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with which all workers should be familiar.

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## Senior Management Acknowledgment

Kondro Electric (1980) Ltd. senior management has reviewed and approved the content of the Health and Safety Manual as documented below and acknowledges that the content of this manual (Table of Contents attached), has been reviewed by various levels of managers, supervisors and workers and the changes within the company safety manual are approved for use by employees and sub-contractors. The manual was developed to ensure all employees within the company have the administrative, training and reference material to meet federal and provincial legislated requirements as well as our industries best practices. Continuous implementation, review, use and further development of this safety program is ongoing and reviewed on an annual basis.

Kondro Electric (1980) Ltd. acknowledges Willard Kondro has the authority to sign the Corporate Health and Safety Policy.

The signature below indicates that the manual, and it's policies, practices, procedures, etc. have been reviewed and accepted as of the date noted and that the specific policies noted below are reflective of current company requirements.

<u>Policy</u>	<u>Policy Dated</u>
Safety Policy and Responsibilities	September 17, 2009
Sub-Contractor Safety Policy	March 18, 2010
Company Rules	April 20, 2012
Personal Protective Equipment Policy	November 10, 2010
Fall Protection Policy	September 17, 2009
Preventative Maintenance Policy	September 17, 2009
Training & Communications Policy	September 17, 2009
Inspections Policy	November 10, 2010
Investigations Policy	September 17, 2009
Emergency Preparedness Policy	September 17, 2009
Records and Statistics Policy	September 17, 2009
Legislation Policy	April 20, 2012
Environmental Policy	September 17, 2009

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Senior Manager

Signature

April 20, 2012  
Date

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## **SAFETY POLICY & RESPONSIBILITIES**

Kondro Electric (1980) Ltd considers the personal health and safety of each worker to be of primary importance and it will take priority over operating productivity. Management will provide all mechanical and physical facilities required for personal safety and health in keeping with the highest legislated standards and it is our policy to provide training, safe equipment and safe tools with which to work.

SAFETY IS AN ATTITUDE and is not something you can ignore. It is not something that can be delegated to a specialist. Specialists support management, supervisors and workers by providing administrative assistance, monitoring and expertise in this area. This role is important but active participation every day by every member of the company is the key to achieve our safety goals.

Our Management and Supervision Team is responsible and accountable for ensuring that the proper planning for accident and loss prevention is incorporated into all of our construction phases.

It is the responsibility of all our workers to abide by the guidelines and safe work practices outlined in our Safety Program and related policies and to make safety a part of their employment responsibilities.

Nothing in our work is so important that it must be done in an unsafe manner.

### **Objective**

Our program objectives are based on the following philosophy:

- Safety will take precedence over expediency.
- The program is designed to ensure that an efficient, orderly approach is taken to safety management in our company. This in turn will provide a safe and healthy workplace.
- Each employee will have access to this policy and will be trained in safe, efficient methods.
- Each employee will, to the best of their ability, take an active part in making the program work.
- Individual employees are responsible for their own safety and have the authority and the responsibility to refuse to work in unsafe conditions. An employee who refuses to work under unsafe conditions will not be subject to discipline.
- Concerns of this nature are to be solved at the lowest possible level to ensure that the unsafe condition(s) can be corrected immediately or guarded to prevent an injury or if required the work can be discontinued until the issue is resolved. All such concerns should be documented and returned to management to ensure seamless integration into the program.

Signature: \_\_\_\_\_

Date: September 17, 2009

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## **Assignment of Responsibility**

### ***Managers Shall***

Provide a Statement of Policy relating to the Safety Program. The statement provides a commitment and philosophy that sets levels of expectations for safety performance throughout the corporation.

Maintain overall control of the Safety and Loss Prevention Program direction.

Ensure all established safety policies are administered and enforced in all areas.

Ensure that all field operations personnel are aware of, and effectively practice, the policies and procedures set out in the Safety Program.

### ***Supervisors Shall***

Ensure implementation and maintenance of the established safety policies on specific projects within their respective areas of jurisdiction.

Ensure the highest standards of performance with respect to the Safety Program on their respective jobsites. Supervisors are legally accountable for the safe performance of personnel and equipment under their control on their projects.

With the assistance of management, implement the safety program and develop a clear understanding of safety responsibilities and specific duties for the supervisor and each worker. The supervisor must be knowledgeable of, and responsible for, complying with all regulations, laws and codes, perform inspections as required by company policy and set a good example for workers by always directing and performing work in a safe manner.

Ensure that Hazard Assessments are conducted as required by current regulations and make this information available to all workers on site.

With Management, undertake the investigation of accidents, incidents or near misses to determine the underlying causes. These must be reported in detail to management and the required report forms completed within 24 hours of the incident.

Be aware of the higher risk of incidents for the newly hired worker (of any age) who is new to construction activities. Ensure that new hires receive detailed safety instructions before they are allowed to start work. New employees should be assigned to work with other employees who are familiar with the project and are aware of any specific rules and regulations that are in force.

Provide instructions to workers in safe work procedures. The Supervisor shall require workers to use personal protective equipment as deemed necessary by the hazard assessment.

Work in cooperation with other project supervisory personnel in determining safe practices, enforcing their observance, developing procedures for dealing with violations and developing other general safety and accident prevention.

Enforce all established safety regulations and work methods. Take disciplinary action as necessary to ensure compliance with the rules.

## **Workers Shall**

Carry out their work in a manner that will not create a hazard to their own safety and health or the safety and health of other workers.

Assist site supervisors and management in the reduction and controlling of accident producing conditions and unsafe acts on the work site.

Report any accidents, incidents, near misses and/or injuries immediately to their supervisor.

Report any anticipated loss of work time to his/her supervisor as soon as possible after being treated by a physician following injury.

## **Legislative Information**

There are several pieces of legislation which, in different ways, impact on workers in our industry and workers shall be aware of and comply with them. The legislative acts we deal with most frequently are:

- Alberta Occupational Health and Safety Act, Regulations and Code
- Canadian Electrical Code (CEC)
- Workplace Hazardous Materials Information System (WHMIS)

There may be other bodies of legislation or client/owner requirements that must also be met

- The Electrical Protection Act and Regulations
- WCB Act & Regulation
- Employment Standards
- National Safety Code (Building Code)
- Traffic Safety Act
- Environmental Regulations
- Alberta EUB and Canada Nuclear Safety and Control Act
- Other legislation's or client requirements, which may be more restrictive in specific work areas, are to be followed. In no case will work be done to a lesser standard than that contained in this safety manual.

## ***The Alberta Occupational Health & Safety Act, Regulations and Code***

The Act itself makes up only one part of this legislation. A complete book of the legislation is law and shall be adhered to at all times.

It is our policy to maintain one copy of the complete book available to the workers to confirm their legislated rights and responsibilities. It will also serve as a reference where job planning is done.

In keeping with our company safety policy, specific sections of this legislation will be reviewed at toolbox talks to help acquaint workers with the legislation and understand it better.

## ***WHMIS***

This is federal and provincial legislation which applies to all workers across Canada in all workplaces. It specifically relates to the hazardous chemicals at the worksite and the workers RIGHT TO KNOW. The WHMIS program is made up of three basic elements:

- Warning Labels on containers of hazardous materials
- Material Safety Data Sheets (MSDS)
- Worker Education

A copy of the WHMIS program will be on each site to use as a reference and all workers shall undergo WHMIS training as per this federal legislation.

Products shall be properly labeled and a copy of the MSDS sheet for each hazardous product will be available to the workers. Whenever a new hazardous material is purchased and used at the site, the book shall be brought up to date by the addition of the new MSDS sheet to the book.

## ***Transportation of Dangerous Goods (TDG)***

TDG legislation is to control the transportation of dangerous goods in any vehicle. Company vehicles shall not be used to transport any good in contravention to this legislation. Kondro Electric (1980) Ltd does not carry products in quantities that are TDG regulated.

## **Electrical Protection Act**

For general purposes, the following data from this Act shall be included in this manual:

Overhead power and joint-use communication lines height from grade:

4.2 m for driveways to residences or residential garages

4.3 m for areas where agricultural equipment is normally used

4.9 m for lanes, alleys or entrances to commercial or industrial premises

5.4 m for roads and highways

5.5 m for right of way of underground pipelines

Safe limit approach from power lines (EPA and Alberta OH&S call for different standards, therefore the most stringent standard has been used in this section)

Safe limit of approach distance for persons and equipment	Operating voltage of overhead power line between conductors
300 mm	0-750 V insulated or polyethylene covered conductors (1)
1.0 m	Above 750 V insulated conductors (1-2)
3.0 m	.75 to 40 kV
3.5 m	69 kV, 72kV
4.0 m	138 kV, 144 kV
5.0 m	230 kV 260 kV
7.0 m	500 kV

**In many cases the kV rating of the line may not be known, so unless supervised by the utility company involved, the 7.0 m distance away from the lines shall be maintained.**

## **Reports By Others**

It cannot be stressed enough that reports by others, whether good or bad, are to be sent into the head office and directed to the attention of the General Manager and/or to the highest level of the company.

## **Subcontractor Safety Policy**

### ***Safety Program Requirements & Responsibilities***

We look forward to working with your company and your workers and to the safe, efficient and quality execution of your contract. Kondro Electric (1980) Ltd. is required to ensure the safety of workers under our control on the worksite. It is your obligation when performing work for Kondro Electric (1980) Ltd. that work activities will be performed in accordance to the most current Occupational Health and Safety Code and Regulations as well as our Safety Management System.

Along with the expectation that all work be performed in a safe manner, each individual employer will ensure that their workers are trained and competent to perform their work activities, are equipped with all of the necessary PPE and safety equipment they will require during the course of their activities, will correctly use this equipment and PPE, and cooperate with all personnel on site to maintain an incident free workplace. Where safe work practices and procedures are required, Kondro Electric (1980) Ltd. additionally expects that these will be prepared and presented to our Site Superintendent for approval in a timely fashion PRIOR to the commencement of work activities for which they are necessary. Kondro Electric (1980) Ltd. reserves the right to reject any safe work practice / procedure that is not considered complete or complimentary to the project as a whole.

### ***Fall Protection Systems***

Approved Fall Protection Systems and a generic Fall Protection Plan must be in place PRIOR to the commencement of any work activities above three meters (ten feet) or at any time there is an unusual possibility that a worker could be injured in a fall less than three meters. A Site Specific Fall Protection Plan must be completed where there is a danger of falling more than 8 meters (25'). Failure to comply will result in immediate work stoppage and corrective action will be taken with any associated costs being billed to you (the Subcontractor) until all necessary systems and plans are in place and accepted by Kondro Electric (1980) Ltd.

We trust that in consideration of the health and welfare of all workers on our projects, that you will ensure your employees are both prepared and cooperative prior to their arrival on our project site. We look forward to the safe completion of your Subcontract.

***Subcontractors are to ensure that:***

- They comply with OH&S Act, Code and Regulations and WCB Legislation.
- They comply with Kondro Electric (1980) Ltd. Safety Management System.
- They can demonstrate that they are fully covered by the appropriate Workers' Compensation Board.
- They report and document all accidents and injuries, including near misses, and investigate lost-time accidents and provide copies of all to Kondro Electric (1980) Ltd. superintendent within 24 hours of the occurrence.
- They comply with WHMIS regulations.
- They attend the project orientation.
- They perform Hazard Assessments as required by OH&S
- They conduct and document hazard assessments as required by OH&S and provide copies to Kondro Electric (1980) Ltd. Superintendent on a daily basis or as conditions change on site and they provide and enforce the use of adequate personal protective equipment as required by the hazard assessment and the applicable legislation.
- They hold weekly toolbox safety meetings for all their employees at this site and provide Kondro Electric (1980) Ltd. Superintendent with documentation of toolbox meetings.
- They report to Kondro Electric (1980) Ltd. Superintendent all reported or observed unsafe conditions and practices.
- They provide MSDS's to Kondro Electric (1980) Ltd. Superintendent and faxed to the main office before the material is brought to the site or when it is brought to site.
- They participate in safety meetings and training as required.
- They comply with Alberta Environmental Enhancement and Protection Legislation.
- Immediately report all spills and environmental damage from the performance of their work to the Kondro project supervisor.
- They ensure all of their employees, sub-subcontractors and their employees also comply with all of the above.

Please note that these requirements are also applicable to all 3rd party Contractors (sub-subs) and it is the sole responsibility of the individual/company with whom Kondro Electric (1980) Ltd. has entered into a contract with to ensure compliance of sub-subs as above.

Thank you for your support in helping us to maintain an incident free workplace.

Signature: \_\_\_\_\_

Date: March 18, 2010

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## HAZARD ASSESSMENT DIRECTIVE

Hazard Assessments are to be conducted as per the OH&S guidelines which require that they are completed by supervisors and workers together. The minimum HA's to be conducted are as per code – an assessment of hazards prior to starting a task or as conditions change.

Hazard Assessments are known by many titles, Hazard Assessment (HA), Field Level Risk Assessment (FLRA), Pre-job Safety Instructions (PSI) and others. In this document these will be collectively referred to as Hazard Assessments (HA's). Several different hazard assessment forms are used by Kondro Electric.

Hazard Assessments must be available to any worker on site at any time (workers right to know). This means all affected workers (not just Kondro Electric workers) have the right to know about any hazards existing or created. A summary of Hazard Assessments are reviewed by management.

Hazards are to be controlled using hazard control measures in the order noted below:

1. Elimination/substitution – remove or eliminate the hazard. This could involve removing a defective ladder from service or using a forklift to lift heavy objects rather than manual lifting. Substitution could involve purchasing less toxic materials or better/newer tools with improved safety features.
2. Engineering controls – this could mean de-energizing a live circuit prior to working on it or providing guards on equipment
3. Administrative controls - involves rules and monitoring for compliance on things like housekeeping, hiring practices, training and education, etc.
4. PPE – The last resort or a backup to other methods. Always try to eliminate the hazard rather than protect yourself from it.

