems are in place on a project. All new site personnel must receive proper fall protection training and be certified. It is the expectation that all employees will have the knowledge to:
    a. know how to use the fall arrest equipment properly
    b. recognize hazards, and
    c. determine if other controls can be put in place to limit the need for fall arrest (e.g. guardrails).

Supervisors will assist in developing a written "Rescue Procedure", as part of the Fall Protection Plan.

Each jobsite supervisor is to develop a written plan for the jobsite and:

- Post it in the trailer, and
- Send to applicable subcontractors.

It is the Supervisor's responsibility to ask the subcontractors' foremen on site if the worker using fall protection has been trained.
Fall protection systems must be in place if any worker is exposed to any of the following conditions:

- Falling more than 3 meters.
- Falling more than 1.2 meters, 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.

To ensure that appropriate fall protection systems are in place for each contractor, supervisors are to use this Fall Protection standard and revise it as often as is necessary.

WORKING FROM SCAFFOLDS

- Scaffold platforms must be fully planked.
- Guardrails consisting of a top rail, mid-rail and toe board are required whenever the working platform is 3 meters (10 feet) or more above floor level.
- Wheels and casters must be locked when personnel are working on the scaffold.
    - If the scaffold is more than 3 meters (10 feet) high, it must not be moved with personnel on it unless:
        - they wear full body harness with lanyard and shock absorber tied off to an independent fixed support, and
        - the floor is firm and level.

WORKING FROM LADDERS

A worker must wear a full body harness with lanyard and shock absorber tied off to either an independent fixed support or a lifeline whenever the worker is:

- 3 metres (10 feet) or more above the floor, or
- above operating machinery, or
- above hazardous substances or objects.

WORKING FROM SWING STAGES

A worker must wear a full body harness with lanyard and shock absorber tied off to:

- an independent lifeline, if the swing stage has only two independent suspension lines, or
- the swing stage, if it has four independent suspension lines (two at each end).

WORKING BESIDE UNPROTECTED OPENINGS AND EDGES

A worker must wear a full body harness with lanyard and shock absorber tied off to an independent fixed support whenever the worker is more than 3 meters (10 feet) above the next level or whenever the worker is above operating machinery, hazardous substances or objects regardless of the possible fall height.

DEFINITIONS

Guardrail: A protective barrier around an opening in a floor or along the open sides of stairs or a ramp, landing, balcony, mezzanine, raised walkway or any other area to prevent a fall to a lower level, or inadvertent entry into a dangerous area

Fall Restraint: A fall restraint system consists of the equipment used to keep an employee from *reaching a fall point,* such as the edge of a roof or the edge of an elevated working surface. A tie off system that "restrains" the employee from falling off an elevated working surface is another type of fall restraint.

Fall Arrest: A personal fall arrest system means a system used to *arrest* an employee in a fall from a working level. It consists of an anchor point, connectors, or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. The entire system must be capable of withstanding the tremendous impact forces involved in *stopping* or arresting the fall.

WORKING BESIDE GUARDRAILS

Guardrails should only be installed by trained installers of such systems. Guardrails temporarily installed during the construction, demolition or renovation of a work area must be able to withstand a load of 550 N (125 lbs) applied perpendicular to the span in a horizontal or vertically downward direction at any point on the top rail, and not be made of fibre or wire rope.

Unless designed by a professional engineer, temporary wooden guardrails on floors and platforms must meet the following criteria:

- Posts must be spaced not more than 2.4 m (8 ft) apart, except a scaffold may have posts spaced not more than 3 m (10 ft) apart
- Wooden top rails must be at least 38 mm x 89 mm (2 in x 4 in nominal) lumber for a span of up to

2.4 m between supports, and at least 38 mm x 140 mm (2 in x 6 in nominal) lumber for a span of 2.4 m to 3 m between supports

Wooden midrails must be 19 mm x 140 mm (1 in x 6 in nominal) or 38 mm x 89 mm (2 in x 4 in nominal) lumber

Wooden rails must be secured to the tops or inner sides of their vertical supports

- Wooden guardrail posts must be at least 38 mm x 89 mm (2 in x 4 in nominal) lumber, and must be installed with the narrow dimension facing the open edge

TEMPORARY REMOVAL OF GUARDRAILS AT THE PERIMETER OF A BUILDING

- Travel restraint system must be used prior to removing the guardrails, during the receiving of material, and until the guardrails are replaced and secure.
- Cordon off the area where guardrails will be removed using rope, chain or yellow caution tape.
- Attach rope, chain or tape to the top of the perimeter guardrails, approximately 6 ft. from where guardrails will be removed. Then attach to the first section of columns inside the building. The cordoned off area must extend a minimum of 8 ft. from the edge. If there are no columns, use 4ft.-high rubber cones.
- Set-up danger/warning signs outside the cordoned area.
- Verbally warn workers in the vicinity about the upcoming work.
- Workers inside the cordoned area must wear and use travel restraint system at all times. (Workers must be trained on set-up and use of travel restraint system.)
- Anchor points must be pre-selected by a competent person.
- Remove guardrails at the perimeter.
- Move hoisted material into the building.
- Replace guardrails.
- Remove rope, chain or tape and the danger/warning sign.

FULL BODY HARNESSES, LANYARDS, AND SHOCK ABSORBERS

The following is the minimum requirement when working over 3 m (10') where no other means of fall protection is available.

- All safety belts, full body harnesses and lanyards must be C.S.A. certified. They must have a C.S.A. label and be inspected on a regular basis.
- Harnesses are to fit snugly to all parts of the body and worn with all hardware and straps intact and properly fastened.
- The D-ring on the harness is to be located in the centre of the back between the shoulder blades.
- Lanyards are to be 16 mm (5/8") diameter nylon or equivalent.
- All lanyards are to have a shock absorber.
- Lanyards are to be a maximum length of 1.5 m (5').
- Lanyards are to be connected to a rigid support or lifeline higher than waist level.
- The shock absorber side of the lanyard is to be connected to the D-ring.

LIFELINES

All lifelines must be:

- 16mm (5/8") diameter polypropylene or equivalent;
- used by only one worker at a time;
- free from any danger of chafing;
- free of cuts, abrasions and other defects;
- long enough to reach the ground or knotted at the end to prevent the lanyard from running off the lifeline; and
- secured to a solid object

ROPE GRABBING DEVICES

To attach the lanyard of a full body harness to a lifeline, use a mechanical rope grab that has been CSA-certified. Look for the CSA label.

SAFETY EQUIPMENT REQUIRED

The following PPE is required by all workers while working on site;

- CSA approved safety boots. Boots must be in good repair.
- CSA approved hard hat. Hard hat must be in good repair with no modifications.
- Adequate clothing to protect from routine hazards on site. Check with your supervisor for additional PPE requirements.

TRAINING

Workers must be trained prior (third party fall protection training) to commencing work on the procedures detailed below. This training will be coordinated by your supervisor. Proof of training is required and must be readily available on site. Use a Tool Box Training Record to record the names of all workers who have participated in a crew talk on this SWP.

PRELIMINARY ACTIVITIES

Prior to any work commencing supervisors must conduct a hazard assessment of all applicable work areas. Any hazards that are found during the hazard assessment must be addressed prior to any work commencing.

PROCEDURES FOR WORKING SAFELY

PREPARATION

1. Work at elevations greater than 10 ft. (3m), where there is a fall risk, must use fall protection measures, including, but not limited to:
    - Installing wall, floors, railings and standard guardrail systems
    - Using personal fall restraint or fall arrest equipment
2. Fall restraint equipment prevents a worker from falling by restricting movement. Fall arrest equipment limits a fall to a maximum of 4 ft. (1.2m), using a full body harness.
3. Prior to the start of any project, a site specific fall protection plan shall be developed and implemented and ongoing training and review shall take place as the project proceeds.
4. Review includes identification of fall hazards, types and methods of fall protection used, procedures for assembly, maintenance, inspection and disassembly of equipment as well as the training requirements necessary for the fall protection program.
5. Training shall include job orientation, instruction on fall restraint, arrest and PPE fitting.
6. Ensure adequate attachment points available where fall protection systems are used.
7. This procedure should be used in conjunction with the following related procedures;
    - Floor openings
    - Guardrails
    - Ladders
    - Overhead hazards
    - Scaffolding
    - Handling and Use/Construction Procedure

8. When working in fall hazard areas, jobsite specific fall protection procedures must be used. Contact your Supervisor for information and appropriate equipment for your work area.
9. Always wear appropriate PPE when passing through an active overhead work area
10. Always use control or restrict access when work is below or overhead others

11. Ensure fall protection equipment is not used by workers until adequately instructed in safe use and handling, and have demonstrated they understand the instruction.

FALL RESTRAINT

Fall restraint is rigged to allow the movement of workers only as far as the sides and edge of the working area. As part of the rigging, anchorage points conforming to the eight times intended load (800 lb) criteria must be provided for each fall restraint device in use.

The plan involving the use of fall restraint systems shall include;

- Hold pre-job meetings and complete a PSI to address and discuss requirements including training or review.
- Working within the confines of a standard guard-rail system.
- Wearing approved fall restraint equipment attached to securely rigged restraint lines. This would include checking restraint line length to ensure limits of approach.
- Confirming all fall restraint devices are compatible.
- Inspecting all restraint components before each use for excessive wear, damage or other deterioration. Always remove defective components from use and mark them to prevent others from using them.
- Tying of restraint lines. These are to be tied independently of other lines and to an approved anchorage point only.

FALL ARREST

Workers exposed to a free fall distance of 10 ft. (3m) or more (without restraint) are required to wear fall arresting equipment including a full body harness.
The plan involving the use of fall arrest systems shall include;

- Holding a pre-job meeting to address and discuss the fall protection requirements including any training or review.
- Inspecting all components before each use to ensure no excessive wear, no damage or other deterioration. Always remove defective components from use and mark them as such to prevent others from using them.
- Securing full body harness to approved anchorage points able to support 5400 lbs (244kg)
- Ensuring that safety lines are rigged in such a manner as to limit the free fall distance to 4 ft. (1.2m). Ensuring that safety lines are protected from cuts, wear and abrasion.
- Ensuring that only one worker may be attached to any one vertical safety line. Ensuring that the attachment involves the use of locking snap hooks to “D” rings only.
- Ensuring the removal from service, until checked and re-certified for use, any body harness components which have been involved in a fall.

CONTROL ZONES

- Control zones are a last resort for fall protection and used for leading or fixed edge work.
- The plan involving a control zone system shall include;

A MINIMUM DISTANCE FROM THE EDGE OF 6 FT. (1.8M) SHALL BE MAINTAINED TO PROTECT WORKERS NOT WEARING FALL RESTRAINT OR FALL ARREST EQUIPMENT.

- All workers working between the 6 ft. distance and the edge must use fall restraint or fall arrest equipment attached to approved attachment points.
- Warning lines or barriers must be installed to separate the control zone from the edge of the building. These lines are generally made of wire, rope, or chain adequately supported on stanchions. Warning lines must be raised off the work surface to maintain a height of 40 – 45 in. (102 – 114cm) above surface.
- All warning lines must be clearly marked with high-visibility materials at least every 6 ft. (1.8m) along their length.
- Warning lines must be capable of resisting, without tipping over, a force of at least 16 lb. (7.2kg) applied horizontally.
- Swing factors must not exceed 22 degrees.
- Control zones shall be inspected at the beginning of each work shift to ensure the integrity of the control zone and that no damage or disruption of the warning line system has taken place.

CLEANUP AND STORAGE

- All equipment should be stored in a dry area to prevent deterioration of the equipment.
- Always inspect equipment thoroughly prior to placing in storage.
- Remove any damaged equipment from service and have it repaired and re-certified prior to future use.

FALL PROTECTION PLAN – SITE SPECIFIC

Site Specific Fall Protection Plan

Company Name:		Start date:
Site description:	Site address:	
Work area:		Tasks:

Identify Site-specific Fall Hazards (Use diagram on page 2 for more details)

Max. height (peak):	Max. height (eaves):	Max. height (other):
Roof slope(s), if applicable:		
Proximity to high voltage power lines:		
Ground cover/hazards:		
Other (Floor, Wall, Skylight, Stairwell Openings, Skeletal Framing, Hazardous processes or equipment, Reinforcing steel installation, Excavations, Elevating Work Platforms, etc.)/comments:		

Type of fall protection to be used (see definitions on page 2)

☐ Fall restraint	☐ Fall arrest	☐ Temporary guardrail system

Equipment inspection

Item	Comment/Defect	Item	Comment/Defect
☐ Full body harness		☐ Anchors	
☐ Vertical lifelines		☐ Ladders	
☐ Lanyards		☐ Ladder hoist	
☐ Rope grabs		☐ Toeboards	

Prior to accessing the work location

Checklist	Comments
☐ First aid attendant/facilities/equipment	
☐ Safety headgear available for all workers	
☐ Barricades & Warning Signs in place	
☐ CSA safety footwear	
☐ Safety eyewear	

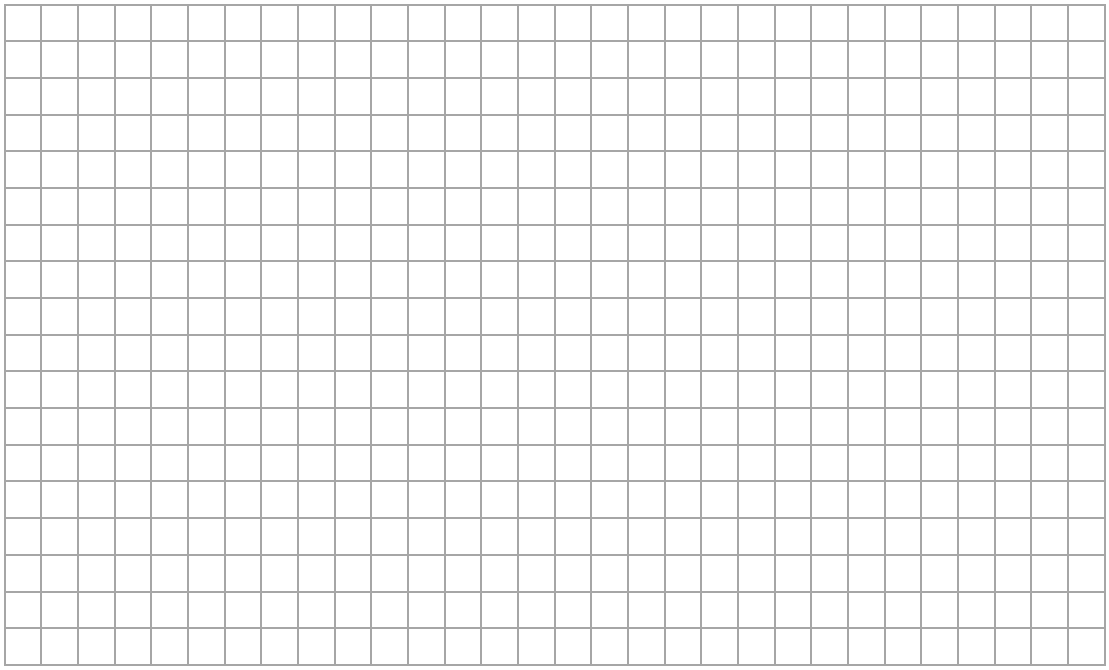
Ladder setup

☐ Set up on a firm, level base	☐ Extends approx. 1 metre (3 feet) past edge of roof
☐ Set up 4:1 (vertical:horizontal)	☐ Secured/tied off

Rescue procedures for a fallen worker (Self-Rescue/Other Employees Training/Location of Elevators, Stairs/Fire Department Info)

3318 Millar Avenue Saskatoon, SK S7K 7G9
T 306.242.6401 **F** 306.933.2317 **E** info@tech-electric.ca

Site roof diagram **(Identify anchor locations & method used to determine adequacy)**



Fall protection definitions

- **Fall Restraint** means a system to prevent a worker from falling from a work position, or from travelling to an unguarded edge from which the worker could fall.
- **Fall Arrest** means a system that will stop a worker's fall before the worker hits the surface below.
- **Guardrail** means a guard consisting of a top rail 102 cm to 112 cm (40 in. to 44 in.) above the work surface, and an intermediate rail located approximately midway between the underside of the top rail and the top of the toeboard, if one is provided, or the work surface if no toeboard is provided.

Worker sign-off

By signing below, I acknowledge that I have reviewed the fall protection requirements and procedures for this site with my supervisor and understand my responsibilities, specifically the requirement to use personal fall protection.

Name: (please print)	Signature:	Company:
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Supervisor: _____ Date: _____
(signature)

3318 Millar Avenue Saskatoon, SK S7K 7G9
T 306.242.6401 **F** 306.933.2317 **E** info@tech-electric.ca

FATIGUE MANAGEMENT - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Definition of Fatigue:

State of reduced mental and physical alertness of functioning caused by sleep related disruption or deprivation, as result of extended work hours, insufficient sleep, or the effects of sleep disorders, medical conditions or pharmaceuticals, which reduce sleep or increase drowsiness.

TRAINING

Workers must be trained prior to commencing work on the procedures detailed below. This training will be done by your supervisor or our safety manager as required.

Proof of training is required and must be readily available on site. Use a Tool Box Training Record to record the names of all workers who have participated in a crew talk on this SWP.

PRELIMINARY ACTIVITIES

Prior to any work commencing, supervisors must conduct a hazard assessment of work areas. Any hazards found during the hazard assessment must be addressed prior to any work commencing.

PROCEDURES FOR WORKING SAFELY

- Never work longer than 14 hours in one day.
- Never drive more than 12 hours in one day.
- If you are feeling tired, always take a break until recuperated.
- If you must work extended hours, inform your supervisor.

FIRE PROTECTION - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Fire extinguishing equipment will be readily available at all jobsites

Fire extinguishing equipment shall be provided at readily accessible and adequately marked locations at a project.

At least one fire extinguisher shall be provided,

a. where flammable liquids or combustible materials are stored, handled or used;
b. where oil-fired or gas-fired equipment, other than permanent furnace equipment in a building, is used;
c. where welding or open-flame operations are carried on; and
d. on each storey of an enclosed building being constructed or altered. At least one fire extinguisher shall be provided in a workshop for each 300 or fewer square metres of floor area.

Training

All workers will be provided training to use fire extinguishing equipment.
Training may be performed in-house or by a 3rd Party.

Fire extinguishing equipment shall be of a suitable type and size to permit the evacuation of workers during a fire.

Every fire extinguisher,

a. shall be a type whose contents are discharged under pressure; and
b. shall have an Underwriters' Laboratories of Canada 4A40BC rating.

Inspections

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

FLAMMABLE LIQUIDS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

PPE Required:

- CSA approved safety boots. Boots must be in good repair.
- CSA approved hard hat. Hard hat must be in good repair with no modifications.
- Adequate clothing consisting of long pants and shirts with a minimum of 4" sleeves to protect from routine hazards on site.
- Other PPE called for in the applicable MSDS. Check with your supervisor for additional PPE requirements.
- CSA approved safety glasses

TRAINING

Workers must be trained prior to commencing work on the procedures detailed below. This training will be done by your supervisor or our safety manager as required.

Proof of training is required and must be readily available on site. Use a Tool Box Training Record to record the names of all workers who have participated in a crew talk on this SWP

PRELIMINARY ACTIVITIES

Prior to any work commencing, supervisors must conduct a hazard assessment of work areas. Any hazards found during the hazard assessment must be addressed prior to any work commencing.

PROCEDURES FOR WORKING SAFELY

- All flammable liquids will be properly identified and monitored
- All sources of ignition must be eliminated or adequately controlled.
- Metallic or conductive containers used to transfer flammable liquids must be electrically bonded to each other or electrically grounded while their contents are being transferred from one container to the other.
- If glass, plastic or other non-conductive container with a capacity of 23 liters (5 imp gal) or more is used to transfer a flammable liquid, the accumulation of electrostatic charge near the surface of the liquid must be eliminated or controlled.
- Limiting the flow velocity of the liquid to less than 1 m/s (200 fpm),
- Using a grounded lance or nozzle extending to the bottom of the container,
- Limiting free fall,
- Using anti-static additives, or other effective means

FORKLIFT - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

PPE Required:

- CSA approved safety boots. Boots must be in good repair.
- CSA approved hard hat.
- Adequate clothing consisting of long pants and shirts with a minimum of 4" sleeves to protect from routine hazards on site.

TRAINING Workers must be trained prior to commencing work on the procedures detailed below. This training will be done by a certified third party training agency.

Alternatively a proof of training can be provided from an accredited Forklift training service provider, and record of this training kept in employee company file.

PRELIMINARY ACTIVITIES

Prior to any work commencing, supervisors must conduct a hazard assessment of work areas. Any hazards found during the hazard assessment must be addressed prior to any work commencing.

PROCEDURES FOR WORKING SAFELY

Properly operated forklifts make material handling effortless. However, when the forklift or operator limitations are exceeded they can be very dangerous.

Adhering to the following general operating rules can greatly reduce the risk of personal injury and property damage:

- Operate only if you have been trained.
- Know the manufacturer's manual. Never exceed manufacturer's load rating.
- Inspect all components prior to use.
- Keep forks and speed low at all times.
- When parked, always place forks flat on the ground.
- Drive in reverse when moving bulky items to avoid blind spots.
- Ensure forks are fully seated and square when lifting pallets.
- Do not move damaged or improperly loaded pallets.
- Do not carry passengers.
- Never leave a machine unattended with an elevated load.
- The use of a seat belt is mandatory.
- When lifting top heavy switchgear and panels, be sure load is secured before lifting

FORKLIFT SAFETY CHECKLIST

DATE: _____

INSPECTED BY:

_____ _____

(PRINT NAME) *(SIGNATURE)*

The operator of the forklift should carry out a *Visual Pre-Use Check* before starting the forklift. After completing the Visual Pre-Use Check, the operator should do an *Operational Pre-Use Check*.

VISUAL PRE-USE CHECK

1) ☐ Floor – clear of objects that could cause an accident
2) ☐ Overhead – no obstructions
3) ☐ Aisles, ramps, doorways and passages are clear.
4) Forks – ☐ Forks not bent ☐ No cracks present ☐ Positioning latches in good working condition ☐ Carriage teeth not broken, chipped or worn ☐ Retaining pins
5) Tires – ☐ Correct pressure ☐ Cuts or bulges ☐ Nails or Spikes ☐ Uneven or excessive wear ☐ Missing valve caps
6) Wheels – ☐ Damaged rims ☐ Missing or loose wheel nuts or bolts ☐ Obvious misalignment
7) Fluids – ☐ Oil ☐ Water ☐ Brake ☐ Hydraulic ☐ Other_____
8) Battery – ☐ Fully charged ☐ Check cables for exposed wires ☐ Vent caps not clogged ☐ Battery plug connections not loose, worn or dirty ☐ Electrolyte levels in cell ☐ Hold downs or brackets to keep battery securely in place
9) ☐ Propane bottle is secure
10) ☐ Fire extinguisher – present and charged
11) ☐ Hoses – held securely; not loose, crimped, worn or rubbing.

***REPORT ANY PROBLEMS IDENTIFIED IN DAILY CHECK TO THE SUPERVISOR IMMEDIATELY.**

FORKLIFT OPERATIONAL PRE-USE CHECK

1) Back up warning signal is operational.
2) All other warning devices are operational.
3) Lights – head lights and warning lights are operational
4) Foot Brake – pedal holds, unit stops smoothly
5) Parking Brake – holds against slight acceleration.
6) Audible back up warning is operational.
7) Clutch and Gearshift – shifts smoothly with no jumping or jerking
8) Dash Control Panel – all lights and gauges are operational
9) Steering – moves smoothly
10) Lift Mechanism – operates smoothly *(Check by raising forks to maximum height then lowering forks*
11) Tilt Mechanism – moves smoothly *(Check by tilting mast all the way forward and backward.*)
12) Cylinders and Hoses – not leaking after above checks
1) Horn – working loud enough to be heard in working environment
2) All other warning devices are operational.
3) Lights – head lights and warning lights are operational
4) Foot Brake – pedal holds, unit stops smoothly
5) Parking Brake – holds against slight acceleration.
6) Audible back up warning is operational.
7) Clutch and Gearshift – shifts smoothly with no jumping or jerking
8) Dash Control Panel – all lights and gauges are operational
9) Steering – moves smoothly
10) Lift Mechanism – operates smoothly *(Check by raising forks to maximum height then lowering forks Completely*
11) Tilt Mechanism – moves smoothly *(Check by tilting mast all the way forward and backward.*)
12) Cylinders and Hoses – not leaking after above checks

DATE: _____

INSPECTED BY:

_____ _____

(PRINT NAME) *(SIGNATURE)*

FUEL SPILL CLEAN UP - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

PPE Required:

- CSA approved safety boots. Boots must be in good repair.
- CSA approved hard hat. Hard hat must be in good repair with no modifications.
- Adequate clothing consisting of long pants and shirts with a minimum of 4" sleeves to protect from routine hazards on site.
- Other PPE called for in the applicable MSDS. Check with your supervisor for additional PPE requirements.

Job Steps:

- Clean up spills thoroughly and promptly.
- Always use Dry Methods for clean-up of fuel spills (gas, diesel or kerosene).
- Spread absorbents ("kitty litter" or loose absorbents) on the spill.
- Sweep up or pick up the absorbed materials.
- Dispose of wastes properly.
- If fluids are leaking or have spilled on an impermeable surface, such as a road or parking lot, locate nearest down gradient storm drain and dike or berm the drain to prevent fluids from entering.
- Put down absorbent on the spill area.
- After clean up, be sure to sweep up the contaminated absorbent and remove berm or dike from storm drain.
- If fluids are leaking or have spilled on a permeable surface, such as gravel, soil or grass, mark the area, then call the Spills Action Centre to assist with clean-up. Call the Provincial Enforcement Centre Spill Report Line **Toll Free: 1-800-667-7525**
- Never hose down spills or leaks.

Report Spills

Report spills of pollutants (e.g. oil, chemicals) by calling the Provincial Enforcement Centre Spill Report Line **Toll Free: 1-800-667-7525**

About spills

Spills are releases of pollutants:

- into the natural environment
- from a structure, vehicle or other container
- that is abnormal in quality or quantity

Some examples of pollutants are:

- oils crude, gasoline, jet fuel, kerosene and all light and heavy petroleum oils
- chemicals acids, bases, solvents or pesticides
- gases and particulates nitrous oxide, sulphur dioxide, methane gas, smoke or dust
- wastes liquid industrial, liquid hazardous, sewage, agricultural and other wastes

Who must report

By law, you must immediately report the spill if you:

- cause or permit the release
- had control of the substance just before the spill occurred
- are a member of a public agency and the spill hasn't been reported

And the spill must be immediately reported to:

- the Ministry of the Environment and Climate Change's Spills Action Centre
- the municipality
- the person in control of the substance if known and not already aware

See Environmental Protection Act (EPA) Part X and SK Regulation 675/98 Classification and Exemption of Spills and Reporting of Discharges under the EPA.

Reporting exemptions

In some cases you do not have to report a spill. O.Reg 675/98 under the EPA classifies 11 types of spills, circumstances, industry type or activities that exempt you from reporting. If you are unsure, it's best to contact the Spills Action Centre.

See O.Reg 675/98 for classifications and exemptions of spills and reporting.

When to report

You must report a spill if it:

- harm or material discomfort to any person
- injures or damages property or animal life
- impairs the quality of the natural environment air, water or land
- causes adverse health effects
- presents a safety risk
- renders property, plant or animal life unfit for use
- leads to the loss of enjoyment of the normal use of property
- interferes with the normal conduct of business

How to report

Spills must be reported immediately to the the Provincial Enforcement Centre Spill Report Line by calling **Toll Free: 1-800-667-7525**

What to report

When reporting, you'll need to provide information such as:

- your name and phone number
- name of the company or individual responsible for the spill
- time and location of the spill
- type and quantity of material spilled (if you know)
- status of the spill, including actions being taken to control the spill

See O.Reg 675/98 Part II for the full list of reporting requirements.

What happens after you report?

Environmental officers from the Ministry of the Environment and Climate Change take your report and:

- document the information and actions taken
- gather further information
- ensure those responsible are taking action as per their legislative responsibility
- provide advice and information relate d to spills or drinking water events
- conduct a field visit during business hours or an after-hours response
- liaise with other agencies as required

District-level Response

1st level field response is provided by environmental officers working out of the ministry's district or area offices.

For example, when an accident involving a tanker truck has spilled a load of chemicals onto a highway:

- district response staff assess the situation
- determine what actions need to be taken
- what additional resources may be needed

Each district office has an on-call environmental response person who is sent out by the Spills Action Centre under certain conditions.

Regional-level response

In some cases, a regional-level response will be needed to support a District-level response bringing in technical support and resources from the ministry's 5 regional offices.

For example, region-level support may be required for a significant chemical fire. Regional assistance or expertise may include:

- staff
- equipment
- technical expertise
- air or water monitoring or modeling and interpretation (a picture of existing and projected conditions)
- responsibility for issuing directions, approvals or orders under the Environmental Protection Act

Non-compliance

If those responsible for a spill can't or will not respond to properly clean up the spill, the Minister has the authority under the Environmental Protection Act to order those responsible to clean it up.

If they fail to do so, the ministry can undertake the clean-up and recover the costs from the spiller.

FUEL TRANSPORTATION - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Plan

Note any special issues or conditions for the worksite (e.g., be familiar with road system, road frequencies, Emergency Preparedness and Response Plan, weight or travel restrictions, etc.). Containers/tanks must conform to Fuel Management Standard, be designed for the product being transported, and must not leak.

Do

- Secure containers, nozzles and valves prior to transportation
- Ensure placards and/or labels are in place and visible prior to transporting fuel.
- Ensure that spill containment is provided in area that fuel is being transported to.
- Contain all waste daily and remove it from the site regularly (e.g., used spill blankets, pails, lunch bags, etc.).

Check

Inspect equipment routinely and make repairs, as required.
Look ahead to make sure that:

- Containers/tanks do not leak
- Hoses, nozzles, and valves meet Fuel Management Standard and do not have excessive wear, cracks, or leaks

Look behind to make sure that that work you have done is according to the plan (e.g., no fuel spills and/or staining, etc.).

Respond

Stop, contain, and minimise the effects of any spills.
Initiate emergency preparedness and response plan if the spill:

- Enters a water body or
- Has an adverse effect (i.e., damage to human health, environment, or property or
- Is greater than 20 Litres

Repair or replace damaged equipment as required (e.g., excessive rust, wear, cracks, etc.)

Report

Report immediately to your supervisor if you:

See or cause a spill that requires the emergency preparedness and response plan to be used
Have done or seen something that is not part of the plan
See something that has potential to cause or is causing damage to the environment

GENERATOR (Equipment) - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

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Precautions:
No Smoking
No Ignition Sources

PPE Required:
Safety Glasses, Safety Boots,
Hard Hat, Long Pants and Shirts

SPECIAL INSTRUCTIONS:

This procedure is intended for small portable generators used for on-site power for electrical tools and equipment, and not for truck or trailer mounted units used as an emergency power supply for buildings or factories.
All circuits used to supply power for electrical tools at a workplace must be protected by a safety switch

Pre-start checks

- Take care when refuelling to not spill fuel or overfill fuel tank.
- Check oil level; add oil if level is below the bottom mark on the dipstick.
- Use test switch to check for correct operation of safety switch.
- Ensure that generator is set up on a firm, level surface, preferably at a short distance away from the actual work area.
- Ensure that tools to be used are compatible with the output of the generator.
- Ensure that generator output is sufficient to operate tools effectively.

Operation

- Do not operate internal combustion motors in a confined or poorly ventilated area.
- Use a safety switch if one is not already fitted to the generator.
- Do not refuel generator while motor is running.
- Allow unit to cool down before refuelling.
- Ensure that generator is secure from unauthorised persons (children, etc).
- Take care when moving the generator as parts become hot to touch during operation.

HAND TOOLS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

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Hand Tools most commonly used:

- Level
- Measuring Tape
- Wrenches
- Cutting tools / knives
- Hammers
- Screwdrivers
- Pliers

PPE Required:

- CSA approved safety boots. Boots must be in good repair.
- Adequate clothing to protect from routine hazards on site.
- CSA approved safety glasses
- Hard Hat

Safe Work Procedures:

- Read and follow the manufacturer's instructions and warning labels.
- Know how to safely use hand tools and identify when they need repair.
- Wear personal protective equipment such as safety footwear, safety glasses, etc., that is appropriate for the hazards to which you may be exposed to when doing the required task.
- Select the right tool for the job; do not substitute.
- Ensure there is adequate lighting in the work area.
- Always concentrate on what you are doing.
- Use good quality hand tools.
- Maintain tools in good working condition. Keep them clean and dry, and store them properly after each use.
- Inspect tools for defects before use. Replace or repair defective tools.
- Ensure that the handle fits tightly into the head of the tool.
- Always pull on a wrench or pliers.
- Replace cracked or broken handles on files, hammers or screwdrivers.
- Replace worn tools.
- Keep cutting tools sharp and cover the sharp edges with a suitable covering to protect the tool and to prevent injuries from unintended contact.
- Keep the work environment clean and tidy.

- Do not use any broken or unsafe equipment, attach a warning tag, take it out-of-service and advise your supervisor.
- Do not apply excessive force or pressure on tools.
- Do not cut towards yourself when using a cutting tool.
- Do not wear bulky gloves when using hand tools.
- Do not throw tools. Hand them, handle first, directly to another worker.
- Do not carry tools in a way that interferes with using both hands on a ladder or while climbing on a structure.
- Do not carry a sharp tool in your pocket.

HEAVY EQUIPMENT - SAFE WORK PROCEDURES

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PPE Required:

- CSA approved safety boots. Boots must be in good repair.
- CSA approved safety glasses
- CSA approved hard hat. Hard hat must be in good repair with no modifications.
- Adequate clothing to protect from routine hazards on site. The following additional PPE and materials are also required for work around heavy equipment;
- High Visibility vest and other clothing as necessary.
- Hearing protection. Check with your supervisor for additional PPE requirements.

TRAINING

Workers must be trained prior to commencing work on the procedures detailed below. This training will be done by your supervisor or third party as required.

Proof of training is required and must be readily available on site. Use a Tool Box Training Record to record the names of all workers who have participated in a crew talk on this SWP.

PRELIMINARY ACTIVITIES

Prior to any work commencing, supervisors must conduct a hazard assessment of work areas. Any hazards found during the hazard assessment must be addressed prior to any work commencing.

PROCEDURES FOR WORKING SAFELY

- Only authorized personnel are allowed within the machine's extended radius.
- Anyone in the area must wear a reflective vest along with all other relevant safety gear.
- Anyone who is planning to enter within the radius of the heavy machinery must ensure eye contact with the operator and wait until the operator recognizes and instructs the person to enter within the radius. The person must always remain in full view of the operator when leaving to ensure the operator it is safe to proceed with his work.
- Under no circumstances shall any person walk between equipment and a trailer.
- Always make eye contact with the operator before doing anything around heavy equipment.

HYDROGEN SULFIDE (H2S) - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

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Equipment Required: **Material Required:** **PPE Required:**
Respirator

Training:

It is a company policy that the supervisor and the workers working in the vicinity of possible exposure to H2S are trained in and follow the emergency procedures. Training may be performed in-house or by a 3rd Party.

Training record of H2S training will be kept in company employee file for all employees.

Job Steps:

If a worker is or may be exposed to H2S, worker is not to enter the jobsite and contact the supervisor immediately. No employees of TECH Electric Limited are allowed to enter any jobsites where H2S exposure is possible.
It is a company policy that no worker is to be working on jobsites where H2S exposure is possible.
If employees are accidentally exposed to H2S that exceeds the ceiling limit of 10 ppm, the employee must be transported to nearest hospital/medical clinic to ensure employee wellbeing.

If a worker is or may be exposed to H2S at the jobsite, following steps must be completed:

(a) Walkthrough survey is conducted to assess the potential for overexposure taking into account inhalation, (to be recorded on Hazard Assessment)
(b) Reassessment is conducted when there is a change in work conditions which may increase the exposure, such as a change in production rate, process or equipment.
(c) If the walkthrough survey reveals that a worker may be at risk of overexposure to H2S, the supervisor will ensure that air sampling is conducted to assess the potential for overexposure.
(d) If a worker is or might be exposed to a concentration of H2S that exceeds its ceiling limit, TECH Electric Limited will provide an appropriate respirator and ensure that the worker uses it. The use of personal protective equipment as the primary means to control exposure is permitted only when
    - substitution, or engineering or administrative controls are not practicable,
    - additional protection is required because engineering or administrative controls are insufficient to reduce exposure below the applicable exposure limits,
    - the exposure results from temporary or emergency conditions only.

Emergency Response Plan and Evacuation Procedures must be followed at all times, if worker is or might be exposed to a concentration of H2S that exceeds its ceiling limit. Supervisors will:

a. notify workers of the nature and location of the emergency,
b. evacuate workers safely,
c. check and confirm the safe evacuation of all workers, and
d. notify emergency responders.

All workers that will be working in vicinity where H2S exposure may be possible will be equipped with H2S monitors that will sign an alarm in any H2S particles are detected in the area.
Employees are to evacuate upwind if any H2S particles are detected, and report to supervisor immediately.
Only employees trained in Respiratory Code of Practice, and the ones whom have received a Fit Test on a respirator, can work in areas where H2S may be present.
Only employees trained in H2S awareness by a third party can work on jobsites which are exposed to H2S.

What is Hydrogen sulphide?

Hydrogen sulphide is a colourless and poisonous flammable gas with a strong smell of rotten eggs. It is also known as sewer gas and stink damp. It can be detected by smell at concentrations ranging from 0.01-0.3 parts per million (ppm). However, relying solely on its odour is not a good idea because at concentrations above 100 ppm it deadens a person's sense of smell within a few minutes. The pure gas is heavier than air and can collect in low areas such as sewers, pits, tunnels and gullies.
Hydrogen sulphide can react with rust or corrosion deposits on equipment to form iron sulphide. This reaction occurs in an oxygen free atmosphere where hydrogen sulphide gas is present or where the concentration of hydrogen sulphide is greater than that of oxygen.
This happens most often in closed vessels, tanks or pipelines. Iron sulphide is a pyrophoric material, which means that it can ignite spontaneously when it is exposed to air.

Hydrogen sulphide is extremely toxic. Workers are exposed when they inhale hydrogen sulphide in air, and the lungs quickly absorb this toxic gas. It is believed that exposure to hydrogen sulphide prevents the brain from using oxygen by inhibiting the enzyme cytochrome oxidase.

Hydrogen sulphide is extremely toxic. Workers are exposed when they inhale hydrogen sulphide in air, and the lungs quickly absorb this toxic gas. It is believed that exposure to hydrogen sulphide prevents the brain from using oxygen by inhibiting the enzyme cytochrome oxidase.

Monitoring Hydrogen sulphide

There is a variety of monitoring equipment available, depending on the purpose of the monitoring. It is important to select monitoring equipment that fits the needs of the work environment. When selecting monitoring equipment, the user should also check for substances that could interfere with the equipment. For example, some gases such as hydrogen can interfere with the instrument sensor and mask the presence of hydrogen sulphide. Hydrogen sulphide monitors may also detect other reduced sulphur compounds such as thiols mercaptans).

Monitoring equipment for hydrogen sulphide should be set to alarm at no higher than the OEL for hydrogen sulphide. It is also very important that the instrument be calibrated and operated properly. More information on the proper operation of monitoring equipment for hydrogen sulphide is provided in the section of this document on regulatory requirements.
Hydrogen sulphide is frequently encountered in work environments (e.g. oil and gas industry, sewage treatment plants) where other flammable or combustible gases are present. In these work environments, it is recommended that monitoring be done for both hydrogen sulphide and other flammable/combustible vapours so the hazards can be properly assessed.

Personal Protective Equipment

If it is not practicable or feasible to use engineering or administrative controls to reduce the potential for exposure to hydrogen sulphide, or if these measures are not sufficient, the employer must provide workers with appropriate personal protective equipment.

Respiratory protective equipment is used to protect workers from inhaling airborne contaminants. There are many types of respirators available and it is important to select the correct level of respiratory protection depending on the type of work being done and the airborne concentrations that may be encountered.

Since hydrogen sulphide is irritating to the eyes, air-tight goggles or full-face respirator masks should be worn.

A full-face piece positive pressure supplied air respirator is needed for work areas where hydrogen sulphide concentrations exceed the OEL.
The National Institute for Occupational Safety and Health (NIOSH) specifies an IDLH (immediately dangerous to life or health) concentration for hydrogen sulphide of 100 ppm. NIOSH allows the use of air purifying respirators for hydrogen sulphide only for escape purposes at concentrations below the IDLH concentration. Above the IDLH concentrations, or for emergency or planned entry into unknown concentrations, a full-face piece positive pressure supplied air respirator must be used. Whatever the type of respirator used, the worker must be clean-shaven where it seals to the skin of the face and must be fit-tested for the type of equipment being used.

JOURNEY MANAGEMENT - SAFE WORK PROCEDURES

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The journey management plan must be utilized in conjunction with the working alone policy especially when travelling.

Driving during adverse weather should be avoided whenever possible.

Driving directions should be obtained before traveling to an unfamiliar destination.

Wildlife?	be aware that wildlife may be out at any time.
Night time?	reduce speed while travelling.

Road travel should be limited whenever practicable and furthermore to daylight hours whenever practicable

Use the buddy system if possible.

- Ensure a supervisor, another employee or a family member is aware of your travel plan.
- Ensure you have a mobile phone and/or a 2-way radio if required for communication purposes.
- Ensure GPS system is operation (if applicable).
- Ensure adequate breaks are taken to reduce fatigue issues.

All vehicles require a roadside emergency kit. The kit should include:

- first aid kit,
- hazard triangles,
- fire extinguisher,
- booster cables.

Additionally drivers should also make sure they pack water, non-perishable food items, blankets, tool kit, shovel, sand, etc.

LADDERS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

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PPE Required:

- CSA approved safety boots. Boots must be in good repair.
- CSA approved hard hat. Hard hat must be in good repair with no modifications.
- CSA approved safety glasses
- Adequate clothing to protect from routine hazards on site. The following additional PPE and materials are also required for work around heavy equipment;
- High Visibility vest and other clothing as necessary.
- Hearing protection. Check with your supervisor for additional PPE requirements.