Copies of Hazard Assessments will be reviewed by the safety coordinator, summarized on a monthly or quarterly basis and any deficiencies will be brought to the attention of management for review and the parties completing the assessment for training purposes. Hazard Assessments are to be filed ONLY by the Safety Coordinator and once filed are considered to have been reviewed by management.

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## **SAFE WORK PRACTICES DIRECTIVE**

Safe Work Practices are a set of general guidelines on how to perform a specific task.

Safe Work Practices are not task specific and do not include the environmental and/or site specific conditions applicable to where the task(s) are being performed. They are GENERAL how-to guidelines. To reduce risks associated with the workplace, Kondro Electric will have a written set of Safe Work Practices. Management has reviewed and fully endorses these Safe Work Practices, and will ensure that:

- They are in writing.
- They are related to the scope of work.
- All workers understand the Safe Work Practices that apply to them.
- Supervisors ensure that all Safe Work Practices are followed.
- Workers follow the Safe Work Practices
- They are reviewed annually.
- New practices are added as equipment and procedures change and evolve over time
- A committee of workers and supervisors will, as a group, perform the annual review and revisions of all the Kondro Electric (1980) Ltd. Safe Work Practices that are in place at the time of review. A dated list of the reviewed practices and procedures will be filed and available for review by any personnel or auditor.

### **Preparation and Selection of Safe Work Practices**

Extreme care must be taken when preparing or customizing Safe Work Practices to ensure that they meet or exceed all applicable legislation and industry standards. It is a good idea to keep the OH&S legislation beside you as you select, customize, or develop your Safe Work Practices.

**Refer to ACSA Principles of Health and Safety Management Manual for detailed instructions on how to complete this critical component of a Health and Safety Program**

## **SAFE WORK PRACTICES - Inventory**

Safe Work Practices	Review			Last Review		
	Date			By Whom	Date	By Whom
	M	D	Y		M	Y
Original SWP's developed August 2009 by Pencor Safety						
* Bobcat General Operating Guidelines						
* Bucket Truck Vehicle operation						
Cell Phone Usage						
Cleaning Solvents Usage						
*Cutting with hand / power tools						
Defective Tools						
Ditch-Witch General Operation						
Ditch Witch Trencher & Walk Behind General Trenching Guidelines						
Driving and Winter Driving						
*Electrical System Lockout						
Excavating to Expose lines and crossings (General)						
Extension Cords						
*Fall Protection						
Fork Lift Use						
Housekeeping						
Hydrovac / Daylighting						
*Loading / Unloading Equipment						
Manual Lifting and Carrying						
Material Securement						
Office Safety						
Overhead power lines, activities near						
*Personnel Lifts, Operation of						
*Portable Fire Extinguishers – Use						
*Portable Ladders						
Power and hand tool use						
Power Circular Saw Use (Skil Saw)						
Power Mowers						
Refueling equipment						
* Respiratory Equipment						
* Restricted Space Entry						
Restricted Work Areas						
Scaffolding						
Temporary Construction Lighting						
Winch Operations						
*Working on Live Electrical Apparatus						
Working Overhead						

\* These SWP have associated Safe Job Procedures

# CONFINED SPACE INFORMATION

## General

THIS DOCUMENT IS NOT A CONFINED SPACE CODE OF PRACTICE. IT IS INTENDED FOR GENERAL INFORMATION FOR THE USER OF THIS MANUAL. KONDRO ELECTRIC ONLY PERFORMS CONFINED SPACE WORK UNDER THE CODES OF PRACTICE, PROCEDURES AND PERMITS OF OWNERS OR PRIME CONTRACTORS AND IS SUBJECT TO THOSE DOCUMENTS. IF A WORKER IS CALLED UPON TO PERFORM CONFINED SPACE WORK OUTSIDE OF THOSE PARAMETERS, THE WORK WILL NOT PROCEED UNTIL A CODE OF PRACTICE, PERMITS, PROCEDURES AND RESCUE PROCEDURES ARE DEFINED AND PUT IN PLACE. THIS DOES NOT APPLY TO RESTRICTED SPACES (see definitions below)

Entering into and working in a confined space poses health and safety problems. Concerns in a confined space are the presence or possible build-up of a hazardous atmosphere (explosive, toxic or both) within the confined space and the difficulties in providing rescue services to occupants in a confined space.

Work intended to be done with the confined space must be carefully defined and planning done ahead of the actual entry taking place in order that all possible hazards are identified and preventative action taken.

## Definitions (Alberta OH&S)

**Confined Space** - any enclosed or partially enclosed space having restricted access and egress which is subject to the development of an oxygen deficient, flammable or toxic atmosphere and does not have an easy means of escape for or rescue of a worker entering it.

**Restricted Space** - an enclosed or partially enclosed space, not designed or intended for continuous human occupancy, that has a restricted, limited, or impeded means of entry or exit because of its construction. It does NOT have oxygen deficient, toxic or flammable atmosphere and will not develop these conditions from the work being performed in the confined space.

**Flammable Atmosphere** - an atmosphere which contains more than 10 percent of the lower explosive limit (LEL) of a flammable gas or vapor.

**IDLH** - Immediately Dangerous to Life and Health atmosphere which include oxygen deficiency and atmospheres approaching LEL.

**LEL** - Lower Explosive Limit means the LEL of flammability of gas, vapor or dust or any combination of these at ambient temperatures.

**Oxygen Deficient Atmosphere** - an atmosphere where the oxygen content is less than 18 kilopascals partial pressure.

**Particulate Contaminants** - dusts, fibers or mists suspended in air which may be inhaled by a person.

**Toxic Atmosphere** - an atmosphere which contains greater than the Threshold Limit Value (TLV) of a gas, vapor or particulate according to the values established by government regulation or the American Conference of Government Industrial Hygienists (ACGIH), which is applicable to the work location.

## **Responsibility**

Where confined space work is to be performed by workers, responsibility for safety, both at the time of entry and during the entire operation, rests with the supervisor. This includes taking steps to eliminate or control the hazard(s) present.

## **Instruction**

The work to be performed shall be under the direction of a supervisor who is thoroughly familiar with the hazards that may be encountered.

All workers connected with performing the work in the confined space shall, before entry, be present at a job meeting to be informed of the hazards they may encounter, how the job will proceed, the precautionary measures required and rescue methods needed in an emergency and will sign off all documents indicating their knowledge of the confined space and rescue procedures.

All workers involved in the Confined Space work must be trained and competent to perform the duties set out for those workers.

## **Permits**

The supervisor shall be responsible to ensure that all notifications, permits and liaison with the governing authority at the worksite have been done and completed to the satisfaction of all parties prior to entry.

## **Personal Protective Equipment**

Appropriate personal protective equipment, for example, clothing, gloves, boots, eye, face, and respiratory apparatus shall be worn to meet the requirements of the job.

Where concentrations of combustible gas or vapors are clearly below 10 percent of the lower explosive limit (LEL), entry into a confined space is allowed providing that the appropriate respiratory and/or skin protective devices are used.

## **Warning**

Chemical cartridge respirators are not to be used in oxygen deficient or explosive atmospheres.

## **Testing**

Prior to any entry being made portable instrumentation for sampling of airborne contaminants in the confined space shall be used to do a thorough test of the atmosphere by qualified personnel.

Where it is necessary to enter the confined space to conduct any testing, self-contained or air supplied breathing apparatus must be worn.

## **Isolation**

The supervisor must arrange for the confined space to be checked to ensure that all blinding, blanking or other effective methods are used to prevent contaminants from entering the confined space.

This may require a further permit system review to identify entry points.

Where purging is necessary to prevent the development of hazardous atmosphere in the confined space, then water, steam, fresh clean air or inert gas may be used. When this is completed, a further test shall be done to ascertain the atmospheric content prior to entry.

Before entry, all power-driven integral equipment of the confined space (such as agitators) and power sources shall be de-energized and locked out to ensure they cannot be operated.

## **Ventilation**

Where possible, clean out doors or any other opening(s) shall be positively locked open and the confined space thoroughly ventilated by a positive method of mechanical ventilation to introduce large quantities of fresh air.

Ensure that the air introduced into the confined space is not in any way accidentally contaminated with harmful substances before it enters the confined space. Immediate area to be ribboned off to prevent men and vehicles coming into the area (approximately 20'x 20').

Continuous ventilation with mechanical ventilation equipment shall be done to provide secondary protection in the event the work in progress produces contamination, heat or toxic fumes.

## **General Procedure**

1. Ensure a written permit is prepared to include all the considerations contained in this procedure.
2. Specific rescue procedures shall be put in place and reviewed by all persons taking part in the confined space entry.
3. All workers entering the confined space shall be provided with training appropriate to the situation, a body harness with lifeline attached.
4. There shall be a standby person at the confined space entrance equipped with respiratory protection at all times and the emergency equipment in place capable of effecting a rescue.
5. Entry without respiratory equipment may proceed providing the atmosphere has been tested for contaminants, clean air is being continually introduced and the atmosphere in the confined space is monitored and tested for contaminants throughout the job when workers are in the confined space.
6. When a job is stopped for any reason and workers have to re-enter after this work break, then testing shall be done again before entry or re-entry, provided work permits are still in place.
7. Where for any reason, an ignition source is to be introduced into the confined space, combustible gas test of the atmosphere in the confined space shall be done immediately and then monitored frequently throughout the job.
8. Again prior to entry review this written procedure to ensure workers are aware of their responsibilities and the appropriate work permits have been issued.

## **Entry**

Following the review of this procedure and any other additional site-specific requirements, entry into the confined space can now proceed.

## **Job Completion**

At the end of the job, a thorough check shall be made by the supervisor to ensure that no tools, equipment or possibly workers have been left behind. Double-check and ensure that all personnel are accounted for before leaving the confined space.

Return the work permit(s) to the responsible supervisor for finalization and to ensure that any locks, belonging to the crew are removed.

## **SAFE JOB PROCEDURES DIRECTIVE**

A Safe Job Procedure is a written, specific step-by-step description of how to complete a job safely and efficiently from start to finish.

In carrying out their tasks at work, what workers don't know can hurt them. In the realm of Safe Job Procedures, one way to increase knowledge of hazards is to conduct a Job Hazard Analysis on an individual job or task. A Job Hazard Analysis (JHA) is a procedure that provides for the integration of accepted health and safety principles and practices into a particular operation. In a JHA, each basic step of the job is examined to identify potential health and/or safety hazards and to determine the safest way to do the job.

JHAs should always be team efforts. By involving others in the process, the possibility of overlooking an individual job step or a potential hazard is reduced. The likelihood of identifying the most appropriate measures for eliminating or controlling hazards is increased by using the team approach.

Kondro Electric (1980) Ltd will form JHA teams composed of:

- The supervisor
- The worker(s) most familiar with how the job is done and its related hazards
- Other workers who perform the job
- Others such as maintenance personnel, associated trades or design engineers
- A committee of workers and supervisors will, as a group, perform the annual review and revisions of all the Kondro Electric (1980) Ltd. Safe Job Procedures that are in place at the time of review. A dated list of the reviewed practices and procedures will be filed and available for review by any personnel or auditor.

JHA teams will, over time, analyze and document procedures starting with the most critical (high risk) tasks, followed by those that have caused injuries, followed by tasks that are done infrequently. The JHA will be written in rough draft by one team, reviewed by a second team and finalized and signed off by management, who shall be familiar with the work required to safely complete the procedure in question.

Once the JHA team has been selected everyone involved must be familiar with what a Job Hazard Analysis is and how it is performed.

**Refer to Principles of Health and Safety Management Manual for detailed instructions on how to complete this critical component of a Health and Safety Program**



## **Lock-Out/Tag-Out Policy and Procedures**

This lock-out/tag-out policy has been adopted for the protection of workers in the performance of their work on electrical equipment and systems which may be energized during any stage of the following activities:

- construction;
- alterations to existing facilities;
- commissioning of electrical or process systems; and
- maintenance of electrical equipment and process systems.

Lock-out/tag-out procedures become an important requirement during any of the foregoing activities when the potential and stored energy in any piece of equipment or system represent a potential hazard to life and property. These procedures are intended to supplement but not replace any requirements dictated by Occupational Health and Safety or any contractual obligations. Under no circumstance will procedures be adopted which are in contravention with current Occupational Health and Safety Regulations.

In some instances an owner may insist their existing lock-out procedures be used, in which event the supervisor and/or the safety coordinator shall examine the Owner's procedures and ensure they are at least equal to the Kondro Electric standards before complying with this request. There may be variances in certain procedures for specific equipment on various sites which then requires absolute cooperation from the Owner, Kondro Electric and workers, to formulate safe lock-out procedures needed for special activities.

This policy places full responsibility on management and project supervisors to fully enforce lock-out procedure requirements and does not expect employees to work under procedures sub-standard to those in this manual.

### ***Lock-Out***

Lock-out requirements come into effect when a system or pieces of equipment are energized and their accidental operation poses a potential hazard to life and property. Lock-out/tag-out requirements are applicable to all energy sources, i.e.; electricity, compressed gasses or air, hydraulics, steam, piping and vessels associated with specific electrical installations.

### ***Lock-Out/Tag-out System Components***

- Scissor type "ganglock" (to be used wherever possible)
- Lock-out tags
- Keyed locks (identified by number for issue to individual workers). Combination locks must NOT be issued or used for lockout purposes.
- Master key (issued only to project supervisors or appointed designates). Master keys are to remain in strict custody of the recipient during the course of a project
- Lock-out log book.