TRAINING

- Workers must be trained prior to commencing work on the procedures detailed below.
- This training will be done by your supervisor.
- Proof of training is required and must be readily available on site.
- Use a Tool Box Training Record to record the names of all workers who have participated in a crew talk on this SWP.

PRELIMINARY ACTIVITIES

Prior to any work commencing, supervisors must conduct a hazard assessment of work areas. Any hazards found during the hazard assessment must be addressed prior to any work commencing.

PROCEDURES FOR WORKING SAFELY

Ladders of all types are used extensively in construction. Workers' Compensation Board statistics show that falls, including those from ladders, are one of the highest causes of injury in this industry.

Requirements for safe ladder use

- Ladders should be inspected before use. Ladders with loose, broken, or missing rungs, split or bent side rails or other defects, must be removed from service.
- The base of a ladder's side rails must rest on a firm, level foundation. Non-self-supporting ladders (straight ladders) need to have non-slip bases or spikes, depending on the terrain. Such safety devices need to be maintained in good condition.
- The top of ladders must rest against a bearing surface of sufficient strength that will not deform under load or shatter (in the case of glass or similar material).

- When in use, portable ladders other than stepladders must be placed using a maximum 4 vertical to 1 horizontal ladder slope.
- Portable ladders other than stepladders must be of sufficient length to project approximately 1 m (3 ft.) above the upper landing to which it provides access.
- Ladders must be tied, blocked, or otherwise secured to prevent them from slipping.
- It's important that the right ladder is chosen for the job.
- Aluminum extension ladders must be constructed rated; and when extended, a minimum overlap of 1 m (3 ft.) of the two pieces of ladder must be made.
- Metal ladders or ladders with steel reinforcements must not be used where electrical hazards exist.
- Short sections of ladders must not be spliced together to make longer ladders.
- Ladders should never be used as scaffolding planks.
- If wooden ladders are coated, the coating should be clear.
- Ladders should not be placed in doorways, passageways, or other areas where they might interfere with other work activities.
- Tools and materials must not be carried when climbing ladders. Suitable hoisting equipment must be used for this purpose.
- No worker is permitted to work from the top two rungs of a single or extension ladder or the top two steps of a stepladder unless permitted by the manufacturer.
- Do not "walk" the ladder to adjust position.

LOCK OUT/TAG OUT (Energy Isolation) - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

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Purpose:

- This procedure establishes the minimum requirements for the lockout of energy sources that could cause injury to
- Personnel. All workers will comply with the procedure

Responsibility:
Supervisors have the responsibility for ensuring this procedure is followed:

- Workers are responsible for following it
- All workers will be instructed in the safety significance of the lockout procedure by their direct supervisor.
- Each new or transferred worker will be instructed by their direct supervisor in the purpose and use of the lockout procedure.
- It is the supervisor's responsibility to have workers trained in lockout and tagging procedures.

Rules for Using Lockout Procedure:

- All equipment will be locked out to protect against inadvertent operation when such operation could cause injury to personnel.
- Do not attempt to operate any switch, valve or other energy isolating device bearing a lock.

Preparation for Lockout:

- A list of persons authorized to do lockout/tag is posted in the Safety Supervisor's office.
- Workers authorized to do lockout will be certain which switch, valve, or other energy isolating devices apply to the equipment being locked out.
- More than one energy source (electrical, mechanical, or others) may be involved; all sources are to be locked out.
- A questionable identification of sources will be cleared by the workers with their supervisors. Before lockout commences, job authorization should be obtained from the supervisor.
- Each person working on a machine must apply their own lock and tag – only a key lock will be used.
- The lock will have no master key and no locks will be opened by the same key.

Detailed Lockout Procedure:

1. Notify all affected workers that a lockout is required and the reason it is require.
2. If the equipment is operating, the operator will shut it down by the normal stopping procedure (such as: depress a stop button, open a toggle switch).
3. Operate the switch, circuit breaker, valve, or other energy isolating devices so that the energy source(s) (electrical, mechanical, hydraulic, and other) is disconnected or isolated from the

equipment. Stored energy, such as this in capacitors, springs, elevated machine members, rotating fly wheels, hydraulic systems, and air, gas, steam or water pressure, must also be drained or restrained by methods such as grounding, repositioning, blocking, or bleeding down.

4. Lockout energy isolating devices with assigned individual locks. Put a lock on all energy sources and keep the keys.
5. After ensuring that no personnel are exposed and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.
   CAUTION: Return operating controls to neutral position after the test.
6. The equipment is now locked out.

Restoring Equipment to Service:

- When the job is complete and equipment is ready for testing or normal service, check the equipment area to see that no one is exposed to a possible hazard.
- When equipment is clear, remove all locks and tags and give to supervisor for storage.
- Restore energy to equipment.
- Operator to restart equipment to ensure energy is properly restored.

Procedures Involving More Than One Person:

- In the preceding steps, if more than one individual is required to work on equipment, each will place his/her personal lock on the energy isolating device(s).
- One designated individual of a work crew or a supervisor, with the knowledge of the crew, may lock out equipment for the whole crew.
- In such cases, it is the responsibility of the individual to carry out all steps and tests of the lock out procedure and inform the crew when working on the equipment is safe.
- Additionally, the designated individual will not remove a crew lock until it has been verified that all individuals are clear.

LOCK-OUT PROCEDURE

Ensure that all energy sources are controlled: (air, electricity, hydraulic pressure, gravity, steam)
Any adjustments, cleaning, lubrication, clearing of obstructions, repairs or other maintenance work must ONLY be done by authorized persons.

PLUG-IN EQUIPMENT:

Before doing any maintenance work, remove the male plug from the outlet. Check that the correct plug has been removed. The worker(s) doing the maintenance work must keep control over this male plug. If control cannot be maintained, then adhere to the following procedure.

WIRED-IN EQUIPMENT:

Before doing any maintenance work, the power supply must be CUT OFF at the main control device (switch).

- EACH person doing maintenance work must secure the control device in the OFF position by placing his personal lock on the device, and keep the key in his possession (pocket).
- The worker applying the FIRST lock must press the “START” button to check that the equipment cannot be operated. (Then push the “STOP” button).
- When his work is done, EACH worker must remove ONLY the lock, which he placed on the control device.
- The worker who removes the LAST lock must check that all persons are in the clear and that the equipment can be safely restarted.

Procedures that must be followed in the event a worker's lock must be removed:

Step-by-step emergency lock removal procedure:

A personal lock must only be removed by the worker who installed it, or if this is not possible, the matter must be referred to the supervisor or manager in charge, who will be responsible for its removal.

The supervisor or manager in charge must:

- Make every reasonable effort to contact the worker who installed the lock, and
- Ensure that the machinery or equipment can be operated safely before removing the lock.
- A worker must be notified at the start of his or her next shift if the worker's personal lock(s) have been removed since the worker's previous shift.

Requirements for performing maintenance while equipment is in operation:

All employees are prohibited from performing maintenance on equipment that is not locked out.

If it is not practicable to shut down machinery or equipment for maintenance, only the parts which are vital to the process may remain energized and the work must be performed by workers who:

- Are qualified to do the work,
- Have been authorized by the employer to do the work, and
- Have been provided with and follow written safe work procedures.

MOVING VEHICLES AND EQUIPMENT - SAFE WORK PROCEDURES

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This procedure is intended to ensure the safe movement and use of vehicles, machines and equipment in accordance with Occupational Health and Safety Regulation 19.24.

The Supervisor shall ensure that all workers, contractors and subcontractors will be informed of this procedure before moving or using vehicles, machines and equipment.

All workers, contractors, and sub-contractors will use this procedure when moving or using vehicles, machines and equipment.
When using vehicles, machines or equipment near energized overhead electrical conductors, no part shall be brought closer than minimum distance listed in Occupational Health and Safety regulations section 19.24.

TABLE 1-1: General limits of approach

Nominal phase-to-phase voltage rating	Minimum distance
	Meters
Over 750 V to 75 kV	3
Over 75 kV to 250 kV	4.5
Over 250 kV to 550 KV	6

Job Steps:

1. Operators of vehicles, machines and equipment shall be assisted by signallers if the operator's view of the intended path of travel is obstructed and/or a person could be endangered by the vehicle, machine or equipment and its load.
2. A competent worker shall be designated as a signaller. Both the operator and signaller shall jointly establish the procedures by which the signaller assists the operator and both will follow those procedures. A loud signalling device, such as a whistle should be used to indicate either "STOP" or "GO".
3. The signaller should be walking with the vehicle, machine, or equipment in a manner that gives the signaller an unobstructed view of the intended path of travel and in full view of the operator.
4. The signaller shall be stationed in such a position that they have a clear view of the equipment and the electrical conductor and be in full view of the operator.
5. The signaller shall warn the operator by the agreed method if any part of the equipment or its load may approach the minimum distance as listed in Table 1.
6. If it is possible that a part of the equipment or its load may encroach upon the minimum distance listed in Table 1, a legible sign that is visible to the operator and warns of the potential electrical hazard shall be posted at the operator's station.

NOISE - SAFE WORK PROCEDURES

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Personal Protective Equipment:

TECH Electric Limited makes available several types of hearing protectors including cylindrical foam earplugs designed to fit snugly in the ear canal.
You insert each earplug into the ear canal after compressing it by rolling it between two fingers. Inside the canal, the foam expands. This type of earplug is meant to be disposable. You should replace them after each use.
If ear plugs are not practicable, company will provide ear muffs for hearing protection.

TRAINING

Workers must be trained prior to commencing work on the procedures detailed below. This training will be coordinated by your supervisor.

Job Steps:

- All employees will wear ear protection (ear plugs or ear muffs) when operating machinery, or when other noise is present that exceeds 85 dBA, at all jobsites, at all times. A rule-of-thumb when a sound level meter is not available is if you have to raise your voice to speak to someone standing a metre away, the chances are the noise level is above 85dBA.
- Workers must not be exposed to noise that exceeds 85 dBA over an 8 hour time period. If you find you are exposed to increased noise at the jobsite, supervisor must be contacted immediately to complete hazard assessment of the area.
- As part of hazard assessment for each jobsite, noise survey will be conducted to identify high noise areas. If noise that exceeds 85 dBA is found anywhere on the jobsite, noise risk will be noted on the hazard assessment. If noise risk is noted on the jobsite hazard assessment all employees will have to wear ear protection at that jobsite at all times.
- For work performed at a client's location, all company employees will observe posted noise signage and implement controls as needed. If unsure how to implement controls or which PPE to use, contact your supervisor immediately for assistance.

POWER TOOLS – GENERAL - SAFE WORK PROCEDURES

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PPE Required:

- Gloves if using blades or sharp objects
- Safety footwear
- Eye protection
- Hearing protection
- Hard hat, CSA approved
- Secure loose clothing, hair, draw strings from hoods etc. that could become entangled in tool

Note: the instructions below are relevant for hand held power tools including but not limited to drills, circular saws, jig saws, reciprocating saws, hand sanders, belt sanders and grinders

- Only use power tools in a manner specified by the operational instructions and in dry environments
- Do not use broken power tools, ones that have cracks or splits in them, or tools that have had guards removed
- Do not force the power tool. This can make the tool less effective, damage it, or could make the tool slip. Ensure the cutting blade, disc/belt, bit, etc is correct for the application and is in good condition
- For repetitive or long lasting tasks, take micro breaks or change tasks or positions to reduce stress on the same muscles
- Try to work in neutral positions as often as possible (wrists and back straight, elbows in, reduce back twisting by instead taking small steps to reposition, etc) and try to avoid overreaching
- Use both hands to use the power tool if it has been designed this way
- Keep work areas free of loose tools which could be tripped over and after use, return tools to designated areas and keep them unplugged
- Wear eye protection when cutting with power saws, drilling or grinding. Direct sparks, chips etc. away from you and others
- Always keep your second hand (for one handed tools) and other body parts clear of the cutting, drilling, or grinding path of the power tool
- Try to use power tools where there is adequate ventilation to remove dust. If this is not possible, use a dust mask
- Use clamps or other practical way to secure and support piece(s) to a stable platform before working on it. Holding pieces or items with only your hand or against your body leaves it unstable and may lead to loss of control and serious injury.
- De-energize the tool once you are finished using it and before changing, bits, blades, discs, belts etc. Let the tool cool before touching the blade, bit etc. to change it

POWER TOOLS – METAL (Abrasive) SAW - SAFE WORK PROCEDURES

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* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Equipment Required:	**Material Required:**	**PPE Required:**
Metal (abrasive) saw, Disk Saw	Metal	Safety Glasses, Safety Boots Hard Hat

Basic safety

- Wear the appropriate protective clothing at all times when operating a saw, especially eye protection.
- When ventilation is poor, wear a suitable dust mask. Exposure to metal dust may cause health problems.
- When using saws for long periods of time, especially in a confined space, wear hearing protection.
- Use a ground fault circuit interrupter for all electrically operated tools.
- Disconnect the power source on all tools before making any changes or adjustments.
- Never put hand tools down on a bench or on the floor while the blade is still moving.

PRE-OPERATIONAL SAFETY CHECKS

- Ensure this power tool has a suitable safe work area.
- Ensure all safety guards are serviceable & in place.
- Inspect the abrasive cut-off disc for chips & cracks.
- Ensure adequate dust & fume ventilation or extraction.
- Confirm this machine has a current electrical safety tag.

This SOP does not necessarily cover all possible hazards associated with the machine and should be used in conjunction with other references.

Safe work procedures

- Do not hold your work piece by hand. It may become very hot while being cut.
- Use the vice to clamp the work. Properly support any over-hanging portion so the work piece is level with the base of the machine.
- Do not leave the length stop in place on the free off-cut end of a clamped work piece after clamping.
- Allow the machine to reach full speed before contacting the work piece.
- Do not have any part of your body in line with the path of the abrasive disc.
- Ease the abrasive disc against the work piece when starting to cut. Do not use excessive force.
- Keep hands away from cutting area. Do not attempt to remove cut material while wheel is moving.

- After finishing the cut, release the switch, hold the saw arm down & wait for the disc to stop before removing your work piece or off-cut piece.
- Before making any machinery adjustments, bring the machine to a complete standstill, & then disconnect from the power source.

HOUSEKEEPING

- Ensure all switches, guards & clamping are cleaned.
- Leave the work area in a safe, clean, & tidy condition.

POTENTIAL HAZARDS AND RISKS

- Moving, rotating & sharp parts
- Electricity
- Pinch & squash
- Noise & dust
- Eye injuries
- Burns & hot ejected waste material

POWER TOOLS – WOOD SAWS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Equipment Required:	**Material Required:**	**PPE Required:**
Circular saw, reciprocating saw, Table saw, Hack Saw	Lumber	Safety Glasses, Safety Boots Hard Hat

Power tools—saws:
The following saws are commonly used: circular saw, quick cut saw (cut off/hack saw), sabre saw (reciprocating), chop saw, radial arm saw, and table saw.

Basic safety

- Wear the appropriate protective clothing at all times when operating a saw, especially eye protection.
- When ventilation is poor, wear a suitable dust mask. Exposure to dust from materials such as particleboard or medium density fibre (MDF) board may cause health problems.
- When using saws for long periods of time, especially in a confined space, wear hearing protection.
- Use a ground fault circuit interrupter for all electrically operated tools.
- Disconnect the power source on all tools before making any changes or adjustments.
- Never put hand tools down on a bench or on the floor while the blade is still moving.

When using hand-held saws:

- Keep hands away from the rotating blade; wet lumber, plywood, or wood with a twisting grain can cause binding and kick back of the blade.
- Rest or clamp wood to a bench or sawhorse on a stable footing; make sure you have a firm grip on the wood being cut.
- Always use the right blade for the material you are cutting; ensure that it is sharp and installed correctly.

When using a sabre saw (reciprocating):

- Caution should be exercised when cutting near electrical wiring, copper or plastic piping.
- Only persons trained in the operation, care, and maintenance of the quick cut saw should use it, because it is a powerful machine.

When operating the saw:
Always have both hands holding the saw and be on a firm footing. Some of the hazards include, but are not limited to

- High-speed blade rotation and exposure during operation
- Exhaust fumes from combustion engine
- Dust when dry cutting concrete or masonry

- Showers of hot sparks when cutting sheet metal or solid steel

Quick cut saws are generally gas-operated machines. When re-fuelling, shut off the engine; ensure that this is carried out in a well-ventilated area, preferably outside. Any gas spills must be cleaned up immediately to ensure the vapours cannot come into contact with any form of ignition.

Portable circular saws - Safe work procedures

- Permit only trained and experienced workers to operate a saw.
- Wear proper eye and hearing protection, and when required, respiratory protection.
- Use sharp blades designed for your work and recommended by the tool manufacturer.
- Check the retractable lower blade guard before use, to make certain that it works correctly.
- Allow the saw to reach full power before cutting.
- Make sure the lower blade guard is fully returned before laying down the saw.
- Disconnect the power supply before adjusting or changing the blade.
- Keep all electrical cords clear of the cutting path.
- Use both hands to operate the saw.
- Keep the saw blade guards and motor clean and free of sawdust.
- Secure the work while cutting.
- Do not fix or hold the retractable lower blade guard in the open position.
- Do not place your hand under the shoe or guard of the saw while the saw is connected to the power supply.
- Do not over-tighten the saw blade locking nut.
- Do not twist the saw while cutting to change direction or saw alignment unless the blade is designed for that purpose.
- Do not use a saw that vibrates or is defective.
- Do not force the saw during cutting.
- Do not cut materials without first checking for obstructions or foreign objects such as nails and screws in the cutting path of the saw.
- Do not carry portable circular saws with hands or fingers on the trigger switch.

Radial Arm Saw - Safe work procedures

- Wear proper eye and hearing protection, and when required, respiratory protection.
- A radial arm saw cutting table must be of sufficient width so that no part of the saw blade overhangs the forward edge of the table. A stop may also be used to limit forward travel of the saw to prevent overhang.
- Saws must not be operated at speeds in excess of the manufacturer's recommendation.
- Only use accessories designed for the saw and recommended by the manufacturer.
- Make sure the blade guard is in place and properly adjusted.
- Stand on the handle side of the saw when cross cutting.
- Return the saw blade to behind the fence after each cut.
- Make sure the overall length of the saw table(both in feed and out feed) is twice the length of the lumber being cut.
- Make sure during ripping that material is fed counter to the saw blade rotation.
- The motor head must be locked into position at the correct height and desired angle.
- Clamp stock to the table when making mitre, bevel, or compound mitre cuts. This overcomes the tendency of the stock to slide along the fence.
- Turn off the saw and unplug the electrical cord when making changes.

POWER TOOLS (Drill and Hammer Drill) - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

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Potential Hazards

- Cuts/lacerations
- Eye injury / flying objects
- Electrocution
- Respiratory illness
- Repetitive strain injury
- Noise (hearing loss)

Personal Protective Equipment Required

- Hard hat, CSA Boots, Eye protection
- Hand protection, Hearing protection, Skin protection
- Face protection, Dust Mask

PRELIMINARY ACTIVITIES

Where multiple trade activity is scheduled, the general contractor is to review in advance the priority of work and schedule the appropriate time frame to allow each trade to complete their scope of work. Prior to any work commencing supervisors must conduct a hazard assessment of all applicable work areas. Any hazards that are found during the hazard assessment must be addressed prior to any work commencing.

- Wear proper personal protection such as eye and face protection.
- Make sure the bit is properly centered and tightened before you begin work.
- Select a bit and fasten it inside the chuck.
- Insert the bit fully into the chuck, and turn the key clockwise in one of the three holes to ensure that each jaw makes contact with the bit.
- Use sharp drill bits to make drilling easier, reduce the load on the motor, and lengthen the drill's life.
- Keep the drill's air ports clear of debris to protect the motor from overheating.
- The hammering action is rated in blows per minute, or bpm. Variable-speed hammer drills can turn out up to 40,000 bpm.
- A hammer drill can easily break a wrist if the bit jams on a piece of aggregate, so it's best to choose a model with a clutch that disengages the drive mechanism in case of a jam.

DON'Ts:

- Never adjust the machine while it is operating.
- Do not use this equipment if you have not reviewed all of the safety materials and have not been properly trained in the use of the tool and wheel.