## Lock-Out/Tag-out Procedures

1. Owner and Kondro supervisor to determine which equipment items require lock out procedures to be applied and workers are not to work on any equipment or system that represents a safety hazard until the hazard is resolved by locking out.
2. The owner and contractor shall cooperate in locating the necessary switches, breakers, relays, including fuses, that have to be locked-out, blocked or removed.
3. A pre-job meeting with all workers involved and including the owner / principal contractors to review a job plan for purposes of establishing awareness of individual responsibilities. Written meeting minutes will be distributed to all attendees prior to execution of work.
4. The Contractor's supervisor shall install either a scissor type ganglock or tag on the isolating device.
5. Kondro Electric supervisor shall satisfy themselves that the equipment or system is correctly and fully locked out, stored energy is discharged and the equipment recorded as inoperative.
6. Workers who will be working on the equipment shall, in addition to the supervisor, place their own individual keyed locks (not combination locks) on the isolating device(s).
7. Tag-out of equipment or control devices are to be done on a non-conductive material and to contain the following in written information:
  - a. words directing persons not to start or operate the equipment
  - b. the date when the tag was installed; and
  - c. the workers' or supervisors name and signature.
8. Workers are to remove their own individual locks when they are no longer working on that equipment.
9. When the work is completed and after all personal locks have been removed, Kondro supervisor is to make a final check of the equipment before removing his/her lock to ensure that it is safe to operate before proceeding with clearing the lock-out.
10. No worker shall remove any personal lock other than his/her own except for Lock Removal By Others Procedure. Unauthorized removal of a lock is cause for immediate dismissal.
11. If a worker has left the job site (quit, discharged, or injured) the personal locks must be removed from service using the Lock Removal by Others Procedure.
12. Double Shift - workers leaving the job site will remove their personal locks which are to be immediately replaced by personal locks issued to workers coming on shift.
13. A master key for personal locks shall be kept by the supervisor in a secure location and shall only be used by that supervisor or his/her designate exercising the following procedures.

### **Lock Removal By Others**

Before a personal lock is removed by others the following conditions MUST be satisfied.

1. The workers or person owning the personal lock must be positively identified.
2. All reasonable efforts must be made to contact the worker who installed the lock (in camp, home, etc.) and have him/her come to site and remove the lock.
3. If the worker cannot be contacted or is incapable of removing his/her lock, the supervisor of that worker, the owner and the principal contractor together must ensure that no other workers will be endangered if the lock is removed and that no equipment or machinery will be damaged.
4. A representative from the Contractor's Safety Committee shall be present when locks are removed in the absence of the lock owner. Should an investigation determine the particular lock is still essential to eliminating a potential hazard then the lock removed shall be immediately replaced by a lock owned by another worker on site who would be appointed to takeover from the absentee.
5. Lock removal should be done with the master key, with cutting the lock off being the last resort.
6. That all information regarding the personal lock removal is documented on the Lock Removal Form.

### **Lock Out Procedures Log Book Instructions For Use**

This book is meant to be used in conjunction with the Contractor's Lock-Out policy and procedures.

This record book is to be kept by the Contractor's supervisor in a secure location and entries are to be made only by him/her or their specific designate.

Although a loose leaf binder is used, the pages are consecutively numbered by the Safety Department and are to remain in the book at all times. Entries are to be made in ink and printed. Where for any reason an incorrect entry is made, a line is to be drawn through that entry and a re-entry put on the next line down.

Do Not try to erase or make a correction over any existing writing.

Do Not for any reason remove a spoiled page. It is to remain in the book to ensure the consecutive numbering stays intact.

Keep one copy of the "Lock out Policy and Procedures" inside the front cover of the log book.

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The information in this manual does not take precedence over applicable government legislation  
with which all workers should be familiar.

Version – June 2012 / Printed - 24 August 2017

## **COMPANY RULES**

Consistent with the company's desire to provide premises and facilities conducive to a safe and efficient workplace and in order to provide reasonable guidelines for employees' behavior, the following rules are set out. The rules are not only related to safety but also to general worker performance and expected behavior for employees of Kondro Electric.

In general the rules imply that:

1. Workers shall cooperate with other workers and other trades workers, all supervisors, management, owners and clients to provide a safe and efficient workplace.
2. Workers will show up on time, fit for duty and perform to reasonable standards as set out herein.
3. Workers shall not perform in a way that is harmful or could potentially harm themselves or others in the workplace or the interests and reputations of other people and companies in the workplace.

Workers shall be provided with a copy of these rules at orientation and periodically as they are updated and the worker is responsible to be familiar with all the rules and the spirit in which they are intended. These rules are detailed in the following sections:

**Grounds For Dismissal with No Warning**

**General Rules**

**Reprimand Policy**

**Safe Work Permit Policy**

**Harassment / Bullying Policy**

Signature: \_\_\_\_\_

Date: April 20, 2012

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The information in this manual does not take precedence over applicable government legislation with which all workers should be familiar.

Version – June 2012 / Printed - 24 August 2017

## Grounds For Dismissal With No Warning

**The following acts are violations of the company's rules and regulations and may be cause for disciplinary action, up to and including immediate dismissal.**

1. Possession or use on the job, reporting or being at work under the influence, of alcohol or illegal drugs or abusing prescription or over the counter medications (or a combination of these) or trafficking or attempting to traffic any of these substances.
2. Assault, fighting or malicious acts, threatening or intimidating any other person(s), indecent or abusive talk, gestures or behavior.
3. Horseplay, gambling and possession of firearms or other weapons (whether legal or not) are strictly forbidden and constitute grounds for dismissal.
4. Use of personal cell phones, etc, MP3 players or personal entertainment devices during working hours. Lunch, coffee breaks and reporting emergencies are exempt from this rule.
5. Smoking in prohibited areas or creating or contributing to unsanitary or unsafe conditions.
6. Failure to operate company vehicles in a safe manner using good defensive driving techniques, failure to report any change in status of the employees drivers license (loss, suspension, etc). Workers are responsible for any fines, etc incurred while operating company vehicles.
7. Theft, unlawful possession of, or caught in the act of removing, property to which you do not have a legal right to possess.
8. Engaging in work for employee's personal gain or for other than the benefit of the company without permission in writing from the supervisor or manager.
9. Falsifying or aiding another worker in falsification of time cards.
10. Malicious or careless destruction of company, other trades or clients property.
11. Failure to follow or refusal to follow proper and reasonable instructions from your supervisor or others acting on behalf of the client or owner. If in doubt, contact your immediate supervisor or management.
12. Taking part in any unauthorized demonstration, including illegal strikes or slow-downs. Loitering, malingering and unproductive work practices and/or any other act not conducive to a sound, continuing employment relationship.
13. Failure to report to work station to or leaving assigned work stations or project site without permission from the immediate supervisor, except in an emergency.
14. Making false or derogatory statements about other employees, the company and/or a client. These statements may take the form of verbal communications, text messages, blogs, written words of any sort, videos, websites, etc.
15. Unauthorized solicitation of money or information on company and/or client premises or posting unauthorized notices of any sort.
16. Unauthorized absence or habitual lateness:
  - a. Employees who have not notified the company of their inability to report to work shall be considered absent without a legitimate reason.
  - b. Employees who have agreed to work overtime and fail to report shall be considered absent without legitimate reason.
17. Violation of any other rules and regulations as posted by the owners and/or his client.

18. Failure to keep confidential, the details of an incident involving serious injury or death. Workers are not to discuss any aspect of the incident with ANY person, other than management or personnel investigating the incident (safety officer, police, WCB, OH&S etc.) or counselors (post incident debriefing).
19. Working on energized circuits unless there is a legitimate need to do so. An inconvenience is not a legitimate need.
20. Performing ground disturbance without having current and up to date line locates in hand. Any conditions on the locate documents must be followed.

## **General Rules**

1. Accidents, injuries or "near misses", regardless of their nature, shall be promptly reported to supervisors.
2. Appropriate PPE as determined by the daily hazard assessment shall be worn at all times as per the PPE Policy.
3. Rings, bracelets, necklaces, metal watchbands, etc. that may be caught on equipment or come in contact with electrical circuits will not be allowed on site. Personnel not actively working on site (supervisors, managers, etc) are exempt from this rule.
4. Smoking is not permitted in the workplace in Alberta, therefore smoking in Company vehicles or in the main shop and office is not permitted. Consideration of this fact should be used for smokers who are working outdoors or indoors in large/open areas. Take guidance from the General Contractor, Owner or Client as to the allowed course of action in this matter. Any fines levied are the responsibility of the offender, govern yourself accordingly.
5. "Strike Anywhere" matches are prohibited.
6. Hand tools, power tools, powder actuated tools and powered mobile equipment shall not be used for any purpose other than that intended by the manufacturer and shall be operated only by authorized personnel, with guards furnished by the manufacturer "in place". All damaged or worn parts shall be promptly repaired or replaced.
7. All electrical hand tools shall be grounded or double insulated.
8. Running is not permitted anywhere, except in the case of extreme emergency.
9. Riding on equipment is prohibited. A seat and seat belt are required for every occupant (if so equipped).
10. Welding and burning operations shall be carried out only by authorized personnel with appropriate personal protective equipment and firewatch where required.
11. Workers shall be knowledgeable of, and obey any and all applicable federal, provincial and local regulations including (but not limited to) the Alberta Occupational Health and Safety Act, Regulations and Code, The Highway Traffic Act, Workplace Hazardous Materials Information System Regulations (WHMIS), The Electrical Protection Act and Regulations, Environmental Regulations
12. Supervisor's approval IN WRITING must be obtained prior to removing any material, supplies or tools from the job site.
13. There may be other legislation or client requirements which are more restrictive in specific work areas and these are to be followed. In no case will work be done to a lesser standard than that contained in the safety manual.

## Reprimand Policy

This policy is not intended to be implemented for innocent one-time oversights of the company rules. It is intended to bring the chronic offender to the realization that their conduct is not acceptable and continuing non-compliance will result in dismissal. Ultimately the goal of this policy is to train the worker in what is acceptable behavior by company standards.

**Step #1** - Supervisor explains to the offending worker the nature of the offense and why the behavior is not acceptable. The incident will be lightly documented on forms provided (KON-HR002) and filed in the worker's personnel file.

**Step #2** - For a second offense (which may be the same offense or totally different than the first offense), the supervisor will meet with worker and explain the seriousness of the offense. The worker will be told at this time he will be terminated should a third incident occur. This meeting will be thoroughly documented in a letter to the worker (not a form).

**Step #3** - On the third offense, the worker shall be terminated with no further recourse, except as noted below.

At all three meetings the worker will have a chance to explain their position and any extenuating circumstances that may have brought about the behavior but the decision of management as to the course of action is final and binding. At the end of the six month period following the latest offense the process will reset to Step #1 (ie: clean slate after six months with no incidents.) If at Step three the employees action is deemed as justifiable by management, the incident will be kept on file. If another incident occurs, the employee will be terminated without exception or recourse.

It is not the intent of this policy to harass or intimidate employees. The supervisor will have to use much discretion in what type of offense warrants a reprimand and follow-up. The intent of the procedure is to stop certain individual's conduct from disrupting the overall good performance of the crew.

## Safe Work Permit Policy

In work environments where Safe Work Permits are implemented, job tasks performed on the worksite require a Safe Work Permit. This permit is a document issued by an authorized person detailing the specific work permitted, steps to prepare the equipment and/or area, precautions to be taken and the time limits in which the work may be performed.

Read Safe Work Permits carefully, making sure that all precautions are being followed and the appropriate Personal Protective Equipment listed on the permit are used.

Safe Work Permit types include: Cold Work, Hot Work, Vessel Entry (Confined Space), Excavation, Personnel Hoisting, Fire Hydrant Operation, Vehicle Entry, etc.

## Harassment / Bullying Policy

Harassment or Bullying refers to any action of a sexual, racial, religious or ethnic nature that threatens or endangers another individual's continued employment, negatively affects their work performance or undermines their sense of personal identity.

Management will:

- Ensure that all employees are aware of the policy that harassment will not be tolerated in the workplace.
- Ensure all complaints are treated seriously, quickly and effectively with the appropriate confidentiality and sensitivity.
- Ensure that, under no circumstance, will a legitimate complaint be dismissed or downplayed nor will the complainant be told to deal with it personally or on their own.

Employees must refrain from harassment in the workplace and are strongly encouraged to report any incident of harassment immediately to senior level management.

All information provided to management will remain confidential and be limited to the minimum number of persons required to effectively conduct the investigation and come to a conclusion.

Harassment is a serious offense and appropriate disciplinary action will be taken should the complaint be substantiated.

## Company Rules Forms List

Forms in this section are as follows:

- Employee Request for Time Off.....KON-HR001
- Employee Disciplinary Action Level 1 .....KON-HR002

## Request for Time Off

Name \_\_\_\_\_ Today's Date \_\_\_\_\_

Days requested (inclusive) from: \_\_\_\_\_ to \_\_\_\_\_

Job (current) \_\_\_\_\_ Supervisor Signature \_\_\_\_\_

Reason:      Vacation      Apprenticeship      Medical      Family      Other \_\_\_\_\_

Approved/Denied Reason \_\_\_\_\_ Date: \_\_\_\_\_

Up to 2 days off - 2 days notice is required. More than 2 days off 2 months notice is required. (KON-HR001)

## Request for Time Off

Name \_\_\_\_\_ Today's Date \_\_\_\_\_

Days requested (inclusive) from: \_\_\_\_\_ to \_\_\_\_\_

Job (current) \_\_\_\_\_ Supervisor Signature \_\_\_\_\_

Reason:      Vacation      Apprenticeship      Medical      Family      Other \_\_\_\_\_

Approved/Denied Reason \_\_\_\_\_ Date: \_\_\_\_\_

Up to 2 days off - 2 days notice is required. More than 2 days off 2 months notice is required. (KON-HR001)

## Request for Time Off

Name \_\_\_\_\_ Today's Date \_\_\_\_\_

Days requested (inclusive) from: \_\_\_\_\_ to \_\_\_\_\_

Job (current) \_\_\_\_\_ Supervisor Signature \_\_\_\_\_

Reason:      Vacation      Apprenticeship      Medical      Family      Other \_\_\_\_\_

Approved/Denied Reason \_\_\_\_\_ Date: \_\_\_\_\_

Up to 2 days off - 2 days notice is required. More than 2 days off 2 months notice is required. (KON-HR001)

### Disciplinary Action Level 1

Worker Name \_\_\_\_\_ Today's Date \_\_\_\_\_ Date of Action \_\_\_\_\_

Job \_\_\_\_\_ Reason:  PPE  Rules  Attendance  Other \_\_\_\_\_

Details \_\_\_\_\_

Worker agrees/disagrees, if disagrees, why \_\_\_\_\_

Supervisor Signature \_\_\_\_\_ Worker Signature \_\_\_\_\_ (KON-HR002)

### Disciplinary Action Level 1

Worker Name \_\_\_\_\_ Today's Date \_\_\_\_\_ Date of Action \_\_\_\_\_

Job \_\_\_\_\_ Reason:  PPE  Rules  Attendance  Other \_\_\_\_\_

Details \_\_\_\_\_

Worker agrees/disagrees, if disagrees, why \_\_\_\_\_

Supervisor Signature \_\_\_\_\_ Worker Signature \_\_\_\_\_ (KON-HR002)

### Disciplinary Action Level 1

Worker Name \_\_\_\_\_ Today's Date \_\_\_\_\_ Date of Action \_\_\_\_\_

Job \_\_\_\_\_ Reason:  PPE  Rules  Attendance  Other \_\_\_\_\_

Details \_\_\_\_\_

Worker agrees/disagrees, if disagrees, why \_\_\_\_\_

Supervisor Signature \_\_\_\_\_ Worker Signature \_\_\_\_\_ (KON-HR002)

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Version – June 2012 / Printed - 24 August 2017

## PERSONAL PROTECTIVE EQUIPMENT POLICY

It is the policy of this company that hard hats, safety glasses and green triangle steel-toed boots are to be worn by workers, supervisors, managers and visitors while on a work site as defined by OH&S regulations. Exception is granted to all personnel in the shop and office conducting clerical or administrative duties. Workers performing field-type activities in the shop and yard area, must use PPE suitable to the task and hazards. Workers and supervisors shall wear work grade long trousers and all personnel will wear full length trousers and a shirt with long or mid-bicep sleeves. All PPE except footwear and gloves shall be supplied by the company.

Considering workplace realities, and in spite of company policy, there are limited times when the use of certain PPE is not practical. For example, while installing switches and plugs in a finished house a hard hat and steel toed boots are not typically used. Also, during some re-lamping in commercial work, a hard hat may not be practical. In these instances, the PPE may be removed but kept within reach if needed for other site activities. Remember workers must protect themselves from ALL hazards, not just those that are present in their own work processes. IN ALL CASES, the required PPE MUST BE USED as determined by a current and thorough Hazard Assessment and the applicable legislated standards.

All PPE used shall be in good condition and maintained according to manufacturer's instructions.

All company and personally supplied PPE shall conform to OH&S requirements and relevant standards.

Workers are to be trained in PPE maintenance and perform these inspections on a monthly basis for basic PPE and daily for Specialized PPE. See Maintenance Section for details

PPE which becomes unfit for service shall be tagged UNFIT FOR SERVICE, removed from service by the worker and turned over to management for maintenance or disposal as required. Said equipment shall not be used until inspected and certified for use by a qualified person

PPE commonly used in Kondro Electric workplaces include:

- Basic PPE (Hardhats, steel toed boots, gloves, safety glasses)
- Fall protection
- Respiratory protection
- Full Face protection
- Hearing Protection

Other PPE may be needed as dictated by Legislated Standards, Hazard Assessments, MSDS sheets, etc.

Signature: \_\_\_\_\_

Date: November 10, 2010

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Version – June 2012 / Printed - 24 August 2017

## **General PPE Information**

The following is general information regarding various PPE and their uses and limitations. This is not an exhaustive resource, but rather a general guide to PPE. Prior to using any PPE a worker should be trained in the use of that PPE, conduct a thorough Hazard Assessment and refer to the applicable legislative standards and MSDS if required.

### ***Fall Protection Systems***

#### **General**

Fall protection harnesses are used to provide workers working at heights with freedom of movement and protection from falls. These devices will arrest a fall and absorb some of the shock of the fall. The systems are worn around the body and attached to a shock absorbing lanyard, a fall arresting device or rope grab and anchored to a secure anchor point, preferably directly above the worker. The lanyard should be as short as possible while still allowing the worker to move with minimal restriction.

A life-line should never be used as a service line. The only time a life-line becomes a load bearing line is in the event of a fall. At all other times it should be just slack enough to permit free movement.

Consult the current OH&S standard for reference to the current Fall Arrest standard (CSA, ANSI, etc.).

#### **Do**

- obtain expert advice before purchasing and using a fall arresting device
- properly train and practice with the system you decide to use
- use only the manufacturer's components for replacement parts
- inspect carefully before each use (inspection to be performed by a trained worker)
- have the harness fitted snugly to the worker using the system
- ensure that the anchor points are secure and able to support the load in the event of a fall
- follow the manufacturer's instructions on care and use

#### **Don't**

- modify, change or put additional holes in the harness or hardware
- use the system for any other than its intended use
- use the life-line for a service line

## **Respiratory Protection Systems**

### **General**

Respiratory protection falls into two major categories. The first category is Air Purifying Respirators (APRs) which are particle removal systems. The second category is Atmosphere Supply Respirators, including self-contained breathing apparatus (SCBA), air line systems and protective suits that completely enclose the worker and incorporate a life support system. Only APRs will be dealt with here. The second category of respirators (SCBA's etc) require more specific information and extensive training.

### **APRs**

There are two basic types of APRs. The disposable fiber type with or without charcoal or chemical filter "buttons" and the reusable rubber face mask type with disposable or rechargeable cartridges. The choice depends on the environment you're working in and the contaminants to be removed. It's important to remember that APRs are limited to areas where there is enough oxygen to support life. APRs don't supply or make oxygen.

The service life is affected by the type of APR, the wearer breathing demand, and the concentration of airborne contaminants. When an APR is required, consult the Material Safety Data Sheet (MSDS) and APR supplier to ensure you have the correct cartridge or combination of cartridges for the hazard.

Facial hair can prevent a good seal and fit of an APR. Follow the manufacturer's instruction to the letter regarding the mask, filters, cartridges and other components. Workers who must use respiratory protection should be clean shaven. All workers should perform a fit test in a clean environment. An APR and its ability to filter out the contaminants it was designed to filter is only as good as its seal.

### **Combination Respirators**

This type of APR combines separate chemical and mechanical filters. This allows for the change of the different filters when one of them becomes plugged or exhausted before the other filter. Usually the dust filter plugs up before the chemical filter. This type of respirator is suitable for most spray painting and welding. For more information check the:

- Material Safety Data Sheet (MSDS)
- O.H. & S. Regulations
- the safety equipment supplier

A thorough Hazard Assessment will determine the need for, and type of, ARP to be used. All workers in the area should be informed of the hazard and sign off on the hazard assessment PRIOR to starting work.

**A. Prior to entering any area where APR use is needed:**

- Train workers in the APR's use, care and limitations.
- Ensure that non-disposable respirators are properly cleaned and disinfected after each shift, according to the manufacturer's instructions.
- Supervisor is to possess basic respirator knowledge, be aware of hazards in the area and provide this information to affected workers.
- An unsafe area is defined as one in which the atmosphere is considered toxic. For example an atmosphere containing asbestos or one containing fumes that could cause unconsciousness, illness or death would be considered unsafe. This information does not address this type of hazard.
- An area where the fumes would cause simple discomfort such as dust or paint fumes or in the vicinity of a worker welding on galvanized metal would be considered safe, but still in need of ARP.

**B. Working in or near an area designated as safe, but in need of APR:**

- Supervisor to be trained in the use and care of ARP.
- Supervisor to ensure remaining employees on site understand basic safety requirements for the specific area and that workers using APR are instructed in fit testing procedures and requirements.
- All personnel to have clean shaven face to ensure proper fitting of APR.
- Proper ARP to be selected in consultation with the ARP supplier. Supplier shall be given appropriate MSDS to ensure they are dealing with the correct information.
- Each unit must be fit tested on the employee it is to be used. Fit test is to be done immediately prior to entering the designated area and the unit must not be removed until after leaving the area completely.
- ARP shall not be tampered with or modified in any way. If the ARP appears questionable in any way, leave the area immediately. This unit is to be replaced with properly tested and operating unit.
- Apparatus must be cleaned and inspected (or discarded if disposable) after each use using methods approved by the manufacturer.

## **Safety Footwear**

### **General**

Safety footwear is designed to protect against foot hazards in the workplace. Safety footwear protects against compression, puncture injuries and impact.

Safety footwear is divided into three grades which are indicated by colored tags and symbols.

The tag color tells the amount of resistance the toe will supply to different weights dropped from different heights.

The symbol indicates the strength of the sole (puncture-resistant able to withstand so many kg of pressure without being punctured by a nail of a certain size. For more information, look at Alberta's O.H.&S. Statute and Regulations

The minimum recommended footwear is the green triangle grade of footwear, which also gives ankle support. Electrical conduction should also be a consideration. Your choice of protective footwear should always over protect, not under protect.

### **Do**

- choose footwear according to Job Hazard and CSA Standards
- lace up boot and tie laces securely, boots don't protect if they are a tripping hazard or fall off
- use a protective boot dressing to help the boot last longer and provide greater water resistance (wet boots conduct current)
- choose a high cut boot to provide ankle support (less injuries)

### **Don't**

- wear defective safety footwear (i.e. exposed steel toe caps)
- under protect your feet or modify safety footwear

## ***Limb and Body Protection***

### **General**

Due to nature of the construction workplace and the number of different hazards, it is not possible to cover specialized limb and body protection in detail. It is beyond the scope of this manual to cover here. PPE in this category would include items such as:

- leg, arm, chin and belly guards
- specialty hand pads and grips
- leather aprons and leggings
- full body suits
- flame and chemical resistant clothing
- various types of plastic boot cover and overshoes

### **Hand PPE (Gloves and Mitts)**

PPE for the hands include: finger guards, thimbles and cots, handpads, mitts, gloves and barrier creams. Choose hand PPE that will protect against the job hazard. Gloves should fit well and be comfortable. This type of PPE has to protect against chemicals, scrapes, abrasions, heat and cold, punctures and electrical shocks.

### **Types**

PPE for the hands come in many forms, each designed to protect against certain hazards. Gloves most commonly used in the construction industry are made from leather, cotton, rubber, synthetic rubbers and other man-made materials, or combinations of materials.

Vinyl coated or leather gloves are good for providing protection while handling wood or metal objects. When selecting hand PPE, keep the following in mind: look for anything at the job site that may be a hazard to the hands. If gloves are to be used select the proper type for the job to be done. Inspect and maintain hand PPE regularly. If in doubt about the selection or need for glove or hand PPE, consult your Material Safety Data Sheet (MSDS).

### **Do**

- inspect hand PPE for defects before use and ensure that gloves fit properly
- wash all chemicals and fluids off gloves before removing them
- use the proper hand PPE for the job
- follow manufacturer's instructions on the care and use of the hand PPE you are using
- ensure exposed skin is covered (no gap between the sleeve and the hand PPE)

### **Don't**

- wear gloves when working with moving machinery (gloves can get tangled or caught)
- wear hand PPE with metal parts near electrical equipment
- use gloves or hand protection that is worn out or defective

## ***Eye and Face Protection General***

This PPE is designed to protect the worker from such hazards as: flying objects and particles, molten metals, splashing liquids and ultraviolet, infrared and visible radiation (welding).

This PPE has two types. The first type "basic eye protection" includes:

- eyecup goggles
- monoframe goggles and spectacles with or without side shields

The second type "face protection" includes:

- mesh face shields for radiant heat or hot and humid conditions
- chemical and impact resistant (plastic) face shields
- welders shields or helmets with specified cover filter plates and lens

Hardened glass prescription lens and sport glasses are not an acceptable substitute for proper, required industrial safety eye protection.

Comfort and fit are very important in the selection of safety eye wear. Len coatings, venting or fittings may be needed to prevent fogging or to fit with regular prescription eyeglasses.

Contact lens should NOT be worn at the work site. Contact lens may trap or absorb particles or gases causing eye irritation or blindness. Hard contact lens may break into the eye when hit.

Basic eye protection should be worn with face shields. Face shields alone often aren't enough to fully protect the eyes from work hazards. When eye and face protection are required, advice from the Material Safety Data Sheet (MSDS) or your supplier will help in your selection. For more information, look at: Alberta's O.H.&S. Statute and Regulations.

### **Do**

- ensure your eye protection fits properly (close to the face)
- clean safety glasses daily, more often if needed
- store safety glasses in a safe, clean, dry place when not in use
- replace pitted, scratched, bent and poorly fitted PPE (damaged face/eye protection interferes with vision and will not provide the protection it was designed to deliver)

### **Don't**

- modify eye/face protection
- use eye/face protection which does not have a CSA certification (CSA stamp for safety glasses is usually on the frame inside the temple near the hinges of the glasses)

## **Head Protection**

### **General**

Safety headwear is designed to protect the head from impact from falling objects, bumps, splashes from chemicals or harmful substances, and contact with energized objects and equipment.

Consult the latest OH&S standard for the current CSA requirements.

Most head protection is made up of two parts: the shell (light and rigid to deflect blows) and the suspension (to absorb and distribute the energy of the blow).

Both parts of the headwear must be compatible and maintained according to manufacturer's instructions. If attachments are used with headwear, they must be designed specifically for use with the headwear used. Bump caps are not considered adequate protection in the construction industry. In Alberta they can only be used when the only hazard is where a worker may strike the head against a stationary object.

### **Inspection and Maintenance**

Proper care is required for headgear to perform efficiently. The service life is affected by many factors including temperature, chemicals, sunlight and ultraviolet radiation (welding). The usual maintenance for headgear is simply washing with a mild detergent and rinsing thoroughly.