SAFE WORK PROCEDURE

- No worker shall operate any power tool, or similar type of equipment unless they are familiar with the use and operation of the equipment and has received specific instruction on its use and operations.
- Only authorized personnel should use the Drills and Hammer Drills.
- Inspect the tool prior to each use.
- Ensure that all parts of the tool operate positively.
- Ensure that the tool has the required “additional” handle based on the required work.
- Hammer drills are primarily used to drill into concrete, extra protection must be used due to the potential generation of Silica Dust resulting from the operation.
- When using any hammer drill, all workers must understand their role and comply with applicable Regulations and Company policies.
- Workers must be wearing the proper Personal Protective Equipment (PPE) such as a hardhat, safety footwear, safety eyewear, and fall protection as required.
- When required, a control zone must be set up and flagged properly prior to starting any work.
- When required, an acceptable abatement method must be used to control any potential Silica Dust.
- As primary objective, all workers must ensure no dust is released. This can be achieved through the application of water directly on the drill bit.
- Vacuums with HEPA filters are also an acceptable means should the quantity of dust generated not be controllable through the use of water.
- When it is not possible to control the dust, all workers involved must wear appropriate respiratory protection, signage warning others of the presence of airborne silica as well as area delineation is also mandatory.
- Always ensure the tool is insulated and the power cord is in good condition.
- Ear protection is mandatory while using hammer drills as the noise generated is greater than 85 db
- Always be sure you are on firm footing when operating tools. Brace yourself at all times when working on ladders and scaffolds to maintain balance.
- Always keep tools pointed in a safe direction. Never carry the tool with a bit inserted into it. This is an impalement hazard.
- Never change a bit while the tool is connected to the power source.
- Ensure the tool is connected to a Ground Fault circuit Interrupter system or have an alternative “acceptable” means of protection (Assured Grounding System).
- Always use the tool at right angles to the work.
- Clean and maintain tool in accordance with the manufacturer’s instructions.

POWERED MOBILE EQUIPMENT - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

TRAINING

Workers must be trained prior to commencing work on the procedures detailed below. This training will be done by your supervisor, or our safety manager as required.

Proof of training is required and must be readily available on site. Use a Tool Box Training Record to record the names of all workers who have participated in a crew talk on this SWP

PRELIMINARY ACTIVITIES

Prior to any work commencing, supervisors must conduct a hazard assessment of work areas. Any hazards found during the hazard assessment must be addressed prior to any work commencing.

Job Steps:

- Do not leave any moving equipment running if you are not on or in it in operating position.
- All powered mobile equipment has to be secured against unintentional movement when it is not in use. When parking a truck or equipment, apply the brakes and insert chock blocks under the wheels.
- Obey all warning signs and prescribed TECH ELECTRIC LIMITED safety procedures.
- Do not use any equipment if its safety and emergency equipment is not in proper working order. Report immediately to your supervisor any missing equipment or defects.
- While operating a piece of moving equipment, keep your body inside at all times and wear seatbelt at all times.
- Do not allow another person to board or exit the vehicle while you are driving until it is fully stopped.
- Only designated and trained workers are allowed to operate powered mobile equipment. Training record for each employee will be kept in company employee file at the main office.
- Maintenance records will be kept for powered mobile equipment, at the main office.
- Maintenance records for any service, repair, or modification which affects the safe performance of the equipment will be kept at the main office and will be available to the operator and maintenance personnel during work hours.
- If any defects are found on the powered mobile equipment, equipment will be placed out of service immediately. Defects that might affect the safe operation of powered mobile equipment must be repaired before the equipment is operated.

SKID STEER LOADER - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

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PPE Required:

- Safety Boots,
- Hi-vis clothing

Potential Hazards:

- Roll-over
- Slipping and falls
- Loss of control
- Overturning
- Dust, falling objects, noise
- Loading and unloading

TRAINING

Workers must be trained prior to commencing work on the procedures detailed below. This training will be done by a third party certified training agency.

Proof of training is required and must be readily available on site. Use a Tool Box Training Record to record the names of all workers who have participated in a crew talk on this Safe Job Procedure.

1. **Personal protective equipment**

   Hardhat and high-visibility clothing to be worn when not inside the cab.
   Safety boots in good condition, properly laced, must be worn at all times. Worn-out soles and heels could lead to slips and falls.

   Eye protection will be worn where there is danger of falling or flying debris from equipment or loads, especially in windy conditions.

   Hand protection will be worn when handling cable or any other material where there is danger of cuts or puncture injury.

   Hearing protection will be worn when exposed to noise levels exceeding 85dBA.

2. **Mounting and dismounting** – three-point contact will be used to mount and dismount equipment.

3. **Inspection and repairs** – Skid Steer Loaders will be inspected prior to use to ensure good mechanical condition.

    - When working under or around Skid Steer Loaders, for inspections or repairs, the Skid Steer Loader must be locked and tagged out, and immobilized and secured against inadvertent movement.

4. **Housekeeping** – cabs, steps and mirrors must be kept clean at all times. All debris should be removed.

5. **Parking** – the Skid Steer Loader must be parked on level ground, clear of hazards, to allow ease of access. All Attachments must be lowered when parked.

6. **Travelling** – proper gear selection must be used to maintain control. Drive according to terrain conditions.

7. **Danger zone** – danger zone is defined as the area around operating machines or working personnel, in which there is potential for being struck by moving equipment or objects. The danger zone may vary according to the machine or work being performed. Operators must make sure that all persons, vehicles and equipment are clear of the danger zone before the vehicle or its components are moved.

8. **Lockout** – lockout procedures must be followed during mechanical service, repairs or inspection for the protection of employees and equipment.

    Refer to company and manufacturer's procedures on lockout.
    Communications while assisting in mechanical repairs – When operators are assisting mechanics to repair machines, clear communications must be established prior to starting the tasks. The operator and the mechanic must each know who will be responsible for:

        a. Starting or moving a machine
        b. Ensuring that anyone involved is in a clear and safe position
        c. Directing the movement of the machine
        d. Ensuring that it is safe to resume working and that all guards are in place.

    The operator must have a clear understanding of what is to be done and follow the specific lockout instructions and instructions given by the mechanic responsible for performing the job.

9. **Fuelling**

    - No smoking. Be aware of slip and trip hazards. Beware of spills and splash-back. Return hose to its proper storage position when fuelling is completed.

10. **Hazardous materials**

    - Read WHMIS label. If there is no label, contact the supervisor.
    - Refer to MSDS if further information is needed. Use protective equipment and follow safe handling instructions as outlined on WHMIS label.
    - If an incident occurs, follow first aid instructions.
    - Use proper storage procedures.

11. **Operation**

- Do not attempt to lift load in excess of working load limit of loader.
- Reduce speed when travelling with load on front attachment.
- Carry load close to ground and racked back for stability and visibility.
- Do not raise load until ready to deposit.
- Immediately after starting the engine, verify the working nature of the controls, brakes, horn, and alarms.
- Operate the loader from the operator compartment, never from the outside.
- Keep arms, legs, and head inside the cab when operating the loader.
- Avoid excessive speeds.
- Operate the equipment on stable surfaces. When possible, load, unload, and turn the equipment around on level ground.
- For maximum stability, travel and turn equipment when the bucket is in the lowest position possible.
- Never exceed the manufacturer's specified load limit. Take care to evenly distribute the load. In some cases, it may be necessary to secure the load to prevent falling or shifting.
- Avoid traveling across slopes and hills; if absolutely necessary, travel straight up or down with the heavy end of the machine pointed uphill.
- Always look in the direction of travel.
- Never allow passengers in the operator compartment or bucket of the skid steer loader.
- Never allow a person to position themselves under or near the bucket or frame while the skid steer loader is in operation.

12. **Exit**

- Before leaving the operator's seat, set the bucket on the ground, set the parking brake, and turn off the engine.
- Never work around the equipment when the bucket or fork attachment is raised unless it is supported and the brakes are set, and the key is removed from the ignition. Use lift arm supports when they are present on the equipment. If no supports are present, contact the equipment dealer or manufacturer for help in determining proper support procedures.
- Chock the wheels, if necessary.

SMOKING (FIRE PREVENTION) - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Equipment Required:

Material Required:

PPE Required:
Dust Mask / Respirator

General
All Workers are responsible for the prevention of accidental fires. This means that good judgment must be used to prevent the creation of a situation where a fire may be started.

Smoking
Smoking is prohibited except in designated areas. These areas will be marked with signs.

Fire Prevention
There are a few basic steps that must be followed to reduce all chances of fire:

- Ensure good levels of housekeeping at all times. Do not allow clutter to build in corners or around waste bins.
- Containers will be commercially approved and have adequate labeling.
- Dispose of oily or solvent soaked rags in a separate container, preferably outside.
- Do not mix chemicals prior to reading the MSDS sheets. Some chemicals will violently interact when mixed with other fluids.
- Ensure there is proper ventilation of fumes.
- Portable containers for flammable materials shall not exceed 20 litres in capacity.
- All propane bottles and tanks should be stored upright in a secure area.
- All Workers shall be aware of and familiar with the location and operation of fire fighting equipment.
- Do not operate an electrical or spark generated device in close proximity to flammable liquids such as gasoline or solvents.

Response

- In the event of a fire or gas leak in the building, all personnel will evacuate the building at the sound of the fire alarm.
- Management is to ensure that the building is completely evacuated. The muster area, in the event of an evacuation, will be crosswind and up wind of the affected area. The first member of management to arrive will begin an immediate head count.
- When a fire is discovered the first priority is to sound the alarm. The second is to see if containing the fire is possible. If containment is impossible, then all personnel remaining in the building will evacuate. Personnel evacuating the building are to do so at a brisk walk, do not run.

SPILL PREVENTION - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

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Equipment Required: **Material Required:** **PPE Required:**
Dust Mask / Respirator

Spills are one of the most common environmental incidents encountered. The prevention of spills or reduction in their severity is a principal initiative in reducing the company's environmental liabilities.

Spill Prevention Equipment Refuelling & Maintenance
Wherever possible, maintenance should be conducted on concrete, areas stripped of topsoil or clay pads. Refuelling should not be conducted within 100 meters of a watercourse or water body. During refuelling and truck loading activities operators must be diligent to ensure overfills do not occur.

1. Spill Reporting
   1. In the event of the accidental or imminent release of dangerous goods from a means of containment during transport, a person who has possession of the dangerous goods at the time of the accidental release must make an immediate report of the accidental release to the local police and Provincial Transportation at 1-800-222-6514 and Dangerous Goods at **1-800-272-9600**

2. In the event that a worker comes across any spill greater than 5 Litres it must be reported to management. Photos of the spill can assist in communicating the nature and extent of the spill. Workers must report the following information:
   - Date and time of release.
   - Duration, frequency and rate of release, if known.
   - The composition of the material released (e.g. Crude oil, produced water, sour gas condensate, etc.) including concentration of key components and amount released, if known.
   - A detailed description of the circumstances leading to the release (e.g., leaking tank, dripping valve, etc.)
   - The steps or procedures, which were taken to minimize, control or stop the release.
   - The steps or procedures, which will be taken to prevent a similar release from occurring.

Spill Response:

1. Ensure safety of personnel. Move away from the area if necessary. The first person to notice the spill or leak should move to a safe area in order to evaluate the situation without exposing him or herself. This is not required if the nature of the spill is known and is minor.
2. Eliminate all ignition sources. Notify management. Get help for all but very minor spills.

3. Identify whether or not the situation is an emergency. Leaks that can immediately be cleaned up by operations and/or maintenance personnel are not considered emergencies. If in doubt, treat the situation as an emergency. Identify the material spilled and determine if it is flammable, combustible, toxic, volatile, corrosive, non-volatile or an oxidizing agent.
4. Plan how to contain and clean up the spill or leak. The Material Data Sheet (MSDS) will provide some information on safe handling of the product.
5. Put on appropriate Personal Protective Equipment (PPE). Refer to MSDS.
6. Stop the source of the spill or leak. This can include turning off a valve, patching a leaky hose, draining a tank or up-righting a container of liquid.
7. Contain the spill to prevent further damage. This can include using appropriate absorbent/containment materials such as absorbent pads, socks and or booms, or other suitable equipment.
8. Dispose of contaminated materials properly. Contaminated spill control materials and disposable PPE may be have to be disposed of as hazardous waste. Contaminated tools and non-disposable PPE should be safely decontaminated. Contact the Environment & Regulatory Dept. for information regarding contaminant disposal and/or decontamination.
9. Take notes of incident and submit to management.
10. Any spill, release or emergency that may cause, is causing or has caused an adverse effect to the environment must be immediately reported to Provincial Transportation 1-800-222-6514. Failure to Report is a serious offence.

THERMAL EXPOSURE - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Thermal Exposure

TECH Electric Limited has implemented this policy to ensure that our employees are protected from the effects of thermal exposure. This policy is available to all employees upon request.

Cold Stress

Wind and humidity increase the risks and symptoms of cold exposure. Therefore, always keep an eye on weather conditions. Cover your hands, face, head and feet whenever possible. Always dress appropriately for the weather conditions. If you find you are not adequately protected from the cold (you feel uncomfortably cold while working) contact your supervisor immediately.
The symptoms of frostbite are including numbness, pain, skin blisters, red or black skin color, and unconsciousness. Get treatment for frostbite immediately. Contact a supervisor or another employee immediately if any cold symptoms occur.

All workers showing symptoms of cold stress must be removed from the cold immediately. If heated facilities are not available at the jobsite, use company vehicles to warm up. Contact first aider on the jobsite to monitor the employee until symptoms of cold stress have dissipated. If symptoms of cold stress are not dissipating in 15 minutes, contact 911 emergency assistance.

Cold Stress Assessment and Exposure Plan

- It is the policy of TECH Electric Limited to conduct a cold stress assessment whenever a worker has expressed concern and may be exposed to elevated levels of cold.
- If it is determined through the assessment that there is a cold stress hazard, TECH Electric Limited will develop and implement an exposure control plan that meets legislation requirements.

Cold Stress Controls

To reduce the hazard of exposure to workers, The General Contractor (or in their absence, TECH Electric Limited) will implement engineering controls to reduce the level of exposure below those classified as —little danger ‖ in the ACGIH Standard.
Engineering Controls will include, but not be limited to:

- Isolating the worker from the environment, where possible.
- Using local heating for the body and especially bare hands (when fine work is required). This may include the use of warm air jets, radiant heaters, or contact warming plates.
- Providing barricades or other structures to block air or reduce air velocities at the work location.

- Provide heated metal tools and equipment handles or cover them with thermal insulating materials.
- Using machine controls and tools designed so that workers do not have to remove mittens or gloves to use them.

If engineering controls are not possible, the General Contractor (or in their absence, TECH Electric Limited) will reduce the level of exposure through the use of Administrative Controls including, but not limited to:

- Work / Warm-up Schedules
- Scheduling and organization of work
- Fluid replacement and diet
- Personal Protective Equipment that provides an equal level of protection.

Clothing and Personal Protective Equipment

- Workers required to work out-of-doors and may be exposed to hazardous levels of cold, will wear adequate insulating clothing and personal protective equipment.
- In the case of a worker or workers who are at risk of exposure thermal conditions that could cause cold stress or injury due to unplanned or accidental events,

Removal and Treatment for Cold-exposed Workers

Any worker showing or reporting signs or symptoms of cold stress or strain, will be removed from the cold environment and treated by an appropriate first aid attendant, or by a physician if available.

Heat stress

If you work outside during the summer months, you are exposed to heat stress.
Symptoms of heat stress include but are not limited to heavy sweating, hot, moist skin, muscle cramps, and sudden onset. Stop work and contact a supervisor immediately if you experience any of these symptoms. If a worker shows signs or reports symptoms of heat stress or strain, the worker must be removed from the hot environment and treated by an appropriate first aid attendant, or by a physician.

If temperature of the workplace increases to uncomfortable or potentially unsafe levels, discuss the need for more breaks, and / or alternate work in cooler areas with your supervisor.
If there is no source of water available at the jobsite, this will be noted on the hazard assessment, as heat stress hazard present. In this case, the company will provide and maintain an adequate supply of cool potable water close to the work area for employee use, in case of heat exposure. Container with potable water will be delivered to the jobsite prior to starting work at that jobsite.

Heat Exposure Limits

- TECH Electric Limited ensures that no worker will be exposed to heat at levels that exceed those listed in the ACGIH Standard screening criteria for heat stress exposure
- When a calculation of heat stress determines the need for clothing corrections; these corrections will be in accordance with the ACGIH Standard.

Heat Stress Assessment and Exposure Control Plan

It is the policy of TECH Electric Limited to conduct a heat stress assessment whenever a worker has expressed concern and may be exposed to elevated heat levels. Heat stress assessments will be in written form and will be conducted using one or more of the following methods:

- Measurement of environmental parameters, such as air temperature, air velocity, air humidity, and infrared radiation;
- Direct measurement of body temperature;

- Measurement of other physiological responses, such as heart rate.

If it is determined through the assessment that there is a heat stress hazard, TECH Electric Limited will develop and implement a written exposure control plan in accordance with *OHS Regulation and Guidelines.*

Heat Stress Controls

- To reduce the hazard of exposure to workers, the General Contractor (or in their absence, TECH Electric Limited) will implement engineering controls
- To reduce the level of exposure below those listed in the screening criteria of the ACGIH Standard.

Engineering Controls will include, but not be limited to:

- Reducing metabolic heat production

Spot cooling

- Insulating hot surfaces
- Reducing humidity

Where engineering controls are not possible, the General Contractor (or in their absence, TECH Electric Limited) will reduce the level of exposure through the use of:

1. Administrative Controls including, but not limited to:
    - Fluid replacement and work practices
    - Scheduling and organization
    - Work rest cycles of work

2. Personal Protective Equipment that provides an equal level of protection including, but not limited to:
    - Anti-radiant heat or reflective clothing
    - Temperature-controlled suits such as:
    - Ice pack vests
    - Wetted over-clothing such as terry cloth coveralls or two-piece, whole-body cotton suits
    - Water-cooled suits such as hoods, vests, and "long-johns" offering partial or complete body cooling
    - Air-cooled suits

Provision of Water

- Clean, cool, potable water will be provided and maintained for use at or near the worksite.

Removal and Treatment for Heat-exposed Workers

- Any worker showing or reporting signs or symptoms of heat stress or strain, will be removed from the hot environment and treated by an appropriate first aid attendant, or by a physician if available.

TRAILER TOWING - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

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REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Trailers Used:

- Flat deck trailer
- Enclosed trailers

Operating Procedures for Drivers:

Ensure breakaway switch, battery and brakes are operational prior to starting your journey. Check tires for proper inflation and tread wear.

Hooking Up Hitches

Always ensure you are familiar with the proper hook up procedure for the type of hitch you are using.

- Do not twist, knot or pin to shorten safety chains, doing so will cause them to snap and render them useless if the hitch comes undone.
- Always use the proper locking pin in the hitch assembly. Do no use bent nails etc.
- Always use the proper hitch for the trailer, do not substitute.

If any of the above are present do not hook up and tow the trailer!

Trailer Backing

Observe the following guidelines when backing a trailer;

- Walk to the rear to make sure the way is clear.
- Back slowly, turning the steering wheel right to go left and left to go right.
- Do not turn the wheels too much or hold them in turned position too long.
- Always turn toward the left side of your vehicle where you can see the trailer over your left shoulder.

Trailer Pulling

When pulling a trailer;

- Allow a greater space before entering traffic, as your acceleration rate is reduced and a greater stopping distance is required.
- Always use the right hand lane.
- Plan your driving so that you are not required to make sudden lane changes. If traffic
- Builds up behind you pull over and stop when safe to do so and allow others to pass.

TRENCHER - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Objective:
to familiarize crew members with the safe operation of a trencher.

Training Materials:
trencher,
manufacturer's manual.

Personal Protective Equipment:
work boots, hard hat, gloves, long pants, eye protection, hearing protection

There are two types of trenchers: ride-on and walkbehind.
Walk-behind trenchers are better suited for tight spaces. Both types have three basic operations systems to be aware of:

- The ground drive which moves the machine while digging the trench.
- Trenching articulation including boom and chain drive controls.
- An auger that places trenched soil beside the trench for backfilling.

The teeth of the chain do the actual digging. There are different teeth for different soils and applications. Cupped teeth do well in most soils, and carbide teeth are suitable for hard ground or soil with a lot of buried debris.

Proper tension on the chain is critical (just like a chain saw).
Poorly adjusted chains wear out quickly. The operator's manual will specify the correct tension for the trencher model. Tension should be checked and adjusted regularly as chains stretch with normal use. Oiling chains is not recommended as it attracts dirt particles and increases wear and tear.

Safety concerns

- Wearing the correct Personal Protective Equipment is important when operating a trencher. Eye protection must be worn.
- Never operate a trencher unless you have been properly trained in its correct and safe use.
- Always complete a circle check before starting the trencher each day.
- Call to get locates before you dig! Sask 1st Call 1-866-828-4888
- Do not remove protective shields or guards.
- Lower the trencher boom to within a few inches of soil.
- Engage the chain at slow speed.
- Make sure you have control of the trencher when engaging the chain.
- Never make sharp turns while digging.
- When raising the boom, disengage the chain just as it clears the trench.

- Make sure the engine is turned off before performing any adjustments, maintenance or to clear a jammed chain.

WHMIS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

WHMIS protects your health and safety by giving you the information you need in order to identify or recognize the hazards or potential hazard of materials you use on the worksite and take the proper precautions when you use, handle, store or dispose of hazardous products.

TECH Electric Limited will train their employees about the content of labels and MSDS procedures for safe handling, storage and disposal of controlled products and emergency procedures.

The hazard warnings and handling instructions given on WHMIS labels are part of each employee's job instructions and must be followed.

On-going training takes place in pre-job meetings, worksite meetings and monthly safety meetings.

Job supervisors are responsible for the on-going WHMIS training of their crews. Any container that is filled with a WHMIS - controlled product should be labeled as such. In addition, refer to MSDS or product identifier.

All supplier labels must be affixed to the original containers of controlled products

If labels are missing or illegible, they should be replaced with workplace labels, or safely disposed off.