#### **Do**

- replace headgear that is pitted, holed, cracked or brittle
- replace headgear that has been subjected to a blow even though damage cannot be seen
- remove from service any headgear if its serviceability is in doubt
- replace headgear and components according to manufacturer's instruction

#### **Don't**

- drill, remove peaks, alter the shell or suspension in any way
- use solvents or paints on the shells (makes shells "break down")
- put chin straps over the brims of Class B headgear
- use any liner that contains metal or conductive material
- carry anything in the hard hat while wearing the hard hat
- turn the hat backwards (except for welders hard hat)

## **Hearing Protection**

### **General**

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 can't carry on a conversation at a normal volume when you are 3 feet apart.**

Remember, this is only a rule of thumb. Any sound over 80 db requires hearing protection. Hearing loss can be very gradual, usually happening over a number of years. Normal conversation is 60-70 dB. 80dB is about the loudness of a telephone dial tone. Other examples of common noises in the 80-90 dB range are:

- freight train (at 15 meters)
- car wash at 20 ft (89 dB)
- propeller plane flyover at 1000 ft (88 dB)
- diesel truck 40 mph at 50 ft (84 dB) / diesel train at 45 mph at 100 ft (83 dB)
- food blender (88 dB)
- garbage disposal (80 dB).

The most common types of hearing protection in the construction industry are earplugs and earmuffs. If you choose to use the other types of hearing protection, ask your safety supplier or for further information.

It is important to have different styles of hearing protection available. Different styles allow a better chance of a good fit. Each person's head, ear shape and size is different. One style may not fit every person on your crew. If hearing PPE does not fit properly or is painful to use, the person will likely not use it. If the hearing protection is not properly fitted, it will not supply the level of protection it was designed to deliver.

Most earplugs, if properly fitted, generally reduce noise to the point where it is comfortable (takes the sharp edge off the noise). If your hearing protection does not take the sharp edge off the noise, or if workers have ringing, pain, headaches or discomfort in the ears, your operation requires the advice of an expert.

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## Fall Protection Policy

Kondro Electric believes that our employees are critical to the success of our business and they are important to us. Fall Protection is an important aspect of our program to ensure that our workers can continue to live safe and healthy lives both on and off the job.

Our Fall Protection Plan requires that workers who work at heights above 3m (10 feet) must be protected from falling. This may be done with guardrails or control zones or travel restraint or fall protection or a combination of these. In some cases we will also implement the Fall Protection Plan at a lesser height if there is a danger or hazard in the area below. A Site Specific Fall Protection Plan will be developed and implemented when a fall hazard exceeds 8 meters or 25 feet. The intent of these plans is to:

- Help prevent falls
- Assist workers and supervisors to identify the fall hazards of the site before work begins at heights.
- Assist in the selection of an appropriate fall protection system(s)
- Assist in rescue procedures for someone if a fall should occur.

It is our company policy that all managers, supervisors and workers comply with the fall protection guidelines we have established.

When developing the site specific plan, supervisors should consider:

- The fall hazards at the work site
- The fall protection system to be used at the site
- The procedures used to assemble, maintain, inspect, use and disassemble the fall protection system
- The rescue procedure to be used if a worker falls, is suspended by a fall arrest system or safety net and needs to be rescued.

We have outlined some specific responsibilities for ourselves (the employer), our supervisors and our workers on the following pages.

Signature: \_\_\_\_\_

Date: September 17, 2009

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**Employer Responsibilities**

- Ensure a written worksite specific fall protection plan is in place where required (fall over 8 m / 25').
- Ensure that a fall Protection System is being used where required. This may include a system of guardrails, travel restraint system, fall protection system, control zones or a combination of these.
- Ensure supervisors and workers are trained.
- Ensure all equipment is safe, maintained, inspected and used correctly.
- Investigate any anomalies in the system to make recommendations so that such anomalies will not happen again.
- Keep a log of all workers who have received fall protection awareness training
- Update the program as needed.

**Supervisor Responsibilities**

- Ensure the generic program or the site-specific program is utilized at each site as required.
- Ensure the program is being implemented and used on a continuous basis for each site.
- Investigate any anomalies and make recommendations to prevent reoccurrence.
- Investigate all workers reports of anomalies to the system.
- Ensure all workers have a access to the fall protection program.
- Inspect, maintain, and use the equipment as per the manufacturer’s recommended methods.
- Ensure that all workers are provided with, and use, the appropriate equipment.
- Observe workers, work practices and site operations and correct when necessary.

**Worker Responsibilities**

- Know the fall protection plan.
- Follow the procedures, as trained.
- Inspect and maintain equipment as required and allowed by the manufacturer
- Remove from service any defective items as per the defective equipment policy.
- Report any anomalies to the supervisors.
- Ensure the equipment is used as the manufacturer recommends.
- It is a condition of employment that all managers, supervisors, and workers comply with the company safety policy and safety programs.

**PPE Forms List**

Forms in this section are as follows:

- Worker Fall Arrest & PPE Agreement ..... KON-PPE001
- Site Specific Fall Protection Plan..... KON-PPE002

## Worker Fall Arrest and PPE Agreement

This agreement is made between \_\_\_\_\_ (The Worker) and Kondro Electric (1980) Ltd. (The Employer).

The Worker agrees that prior to each use, the Worker will inspect their personal fall arrest and if defects are found, it will be brought to the attention of the supervisor, the system will be tagged unfit and will not be used.

By signing below The Worker acknowledges that they have (or will secure prior to deployment on the worksite) and will correctly wear steel toed boots (Green Triangle) and they have been given safety glasses and a hard hat which they also agree to maintain and wear as required by company policy.

Other than Steel Toed Safety Footwear and gloves, all PPE will be supplied by Kondro Electric (1980) Ltd. If Workers wish to use their own gloves they will not be reimbursed for them. All PPE must be inspected as per the PPE policy and adequately protect the worker.

\* Fall arrest system issuance. Cross out the statement in the “boxed” paragraph below that does NOT apply and sign or initial accordingly.

The Worker agrees to the deduction of \$150.00 if the workers assigned FALL ARREST SYSTEM, is lost, abused (abuse includes improper storage), altered or damaged (excluding normal wear and tear or damage from an actual fall) in any such way to make it unsafe.

If The Worker’s employment with The Employer ends and The Worker does not return the said item or returns it in condition such that it is not useable, it will be deducted off The Worker’s final pay. This deduction is waived if the worker is employed longer than 6 months continuous service.

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Employer Signature

Fall Protection not issued to this worker:

\_\_\_\_\_  
Employee Initials

\_\_\_\_\_  
Employer Initials

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Supervisor Signature

\_\_\_\_\_  
Date

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KON-PPE001

## Site Specific Fall Protection Plan

To be completed when fall hazard is greater than 8 meters (25')

Company: Kondro Electric (1980) Ltd.

Address: 6202 - 50 Avenue Lloydminster Alberta

Phone: 780-875-6226

Date: \_\_\_\_\_

Project: \_\_\_\_\_

Location: \_\_\_\_\_

Supervisor: \_\_\_\_\_

Phone: \_\_\_\_\_

Site Safety Representative: \_\_\_\_\_

Phone: \_\_\_\_\_

---

Job Description and Type of Work: (New – Renovation – Demolition)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe the type of Fall Protection System to be used: (Harness & lanyard, type of tie-off, etc.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

List the Fall Hazards: (height, water below, rebar below, hard surface, etc.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is a Control Zone used: Yes - No. If yes, where? Attach a diagram if required.

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Is the Control Zone marked: Yes - No. How:

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Review the Standard Rescue Procedure. If conditions on site require it, enter any required deviations from the Standard Rescue Procedure below.

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All workers who will be exposed to fall hazards are informed of those hazards, and are instructed in the fall protection system to be used and the procedures to be followed. All contents of this program have been conveyed to the workers. All necessary equipment has been provided.

Supervisor Signature \_\_\_\_\_ Date \_\_\_\_\_

Worker Name	Signature
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

## Fall Protection Plan – Aerial Lifts

Company: **Kondro Electric (1980) Ltd.**

Date: **February 7, 2011**

Address: **6202 – 50 Avenue Lloydminster, AB**

**T9V 2C9**

Phone: **(780) 875 - 6226**

Fax: **(780) 875 - 6007**

Project: **Generic**

Location: **Lloydminster, AB**

Supervisor: \_\_\_\_\_

Phone: \_\_\_\_\_

JWSHSC Representative: \_\_\_\_\_

Phone: \_\_\_\_\_

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Job Description and Type of Work: (New – Renovation – Demolition) **Installation, repair, removal, demolition of various electrical components. Fall protection requirements are limited to workers on various makes and models of aerial lift equipment which may be either a scissor lift or a telescopic ladder truck (bucket truck). Aerial devices are not insulated, all normal precautions to be taken regarding contact with live circuits.**

List the Fall Hazards: (height, water below, rebar below, hard surface, etc.) **Fall hazards are in the range of 6' to 30' and generally limited to contact with the PME the worker is using and adjacent objects. Some contact with the surface grade may be expected and unavoidable in some circumstances – see below.**

Describe the type of Fall Protection System to be used: (Harness & lanyard, anchors, etc.) **All workers in aerial lifts are to be protected against falls by the correct use of Travel restraint/Fall Protection. Systems consist of**

- 1. A full body harness properly adjusted to the worker's physique.**
- 2. An anchor point as designated in the PME operator's manuals. On Bucket trucks with no designated tie off point, the workers shall use the provided "D-Ring" straps, secured around the boom of the lift. Workers in bucket trucks shall use short (approx 18") lanyards consisting of a hook, a shock absorber and a carabiner. Carabiner shall be connected to the secure anchor point.**
- 3. Workers in scissor lifts shall use the shortest possible shock absorbing lanyard that is of practicable length to allow the work to be performed.**

**EXCEPTION – workers in a scissor lift on a smooth hard surface are not required to wear this PPE if all guard rails rated as fall protection are in place on the lift.**

Clearance distances: **In some cases with a scissor lift, the required clearance distance cannot be maintained while still allowing for worker movement (6' lanyard). Contact with the floor may be experienced by workers in scissor lifts due to the required length of lanyard to allow free movement and the (sometimes) low work platform height. However, it would be quite unusual for a platform to tip at this lower height, therefore floor contact is not expected.**

Procedures used to assemble, maintain, etc.: **Workers are to use the training they have received to correctly inspect and document an inspection of their personal Fall Arrest system. Workers are to perform a hazard assessment for the tasks they are performing IN ADDITION TO the hazards specifically related to working at heights. Workers using the Fall Arrest systems are to tie off only to the anchor points noted.**

Is a Control Zone used and marked: **not applicable.**

Worker Training: **As required by AB OH&S part 9.**

Review the Standard Rescue Procedure. If conditions on site require it, enter any required deviations from the Standard Rescue Procedure below.

**In most cases a specialized rescue is not expected to be needed. The normal fall distance of 16' to 24' will place the suspended worker at or near grade. If suspended, either a short ladder rescue may be performed or the lift can be mechanically lowered to the ground, ensuring the worker does not become tangled in the lift mechanism. At that point, standard worker rescue procedures (first aid) will apply if required.**

All workers who will be exposed to fall hazards have been informed of those hazards, and have received instruction in the fall protection system to be used and the procedures to be followed. The contents of this program have been conveyed to the workers and all necessary equipment has been, or will be, provided. Then workers agree to abide by the contents of this fall protection plan

Supervisor Signature \_\_\_\_\_ Date \_\_\_\_\_

Workers signing below have reviewed the Site Specific Fall Protection Plan dated \_\_\_\_\_, Rescue Procedures and Emergency Response plans and acknowledge that their activities are guided by these documents and the requirements of applicable legislation.

Worker Name	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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## **PREVENTATIVE MAINTENANCE POLICY**

All tools, vehicles and equipment shall be properly maintained so as to reduce the risk of injuries to workers or damage to property.

Management & supervision shall ensure that all preventative maintenance is carried out by qualified personnel according to established schedules and that records are maintained.

All workers shall regularly check all tools, vehicles, and equipment as per the schedule in this section and record the results of their inspections on tracked tools and equipment. Workers shall, without delay, remove from service any tools, vehicles, or equipment that pose a hazard due to a need for repair. Said tool shall be tagged as defective and set aside for maintenance.

Fire Extinguishers shall be checked daily (for existence) and once each month for settling and expiration date. Extinguishers needing maintenance shall be immediately removed from service and replaced and sent for maintenance by authorized personnel.

Workers personal tools are not documented but are subject to this policy as well and are to be inspected monthly or more often and immediately removed from service if not in good repair.

Maintenance records will be tracked by workers and recorded digitally and records made available to workers upon request.

Workers with vehicles assigned to them are responsible to ensure oil changes and minor maintenance (lights, etc) are performed when required and as per the maintenance schedule and documented on forms provided.

Company and personal PPE shall be checked prior to each use (daily, undocumented) and once per month (documented) at the monthly safety meeting. Fall protection shall be thoroughly checked prior to first use each day.

Maintenance shall be tracked according to the schedule at the end of this section (KON-PM001).

Signature: \_\_\_\_\_

Date: September 17, 2009

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## Safety Harnesses, Lanyards and Life-Lines

- Safety harnesses and lanyards which have been exposed to a fall impact load shall be removed from service, tagged with the incident details and after any required investigation, all components destroyed.
- Fall arresting/restraining equipment shall be inspected as per the maintenance schedule. The user of this equipment must inspect its condition prior to each use.
- Safety straps, lanyards and life-lines shall be free of knots and splices.
- Webbing is to be inspected through its entire surface. Beginning at one end, bend the webbing in an inverted V. Watch for frayed edges, broken fibers, pulled stitches, cuts or chemical damage. Remove from service according to manufacturer's guidelines.
- Inspect for loose, distorted or broken grommets. Do not cut or punch additional holes in the waist strap or strengthen members. Check belts without grommets for torn or elongated holes which could cause the buckle tongue to slip.
- Inspect the buckle for distortion and sharp edges. The outer and center bars must be straight. Carefully check corners and attachment points of the center bar. They should overlap the buckle from and move freely back and forth in their sockets. The roller should turn freely on the frame. Check friction buckles for slippage and sharp buckle edges.
- Inspect for pitted or cracked rivets which indicate chemical corrosion. Check that rivets are tight and cannot be moved. The body side of the rivet base and outside rivet burr should be flat against the material.
- Inspect hardware for cracks or other defects. Remove from service if the "D" rings are not a 90 degree angle and do not move vertically independent of the body pad or "D" saddle.
- Inspect snaps for hook and eye distortion, cracks, corrosion or pitted surfaces. The keeper (latch) should be seated into the snap nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to close the keeper firmly.
- Rotate rope lanyards and inspect from end to end for frayed, worn, broken or cut fibers. Watch for weakened areas which MAY have noticeable changes from the original rope diameter.