All workplace labels must be affixed to controlled products that have been transferred from the original container into another container. If workplace labels are not available product should be returned to original container or safely disposed of. Never leave unlabeled containers with controlled products on the jobsite.

Material Safety Data Sheets (MSDS) are obtained for all controlled products.

MSDS are readily available to employees at the main office and on the safety wiki (visit tech-electric.ca and click “Guide-to-Success”) at all times.

WORKING CLOSE TO ENERGIZED HIGH VOLTAGE EQUIPMENT AND CONDUCTORS - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

1. The employer must ensure that at least the minimum applicable distance specified in Table 19-1 is maintained between exposed, energized high voltage electrical equipment and conductors and any worker, work, tool, machine, equipment or material, unless otherwise permitted by this Part.

2. The employer must accurately determine the voltage of any energized electrical equipment or conductor and the minimum distance from it required by subsection (1).

Table 19-1: General Limits of approach

Voltage	Minimum distance	
Phase to Phase	Metres	Feet
150 – 750 V	2.5	7
Over 750 V to 75 kV	3	10
Over 75kV to 250 kV	4.5	15
Over 250 kV to 550 kV	6	20

*For qualified electrical workers, material and equipment follow limits of approach established by the Canadian Electrical Code and Saskatchewan Interpretations.

1. If the minimum distance in Table 19-1 cannot be maintained because of the circumstances or work or the inadvertent movement of persons or equipment, an assurance in writing on a form acceptable to the board and signed by a representative of the owner of the power system, must be obtained.
2. The assurance must state that while the work is being done the electrical equipment and conductors will be displaced or rerouted from the work area if practicable.
3. If compliance with subsection (2) is not practicable the assurance must state that the electrical equipment will be isolated and grounded, but if isolation and grounding is not practicable the assurance must state that the electrical equipment will be visually identified and guarded.
4. The safeguards specified in the assurance must be in place before work commences and effectively maintained while work is taking place.
5. If guarding is used,
    a. neither equipment nor unqualified persons may touch the guarding, and
    b. a safety watcher must be designated, or range limiting or field detection devices acceptable to the board must be used.
6. The assurance must be available for inspection at the workplace, as close as practicable to the area of work, and must be known to all persons with access to the area.
7. If exposed high voltage electrical equipment and conductors cannot be isolated, rerouted or guarded, work must not be done within the minimum distance in Table 19-1 until approval is obtained from the board and the following precautions are taken:
    a. the area within which equipment or materials are to be moved must be barricaded and

b. supervised to restrict entry only to those workers necessarily engaged in the work;
c. a safety watcher must be designated;
d. a positive means must be provided for the safety watcher to give a clear, understandable stop signal to workers in the area, and the watcher must give the stop signal by no other means.

8. While equipment is in motion in an area in proximity to energized electrical equipment or conductors, no person other than the equipment operator may touch any part of the equipment or the material being moved by it.

9. No person may move a load or any rigging line from its position of natural suspension if it is in the proximity to an energized electrical conductor or equipment.

WORKING CLOSE TO UNDERGROUND UTILITITES - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Working Close to Underground utilities safe job procedure:

- Before excavating or drilling with powered tools and equipment, the location of all underground utility services in the area must be accurately determined, and any danger to workers from the services must be controlled. Call Sask 1st Call 1-866-828-4888 to do utility locates before you dig!
- Excavation or drilling work in proximity to an underground service must be undertaken in conformity with the requirements of the owner of the service.
- Pointed tools must not be used to probe for underground gas and electrical services.
- Powered equipment used for excavating must be operated to avoid damage to underground utility services, or danger to workers.

WORKING ALONE - SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Working Alone Definition

"working alone" means a worker working at a workplace who is the only worker at that workplace, in circumstances where assistance is not readily available to the worker in the event of injury, ill health or emergency.
A worker can be considered to be working alone if there is a reasonable expectation that a call for assistance will not or cannot be responded to and the worker's absence may not be noticed for some time. Risks to workers may be higher when they are working alone. A fall, exposure to dangerous chemicals or an assault can have very different consequences if a worker is alone than if the victim has co-workers or capable assistants in the immediate vicinity.

Whenever any workers are working alone, following Working Alone Call-In Procedure must be followed and documented:

Working Alone Call-in Procedure

Call-in Procedure for Lone Workers
Workplace:
Name _____
Address_____
Phone: _____

Employer:
Name: _____
Address: _____
Phone: _____

RISK: _____

Working alone call-in procedures for _____ (position)

For work between _____and _____ , on _____
Time Time Day(s) of the week

Person responsible for checking on the above noted worker is the person the worker contacted initially.

Call times (every two hours):

Method of contact:

Phone ( ) Face to face ( ) Text Message ( )

Response will be logged in Check-in log
If the worker cannot be reached and does not respond within 30 minutes face to face or phone contact will be made by the person originally contacted by the worker.

The person responding will immediately inform the person responsible for face to face contact with the worker of the reason for the delay or any incidents.

Responsible person will call supervisor in the event of an accident.

Supervisor to call_____

If the worker encounters an unsafe situation the worker is to immediately contact the designated person for instruction and/or call the police if necessary.

Contact phone number _____(Also post by phone)

These procedures will be reviewed at orientation and at least annually.

Any change in names or numbers will be made immediately.

_____ _____
Signature of Worker Date

_____ _____
Signature of Supervisor Date

INSTALLATION OF ROOF MOUNTED ELECTRIC SOLAR CELLS – SAFE WORK PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: TECH Electric Field Crew* Date: February 2016

REVISED BY: Brent Timmerman, Mathieu Gaudet, Casey Buikema Date: February 2016

* See sign in sheets dated February 10 (Saskatoon) and February 12 (Prince Albert)

Equipment Required:	**Material Required:**	**PPE Required:**
	Solar Cells	Safety Glasses, Safety Boots Fall Protection, Hard Hat

Training:

It is a company policy that the supervisor and the workers working at heights are trained in fall protection, and follow the fall rescue plan emergency procedures. Training may be performed in-house or by a 3rd Party.
Training record of Fall Protection will be kept in company employee file for all employees.

Job Steps:

Step One
Pick out location for solar panel(s) on either the west or east side of the roof, wherever it will receive the most the sun. Double check with your supervisor, if unsure where to install the panel(s).

Step Two
Determine the latitude tilt. In areas below twenty-five degrees latitude, solar panels will need to be tilted towards the sun in the amount of latitude number.
If latitude tilt is twenty-five degrees latitude, tilt panels by twenty-five degrees. After twenty-five latitude, add five degrees for each additional five degrees of latitude up to forty degrees. (35 lat = 50 tilt and 30 lat = 40 tilt)
At forty degrees latitude, add twenty degrees of tilt to your latitude number. (55 lat = 75 tilt)

Step Three
Mounts should be placed four feet apart and on top of rafters. Ensure to use a stud finder or the blueprints of the home to find those rafters.

Step Four
Drill holes carefully into the rafters. You do not want them to split. These holes are where the steel bolts will fasten the solar-panel mounts to roof.

Step Five

Secure the mounts with steel bolts. Make sure to seal the area around the bolts in order to keep your thermal envelope air tight. Check with your supervisor which sealant to use if you are unsure.

Step Six
Fasten the solar panels to the mounts. The solar panels come with an easy-to-fasten panel to mount interface. Make sure that the solar panels are off the roof by at least a quarter of a foot. Airflow helps the panels operate at peak efficiency.

Step Seven
Once the solar panel is mounted, connect it to electrical supply. Ensure you are trained on how to connect to the electrical supply.

CREATE A PROCEDURE FORM - SAFE WORK PROCEDURES

JOB: _____

DEVELOPED BY: _____ Date:_____

APPROVED BY:_____ Date:_____

REVISED BY:_____ Date:_____

Equipment Required:	**Material Required:**	**PPE Required:**
_____	_____	_____
_____	_____	_____

Job Steps:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____

SECTION 4 - COMPANY SAFETY RULES

GENERAL RULES

- Consuming, being in possession of, or being under the influence of alcohol or illegal drugs on company premises, or on any company job site, is prohibited.
- Theft, vandalism or any other abuse or misuse of company property is prohibited.
- All unsafe acts and conditions, including “near miss” incidents, are to be reported to appropriate supervision promptly.
- All incidents that result in damage or injury are to be reported to a supervisor immediately.
- First aid treatment is to be obtained promptly for any injury.
- Personal Protective Equipment is to be worn as required on all job sites.
- All work shall be carried out in accordance with appropriate safe work practices for each job.
- Only those tools that are in good repair, with all guards and safety devices in place, shall be used.
- All broken or malfunctioning tools will be placed out of service by way of tagging the tools “out of service” and reported to supervisor immediately.
- Every worker shall keep his/her work area neat, clean and orderly.
- All employees are to abide by the regulations, safety rules, and the use of safe work practices and safe job procedures. Safety violations or non-compliance with company rules are handled in an objective but firm manner. The enforcement progression conforms to the following with documentation at each stage;

Verbal Warning, Written Warning, Dismissal

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

EMPLOYEE WARNING REPORT

Type of Warning: ☐ **Verbal** ☐ **Written** ☐ **Dismissal**

Employee's Name: _____

Date of Warning: _____

Project: _____

Warning Issued by: _____

Type of Violation: ☐ Safety ☐ Other

Company Statement (Supervisor's Report):

_____

_____

_____

Signature: _____

Employee Statement (check the appropriate statement)

- I agree with the company's statement.
- I disagree with the company's statement for the following reasons. (Please state your reasons below)

_____

_____

_____

Employee Signature: _____ Date: _____

☐ I would like to receive a copy of this statement for my records.

Please be aware that this report will be kept on file at the home office, and the issue may be discussed at a company health and safety meeting in the future.

EMPLOYEE VIOLATIONS SUMMARY

TECH Electric Limited

For the period starting: (month/year)_____

For the period ending: (month/year)_____

1. Number of Workers Issued a Warning: _____
   Number of Warnings related to safety infractions: _____

2. Total Number of Incidents: _____
   Damage only: _____
   Injury only: _____
   Injury & Damage: _____
   Near Miss: _____

Number of Investigations: _____
   Completed: _____
   Outstanding: _____

Number of Recommendations Made: _____
   Completed: _____
   Outstanding: _____

2. Number of Incidents where employee warning was issued: _____
   Damage only: _____
   Injury only: _____
   Injury & Damage: _____
   Near Miss: _____

Number of Investigations: _____
   Completed: _____
   Outstanding: _____
Number of Recommendations Made: _____
   Completed: _____
   Outstanding: _____

Comments:

_____
_____
_____

SECTION 5 - PERSONAL PROTECTIVE EQUIPMENT (P.P.E.)

PERSONAL PROTECTIVE EQUIPMENT POLICY

- It is the policy of TECH Electric Limited to have all workers use the proper Personal Protective Equipment (PPE) when and where required.
- All specialty PPE shall be supplied by the company.
- All PPE used shall be in good condition and maintained according to the manufacturer's instructions.
- All company-supplied, or worker owned PPE will conform to government OH&S requirements and relevant Safety Standards
- Each worker will be responsible for supplying own safety boots (CSA approved) and safety glasses, which must be worn at all job-sites, at all times.
- All PPE used shall be in good condition and maintained according to the manufacturer's instructions.
- All workers will be trained on the selection, use, and care of PPE
- 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. Training may be performed in-house or by a 3rd Party.
- A worker exposed to the hazard of head injury shall wear head protection appropriate in the circumstances.
- A worker exposed to eye injury shall wear eye protection (safety glasses)
- Where there is a risk of injury to the skin of a worker an employer shall provide, and require the worker to use, approved protective clothing or covers or any other safeguard that provides equivalent protection for the worker.
- Employees must use gloves when handling objects that could injure the hands

PPE equipment that would typically be used:

- Safety glasses (on construction sites at all times)
- Safety boots with steel toe (on construction sites at all times)
- Hard Hat (on construction sites at all times)
- Dust mask
- Respirators
- Coveralls
- Gloves
- Hearing Protection (ear plugs or ear muffs)
- Fall Protection: Safety Harness and Lanyard (when working at heights)
- Arc Flash PPE (HRC category 2 arc rated clothing)

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

FOOT PROTECTION

The immediate supervisor of any work site under the control of TECH Electric Limited where there exists a potential for foot injury, shall ensure that all persons entering upon such work site, as a condition of entry, are provided with and utilize a protective strategy adequate to address the hazard potential for foot injury that may be present at that work site. CSA approved steel toed boots shall be worn by all at all times.

All persons entering the field under the control of TECH Electric Limited, as a condition of entry shall utilize the control strategy prescribed to address the potential for foot injury.

When it is not reasonable or practical to eliminate the potential for foot injury at a work site, appropriate protective footwear shall be used. The specific protective footwear selected shall be appropriate for the work being done and the hazard potential at the particular work site concerned.

Safety protective footwear is required to have toe protection, metatarsal protection, puncture resistant soles, dielectric protection or any combination of these, the footwear must meet the requirements of

- *CSA Standard CAN/CSA-Z195-M92, Protective Footwear*,
- *ANSI Standard Z41-1991, American National Standard for Personal Protection - Protective Footwear*
- Saskatchewan section 96(1) 4 Oct 96 cO-1.1 Reg 1 s95.
- Saskatchewan WCB Regulations.

It shall be recognized that the Protective Footwear Standard CAN/CSA - Z195-M92 addresses design and performance requirements for toe impact resistance, sole puncture protection and electric shock resistance of the sole of the protective footwear. Relative to such parameters, the selection of protective footwear shall be in accordance with this standard. It must also be recognized that an assessment of the potential hazards present at a particular work site may necessitate the inclusion of additional protective features in addition to those specified by Regulations.

A worker must wear the appropriate footwear and ensure that it is in a condition to provide the required protection.

Slippery surfaces

- If a workplace has slippery surfaces, appropriate non-slip footwear must be worn.

SAFETY HEADGEAR

The immediate supervisor of any work site or field under the control of TECH Electric Limited, where there exists a potential for head injury shall ensure that all persons entering such work site, as a condition of entry, are provided with and utilize a protective strategy to address the hazard potential for head injury that may be present at that work site or field. CSA approved hard hat shall be worn by all at all times.

All persons entering upon a work site under the control of TECH Electric Limited, as a condition of entry shall utilize the control strategy prescribed to address the potential for head injury.

When it is not reasonable and practical to eliminate the potential for head injury at a work site, appropriate industrial protective headgear shall be used.

The specific headgear selected shall be appropriate to the work being done and the hazard potential at the particular work site involved, as specified by Occupational Health and Safety Regulations, and WCB regulations.

1. Safety headgear must be worn by a worker in any work area where there is a danger of head injury from falling, flying or thrown objects, or other harmful contacts.
2. Safety headgear must meet the requirements of
    - *CSA Standard CAN/CSA-Z94.1-92, Industrial Protective Headwear*,
    - *ANSI Standard Z89.1-1986, American National Standard for Personnel Protection - Protective Headwear for Industrial Workers Requirements,* or
    - Saskatchewan section 91(1) 4 Oct 96 cO-1.1 Reg 1 s90.
    - Saskatchewan WCB Regulations.

3. If a worker may be exposed to an electrical hazard the safety headgear must have an appropriate non-conductive rating.
4. Chin straps or other effective means of retention must be used on safety headgear when workers are climbing or working from a height exceeding 3 m (10 ft), or are exposed to high winds or other conditions that may cause loss of the headgear.
5. Damaged headgear or headgear with missing, mismatched, or modified components must be removed from service.

EYE AND FACE PROTECTION

The immediate supervisor of any work site under the control of TECH Electric Limited where there exists a potential for injury to or irritation of a workers eyes, shall ensure that all persons entering upon such work site, as a condition of entry, are provided with and utilize a protective strategy adequate to address the hazard potential for injury to or irritation of the eyes that may be present at the work site. CSA approved safety eyewear shall be worn by all at all times.

All persons entering upon a work site under the control of TECH Electric Limited as a condition of entry, shall utilize the control strategy prescribed to address the potential for injury to or irritation of the eyes.

When it is not reasonable and practical to eliminate the potential for injury to or irritation of the eyes at a work site, appropriate industrial eye protection shall be used.

The specific eye protection selected shall be appropriate to the work being done and the hazard potential at the particular work site involved, ass specified by the “Industrial Eye and Face Protectors Standard Z94.3-M88” of the Canadian Standards Association, O.H.&S. and WCB Regulations 8.15-8.18.

This chosen strategy shall be in full compliance with:

a. *CSA Standard CAN/CSA-Z94.3-92, Industrial Eye and Face Protectors*,
b. WCB Regulations, Section 8.14-8.18
c. O.H. & S. Regulations Part 18
d. Saskatchewan Regulation Section 93(1) 4 Oct 96 cO-1.1 Reg 1 s93

Safety eyewear

1. A worker must wear properly fitting safety eyewear appropriate to the conditions of the workplace if handling or exposed to materials which are likely to injure or irritate the eyes.
2. Properly fitting safety eyewear appropriate to the conditions of the workplace must be worn if a worker
    a. has 20/200 or less vision in either eye, or is blind in either eye, or
    b. is working on or testing electrical equipment energized at a potential greater than 30 volts.

Prescription safety eyewear

1. Prescription safety eyewear must meet the requirements of *CSA Standard CAN/CSA-Z94.3-92, Industrial Eye and Face Protectors*, and Saskatchewan Regulation Section 93(1) 4 Oct 96 cO-1.1 Reg 1 s93
2. Bifocal and trifocal glass lenses must not be used if there is danger of impact unless they are worn behind impact rated goggles or other eye protection acceptable to the Board.
3. If the use of polycarbonate or plastic prescription lenses is impracticable, due to the conditions of the workplace, and there is no danger of impact, workers may use prescription lenses made of treated safety glass meeting the requirements of *ANSI Standard Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection*.

Side shields

Safety eyewear must be fitted with side shields when necessary for the safety of a worker.

Face protection

All workers must wear Full face shield when there is a risk of face injury.

1. If there is a risk of face injury, suitable face protection must be worn.
2. Face protectors and non-prescription safety eyewear must meet the requirements of
    a. *CSA Standard CAN/CSA-Z94.3-92, Industrial Eye and Face Protectors*, or
    b. *ANSI Standard Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection.*
    c. Saskatchewan Regulation Section 93(1) 4 Oct 96 cO-1.1 Reg 1 s93
    d. Saskatchewan WCB Regulations

Contact lenses
Adequate precautions must be taken if a hazardous substance or condition may adversely affect a worker wearing contact lenses.

HEARING PROTECTION

On the work site or field, personal protective hearing protection shall be used. The specific personal protective equipment selected shall be appropriate for the work being done and the hazard potential at the particular work site concerned.

Hearing protection is designed to reduce the level of sound energy reaching the inner ear.
The “rule of thumb” for hearing protection is: use hearing protection when you cannot carry on a conversation at a normal volume of voice when you are 3 feet from the person you are attempting to communicate with. Remember, this is only a rule of thumb.

Any sound over 85dBA daily exposure of 140 dBA peak sound level requires hearing protection as per OH&S and WCB Regulations. Hearing loss can be very gradual, usually happening over a number of years. Protect your hearing at all times.

The most common types of hearing protection used at present are ear plugs and ear muffs. If the hearing protection is not properly fitted, it will not supply the level of protection it was designed to deliver.

Most ear plugs, if properly fitted, generally reduce noise to the point where it is comfortable (takes the sharp edge off the noise).

Workers should have their hearing tested at least every two years.

For further information see the appropriate current Occupational Health and Safety Noise Regulations (Section 99(1) 4 Oct 96 cO-1.1 Reg 1 s99.), and/or contact the Safety Manager or your supervisor for the required information on audiometric testing.

FALL PROTECTION – FULL BODY HARNESSES, LANYARDS, AND SHOCK ABSORBERS

All installers are required to have the following training:

- WHMIS
- Aerial Work Platform (when working from an elevated work platform)
- Fall Protection

The following is the minimum requirement when working over 3 m (10') where no other means of fall protection is available.

- All safety belts, full body harnesses and lanyards must be C.S.A. certified. They must have a C.S.A. label and be inspected on a regular basis.
- Harnesses are to fit snugly to all parts of the body and worn with all hardware and straps intact and properly fastened.
- The D-ring on the harness is to be located in the center of the back between the shoulder blades.
- Lanyards are to be 16 mm (5/8") diameter nylon or equivalent.
- All lanyards are to have a shock absorber.
- Lanyards are to be a maximum length of 1.5 m (5').
- Lanyards are to be connected to a rigid support or lifeline higher than waist level.
- The shock absorber side of the lanyard is to be connected to the D-ring.

FALL PROTECTION – FALL RESTRAINT

All installers are required to have following training:

- WHMIS
- Aerial Work Platform (when working from an elevated work platform)
- Fall Protection

Fall restraint is rigged to allow the movement of workers only as far as the sides and edge of the working area. As part of the rigging, anchorage points conforming to the eight times intended load (800 lb) criteria must be provided for each fall restraint device in use.

The plan involving the use of fall restraint systems shall include;

- Hold pre-job meetings and complete a JHA to address and discuss requirements including training or review.
- Working within the confines of a standard guard-rail system.
- Wearing approved fall restraint equipment attached to securely rigged restraint lines. This would include checking restraint line length to ensure limits of approach.
- Confirming all fall restraint devices are compatible.
- Inspecting all restraint components before each use for excessive wear, damage or other deterioration. Always remove defective components from use and mark them to prevent others from using them.
- Tying of restraint lines. These are to be tied independently of other lines and to an approved anchorage point only.

FALL PROTECTION – FALL ARREST

All installers are required to have following training:

- WHMIS
- Aerial Work Platform (when working from an elevated work platform)
- Fall Protection

Workers exposed to a free fall distance of 10 ft. (3m) or more (without restraint) are required to wear fall arresting equipment including a full body harness.

The plan involving the use of fall arrest systems shall include;

- Holding a pre-job meeting to address and discuss the fall protection requirements including any training or review.
- Inspecting all components before each use to ensure no excessive wear, no damage or other deterioration. Always remove defective components from use and mark them as such to prevent others from using them.
- Securing full body harness to approved anchorage points able to support 5400 lbs (244kg)
- Ensuring that safety lines are rigged in such a manner as to limit the free fall distance to 4 ft. (1.2m). Ensuring that safety lines are protected from cuts, wear and abrasion.
- Ensuring that only one worker may be attached to any one vertical safety line. Ensuring that the attachment involves the use of locking snap hooks to “D” rings only.
- Ensuring the removal from service, until checked and re-certified for use, any body harness components, which have been involved in a fall.

RESPIRATORY PROTECTION POLICY

When to use respiratory equipment

Respiratory hazards are controlled using ventilation.

Where ventilation is not practicable, workers potentially exposed to airborne contaminants must wear respiratory protective devices.

A project shall be adequately ventilated by natural or mechanical means if a worker may be injured by inhaling a noxious gas, vapour, dust or fume, or from a lack of oxygen; or if a gas, vapour, dust or fume may be capable of forming an explosive mixture with air.

If it is not practicable to provide natural or mechanical ventilation, respiratory protective equipment suitable for the hazard shall be provided to and used by the workers.

Training

A worker required to wear or use respiratory protective equipment shall be instructed and trained in its care and use before wearing or using the device. Training may be performed in-house or by a 3rd Party.

LIMB AND BODY PROTECTION

The immediate supervisor of any work site under the control of TECH Electric Limited, where there exists a potential for injury to hands, arms, legs, or the trunk of the body shall ensure that all persons entering upon such work site, as a condition of entry, are provided with and utilize a protective strategy adequate to address the hazard potential for injury of such body parts, as may be present at that work site.

All persons entering upon a work site under the control of TECH Electric Limited, as a condition of entry shall utilize the control strategy prescribed to address the potential for injury to hands, arms, legs or trunk of the body.

When it is not reasonable or practical to eliminate the potential for injury of the hands, arms, legs or trunk of the body at a work site, properly fitted protective equipment, that is appropriate to the work being done and the nature of
the hazard involved, shall be used.

Commonly used limb protective equipment:

- Gloves
- Coveralls
- Leather Sleeves

FR RATED HI-VISIBILITY CLOTHING (on-site only)

Section 133 of the 4 Oct 96 cO-1.1 Reg 1 s132, in Saskatchewan, as well as *OH&S and WCB Regulation* requires a worker exposed to the hazard of moving vehicles to wear high visibility apparel appropriate to the hazard. To determine the nature of the hazard, it is necessary to consider the speed of the moving vehicles, as well as the duties and the work location of the worker relative to the vehicles or mobile equipment.

Section 133 (1) of the 4 Oct 96 cO-1.1 Reg 1 s132 requires a worker exposed to the hazards of vehicular traffic must wear high visibility apparel meeting the Type 1 or Type 2 criteria of *WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment*.

Section 133 (6) of the 4 Oct 96 cO-1.1 Reg 1 s132 requires a worker whose duties on the work site result in exposure to the hazards of mobile equipment must wear high visibility apparel meeting at least the Type 3 criteria of *WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment*.

Distinguishing apparel
If distinguishing apparel is required in another Part of this Regulation for the purpose of identifying a worker's location or well-being, the apparel must be of a colour which contrasts with the environment and must have at least 775 sq cm (120 sq in) of fluorescent trim for daytime use and retroreflective trim for nighttime use, on both the front and back.

A fluorescent material is one that absorbs ultraviolet light in daylight and emits it in the visible light region. This property allows the material to radiate more visible light than is incident on it, thus it appears and is brighter than a non-fluorescent material which at best can reflect all the visible light that falls on it. Visibility enhancing trim has both fluorescent and retroreflective properties. A retroreflective material is one that reflects light back to the same direction as the source of the light.

A basic description of Type 1, Type 2 and Type 3 high visibility apparel:

Type 1 - Vest, shirt or other similar garment, worn on the torso, with a fluorescent background and attached visibility-enhancing trim.

Type 2 - Jacket, coat, coverall or other garment with a bright coloured background and attached visibility enhancing trim.

Type 3 - A harness or suspender-type of garment worn on the torso, fabricated from parallel strips of contrasting colours. The harness has fluorescent and retro reflective properties.

To ensure safety of all employees and contractors at TECH Electric Limited, all employees and contractors will wear Type 1, Type 2 and Type 3 high visibility apparel, whenever working near roads, or on jobsites where any vehicles and/or equipment are operating.
For more detail, refer to or Section 133 of the 4 Oct 96 cO-1.1 Reg 1 s132, in Saskatchewan.

RESPIRATORY PROTECTIVE EQUIPMENT CODE OF PRACTICE

TITLE	Respiratory Protection
GENERAL	Protect workers from injuries associated by not utilizing proper RPE.
APPLICATION	RPE shall be utilized where there is or may be a danger to workers respiratory systems. All workers are required to wear RPE as required.
PERSON IN CHARGE FOR SELECTING AND ASIGNING RPE	Supervisor on the job or job-site
REQUIREMENTS	Worker must be medically fit to wear a respirator Worker must use Respirator that is assigned to them by manager or supervisor. Supervisor or Manager will only assign respirators that are NIOSH approved. Worker must be 'Fit Tested' for the respirator, prior to first use, and every two years. Workers must be clean shaven where the respirator contacts the face.
WHEN TO USE A RESPIRATOR	When it is required per job-site Hazard Assessment When Painting or installing Wall Protection When Working with any airborne chemical Whenever Supervisor or Manager indicated RPE is needed
MAINTENANCE	Cartridges/Filters must be replaced when: As per Manufacturer's Instructions If Smell, Taste or Irritation from contaminant is detected If there is resistance to breathing
CLEANING	Respirators should be cleaned with alcohol wipes, before and after each use.
STORAGE	Respirators must be stored in individual sealed Ziploc bag, to prevent contamination.
TRAINING	All workers must be trained on proper use of Respirators Fit test needs to be performed with all new employees Fit test must be performed every two years, for all workers

RESPIRATORY PROTECTIVE EQUIPMENT CODE OF PRACTICE

All workers affected must be trained in this RPE code of practice.

Person Responsible for selecting and providing Respiratory Protective Equipment:

Name: _____
Telephone: _____
Position: _____

Conditions for Use of RPE:
Health Surveillance: Workers must be medically fit to wear a respirator (Appendix E of CSA Standard Z94.4-02)

Fit-Testing:
RPE that depends on an effective seal for its safe use must be fit tested by a competent/trained person.
NIOSH Approval: RPE required at the worksite must be NIOSH approved
Clean-Shaven: Workers must be clean-shaven where the respirator contacts the face.

Task (e.g. spray painting)	Airborne Hazard type (e.g. dust)	Type of Respirator (e.g. half mask)	Respirator Make/Model #	Type of Cartridge (e.g. P100)	Cartridge Make/Model #	RPE Use Mandatory? Y / N
Demolition	Dust	Silicone Half Mask	North 7700	P100	North 7380P100	Yes
Wall Sanding	Dust	Silicone Half Mask	North 7700	P100	North 7380P100	Yes
Applying Primer	Paint Fumes	Silicone Half Mask	North 7700	P100	North 7581P100	Yes
Spray on Waterproofing	Other Solvents	Silicone Half Mask	North 7700	P100	North 7581P100	Yes

Maintenance / Cleaning / Storage of Respiratory Protective Equipment:

Maintenance: Cartridges/Filters must be replaced as per manufacturer's instructions or earlier if smell, taste or irritation from contamination is detected, or if there is resistance to breathing.

Cleaning: RPE should be cleaned after each use. Wipes may be used, but should not be the only method of cleaning RPE. Check manufacturer's instructions for additional cleaning options. In most cases water and soap are acceptable.

Storage: RPE must be stored in a manner that will prevent its contamination (sealed Ziploc bag, or similar air tight storage)

ELECTRICAL ARC FLASH PERSONAL PROTECTIVE EQUIPMENT

With recent increased awareness of the dangers of shock and arc flash, there have been many companies that offer shock and arc flash personal protective equipment (PPE). The materials are tested for their arc rating. The arc rating is the maximum incident energy resistance demonstrated by a material prior to break-open (a hole in the material) or necessary to pass through and cause with 50% probability the onset of a second degree burn.

Arc rating is normally expressed in cal/cm² (or small calories of heat energy per square centimeter). The tests for determining arc rating are defined in ASTM F1506 *Standard Performance Specification for Flame Resistant Textile Materials for Wearing Apparel for Use by Electrical Workers Exposed to Momentary Electric Arc and Related Thermal Hazards*.

Selection of appropriate PPE, given a certain task to be performed, is normally handled in one of two possible ways.

The first method is to consult arc flash labels on existing equipment or a hazard category classification table, like that found in NFPA 70E[11] Table 130.7(C)(15)(a) lists a number of typical electrical tasks by various voltage levels and recommends the category of PPE that should be worn. For example, when working on 600 V switchgear and performing a removal of bolted covers to expose bare, energized parts, the table recommends a Category 3 Protective Clothing System. This Category 3 system corresponds to an ensemble of PPE that together offers protection up to 25 cal/cm² (105 J/cm² or 1.05 MJ/m²). The minimum rating of PPE necessary for any category is the maximum available energy for that category. For example, a Category 3 arc-flash hazard requires PPE rated for no less than 25 cal/cm² (1.05 MJ/m²). Table 4 and 5 from CSA Z462 also provide hazard category classifications and should be consulted here in Canada.

The second method of selecting PPE is to perform an arc flash hazard calculation to determine the available incident arc energy. IEEE 1584 provides a guide to perform these calculations given that the maximum fault current, duration of faults, and other general equipment information is known. Once the incident energy is calculated the appropriate ensemble of PPE that offers protection greater than the energy available can be selected.

PPE provides protection after an arc flash incident has occurred and should be viewed as the last line of protection. Reducing the frequency and severity of incidents should be the first option and this can be achieved through a complete arc flash hazard assessment and through the application of technology such as high-resistance grounding which has been proven to reduce the frequency and severity of incidents.

If you are not sure what type of PPE you require to protect yourself from the Arc Flash, please consult with your supervisor before starting work.

All company-supplied PPE shall conform to Occupational Health and Safety requirements, CSA Z462 workplace electrical safety and relevant safety standards. Table 4 and 5 have been reproduced in part from CSA Z462 for convenience only. The complete CSA Z462 workplace electrical safety specification should be referenced.

Table 4 (CSA Z462)
Hazard/risk category classifications and use of rubber insulating gloves

Task(s) performed on energized equipment	Hazard/risk category	Rubber Insulating gloves required?
Panelboards or other equipment rated 240 V and below		
Perform infrared thermography and other non-contact inspections outside the restricted approach boundary	0	N
Circuit breaker (CB) or fused-switch operation with covers on	0	N
CB or fused-switch operation with covers off	0	N
Work on exposed energized electrical conductors and circuit parts, including voltage testing	1	Y
Remove/install CB;'s or fused switches	1	Y
Removal of bolted covers (to expose bare energized electrical conductors and circuit parts)	1	N
Opening hinged covers (to expose bare energized electrical conductors and circuit parts)	0	N
Work on exposed energized electrical conductors and circuit parts of utilization equipment fed directly by a branch circuit of the panelboard	1	Y
Panelboards or switchboards rated more than 240 V and up to 600 V (with moulded-case or insulated-case circuit breakers)		
Perform infrared thermography and other non-contact inspections outside the restricted approach boundary	1	N
CB or fused-switch operation with covers on	0	N
CB or fused-switch operation with covers off	1	Y
Work on exposed energized electrical conductors and circuit parts, including voltage testing	2	Y
Work on exposed energized electrical conductors and circuit parts of utilization equipment fed directly by a branch circuit of the panelboard or switchboard	2	Y
600V class motor control centres (MCCs) (except as indicated)		
Perform infrared thermography and other non-contact inspections outside the restricted approach boundary	1	N
CB, fused-switch, or starter operation with enclosure doors closed	0	N
Reading a panel meter while operating a meter switch	0	N
CB, fused-switch, or starter operation with enclosure doors open	1	N
Work on exposed energized electrical conductors and circuit parts, including voltage testing	2	Y

(continued)

Table 4 (CSA Z462) (continued)
Hazard/risk category classifications and use of rubber insulating gloves

ask(s) performed on energized equipment	Hazard/risk category	Rubber Insulating gloves required?
600V class motor control centres(MCCs) (except as indicated)		
Work on control circuits with exposed energized electrical conductors and circuit parts 120 V or below, exposed	0	Y
Work on control circuits with exposed energized electrical conductors and circuit parts greater than 120 V, exposed	2	Y
Insertion or removal of individual starter "buckets" from MCC	4	Y
Application of safety grounds after voltage test	2	Y
Removal of bolted covers (to expose bare energized electrical conductors and circuit parts)	4	N
Opening of hinged covers (to expose bare energized electrical conductors and circuit parts)	1	N
Work on exposed energized electrical conductors and circuit parts of utilization equipment fed directly by a branch circuit of the panelboard or switchboard	2	Y
600 V Class switchgear (with power circuit breakers or fused switches)		
Perform infrared thermography and other non-contact inspections outside the restricted approach boundary	2	N
CB or fused-switch operation with enclosure doors closed	0	N
Reading a panel meter while operating a meter switch	0	N
CB or fused –switch operation with enclosure doors open	1	N
Work on exposed energized electrical conductors and circuit parts, including voltage testing	2	Y
Work on control circuits with exposed energized electrical conductors and circuit parts 120 V or below, exposed	0	Y
Work on control circuits with exposed energized electrical conductors and circuit parts greater than 120 V, exposed	2	Y
Insertion or removal (racking) of CBs from cubicles, doors open or closed	4	N
Application of safety grounds after voltage test	2	Y
Removal of bolted covers (to expose bare energized electrical conductors and circuit parts)	4	N
Opening of hinged covers (to expose bare energized electrical conductors and circuit parts)	2	N

(continued)

Table 4 (CSA Z462) (continued)
Hazard/risk category classifications and use of rubber insulating gloves

Task(s) performed on energized equipment	Hazard/risk category	Rubber Insulating gloves required?
Other 600 V class (277 to 600 V, nominal) equipment		
Lighting or small power transformers (600 V, maximum)	--	--
Removal of bolted covers (to expose bare energized electrical conductors and circuit parts)	2	N
Opening to hinged covers (to expose bare energized electrical conductors and circuit parts)	1	N
Work on exposed energized electrical conductors and circuits parts, including voltage testing	2	Y
Application of safety grounds after voltage test	2	Y
Revenue meters (kW-h at primary voltage and current) Insertion or removal	2	Y
Cable trough or tray cover removal or installation	1	N
Miscellaneous equipment cover removal or installation	1	N
Work on energized electrical conductors and circuit parts, including voltage testing	2	Y
Application of safety grounds after voltage test	2	Y
Insertion of or removal of plug-in devices into or from busways	2	N

Table 5 (CSA Z462)
Protective clothing and personal protective equipment

Hazard/risk category 0	
Protective clothing, non-melting (as specified in ASTM F 1506) or untreated natural fibre	Shirt (long sleeve) Pants (long)
Other Protective Equipment	Safety glasses or safety goggles (SR) Hearing protection (ear canal inserts) Leather gloves (AN) (Note 2)
Hazard/risk category 1	
FR clothing, minimum arc rating of 4 cal/cm² (Note 1)	
	Arc-rated long-sleeve shirt and pants (Note 3) or arc-rated coverall (Note 4) Arc-rated face shield or arc flash suit hood (Note 7) Arc-rated jacket, parka, or rainwear (AN)
Other protective equipment	
	Hard hat Safety glasses or safety goggles (SR) Hearing protection (ear canal inserts) Leather gloves (Note 2) Leather work shoes (AN)
Hazard/risk category 2	
FR clothing, minimum arc rating of 8 cal/cm² (Note 1)	
	Arc rated long-sleeve shirt and pants (Note 5) or arc-rated coverall (Note 6) Arc-rated face shield or arc flash suit hood (Note 7) Arc-rated jacket, parka, or rainwear (AN)
Other protective equipment	
	Hard hat Safety glasses or safety goggles (SR) Hearing protection (ear canal inserts) Leather gloves (Note 2) Leather work shoes

SECTION 6 - PREVENTATIVE MAINTENANCE

PREVENTATIVE MAINTENANCE POLICY

All tools, vehicles, and equipment shall be properly maintained so as to reduce the risk of injuries to employees, or damage to property.

All competent employees shall regularly check all tools, vehicles, and equipment that they are working with, and shall take out of service any tools, vehicles, or equipment that pose a hazard due to a need for repair.

Maintenance Program and Inspections

TECH Electric Limited ensures that tools and equipment are properly inspected and maintained.

The primary equipment used is as follows:

- Forklift
- Half-ton trucks
- Trailer
- Aerial Work Platforms (Scissor Lifts)
- Hand tools & Power Tools including but not limited to:
    - Drills, grinder, flashlight, hammerdrill, sawzall, skillsaw
    - Hydraulic benders
    - Knockout cutters
    - Tuggers
    - Chopsaw
- Personal Protective Equipment

Equipment is inspected as per the general rules and safe work practices previously outlined in this safety manual (see General Rules and Safe Work Practices) and is summarized in the safety documentation frequency guide below; equipment is also checked daily (when used), and monthly or quarterly by the supervisor.

Competency in performing maintenance inspections shall be demonstrated by the following qualifications, at a minimum, with respect to the equipment/tool being inspected:

- Previous experience with the equipment/tool
- Has read and understood safe work practices and procedures and the owners manual related to the equipment/tool
- Is licensed/trained to operate the equipment/tool, where required by legislation, this safety manual and/or Occupational Health and Safety Regulations (ie. Motor vehicle license, aerial work platform and fall protection training for a scissor lift)

Removal from Service:
If the inspected equipment/tool is deemed to pose a hazard or maintenance is required, the item shall be tagged “out of service” by an appropriate method (to ensure another operator of that equipment/tool will clearly know it is out of service) and reported to the supervisor immediately. The supervisor will then dispose of, or ensure the proper maintenance is performed on the equipment/tool.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

EQUIPMENT INSPECTION CHECKLIST

	EQUIPMENT INSPECTION CHECKLIST	
	Equipment #:	Operator:
	Project:	Date:

Inspection Checklist (choose one) □ Forklift □ Elevated Work Platform	Needs Repair	Defect reported to Supervisor	Supervisor's Initial

Daily Pre-Start Check	Yes	No	Yes	No	
Fuel Level / Oil Level					
Fuel Leaks					
Fuel Lines/Connections/Status (EWP)					
Loose Bolts, Clips, etc.					
Wheels and tires					
Forks – move freely, defects (Forklift)					
Hoses Secure, Fluid Leaks					
Horns, Lights, Backup Beeper					
Operational					
Cable Check					
Cracks in Scissor Boom (EWP)					
Operation Pre-Use Check					
Foot and Parking Break Operational					
Clutch/Gear Shift Operational					
Steering Operational					
Boom/Mast Operational (test full hoist & full tilt)					
Boom/Outrigger Operational					

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Platform Inspection					
Handrails/Safety Chains/Bars					
Clean & Free of Obstructions					
Controls – Check All					
Functions & Indicators (must be legible)					
Motion Warning Devices					
Documentation & Handbook					
Alarm/Warning Devices/Lights					
Oil Leaks					
Lift Cylinder Condition					
Hydraulic Fluid Level					
Emergency Lowering Valve					
Battery Fluid Levels/Cables					
Visual Check of Battery Casing					

Report Serious Deficiencies Immediately, Do Not Operate a Defective Machine

Operator's Signature: _____

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VEHICLE INSPECTION REPORT

TECH ELECTRIC

VEHICLE INSPECTION REPORT

Vehicle#:		Date:	
Mileage:		Name:	

S – Satisfactory **NS – Not Satisfactory (must enter actions to be taken)**

	S	NS	If NS, actions to be taken or actions taken
Check belts for signs of fray or cracks			
Check hoses for leaks or bulges			
Check engine and ground for signs of leaks			
Make certain heater and air conditioning works			
Check wipers			
Headlights: High Beam			
Low Beam			
Fog or driving lights			
Turn signals			
Brake lights/tail lights/trailer electric breaks and breakaway			
Hazard lights			
Door locks			
Seat belts			
Windows/windshield function or cracks			
Horn			
Tires: Tread/Condition/trailer tires			
Proper Inflation			
Safety kit, First Aid, Safety Resources			
Registration in glove box			
Liquid level check:			
Coolant			
Oil			
Auto Transmission			
Power Steering			
Brakes			
Window Wash			

Always consult and follow your owner's manual for proper tire inflation and fluid levels.