## **Vehicles**

- All company vehicles are to be maintained in good, clean and safe working order.
- Vehicle maintenance shall follow the company maintenance schedule which is in agreement with the manufacturer's suggested maintenance schedule
- The user of the company vehicles is responsible for ensuring that regular maintenance and records are kept and that the necessary safety equipment is present and operable.
- Repairs to vehicles other than minor maintenance must have approval of management.

## **Tools and Equipment**

- All tools or equipment that are defective or in need of repair shall be tagged with an "out of service" tag on which shall be noted the defect(s) and signed and dated by the person tagging the item and be placed in the designated location in the shop. Tools and equipment shall be serviced and returned to the worker or tool lockup at the earliest possible time.
- All workers, shop personnel and foremen are responsible for ensuring this procedure is followed.

## **Job Site Office and Lunch Trailers**

All trailers shall be inspected prior to sending them to a job site, and before they are returned.

The following shall be checked:

- Keys and locks present and operable.
- Windows and screens in good repair and operable.
- All doors secure and functioning properly.
- All electrical fixtures intact and operable.
- Heating lines and units intact and functional.
- Ceiling, walls, doors, floors and exterior cladding are in good order.
- Roof to be checked for leaks caused by snow shoveling, attachment of signs, etc.
- Structural damage due to negligence, improper set up or transport.
- Furnace / ventilation to be checked for gas leaks to make sure that it is functional.
- Any other deficiencies that are observed shall also be noted and rectified as required.

## Preventative Maintenance Forms List

Forms in this section are as follows:

- Maintenance Schedule .....KON-PM001
- Equipment Daily Log Sheet - completed daily, submitted monthly ..... removed Nov/10
- Vehicle Daily Log Sheet - completed daily, submitted monthly .....KON-PM003\*
- Vehicle Monthly Checklist - completed Monthly with Daily Log .....KON-PM004\*
- Telelift Maintenance Checklist.....KON-PM005
- Equipment Sign-out Sheet (Excel spreadsheet to be inserted) .....KON-PM006
- Hyundai Forklift Sign-out Sheet .....KON-PM007
- Vehicle and Equipment List – list of all large equipment (trucks, bobcat, ditch witch, etc) to be maintained digitally – (PME & Trailer List)

\* It is preferable to use the preprinted books for Vehicle daily and monthly inspections KON-PM003 & 004 which are available on request. Please provide unit number when making this request.

## Instructions for Completing Bucket Truck Signout & Inspection

- Obtain bucket truck log book and keys from designated area in shop
- Look in the log book and determine which inspection to perform (daily or monthly). Daily inspections must be performed each day and should be reviewed at each job location that day. Monthly inspections must be performed once for every 20 daily inspections or at least once every three months.
- Using the appropriate column in the Maintenance schedule, check the items required
- Consult the TELELIFT ROUTINE MAINTENANCE SCHEDULE and perform the semi-annual inspections as required.

# Kondro Electric Maintenance Schedule

Item to check	Trucks	Scissor Lifts	TELELIFT	SK Power Lift	Bobcat	Forklift	Ditch Witch	Trailers	Job Shacks
General Cleanliness, return materials to stock	d	d	d	d	d	d	d		w
Brakes / Steering	m	d			d	d	d	PTM	PTM
Tires & lug nuts - visual	d	d			d	d	d	d	PTM
Tires & lug nuts - check	m	d			w	m	m	m	PTM
Wheel Bearings, locking pins, kingpins		d	d	d	d	d			
Engine Fluid Levels	w	d			w	w	d		
Engine Belts	m				w	w	d		
Condition of main frame, welds, etc.		d	d	d	m	m	m	PTM	PTM
Suspension, guides, rollers		d	m	m		m	d	PTM	PTM
Rails, entry chains, gates, bucket, guards, forks		d	m	m	m	m			
Glass	m				w	w			PTM
Seat Belts	m				d	d	d		
Fire Ext / First Aid (vis)	d								d
Fire Ext / First Aid (doc)	m								m
Controls		d	d	d	d	d	d		
<b>HYDRAULICS</b>									
Check all operations			m	m	d	d	d		
check outrigger function, pads, leaks, etc.				m			d		
leaks around all fittings, pump and cylinders		d	d	d	m	m	d		
Hoses/connections		d	d	d	m	m	d		
Fluid levels		d	m	m	d	d	d		
<b>ELECTRICAL</b>									
Lights	m	d	d	d	m	m	d	PTM	PTM
Limit/Safety Switches		d	d	d					
All wiring harnesses		d	m	m	d	d	d		
Battery levels, inverter connection, terminals, etc.		d			m	m			
Safety Kit	m							m	m

Fire ext(inguisher) / First Aid Daily - check if they are there

Fire ext(inguisher) / First Aid Monthly - check contents of first aid, expiry of both and tip/tap extinguisher to loosen powder

BUCKET LIFT - Grease ladder as per manual April 1 & Oct 1 (every 6 months)

DITCH WITCH - Daily Check includes all warning signs, gaurds and general apperance and function of tractor and attachments

Safety Kit consists of Safety / WHMIS Manual and hard hat, glasses and safety boots for each worker

n/a
Daily
Weekly
Monthly
prior to move (PTM)

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KON-PM001



# Vehicle Daily Log Sheet

Month/Year: \_\_\_\_\_ / \_\_\_\_\_

Unit # \_\_\_\_\_

Date	Time	Odometer Reading	Fluid Check	Project	Driver's Signature	Repairs	
						Detail	Date Repaired
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							
26							
27							
28							
29							
30							
31							

Daily Log sheets to be completed daily and handed in monthly with a monthly inspection sheet  
 Check Fluid levels once per week

Odometer Reading at Last Oil Change \_\_\_\_\_ Date of Last Oil Change: \_\_\_\_\_

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## Kondro Electric (1980) Ltd - Monthly Vehicle Checklist

Unit # \_\_\_\_\_

Make & Model: \_\_\_\_\_ Date: \_\_\_\_\_ km / mi / hrs \_\_\_\_\_

Item	O.K.	Requires Action	Comments
Cleanliness			
Brakes			
Steering			
Tires			
Fluid Levels			
Spare and Jack			
Engine Belts			
Lights			
Glass			
Seat Belts			
Front & Rear Suspension			
<b>Fire Extinguisher</b>			
In Place?			
Last Service Date			
<b>Tip / Tap!</b>			
<b>First Aid Kit</b>			
In Place?			
Sealed?			If not sealed, an inspection, inventory and re-seal is needed
<b>Documentation</b>			
Insurance/Registration			
Safety/WHMIS Manual			
PSI and Near Miss Books			
<b>PPE</b>			
Hard hat / Safety Glasses			
Fall Arrest (if issued)			
Operator Name:		Repairs completed (date & signature)	
Operator Signature:		Supervisor:	

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KON-PM004

TELELIFT ROUTINE MAINTENANCE		PERIOD
Retighten hardware after purchase		2 weeks
Retighten hydraulic hoses after purchase		2 weeks
Ground the electric tools		Before start each day
Working the push button control boxes		EACH DAY
Oil leaks:	hoses	EACH DAY
	O'ring & cylinders	EACH DAY
	Mechanism	EACH DAY
	Motor	EACH DAY
	pump	EACH DAY
Check all safety switches (red light, etc.)		EACH DAY
Check the hydraulic fluid (breather gauge)		EACH MONTH
Check complete of your unit "TELELIFT"		EACH MONTH
Check the bucket		EACH MONTH
Check electric wiring		EACH MONTH
Greasing nylon roller on shoe assembly		6 MONTHS
Greasing rollers of the ladder (6) (see manual)		6 MONTHS
Greasing pins of the cylinders & the ladder		6 MONTHS
Check oil of worm gear at the shadow (Oil SAE80W-90)		6 MONTHS
Change oil of your unit		3 YEARS
TTS-20 & TTS-25: 3 gallons	TTS-40: 4 gallons	
Clean the interior filter of the reservoir		3 YEARS

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KON-PM005



<b>Periodic checks and planned maintenance(PM)</b>	<b>Q</b>	<b>A</b>
Air clean truck and radiator.		•
Check torque on critical fasteners.		•
Drain and replace engine oil.		•
Replace gas engine oil filter.		•
*Clean / replace engine air filter		•
Inspect/adjust fan belts.	•	•
Drain/flush radiator coolant.		•
Check engine ignition and timing.		•
Engine tune-up.		•
Check drive axle fluid level.		•
Change drive axle fluid.(Drain and replace)		•
Change(Replace) drive axle oil filter.		•
Clean drive axle air vent.		•
Check brake condition and wear.		•
Check drive axle mounting and fasteners.		•
Lubricate steering axle linkage	•	•
Check/lubricate steering axle wheel bearings.		•
Change/replace hydraulic sump oil filter and breather.		•
Change/replace hydraulic sump fluid and oil filter.		•
Lubricate tilt cylinder rod ends.	•	•
Check lift chain adjustment and wear	•	•
Check/lubricate lift chains.		•
Lubricate mast rollers.		•

Items in the A (Annual) column will be completed by outside service agencies.

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## **SAFETY TRAINING & COMMUNICATIONS POLICY**

The purpose of this policy is to provide guidelines for general and specialized safety and related training throughout all levels of the organization and to define safety meetings of all types.

The company will provide, and workers will participate in, all safety and related training that is necessary to minimize losses of human and physical resources of the company.

This training will include, but not be limited to:

- Health and safety orientations for newly-hired personnel, prior to reporting to work
- Hazard identification and control process
- Health and safety training for supervisors and management
- Task and trade-specific training and certification
- Specialized safety and related training
- Refresher and update training
- Competency assurance (testing)

**Remember: "Learning continues for a Lifetime"**

Signature: \_\_\_\_\_

Date: September 17, 2009

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## **Policy Guidelines**

Health and safety training at all levels in an organization is vital to the ongoing success of the Company and the Health & Safety Program. The program must contain at least the following training components:

### ***New Hire Health And Safety Orientations***

Includes Awareness Of:

- Company Rules
- Hazard assessment and control
- Workplace Hazardous Materials Information System (WHMIS)
- First Aid and Emergency Response
- Legislated responsibilities
- Safe Work Practices and Safe Job Procedures
- PPE requirements

### ***Specialized Training May Also Be Required***

This Could Include Training In:

- Fire Extinguisher selection and use
- Fall Protection
- Driver training
- First Aid
- Confined Space Entry
- Air Quality Monitoring
- Explosive/Powder Actuated Tools
- Scaffold Erection/Dismantling
- Hydrogen Sulfide (H<sub>2</sub>S)
- Powered Mobile Equipment (man-lifts, etc)

Refresher courses and training schedules have an important role to play. A good practice is to organize the work force into a timetable, which ensures training or refresher courses are scheduled at regular intervals.

## Health and Safety Meetings

Health and safety meetings serve to communicate information and concerns throughout the organization. Kondro Electric will use the following formats as deemed practical in varying work environments. At any of these meetings workers meet to discuss relevant safety issues. Additionally they may conduct training, discuss incidents and near misses

- DAILY HAZARD ASSESSMENTS. These are included in this section (as well as the HA section) because workers MEET and discuss the hazards and protective measures, so the HA is also considered a safety meeting. Workers and supervisors may also need to be aware of, and attend other contractors HA meetings to be informed of hazards and the required PPE
- When required by the prime contractor, workers and supervisors will meet as requested by the prime contractor to discuss issues pertaining to health and safety at a particular worksite or area of a worksite. On a large project with several crews working on different tasks, two or more such meetings may be needed to discuss issues relevant to each crew.
- Monthly (if required) or quarterly (minimum) company-wide meetings.
- Supervisors should also attend any site wide safety meetings called by the prime contractor or other authority on site.
- For consistency, the recommended forms should be used at each meeting, forms should be dated with day, month and year and workers should sign legibly, in ink once they have reviewed the document

## Training and Communications Forms List

Forms in this section are as follows:

- List of Current First Aiders (Also in back of Manual) ..... KON-TC001
- Orientation checklist form ..... KON-TC002
- Employee Orientation Verification form ..... KON-TC003
- Tailgate Meeting form ..... KON-TC004
- Monthly Safety Meeting form ..... KON-TC005
- Training Records Summary Form (not in binder)



# Kondro Electric (1980) Ltd - Orientation Checklist

New Employee / Sub trade Orientation (administrative).....

Site Orientation (name of site) \_\_\_\_\_.....