Next oil change: Date _____ Mileage _____

Signature: _____

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SAFETY DOCUMENTATION FREQUENCY

Safety Documentation Frequency Guide

- Use as a reference only as policy may change and is per TECH Electric Limited Safety Manual and Occupational Health and Safety Regulations
- When in doubt follow the most stringent requirements
- OH&S Regulations can be found on the TE wiki, go to tech-electric.ca and click on "staff login"

	With Each Use	Weekly	Monthly	For Each Work Site	For Each Hire	As Job/Task Changes	As They Occur	Notes
Safety Meeting		X						
Safety Orientations				X	X			
Fall Protection Plan				X				Where workers may fall 3m or more*
Job Hazard Assessment						X		
Near Miss							X	Minimum of 2/employee/month
Incident Report							X	Per TE policy; see handbook
Jobsite Inspection			X					Or if something brought forward
Equipment Inspection	X							
Vehicle Inspection			X					

* And where workers are not protected by a guardrail or similar barrier

SECTION 7 - TRAINING

SAFETY TRAINING POLICY

Purpose

The purpose of this policy is to ensure that all employees receive adequate safety training.

Policy

The company will provide and ensure that all employees participate in the following safety training:

- Safety orientations will be site specific and be completed for all employees on each new project site. Newly-hired personnel will also receive orientation, on or before first day of work.
- Job-specific training will be performed by a competent employee, starting first day of work, until training is completed.
- All employees will be trained in safe job practices and procedures, for their position.
- All employees will be trained in WHMIS within 1 months of employment
- All managers, supervisors and workers (on site without a supervisor) will be trained in First Aid (pending course availability) within 3 months of employment
- All employees will be trained in Fall Protection within 1 month of employment
- All employees required to work from aerial work platforms will be trained in Aerial Work Platform
- All employees required to work from powered mobile equipment will be trained in Powered Mobile Equipment
- Employee training will be documented, using forms found in this section or provided by an accredited training program, and records of all employee training will be kept in the employee file at the main office, for duration of employ.
- Refresher training will be conducted when procedures, or job description change.
- Safety meetings involving all employees on a given project site will be held minimum once a week.
- Occupational Health and Safety committee meetings will be held minimum once a quarter (every 3 months)

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

NEW EMPLOYEE SAFETY ORIENTATION FORM

WORKER SAFETY ORIENTATION CHECKLIST	
Project:	Project #:
Worker Name:	Date:

PLEASE CHECK OFF EACH OF THE TOPICS AS THEY ARE DISCUSSED.	
❒ Health & Safety Policy	❒ Emergency Preparedness & Phone Numbers
❒ Job Hazard Assessment	❒ Records & Statistics
❒ How to Identify	❒ Environmental Policy
❒ Specific to Job or Site	❒ Workplace Violence
❒ Safe Work Practices & Work Procedures	❒ Workplace Violence Policy
❒ Company Safety & General Rules	❒ Harassment Policy, Procedure & Responsibilities
❒ Personal Protective Equipment	❒ Harassment Complaint & Investigation Form
❒ Preventative Maintenance	❒ Return to Work
❒ Equipment & Vehicle Inspection	❒ Alcohol and Drug Policy
❒ Safety Documentation Frequency	❒ Return to Work Policy
❒ Training	❒ First Aid
❒ Training Policy & Meetings	❒ Health & Safety Representative
❒ Inspection, Investigation & Reporting	❒ Joint Health & Safety Committee
❒ Inspection Policy	❒ Management Review
❒ Investigation Policy	❒ Questions – **ASK – THERE ARE NO STUPID QUESTIONS**

ORIENTATION QUIZ:	
1	Where is the muster point located at this work site?
2	What should you do if an accident/incident occurs resulting in injuries that require medical aid?
3	Our workplace Harassment Policy and procedures are located where?
4	OH&S regulation requires that employers ensure that workers using a fall protection system are trained in its use and given adequate oral and written instructions. True False
5	What are the minimum safety Personal Protective Equipment required by all workers on site?

WORKER ACKNOWLEDGEMENT:
I have been given the TECH Electric Limited Safety Orientation session as checked off above, and I have received a copy of the TECH Electric Limited Safety Handbook to keep. By accepting employment, I have made a commitment to read, understand and abide by TECH Electric Limited policies, rules and regulations and will diligently adhere to them during the performance of my duties. I will make every effort to follow the safe work practices and procedures outlined in the Safety Handbook and posted on the job site. As company, client and legislated rules and regulations vary, I will always follow the most stringent. As a worker on this work site, I will cooperate with my employer to protect the health and safety of others and myself. I understand that this signed page will be retained in my employee file as a record of my understanding, acceptance and commitment to follow and abide by the rules and regulations governing employment on a TECH Electric Limited work site. Failure to follow these rules or to perform my work in a safe manner will result in disciplinary action.

Worker Signature	Print Name	Supervisor Signature	Print Name

SAFETY MEETINGS

As part of TECH Electric Limited's ongoing commitment to health and safety, safety meetings are held minimum quarterly (every 3 months). Safety meetings are an opportunity to review any safety incidents (accidents, illness, material loss, or near-miss incidents) and make any necessary improvements and/or corrections to current policies, practices, and procedures.

Tool Box Meetings will be held minimum weekly. The following is the agenda followed for these weekly Tool Box meetings:

SAFETY TOOLBOX MEETINGS

SAFETY MEETING MINUTES

PROJECT:	**DATE:**
SUPERVISOR:	

REVIEW LAST MEETING TOPICS	LAST MEETING DATE:
1)	**4)**
2)	**5)**
3)	**6)**

NEW SAFETY CONCERNS	**SUGGESTIONS/ACTIONS TO BE TAKEN**
1)	
2)	
3)	
4)	
5)	
6)	

INJURIES/ACCIDENTS REVIEWED

ATTENDEES

1) _____	**5)** _____	**9)** _____
2) _____	**6)** _____	**10)** _____
3) _____	**7)** _____	**11)** _____
4) _____	**8)** _____	**12)** _____

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SECTION 8 - INSPECTIONS

INSPECTION POLICY

Purpose

The purpose of this policy is to control losses of human and material resources by identifying and correcting unsafe acts and conditions.

Policy

TECH Electric Limited will maintain a comprehensive program of safety inspections at all job sites. Minimum once per month, owner or site-supervisor will perform an inspection of all company job-sites; equipment, tools and PPE, to ensure all equipment and tools used meet recommended manufacturer standards, and are in safe operating condition. Frequency of Inspections can be increased as required by owner or site-supervisors.

Responsibilities

- The supervisor is responsible for the overall operation of the program.
- The supervisor is responsible for directing inspections on job sites.
- The supervisor is responsible for ensuring the recommendations made during inspections are implemented in a timely manner.

Workers are responsible for participating and contributing to the Inspection Program, as instructed by owner or site supervisors.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

JOBSITE INSPECTION CHECKLIST	
Project:	Project #:
Completed By:	Date:
Project Manager:	No. Of Employees:

Prioritize the risk associated with the unsatisfactory condition. With 1 as the highest priority, list the priority of each unsatisfactory condition

#	Priority	Inspection Item	Action Plan	Completed By Who	Date Completed
1		Adequate Lighting			
2		Excessive Noise Levels			
3		Extremes of Heat/Cold			
4		Safe Access/Egress			
5		Sanitary Facilities (toilet), Eating area			
6		Basic PPE (hard hats, safety boots)			
7		Other PPE			
8		Proper Lifting Techniques			
9		Exits, Walkways, Emergency Routes			
10		Dangerous Openings (guardrails, covers)			
11		Rebar Guarded/Nails Removed			
12		Ladders & Platforms (secure, good condition)			
13		Overhead Power Line Clearance			
14		Cord/Tool Condition			
15		Tool Guards in Place			
16		Right Tool for Job			
17		Lock-out Systems			
18		Clear/Safe Access to Materials			
19		Materials Handling Equipment			
20		Operators/Drivers Qualified			
21		Loads Secured			
22		Vehicle Traffic Hazards/Congestion			
23		Warning Signs/Tags/Barricades			
24		Emergency Muster Point (OK for job status)			
25		First Aid Materials (available & stock)			
26		First Aid Personnel			
27		MSDS/WHMIS Materials			
28		Other Items (list)			

Supervisor Signature:	Project Manager Signature:

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SECTION 9 - INVESTIGATIONS

INVESTIGATION POLICY

Purpose

To investigate accidents/incidents so that causes can be determined and corrective actions can be implemented to prevent recurrence.

Policy

TECH Electric Limited shall fully investigate the following incidents/accidents:

- Accidents that result in injuries requiring medical aid.
- Accidents that cause property damage or interrupt operations with potential loss.
- Incidents that have the potential to result in (1) or (2) above, such as close calls or near misses.

All incidents that fall under the OH&S Act must be reported to OH&S and to WCB or other regulatory agencies as defined by the OH&S Act.

Responsibilities / Reporting Procedure for Investigations

- All employees shall report all incidents as soon as possible to their immediate supervisor and assist in the investigation when requested.
- Supervisors shall conduct initial investigations and submit their report(s) to their Managers promptly.
- Managers shall determine the need for, and if necessary shall direct, detailed investigations. They shall also determine causes, recommend corrective action, and report to the Senior Management.
- The Senior Management shall review all Managers reports, determine the corrective action to be taken, and ensure that such action is implemented.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

ACCIDENT/INCIDENT/LOSS WITNESS STATEMENT

Name: _____ Company: _____

Location: _____ Date: _____ Time: _____

Telephone: _____ Cellular: _____

Description of Accident/Incident/Loss:

_____

_____

When completing this statement, be sure to include all events and factors that led to this accident/incident/loss. Include actions taken during and after. Please print clearly. Attach all original Witness Statements to the accident/incident/loss report. Use the back of this form for additional information.

Description _____

_____

_____

_____

_____

_____

Signature: _____

Office Use Only

File # _____ Date Received _____ Job # _____

Received by _____

NEAR MISS/CLOSE CALL REPORT

NEAR MISS/CLOSE CALL INCIDENT REPORT	
Project:	Date/Time:
Name(s) (optional):	Reviewed by:

What happened? Describe the sub-standard act or sub-standard condition observed.

Contribution Cause	
❑ Planning Process	❑ State of Mind/Attention to Task
❑ Environmental Conditons	❑ PPE (Personal Protective Equipment)
❑ Property/Materials	❑ Slip/Trip/Fall
❑ Tools/Equipment Factors	❑ Working at Heights
❑ Signs and Labels	❑ Worker Knowledge or Training
❑ Practices/Procedures	❑ Other (please describe below)

Immediate Action(s) Taken to Correct Conditon or Act: (please describe below)

Who Was Involved:	❑ Contractor or Sub-Trade	❑ Worker	❑ Both

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INCIDENT REPORT

	INCIDENT REPORT
Project:	Project #:
Task Location:	Date:
Employee:	Supervisor:

Type of Incident (check all that apply):

Is this a lost time incident?	NO YES	If Yes, number of hours/days lost:	
Did the victim leave the job site?	NO YES	If Yes, on what date:	
Did the victim visit a medical facility?	NO YES	If Yes, length of stay in days:	
Did the victim return to job site?	NO YES	If Yes, on what date:	

Was there damage to (circle) vehicle, equipment or property?

Type of Injury (check all that apply):

	bruise(s)		head injury with loss of consciousness		laceration(s)
	eye injury		head injury without loss of consciousness		blister(s)
	burn		dental or tooth-related		dislocation
	fracture		skin abrasions		Other:

Anatomical Location of Injury (check all that apply):

	head		shoulder		forearm		face		wrist
	eye		upper back		chest		knee		hand/finger
	neck		lower back		abdomen		ankle		lower leg
	thigh		foot/toe(s)		elbow		upper arm		other

Description of Incident:

Root Cause of Incident:	Corrective / Preventive Actions:

Employee's Signature:	Supervisor's Signature:

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SECTION 10 - EMERGENCY PREPAREDNESS

EMERGENCY PREPAREDNESS AND RESPONSE PLAN

Emergencies can occur at any workplace, and TECH Electric Limited strives to reduce or eliminate potential injuries or losses by planning and preparing for emergencies that may occur at TECH Electric Limited job-sites

Part III, 'General Duties' in the OHS Regulations, 1996 requires the provision of information, instruction, training and supervision that is necessary to protect the health and safety of workers. This includes the development of emergency plans or responses as determined by a risk assessment to protect workers.

To ensure compliance with OHS Regulations, 1996. TECH Electric Limited has created and implemented this emergency preparedness and response plan, to ensure safety of its workers.

Company Job-site Supervisors will coordinate emergency response at each job-site.

(a) Potential emergencies at job-sites include:

- **Fire**
- **Medical Emergency**
- **Other**

(b) Procedures for dealing with the identified emergencies;

All workers will ensure 911 services are available from their cell phone prior to starting work. If 911 services are not available, contingency Emergency Response Plan has to be established with owner or supervisor, and posted at the worksite.

Company's emergency response plan for responding to fire emergency is evacuating the hazardous area immediately, and contacting **911 for any type of fire emergency.**

Fire Extinguishers are located in all company vehicles. Do not endanger yourself; only fight a small manageable fire, if it is not a risk to your safety.

Company's emergency response plan for responding to medical emergency is assisting casualty using First Aid procedures immediately, and contacting **911 for all types of medical emergency**.

For all other emergencies contact company owner / supervisor, or on-site contracting supervisor / safety officer immediately.

After contacting emergency services, call company owner / supervisor to report the incident, and to fill out investigation forms as required.

(c) Location and operational procedures for emergency equipment;

All company vehicles contain fire extinguisher, and a first aid kit. All employees will ensure they do have First Aid kit and Fire Extinguisher present in the company vehicles prior to leaving for a jobsite.

(d) Emergency response training requirements are:

- Emergency response training & evacuation drill will be completed with the general contractor for site specific upon mobilization, and in accordance with the general contractor's emergency response plan, to ensure workers are able to evacuate work sites and contact Emergency services as required.
- The evacuation procedures, alarm and emergency communication requirements, will be communicated and trained for minimum once every 3 months.
- All company employees will be trained in First Aid (rescue and evacuation workers are all workers trained in First Aid). First Aid training will be completed in accordance with the training section, and renewed every two years thereafter.

(e) Location and use of emergency facilities;

The company does not have emergency facilities, as the work is performed at customer job-sites. On all job-site 911 has to be accessible by telephone, or customer has to have own emergency facilities. For small emergencies there is a First Aid Kit and Fire Extinguisher located in company truck. For all other emergencies, call 911.

(f) Fire protection requirements;

The company does not have fire protection requirements, as the work is performed at customer job-sites. On all job-site 911 has to be accessible by telephone, or customer has to have own fire protection requirements.

(g) Alarm and emergency communication requirements;

The person instigating the site evacuation shall instruct that the aerosol-powered horn be sounded as follows:

a. Three (3) sharp blasts, followed by a
b. Five (5) second delay, then
c. Three (3) more sharp blasts.
d. Repeat several times to ensure that all workers on site have heard this signal.
e. This person, having the site evacuated, shall ensure all workers and visitors on site have been evacuated to a designated muster location;

Or in accordance with the general contractor's emergency response plan.

(h) First aid services required;

All managers, supervisors and workers (on site without a supervisor) will be trained in First Aid within 3 months of employment (pending availability of courses). First Aid will be provided by all workers trained in First Aid, to all workers, contractors or visitors on any company job-site that require assistance. Emergency 911 services will be contacted immediately if any First Aid needs to be provided, to ensure medical well being of the casualty.

(i) Procedures for rescue and evacuation;

1. The Supervisor shall initiate evacuation procedures when required and call 911 immediately. If the Supervisor is not available, a senior employee can initiate evacuation procedures.
2. The person instigating the site evacuation shall instruct that the aerosol-powered horn be sounded as follows:
    a. Three (3) sharp blasts, followed by a
    b. Five (5) second delay, then
    c. Three (3) more sharp blasts.
    d. Repeat several times to ensure that all workers on site have heard this signal.
    e. This person, having the site evacuated, shall ensure all workers and visitors on site have been evacuated to a designated muster location;

    Or in accordance with the general contractor's emergency response plan.

3. The supervisor will be responsible for taking a roll call following the evacuation, to ensure that all workers in their crew (including sub-contractors) are accounted for.

4. The supervisor shall determine if the site is safe to reoccupy following an evacuation.

(j) Designated rescue and evacuation workers.

- Rescue and evacuation workers are all workers trained in First Aid.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

EMERGENCY EVACUATION PROCEDURES

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: Casey Buikema, Robin Lehouillier Date: February 2016

REVISED BY: Brent Timmerman Date: February 2016

Tools/Equipment Required: Aerosol-Powered Horn_____

_____

Material Required:_____

Personal Protective Equipment:_____

_____

STEPS

1. The Supervisor shall initiate evacuation procedures when required. If the Supervisor is not available, a senior employee can initiate evacuation procedures.

2. The person instigating the site evacuation shall instruct that the aerosol-powered horn be sounded as follows:

    a. Three (3) sharp blasts, followed by a
    b. Five (5) second delay, then
    c. Three (3) more sharp blasts.
    d. Repeat several times to ensure that all workers on site have heard this signal.
    a. This person, having the site evacuated, shall ensure all workers and visitors on site have been evacuated to a designated muster location;

    Or in accordance with the general contractor's emergency response plan.

3. The supervisor will be responsible for taking a roll call following the evacuation, to ensure that all workers in their crew (including sub-contractors) are accounted for.

4. The supervisor shall determine if the site is safe to reoccupy following an evacuation.

EMERGENCY PHONE NUMBERS

Saskatoon Emergency Contact Information			
Site Name & Address:			
***NOTE:	If there is an emergency, assign someone to wait for the emergency response team to guide them to the scene		
EMERGENCY SERVICES – Spill Reporting: Provincial Transportation 1-800-222-6514 and Dangerous Goods 1-800-272-9600			
	SITE (Outside of Saskatoon area)	**Saskatoon City:**	
AMBULANCE:		911	
POLICE:		306-975-8300	911
FIRE DEPARTMENT:		306-975-2520	911
WATER: (trouble)		306-975-2491	
GAS: (trouble)		Sk Energy	306-975-8500
ELECTRICAL:(trouble)		City	306-975-2621
		Sk Power	306-310-2220
HOSPITALS:		City	306-655-8000
		University	306-655-1000
		St. Paul's	306-655-5000
OH&S Saskatoon:		306-933-5052 / 1-800-667-5023	
OH&S Regina:		306-787-4496 / 1-800-567-7233	
TECH SITE:		HEAD OFFICE:	PHONE: 306-242-6401 FAX: 306-933-2317

GENERAL CONTRACTOR:	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
OTHER:				

Prince Albert Emergency Contact Information

Site Name & Address:

*****NOTE:** **If there is an emergency, assign someone to wait for the emergency response team to guide them to the scene**

EMERGENCY SERVICES – Spill Reporting: Provincial Transportation 1-800-222-6514 and Dangerous Goods 1-800-272-9600

	SITE (Outside of Prince Albert area)	**Prince Albert City:**	
AMBULANCE:		911	
POLICE:		306-953-4222	911
FIRE DEPARTMENT:		306-953-4200	911
WATER: (trouble)		306-953-4284	
GAS: (trouble)		Sk Energy	306-922-8533
ELECTRICAL:(trouble)		City	
		Sk Power	1-888-757-6937
HOSPITALS:		Victoria	306-765-6000

OH&S Saskatoon:	306-933-5052 / 1-800-667-5023
OH&S Regina:	306-787-4496 / 1-800-567-7233

TECH SITE:		HEAD OFFICE:	PHONE: 306-242-6401 FAX: 306-933-2317

GENERAL CONTRACTOR:	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	
	OFFICE			
	HOME		CELL	

OTHER:

EMERGENCY RESPONSE DRILL

Date of Drill:_____ Location:_____

Time of Drill:_____ Conducted by:_____

In attendance:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Describe the type of emergency drill conducted (example: fire drill)

_____

Summary of completed drill (what worked well, what needs improvement, etc.):

_____

_____

_____

_____

_____

Follow-up action required:

_____

_____

_____

_____

FIRE EXTINGUISHER INSPECTION SUMMARY

Date of Inspection:_____ Location: _____

Time of Inspection:_____ Conducted by:_____

Number of Fire Extinguishers at this location: _____

Number of Fire Extinguishers at this location - pass inspection: _____

Number of Fire Extinguishers at this location - need maintenance: _____

Annual Inspection for all Fire Extinguishers at this location: _____

Summary of completed inspection:

_____

_____

_____

_____

_____

Follow-up action required:

_____

_____

_____

_____

SECTION 11 - RECORDS AND STATISTICS

ANNUAL EMPLOYEE SAFETY TRAINING SUMMARY

Employee Safety Training Records

			First Aid		Aerial Work Platform	Fall Protection	WHMIS	Confined Space	Arc Flash	Safety Mgmt	Training Techniques	LSE Proficiency	Auditor Proficiency
Name	Start Date	Title	Training Date	Exp Date	Training Date	Training Date	Training Date	Training Date	Training Date	Training Date	Training Date	Training Date	Training Date

MONTHLY INJURY SUMMARY

Month of:_____

			Injuries							
	Man Hours Worked		Lost Time		Medical Aid		First Aid		Frequency	
Project/Job Site	Month	Year to Date	Month	Year to Date	Month	Year to Date	Month	Year to Date	Month	Year to Date
Company Totals										

ANNUAL INJURY SUMMARY

Employee Name	Date of Injury:	Type of Injury	Time Lost (hrs)	Modified Duties (hrs)	WCB Claim Y/N

ANNUAL SAFETY ACTIVITY SUMMARY

TECH Electric Limited

For the period starting: (month/year)_____

For the period ending: (month/year)_____

1. Number of Workers Hired: _____
   Number completed Orientation: _____
2. Number of Tool Box Meetings Scheduled: _____
   Number conducted: _____
   Percentage Attendance _____
3. Number of Formal Inspections Scheduled: _____
   Number completed: _____
   Total Unsafe Acts/Conditions Identified: _____
   Number Corrected: _____
   Number Outstanding: _____
4. Number of Incidents: _____
   Damage only: _____
   Injury only: _____
   Injury & Damage: _____
   Near Miss: _____

Number of Investigations: _____
   Completed: _____
   Outstanding: _____
Number of Recommendations Made: _____
   Completed: _____
   Outstanding: _____

Comments:

_____
_____
_____
_____

SECTION 12 - ENVIRONMENTAL

ENVIRONMENT POLICY

1. The proper safeguard of our environment is important to our organization.

2. While doing our work, we shall consider the appropriate protection of humans, animals, plant life, air, water, and soil.