Employee: \_\_\_\_\_ Hire Date: \_\_\_\_\_

Position: \_\_\_\_\_ Supervisor: \_\_\_\_\_

Emerg. Contact (Relat) : \_\_\_\_\_ Telephone: \_\_\_\_\_

Emerg. Contact (Relat) : \_\_\_\_\_ Telephone: \_\_\_\_\_

- |   | New Hire<br>/Sub         | Site<br>Orientation      |
|---|--------------------------|--------------------------|
| 1. Company Safety Policy.....   | <input type="checkbox"/> |                          |
| <b>Worker's Responsibilities for Safety</b> .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. <b>Hazard Assessments – required and accurate, use WHMIS and SJP</b> .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Safe Work Practices / Safe Job Procedures.....   | <input type="checkbox"/> |                          |
| <input type="checkbox"/> Cutting ( <i>cutting</i> ) <input type="checkbox"/> Excavations <input type="checkbox"/> <i>Live Work</i> <input type="checkbox"/> Ladders |                          |                          |
| <input type="checkbox"/> <i>Lockout/Tagout</i> <input type="checkbox"/> Power Tools <input type="checkbox"/> List others in SWP/SJP                                 |                          |                          |
| 5. <b>Safety Rules</b> .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Immediate Dismissal <input type="checkbox"/> General <input type="checkbox"/> Reprimand Policy   |                          |                          |
| <input type="checkbox"/> Safe Work Permit <input type="checkbox"/> Harrassment/Bullying <input type="checkbox"/> <b>Reporting Unsafe Acts / Conditions</b>          |                          |                          |
| 6. <b>Personal Protective Equipment (PPE)</b> all by Kondro except Boots and Gloves....   | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Fall Protection</b> Policy.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Worker Responsibility to maintain PPE</b> (sign off) .....   | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. <b>Preventative Maintenance</b> Policy.....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> <b>Worker to inspect</b> <input type="checkbox"/> <b>Do Not Use Defective</b> <input type="checkbox"/> <b>Tag Out Procedure</b>            |                          |                          |
| 8. Training and Communication .....   | <input type="checkbox"/> |                          |
| <input type="checkbox"/> HA Meetings <input type="checkbox"/> Toolbox/tailgate <input type="checkbox"/> Mandatory attendance at Safety Meetings                     |                          |                          |
| 9. Inspections Policy .....   | <input type="checkbox"/> |                          |
| 10. <b>Investigations Policy</b> .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> <b>Report ALL incidents</b> <input type="checkbox"/> <b>Near Misses</b> <input type="checkbox"/> <b>WCB Reporting REQUIRED</b>             |                          |                          |
| <input type="checkbox"/> Serious Incidents MUST be reported to authorities <input type="checkbox"/> Modified Work Procedure   |                          |                          |
| 11. <b>Emergency Preparedness</b> Policy .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> <b>ERP</b> <input type="checkbox"/> <b>Phone List</b> <input type="checkbox"/> <b>First Aiders List</b>                                    |                          |                          |
| <input type="checkbox"/> Suspension Trauma <input type="checkbox"/> Generic ERP <input type="checkbox"/> Site Specific ERP if required                              |                          |                          |
| <input type="checkbox"/> Prime Contractor ERP <input type="checkbox"/> Utility Contact ERP  |                          |                          |
| 13. <b>Legislation, Environmental Policy &amp; WHMIS Information</b> .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Site Documents Location</b> .....  | <input type="checkbox"/> | <input type="checkbox"/> |
| Worker to Disclose any physical/medical issues that may effect .....  | <input type="checkbox"/> |                          |
| their work, their safety or other workers safety  |                          |                          |

I, \_\_\_\_\_ have received this orientations and the following four documents.

- Company Safety Policy       SWP / SJP Policy       Rules (5 sections)       PPE Policy

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Orientation administered by: (Office) \_\_\_\_\_ (Site) \_\_\_\_\_



11. Tools and equipment whose guards are inoperative or missing are okay to use “just this once”.

False     True

12. The Workplace Hazardous Material Information System (WHMIS) designates certain products as controlled products and requires them to be labeled. This label is a warning for you the worker. The label tells you:

- Name of the product
- Hazard symbol
- Risks when you use it
- Personal protective equipment to wear
- First aid treatment if necessary
- All of the above

13. Material Safety Data Sheets (MSDS) are readily available for workers to review when needed.

False     True

14. Workers should not be involved in the process of identifying, assessing, prioritizing and controlling hazards in the workplace.

False     True

15. A modified work program is available if you are injured on the job.

False     True

16. Smoking in prohibited areas (hot work) is subject to immediate dismissal.

False     True

17. Rules in the safety program are only applicable to workers, not managers and supervisors.

False     True

18. The rules for fall protection procedures are the same for all heights.

False     True

19. A casualty that has been suspended in a fall protection harness for longer than 5 minutes needs first aid that is different from normal and should have specialized medical care.

False     True

20. Certain incidents are required by law to be reported to Authorities.

False     True

**Signature of worker:** \_\_\_\_\_ **Date** \_\_\_\_\_

# Tailgate Safety Meeting Form

Date: \_\_\_\_\_ District \_\_\_\_\_ Project Name: \_\_\_\_\_

Foreman: \_\_\_\_\_ Project Number: \_\_\_\_\_

Attendance - **Name & Legible** Signature

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Safety Items Discussed \_\_\_\_\_

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Employee Suggestions \_\_\_\_\_

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Corrective Action \_\_\_\_\_

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Safety Talk Used \_\_\_\_\_

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The information in this manual does not take precedence over applicable government legislation with which all workers should be familiar.

Version – June 2012 / Printed - 24 August 2017

KON-TC004

## **INSPECTION POLICY**

The purpose of this policy is to control losses of human and material resources by identifying and correcting unsafe acts and conditions. This company will maintain a comprehensive program of health and safety inspections at all facilities and job sites.

### **Schedules**

This company will maintain the following schedules:

- Offices / Shops – quarterly
- Worksites with more than 2 workers – as required by site conditions or monthly minimum

### **Responsibilities**

The manager is responsible for the overall operation of the program.

Supervisors are responsible for conducting ongoing informal inspections of areas where their crews are working.

Workers are responsible for participating in and contributing to the Inspection Program.

Signature: \_\_\_\_\_

Date: November 10, 2010

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Version – June 2012 / Printed - 24 August 2017

# Inspections Forms List

Forms in this section are as follows:

- Scaffold Inspection Checklist .....KON-INS001
- Worksite Safety Inspection .....KON-INS002

### ***Scaffold Inspection Checklist***

<b>No.</b>		<b>Yes</b>	<b>No</b>
1	Scaffold erection coordinated by a competent worker and tagged safe for use (green or yellow)	<input type="checkbox"/>	<input type="checkbox"/>
2	Scaffold square, straight, and plumb in all directions, all scaffold components present, tight and secure.	<input type="checkbox"/>	<input type="checkbox"/>
3	Toeboards in place for work platforms over 3.5 meters	<input type="checkbox"/>	<input type="checkbox"/>
4	No tubes or members over-extended and hazardous.	<input type="checkbox"/>	<input type="checkbox"/>
5	Base plates and screws firmly supported on all legs. Mudsills used?	<input type="checkbox"/>	<input type="checkbox"/>
6	Leveling adjustment screws extended less than 0.3 meters and lock nuts tightened.	<input type="checkbox"/>	<input type="checkbox"/>
7	Tower tied to rigid support horizontally and vertically according to legislative requirements.	<input type="checkbox"/>	<input type="checkbox"/>
8	Free-standing tower scaffold steadied with guy wire according to legislated requirements for its height.	<input type="checkbox"/>	<input type="checkbox"/>
9	Platform planking cleats on underside at each end with wood or angle iron.	<input type="checkbox"/>	<input type="checkbox"/>
10	Platform planking tied down securely.	<input type="checkbox"/>	<input type="checkbox"/>
11	Platform planking maximum span 2.4 meters for heavy duty and 3.0 meters for light duty.	<input type="checkbox"/>	<input type="checkbox"/>
12	Vertical ladder securely fastened in place, Maximum length 9.1 meters between stops	<input type="checkbox"/>	<input type="checkbox"/>
13	Safety cage needed around vertical ladder based on height according to legislated requirements. (more than 6.1 meters in height)	<input type="checkbox"/>	<input type="checkbox"/>
14	Perimeter handrail height with a mid-rail around all work platforms according to legislated requirements.	<input type="checkbox"/>	<input type="checkbox"/>
15	Separate rope or hand line in place at all platforms to raise and lower tools or material.	<input type="checkbox"/>	<input type="checkbox"/>
16	Warning devices/signs provided if erected over walkways or roadways (flashing lights, reflective tape streamers, or area is roped off).	<input type="checkbox"/>	<input type="checkbox"/>
17	Minimum clearance from overhead power lines maintained as per Occupational Health and Safety Legislation.	<input type="checkbox"/>	<input type="checkbox"/>
18	Rolling scaffold wheel brakes locked and outriggers extended to maintain maximum height of 3 times the smallest base dimension.	<input type="checkbox"/>	<input type="checkbox"/>
19	Separate ladders being used for scaffold access.	<input type="checkbox"/>	<input type="checkbox"/>
20	Scaffold constructed & maintained according to certified engineered specifications and drawings.	<input type="checkbox"/>	<input type="checkbox"/>

Scaffolds should be erected, inspected and dismantled by competent workers, trained in proper erection procedures and legislated requirements. If in doubt, do not use the scaffold.

# Worksite Safety Inspection

		<b>Inspection Checklist:</b> <input type="checkbox"/> PPE <input type="checkbox"/> Equipment <input type="checkbox"/> Truck Logs checked <input type="checkbox"/> Other Equipment Checked				
		Inspected by: _____		Date: _____		
Location: _____		Weather Conditions: _____		Time: _____		
<b>Items To Watch For:</b>	<ul style="list-style-type: none"> <li>• Buildings and structures, windows, floors, doors, stairs, openings</li> <li>• Elevator shafts secured</li> <li>• Aisles, work surfaces</li> <li>• Lighting</li> <li>• Electrical wiring, cords / ends</li> <li>• Exits, emergency lighting, alarms</li> <li>• Fire protection equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Heating and cooling (adequate)</li> <li>• Ventilation (toxic atmosphere)</li> <li>• Sanitation (supplied, sanitary)</li> <li>• Storage area, orderly, clean</li> <li>• Toxic materials, labeled, MSDS</li> <li>• Flammables, stored and labeled</li> <li>• Forklifts, traffic, aisles, etc.</li> <li>• Personnel lifts</li> </ul>	<ul style="list-style-type: none"> <li>• Containers/Shelving - correct for material and stable</li> <li>• Guards on production &amp; construction equipment</li> <li>• Hand and power tools (used &amp; maintained to manuf. standard)</li> <li>• Ladders (stable, 1:4, correct rating and type)</li> <li>• Scaffolds, material lifts, vehicles, powered mobile equipment: (inspected, tagged, trained &amp; authorized operator, etc.)</li> <li>• First Aid kits (correct size, contents correct and fresh)</li> <li>• Correct PPE available and being used</li> </ul>	<ul style="list-style-type: none"> <li>• Warning signs and labels</li> <li>• Safe Work Practices &amp; Job Procedures used?</li> <li>• Proper lifting</li> <li>• Housekeeping</li> <li>• Safety training</li> <li>• Smoking</li> <li>• Sanitary eating area</li> </ul>		
<b>General Observations:</b> <div style="border: 1px solid black; padding: 10px; text-align: center; margin: 10px auto; width: 80%;"> <p style="font-size: 1.2em; margin: 0;">SAMPLE ONLY</p> <p style="font-size: 1.5em; margin: 0;">Larger form is available</p> </div>						
<b>Powered Mobile Equipment Logs up to date for Equipment in use - List equipment and status</b>						
<b>Hazard Assessments – complete and relevant?</b>						
<b>Comment on any positive or negative notes</b>						
Item #	Location on site	Hazard(s) Observed	Sever / Prob	Corrective Actions	Date/Time Completed	By Whom (print name)
<b>SEVERITY</b> 1. Imminent Danger   2. Serious   3. Moderate   4. Slight <b>PROBABILITY</b> A. Probable   B. Somewhat Probable   C. Remote   D. Extremely Remote		Discussed on site with: _____			Copy to: _____	
Worker printed name and signature(s) _____				<b>Manager Signature:</b> _____		
_____				<b>Reviewed Date:</b> _____		



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Version – June 2012 / Printed - 24 August 2017

## **INCIDENT INVESTIGATION POLICY**

It is the policy of Kondro Electric (1980) Ltd. to investigate incidents so that causes can be determined and corrective actions can be implemented to prevent recurrence. The following types of incidents shall be fully investigated:

1. Incidents that result in injuries requiring medical aid.
2. Incidents that cause property damage or interrupt operations with potential loss.
3. Incidents that have the potential to result in (1) or (2) above, such as close calls.

All reported incidents that fall within legislative requirements must be reported to the appropriate authority (WH&S, WCB, Police, etc.).

Incident investigations are not conducted to fix blame. They are conducted to find facts which help prevent recurrence.

### **Responsibilities**

All workers shall report all incidents as soon as possible to their immediate supervisor and assist in the investigation when requested.

Supervisors and workers shall conduct initial investigations together and submit their report to the safety coordinator promptly.

The Safety Coordinator shall determine the need for, and if necessary shall direct, detailed investigations. They shall also determine causes, recommend corrective action, and report to the manager.

The manager shall review all Safety Coordinator's reports, determine the corrective action to be taken, and ensure that such action is implemented.

Signature: \_\_\_\_\_

Date: September 17, 2009

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Version – June 2012 / Printed - 24 August 2017

## **Investigations and Reporting – Background Information**

### ***Definition***

Any unplanned or unwanted event, which results in damage or injury, or could have resulted in damage or injury (i.e., loss-type incidents or no-loss incidents/close calls).

### ***Incident Reporting/Documentation***

Almost every incident is the result of a combination of causes (i.e. unsafe acts and/or unsafe conditions). To maintain a safe and healthy workplace, incidents must be reported and documented so that the appropriate corrective action(s) can be implemented.

### ***Investigations***

The primary purpose of an investigation is to identify the root causes so that corrective action can be taken to prevent a recurrence of the incident. Additionally, information collected will be valuable in meeting the WCB and OH&S reporting requirements.

Investigations should be conducted by the supervisor in charge of the area and/or personnel involved. The investigator must review every incident report to ensure that appropriate corrective actions take place. Note: vehicle incident investigations may be completed by outside sources due to legislated requirements and/or insurance purposes.

Initial investigations should be conducted as soon after the reported incident as possible. If the incident involves an injury to a worker or workers, the preservation of the health and safety of the injured is of primary importance and the investigation can be conducted once the injured are stabilized and removed from the area.