3. We expect all persons to do their best to prevent harm to the environment.

4. Our goals on the job can be met without risking harm to the environment.

5. We shall use, store, and dispose of products in such a manner that will provide appropriate protection to the environment.

6. Management will develop and enforce good environmental standards in accordance with relevant legislation.

7. Workers will be kept informed on how to do their jobs in such a manner as to cause minimum environmental harm and waste of materials.

8. Where possible, we shall recycle and promote the use of recycled products.

9. All hazardous materials will be disposed of in accordance with Provincial Regulations.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

SECTION 13 - WORKPLACE VIOLENCE

WORKPLACE VIOLENCE POLICY

TECH Electric Limited recognizes that workplace violence and harassment are occupational hazards and that a proactive approach in preventing these types of incidents is necessary. This may include provisions for management and employee training, outlines of prohibited behaviour, and investigation / reporting investigation procedures.

TECH Electric Limited provides a place of employment that is free from recognized hazards that cause or are likely to cause death or serious physical harm to employees or the public. The management is committed to maintaining a safe, healthy and efficient working environment where employees and the public are free from the threat of workplace violence or harassment. Whenever and wherever these workplace violence and harassment hazards are recognized and identified, proper training and appropriate security measures will be implemented. If required, a health care professional will be consulted.

The company will educate workers on the company's workplace violence program by posting policy in work site trailer coffee rooms, on our safety wiki (tech-electric.ca click on Guide-to-Success) and as part of New Employee Orientation Training.

The company shall assess the risks of workplace violence that may arise from the nature of the workplace, the type of work, or the conditions of work.

The assessment shall take into account,

- Circumstances that would be common to similar workplaces;
- Circumstances specific to the workplace; and
- Any other prescribed elements.

All incidents of workplace violence must be reported and investigated.

All workers are to report incidents of workplace violence to the employer or supervisor for immediate start of Workplace Violence investigation.

Company will investigate and deal with incidents or complaints of workplace violence immediately.

Workers found involved in workplace violence will be subject to immediate dismissal.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

SEXUAL HARRASSMENT POLICY

TECH Electric Limited does not tolerate harassment of our job applicants, employees, contractors, clients, guests, vendors, customers, or persons doing business with TECH Electric Limited. Any form of harassment related to an employee's race, color, sex, religion, national origin, age, citizenship status, veteran status, or handicap is a violation of this policy and will be treated as a disciplinary matter. For these purposes, the term harassment includes, but is not limited to, slurs, jokes, or other verbal, graphic, or physical conduct relating to an individual's race, color, sex, religion, or national origin; sexual advances; requests for sexual favour's and other verbal, graphic, or physical conduct of a sexual nature whether communicated verbally or through other forms of communication such as social media, texting, email or any other medium.

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

Sexual harassment, one type of prohibited harassment, has been defined according to company guidelines as unwelcome sexual advances, requests for sexual favour's, and other verbal or physical conduct of a sexual nature when:

- Submission to such conduct is made a term or condition, either explicitly or implicitly, of an individual's employment;
- Submission to or rejection of such conduct by an individual is used as a factor in decisions affecting that individual's employment; or
- Such conduct has the purpose or effect of substantially interfering with an individual's work performance or creates an intimidating, hostile, or offensive working environment.

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

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

Harassment of our employees & contractors in connection with their work by nonemployees may also be a violation of this policy. Any employee who becomes aware of any harassment of an employee by a nonemployee should report such harassment to his or her supervisor. Appropriate action will be taken with respect to violation of this policy by any nonemployee.

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

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

Any reported incident will be investigated. Complaints and actions taken to resolve complaints will be handled as confidentially as possible.

Retaliation of any kind against an employee who reports a suspected incident of sexual harassment is prohibited.

An employee who violates this policy or retaliates against an employee in any way will be subject to disciplinary action up to and including termination.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

WORKPLACE BULLYING AND HARRASSMENT POLICY

The company will make every reasonable effort to prevent harassment in the workplace.
Acts of harassment will not be tolerated. The company will take corrective action respecting any person under the employer's direction who subjects any worker to harassment.

PURPOSE

The purpose of this policy and program is to assist in developing a working environment in which harassment and bullying are known to be unacceptable and where individuals have the confidence to complain about harassment and bullying, should it arise, in the knowledge that their concerns will be dealt with appropriately and fairly. The Program outlines procedures to be followed by TECH Electric Limited if a member of staff feels they are being harassed or bullied in the course of their work or as a result of their employment.

POLICY

TECH Electric Limited welcomes diversity and is committed to ensure that all staff will be treated in a fair and respectful manner. Bullying and harassment are not acceptable or tolerated in the workplace. All incidents must be reported and investigated immediately.

SCOPE

This program applies to all TECH Electric Limited employees including permanent, temporary, casual, contract and student workers, managers and supervisors. It applies to face-to-face and electronic communications; such as email or social media.

The company's harassment policy will be posted in the main office.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

DEFINITIONS - Workplace Bullying and Harassment

Bullying/Harassment
Any inappropriate conduct or comment by a person towards a worker that the person knew or reasonably ought to have known would cause that worker to be humiliated or intimidated, but excludes any reasonable action taken by an employer or supervisor relating to the management and direction of workers or the place of employment.

Bullying and harassing behaviour can include*:*
- Verbal aggression, insults or threats
- Humiliating initiation practices or hazing
- Spreading malicious rumours
- Calling someone derogatory names
- Vandalizing personal belongings
- Isolation and/or exclusion from work-related activities

The above list is not exclusive and harassment can also take place on the grounds of a persons' age, religion, or any other characteristic protected under Human Rights.

Bullying and harassing behaviour does not include:
- Expressing differences in opinion
- Offering constructive feedback, guidance or advice about work-related behaviour
- Reasonable action taken by an employer or supervisor relating to the management and direction of workers or the place of employment (eg. Managing a workers performance, taking reasonable disciplinary actions, assigning work)

Complainant
Someone who makes a complaint or files a formal objection

Education
Knowledge acquired by learning and instruction

External Investigator
Someone outside the organization hired to investigate an incident

Internal Investigator
Someone within the organization assigned or designated to investigate an incident
One who responds or is in the position to defend his/her position

Supervisor
A person, who instructs, directs and controls workers in the performance of their duties. This could be a Manager, Supervisor, Foreman, or Lead hand.

Target
Person who is the focus of bullying/harassment

Worker
A person employed to perform a function or duty. For the purposes of this Program, worker means any permanent, temporary, casual, contract and student workers, managers and supervisors.

Workplace
Workplace is not confined to the offices, job sites and buildings where business of TECH Electric Limited is being carried out. Harassment can occur during or after working hours, on or off TECH Electric Limited property. Harassment can occur during business travel, work-related social gatherings, through internet communications, or any other locations where the prohibited conduct may have a subsequent impact on the work relationship, environment or performance of any person to whom this policy applies.

WORKPLACE BULLYING AND HARRASSMENT RESPONSIBILITIES

Senior Management

- Support and endorse the workplace bullying and harassment program
- Ensure time and resources are available to conduct training, investigations etc.
- Complete all appropriate forms to document any incidents of bullying or harassment
- Assist in the investigation of any incidents of bullying or harassment where necessary or required
- Not engage in bullying or harassment of workers, supervisors or other managers

Managers/Supervisors/Foremen/Lead hands

- Apply and comply with this program
- Inform and train workers on this program
- Ensure bullying/harassment is never endorsed or engaged in
- Take steps to prevent bullying and harassment
- Promote the process to report incidents and complaints of bullying and harassment
- Complete all appropriate forms to document any incidents of bullying or harassment
- Assist in the investigation of any incidents of bullying/harassment where necessary or required
- Not engage in bullying or harassment of workers, other supervisors or managers

Workers

- Not engage in bullying or harassment of other workers, supervisors, or managers
- Report bullying and harassment observed or experienced in the workplace
- Complete all appropriate forms to document any incidents of bullying or harassment
- Apply and comply with the employer's policies and procedures on bullying and harassment

Investigators

- Gather all required information to conduct a full and comprehensive investigation
- Complete investigations free of bias
- Provide follow up and recommendations to assist in eliminating reoccurrence

WORKPLACE BULLYING AND HARRASSMENT PROCEDURE

DEVELOPED BY: Safety Incorporated Date: December 2015

REVIEWED BY: Wes Noon, Mathieu Gaudet, Casey Buikema Date: February 2016

REVISED BY: Brent Timmerman Date: February 2016

This program includes:

A. Procedures for reporting incidents of bullying/harassment (COMPLAINANT)
B. Procedures for investigating incidents of bullying/harassment (EMPLOYER)
C. Appeal Procedure
D. Training
E. Record Keeping
F. Annual Review

A. PROCEDURES FOR REPORTING INCIDENTS OF BULLYING/HARASSMENT (COMPLAINANT)

- All incidents of bullying/harassment must be reported immediately to a supervisor verbally and in writing. A Workplace Bullying and Harassment Complaint Form is to be completed. A sample is shown below.
- Where the supervisor is the alleged bully, Human Resources (and/or other designate) will assist in receiving/following up on incidents/reports.

B. PROCEDURES FOR INVESTIGATING INCIDENTS OF BULLYING/HARASSMENT (EMPLOYER)

The process for investigating incidents and complaints of workplace bullying and harassment will be:

- undertaken promptly and diligently, and be as thorough as necessary, given the circumstances
- fair and impartial, providing both the complainant and respondent equal treatment in evaluating the allegations
- Sensitive to the interests of all parties involved, and maintain confidentiality
- focused on finding facts and evidence, including interviews of the complainant, respondent, and any witnesses
- incorporate, where appropriate, any need or request from the complainant or respondent for assistance during the investigation process

1. Investigator selection

Most investigations at TECH Electric Limited will be conducted internally. Depending on the situation, the supervisor, or other designate will be the lead investigator. A worker representative from the safety committee may also be involved. In complex or sensitive situations, an external investigator may be hired. A Workplace Bullying and Harassment Investigation Form is shown below.

2. Incident Review

Investigations will include interviews with the alleged target, the alleged bully, and any witnesses. If the alleged target and the alleged bully agree on what happened, then TECH Electric Limited will not investigate further, and will determine what corrective/follow up action to take, if necessary.
Documents to be reviewed may include:

- Workplace Bullying and Harassment Complaint Form
- Emails or social media evidence

- Notes
- Photographs
- Physical evidence like vandalized objects

3. Follow up

All investigations of alleged bullying and harassment will be followed up and documented. Follow up will include a description of corrective actions, a time frame, and a means for dealing with adverse symptoms. The complainant(s) will be advised of the outcomes and options available. These could include assistance programs, training and discipline.

Documents to be completed:

- Workplace Bullying and Harassment Complaint Form

C. APPEAL PROCESS

Should either complainant or respondent wish to appeal any outcome of the investigation; they are free to do so.

- An appeal must be made in writing without unreasonable delay, no later than 30 days after the decision.
- Full details on the reason for appealing the decision must be provided, clearly explaining why there is a disagreement on the decision.
- Every effort must be made to follow the current corrective actions while the appeal is reviewed.
- An appeal meeting will be arranged to discuss the appeal and, where possible, other participants may be included in the discussion (different senior manager, unbiased 3rd party etc).
- A final decision will be provided in writing within one week of the appeal meeting.

D. TRAINING

Training for supervisors and workers will include the following:

- How to recognize bullying and harassment
- How staff who experience or witness bullying and harassment should respond
- Procedures for reporting, and how the employer follows up with incidents or complaints of bullying and harassment
- Documents/form review

Training will occur as required and will be included in orientation.

E. RECORD KEEPING

TECH Electric Limited expects that staff experiencing or witnessing suspected/alleged bullying and harassment to complete the Workplace Bullying and Harassment Complaint Form. (Appendix A). TECH Electric Limited will keep all records pertaining to investigations and findings in a secure and confidential manner.

F. ANNUAL REVIEW

This program and these procedures will be reviewed annually. All workers will be advised and educated on this policy and program when they are hired, through the new employee orientation process.

WORKPLACE BULLYING AND HARASSMENT COMPLAINT FORM

COMPLAINANT INFORMATION	
NAME:	POSITION:
PROJECT:	DATE:
RESPONDANT INFORMATION (ALLEGED BULLY OR BULLIES)	
NAME(S):	
POSITION/RELATIONSHIP:	
PERSONAL STATEMENT	

Please provide details on the bullying and harassment incident(s), including:
Names of all parties involved
Any witnesses to the incident(s)
Location, date and time of the incident(s)
Details about the incident(s) (behavior and/or words used)
All other relevant information
Attach any supporting documents, such as emails, handwritten notes, or photographs. Physical evidence, such as vandalized personal belongings, can also be submitted.
Attach additional pages, as necessary.

Complaint form received by: (Name and Position)

Date:

WORKPLACE BULLYING AND HARASSMENT INVESTIGATION FORM

COMPLETED BY THE INVESTIGATOR

INVESTIGATOR INFORMATION	
NAME(S):	POSITION(S):
PROJECT:	DATE:

DOCUMENT REVIEW
List all documentation reviewed (emails, notes, photographs, physical evidence etc.)

INTERVIEWS
PERSON INTERVIEWED (Name, position)
SITUATION DESCRIPTION (include dates, words actions) and impact (humiliated, intimidated etc.)
PERSON INTERVIEWED (Name, position)
SITUATION DESCRIPTION (include dates, words actions) and impact (humiliated, intimidated etc.)
PERSON INTERVIEWED (Name, position)
SITUATION DESCRIPTION (include dates, words actions) and impact (humiliated, intimidated etc.)

OUTCOMES
Based on the investigation, did workplace bullying and harassment occur? Yes No
Reason(s) for this conclusion:
Follow up with complainant/respondent. Include corrective actions, time frame, training opportunities etc.

SECTION 14 - RETURN TO WORK

ALCHOHOL AND DRUG POLICY

Drugs and alcohol are not acceptable on any project of TECH Electric Limited

We maintain a zero tolerance for the use or the possession of these substances, on our job sites. Any worker found to be in possession of or under the influence of alcohol or an illicit drug will be subject to immediate dismissal.

Any incident or accident on a job site may be considered reasonable grounds for drug and alcohol testing to be conducted.

In the event of an accident, incident or near miss that may have resulted in significant loss or does in fact result in the loss, whether monetary or to the health and wellness, TECH Electric Limited reserves the right to ask for drug and alcohol testing to be undergone by those involved in such an incident/near miss.

Refusal to test will be considered grounds for dismissal.

Return to work will not be possible until such time as testing has been conducted or evidence of the successful completion of rehabilitation is made available to the management of TECH Electric Limited

If any employee of TECH Electric Limited finds that they may have an alcohol or drug dependency problem, they will be allowed a non-paid leave of absence, for as long as needed to rehabilitate.

TECH Electric Limited will guarantee a position for any employee whom requires a leave of absence, for as long as needed to rehabilitate so long as the position, once re-assumed by the rehabilitated employee, does not cause the need for a layoff/termination of an existing employee of TECH Electric Limited as determined by TECH Electric Limited and its Senior Management.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

RETURN TO WORK POLICY

TECH Electric Limited will guarantee a position for any employee whom requires a leave of absence, for as long as needed to rehabilitate, whether rehabilitation is for work related injuries, non-work related injuries or dependency rehabilitation so long as the position, once re-assumed by the rehabilitated employee, does not cause the need for a layoff/termination of an existing employee of TECH Electric Limited as determined by TECH Electric Limited and its Senior Management.

Preventing workplace injuries and illness is the responsibility of everyone at the workplace. When injuries and illness do occur, however, it is important minimize the human and financial impacts by focusing on getting the worker back to safe and productive work as soon as medically possible.

Return to work is the process or strategy of safely returning employees to the workplace in a timely manner. The goal is to return the worker to their pre-injury position through complete cooperation of employee and employer.

Most injured workers can return to some type of work even while they are still recovering. Returning to daily work and life activities can actually help in the recovery process. In fact, research shows that the longer a worker is off work due to injury or illness, the less likelihood there is of that person returning to work.

Communication is important for a successful return to work. Workers benefit when they know the company is interested in their wellbeing. Health care providers may not understand the work that is available so it is important for employers to advise them of the kinds of work that the company has available for injured workers.

The modified work plan may include:

a) working in different locations
b) modified job duties
c) re-assignment to a different job
d) altered or reduced work hours

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

SECTION 15 - FIRST AID

FIRST AID

First aid services

- All managers, supervisors and workers (on site without a supervisor) will be trained in First Aid (pending course availability) within 3 months of employment
- At least one person trained in First Aid has to be present on each jobsite, per each 5 employees.
- First Aid will be provided by all workers trained in First Aid, to all workers, contractors or visitors on any company job-site that require assistance.
- Emergency 911 services will be contacted immediately if any First Aid needs to be provided, to ensure medical wellbeing of the casualty.
- Accident/Incident Form will be filled out for each occurrence of applying First Aid, so that the full investigation can be completed to prevent such incidents from occurring in the future.

Designated rescue and evacuation workers

- Rescue and evacuation workers are all workers trained in First Aid.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

SECTION 16 - Health & Safety Representative/Joint Health and Safety Committee

JHSC/HEALTH & SAFETY REPRESENTATIVE

One of the basic principles of the Occupational Health and Safety Act is the right of all workers to participate in matters affecting workplace health and safety.

One provision of the Act that makes this involvement possible is the requirement for a health and safety representative or joint (labour and management) health and safety committee (JHSC).

By allowing input from all parties and encouraging consensus resolutions, the JHSC members are able to participate in all aspects of the health and safety program.

The support of all parties in the workplace for a common objective, the well-being of all personnel, is absolutely necessary to ensure an effective health and safety program.

Requirements

The health and safety representative must:

- be familiar with the current Occupational Health and Safety Act and Regulations for Construction Projects
- conduct monthly inspections
- make recommendations to employers to improve safety
- be familiar with procedures for refusal to work where health and safety are in danger

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

JOINT HEALTH AND SAFETY COMMITTEE

In a workplace that employs 20 or more workers on a regular basis, there is a legal requirement to have a joint health and safety committee. The minimum requirement for committee composition is one representative from management and one representative from the workers.

A brief description of the JHSC's duties are as follows:

- Meet every quarter.
- Maintain written minutes of the meetings (posted to Safety wiki, tech-electric.ca click “Guide-to-Success”).
- Conduct an inspection of the work areas monthly to identify hazards (worker member).
- Report findings and make written recommendations to senior management.
- Support the implementation and maintenance of the company safety program.
- Review inspection and accident reports.

On a construction project where 50 or more workers are regularly employed, the health and safety committee on the project must have at least one member representing workers and one member representing the company. In addition, the committee must ensure that a Worker Trades Committee is in place.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

SECTION 17 - MANAGEMENT REVIEW

SAFETY PROGRAM MANAGEMENT REVIEW

TECH Electric Limited is committed to maintaining a safe workplace for all employees.

To ensure safe work environment, the company will create and maintain the safety program that follows the guidelines outlined in COR certification program through Saskatchewan Construction Safety Association.

The office manager will review the safety program annually as part of maintaining COR certification (Safety Audit).

Each year, after the annual safety audit, the Safety Program Corrective Action Plan will be developed and filed in this section. This action plan will be used to implement new items or review current items that are a part of the safety program. This Action Plan will also be reviewed in the following year to ensure all elements have been implemented successfully.

*** The safety information in this policy does not take precedence over applicable government legislation with which all employees should be familiar.**

Signature:	**Date: May 12, 2017**

Jeff Parker, General Manager

SAFETY PROGRAM CORRECTIVE ACTION PLAN

Date Of Audit: _____

Recommendations	Assigned to:	Target Completion Date:	Date Completed:	Reviewed by:
Review of H&S Policy	General Manager	Annual 2017	May 12,2017	Jeff Parker