There may be situations where a secondary investigation needs to be conducted by others e.g. Occupational Health & Safety Ministry, Environmental Ministry, Insurance companies, the Owner of the work site or the prime contractor.

The result of any and all investigations should contain monitoring and follow up actions to verify that recommended controls have been implemented.

**NOTE: Reporting of incidents is outlined in the Occupational Health & Safety Act – Section 18 and also in the Workers' Compensation Act.**

## ***Conducting Investigations***

The person or team conducting the investigation of an incident should proceed as follows, keeping in mind that the scene must remain undisturbed except to extricate and care for the injured and to secure the scene to make rescue and care possible. More than one person may be responsible for completion of the points below.

### **Take control of the scene.**

1. Initiate the Emergency Response Procedure and notify head office of an incident.
2. Ensure the scene is safe to enter and do not enter until it is.
3. If possible and as soon as possible have one person photograph the scene and notify the required authorities while others care for the injured. Remove the injured from the scene only if it is necessary for their further safety.

### **Begin the preliminary investigation**

4. Ensure that no further injury or damage occurs.
5. Get the "big picture" of what happened.
6. Examine equipment/materials involved.
7. Preserve the evidence - collect and safeguard any physical evidence. Where practicable, the scene of any incident should be left untouched, except for activity necessitated by rescue work or to prevent further injuries or damage, until the incident has been investigated.
8. Take detailed photographs of the scene.
9. Interview witnesses and obtain written statements where appropriate.

### **Examine in Greater Detail**

10. Analyze all the available information to determine the causes.
11. Look for causes where "the system failed the worker," not only for those where "the worker failed the system."
12. Determine what corrective action will prevent recurrence.
13. Complete the report.
14. Forward the completed report to management for review and signature.
15. Follow-up to ensure corrective action is completed.

## Modified Work Program

This policy enables workers who have been injured or ill due to their occupation an opportunity to do meaningful work which will not hinder and will aid their recovery.

### *Procedure*

1. Employee is injured while at work, performing work related duties
2. First aid is administered and if required medical aid is obtained (Outpatients, Emergency Room, etc.). Company will pay normal wages for the day of the injury.
3. Complete WCB and incident reports with the employer no later than the day after the injury or the next work day. This **MUST** be done within 72 hours of the injury, no exceptions for any reason.
4. Depending on the nature of the injury, a consultation with an occupational therapist may be requested.
5. Therapist, in consultation with WCB will provide Modified Work Program instructions.
6. The Company will discuss with the individual the scope of work to be performed prior to starting. Duties will then be assigned to the employee and recovery monitored.
7. Worker is required to report for work at normal hours of work (subject to limitations prescribed by the therapist) and attend all prescribed therapy sessions. Sick time not related to the injury will not be paid by Employer or WCB.
8. The employee will only be eligible to return to regular duties after a written release from the Therapist or Doctor is obtained.
9. Records will be kept in the employee file of the nature of the injury suffered in case of reoccurrence.
10. All the above steps are monitored by WCB and records kept are accessible only to the worker and those supervisors and managers with a direct need to know. Confidentiality of workers medical records will be respected at all times.

## Incident Investigation Forms List

Forms in this section are as follows:

- Incident Investigation Form..... KON-INV001
- Witness Statement Form ..... KON-INV002
- Motor Vehicle Incident Report ..... KON-MVA001
- Near Miss reports (small notepad type form not in manual)

# Incident Investigation Report

Date: \_\_\_\_\_

Who was involved? \_\_\_\_\_

\_\_\_\_\_

What happened? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

When? Date: \_\_\_\_\_ Time: \_\_\_\_\_

Where? \_\_\_\_\_

What was the immediate cause?

\_\_\_\_\_

\_\_\_\_\_

What were the underlying causes?

\_\_\_\_\_

\_\_\_\_\_

What training, instruction, cautions, were given before the incident?

\_\_\_\_\_

\_\_\_\_\_

How can similar incidents be prevented in the future?

\_\_\_\_\_

\_\_\_\_\_

Recommendations for further action:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Investigator: \_\_\_\_\_ Signature: \_\_\_\_\_



## **EMERGENCY PREPAREDNESS POLICY**

Management will provide the training and resources to supervisors and workers to be prepared for emergencies that are reasonably foreseeable. This includes design and implementation of a generic Emergency Response Plan (ERP) that will address these potential emergencies.

Supervisors are responsible to ensure that the Generic ERP will address the needs of the specific sites that they are working on. If the generic ERP does NOT address the foreseeable emergencies, the supervisor will bring this to the attention of management and together they will devise an ERP that will address the issues prior to work on site that may require the upgraded ERP.

The Site Specific ERP information will address contacts for, and directions to, the nearest Emergency Facilities as well as clear directions to the worksite.

It is company policy that ALL workers are to be aware of the details of the ERP for the site they are on, but in the event of an emergency they are to follow the instructions of the manager/supervisor on site at the time of the emergency

Mock Emergency drills will be held at least once per year at the main shop. Kondro Electric employees will cooperate with Prime Contractors to test their emergency response plans.

Emergency Preparedness includes Fire Prevention for it is far more desirable to prevent a fire than to fight a fire. Fire protection and prevention shall embrace all measures relating to safeguarding human life and preserving property by ensuring that workers are aware of the causes of un-controlled fires and at all times workers shall know the location of fire extinguishers, fire fighting devices and be properly trained in how to operate them in order to respond to fires in the correct manner.

First Aid kits will be provided in vehicles and trailers as required by Legislative Requirements.

Signature: \_\_\_\_\_

Date: September 17, 2009

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Version – June 2012 / Printed - 24 August 2017

## **Emergency Preparedness**

Emergency preparedness means having plans in place that we hope we will never have to use. However, the Company recognizes that employees must be prepared for and capable of dealing with the following:

- providing first aid to the injured
- providing transportation to medical aid for the injured
- promptly contacting outside agencies for assistance
- conducting initial attack fire fighting
- control of emissions and spills if trained and equipment is available

### ***As Principal Contractor***

Our emergency procedures are specific to emergencies but generic to sites and each supervisor must ensure that the response is compatible with the conditions on the specific worksite.

As all personnel will be oriented by us with our New Employee Orientation, there will be a standardized approach to emergency matters.

A copy of the Generic or Site Specific Emergency Response Plan is to be posted or available at each worksite

### ***As Sub-Contractor***

Our supervisory personnel will approach the principal contractor to determine what emergency response guidelines are in place and what is required of our employees.

Whether these guidelines do or do not exist, it will be up to our senior supervisor on the job site to ensure that Kondro Electric or principal contractor guidelines are known to and practiced by all workers for whom he/she is responsible. (Site Emergency Response Guidelines shall be posted).

### ***Notification***

Regardless of what procedures are in place, a worker shall advise his/her supervisor as quickly as possible of the situation causing the concern. Similarly where notification of government and municipal agencies is required, the senior company representative at the site will notify head office and the office will take the appropriate action.

### ***First Aid***

Workers in our employ will have first aid training as set out in the Occupational Health and Safety Regulations.

Also, at least minimal first aid supplies as per the Occupational Health and Safety Regulations shall be on the site. In any case of injury accident at the site, our first aiders shall make themselves available to assist the principal contractor, if needed.

### ***Transportation***

In case of Emergency, it is the duty of the senior site supervisor to ensure that all transportation requirements shall be made.

### ***Contacting Outside Agencies***

When an accident resulting in injury, fire or other emergency occurs, outside assistance from the local ambulance, fire or utility organization may be needed.

It is essential that every employee and supervisor is aware of the nearest means of communication and how to summon assistance.

For field settings and remote locations, radius or non-company telephones may be used to summon help.

This also will be the responsibility of the senior site supervisor using the appropriate safety legislation to ensure notification.

### **Utility Contact While Excavating or Trenching**

Line Locates are to be ordered well in advance of excavating and trenching operations, this will prevent utility line contact. In the event of a contact, regardless whether the line was located or not, refer to the Utility Contact Emergency Response Plan

### **Initial Attack Fire Fighting**

Most fires start small and then grow into larger ones, and a great deal of damage can result from them if persons are not prepared. For this reason, all vehicles shall be equipped with Fire extinguishers and workers should be knowledgeable in their correct use.

See Also Emergency Response Plan

## GENERIC EMERGENCY RESPONSE PLANS

The four response plans are to be reviewed at job startup. If site conditions extend beyond the scope of the generic plans, a site specific plan must be adopted using the information which follows. Generally, it is the Prime Contractors responsibility to orchestrate the ERP. However, negligence on the part of the Prime Contractor does not excuse Kondro Electric and our workers from preparing and acting in a responsible manner.

### In the event of an Emergency:

- 1) Alert other workers present on the worksite of the danger and evacuate if necessary to the site muster point(s)
- 2) If the situation requires it ensure that all workers are safe (evacuated)
- 3) Do not put yourself in critical danger, appraise the situation and then
  - a) If you and/or your co-workers have the necessary skills (training) and information (MSDS, etc.) and equipment (fire extinguishers, rescue devices) attempt to rectify the situation or aid the injured worker(s). First Aiders are listed in the Back of the Safety Manual.
  - b) If you do not have the skills, information and equipment, call the appropriate emergency personnel – See FRONT of Manual for Emergency Numbers
- 4) Notify company officials

<b>STRUCTURAL COLLAPSE</b>	Evacuation to muster point & head count
<b>EXPLOSION / FIRE / TOXIC GAS RELEASE</b>	Sound the alarm and evacuate the premises.
<b>INJURY</b>	Administer First Aid if possible.
<b>VIOLENCE</b>	Remove yourself from threat of injury.
<b>CHEMICAL SPILL</b>	refer to MSDS

Except to perform the following tasks, the incident scene must remain undisturbed

- Attend to injured workers OR
- Prevent further injuries OR
- Protect property that is endangered by an incident

Reportable incidents – the following list represents incidents that by law must be reported to Workplace Health and Safety and/or Workers Compensation by the Safety Coordinator. See OH&S Manual section 18 for complete explanation and details

- An injury or accident that results in Death or requires more than two days hospitalization
- An explosion or fire that caused, or had the potential to cause serious injury
- The collapse or upset of any hoisting device
- The collapse or failure of any structural member of a building

## **Emergency Plan Guidelines**

An Emergency Response plan must include the following:

- Identification of potential emergencies
- Procedures for dealing with these emergencies
- Identification, location and use of emergency equipment
- Emergency response training requirements
- Location and use of emergency facilities
- Fire protection requirements
- Alarm and emergency communication requirements
- First aid service requirements
- Procedures for rescue and evacuation
- Designated rescue and evacuation of workers
- A list of phone numbers for emergency and support services (available to workers)

### ***Plan Testing***

Emergency plan rehearsals are required. A rehearsal may require:

- Notification of emergency services, all supervision and prior notification of workers;
- A pre-determined all clear signal to allow rapid return to work;
- An evaluation system to determine the effectiveness of the emergency plan. (This is usually only a stopwatch timing to determine evacuation time.
- 

### ***Coordination with Plant or General/Prime Contractor***

If the project is located within a plant or under the control of a prime contractor which has an existing emergency and evacuation plan, the supervisor must learn it and establish only those procedures necessary to complement the existing system and ensure a complete Emergency Plan for the project site. If there is no plan, Kondro Electric will protect their workers by maintaining an ERP for their own workers.

## Guidelines for Preparing the Emergency Plan

All projects require an emergency plan. The magnitude and complexity of the plan depends on the size of the project/workplace. Required elements are:

- Kondro Electric (1980) Ltd. has generic Emergency Response Plans that will apply in most situations. This plan is to be reviewed at job startup to determine if different and/or additional hazards exist or could develop and additional plans shall be put in place to deal with the additional hazards.
- A method for reporting the emergency. Generally, telephone is the most effective. As cell phones are not reliant on site infrastructure, they would be considered most effective. However, an alternative should be considered if the situation warrants.
- A list of workers responsible in emergency situations and how to contact them. This information is in each job shack and the front of each safety manual.
- A plan for hazard assessment and correction of hazard. This information is in each safety manual.
- A list of phone numbers for emergency and support services. This should be available to all workers. This information is in each and the front of each safety manual.
- A method for sounding an alarm, such as an air horn or warning bell. On most sites, the entire site is visible and an emergency on one part is readily seen and reacted to by all workers on site.
- A description of potential emergencies. This is extremely important from an educational standpoint. Emergency preparedness is essentially based on anticipating all possible situations.
- A designated muster point, as well as location of emergency equipment, first aid station, fire extinguishers (in company trucks). This should be designated at the start of the job.
- An evacuation, head count and rescue plan. Rescues should only be attempted by trained persons and only if they do not risk injury to themselves. Each contractor and supervisor should have a roll call system in place to ensure that all workers have been evacuated from the hazard area.

















# Emergency Response Telephone Numbers

Edmonton and Area All Emergencies ..... 911  
 Lloydminster Hospital .....(306) 820-6000  
 RURAL HOSPITALS ALBERTA  
 Bonnyville.....(780) 826-3311  
 Cold Lake .....(780) 639-3322  
 Elk Point .....(780) 724-3847  
 Provost .....(780) 793-2291  
 St Paul .....(780) 645-3331  
 Vermilion.....(780) 853-5305  
 Wainwright.....(780) 842-3324  
 RURAL HOSPITALS SASKATCHEWAN  
 Maidstone .....(306) 893-2622  
 Paradise Hill.....(306) 344-2255  
 Poison Control Center ALBERTA ..... 1-800-332-1414  
 Poison Control Center SASK.....(306) 766-4545

TDG Emergency (CANUTEC) ..... (613) 996-6666  
 ..... or \*666 on a cellular phone  
 COMMON ALBERTA UTILITIES CALL ALBERTA ONE CALL  
 Alberta One Call..... 1-800-242-3447  
 Shaw Cable ..... 1-866-344-7429  
 Telus Repairs..... 611  
 ATCO Gas)..... (780) 420-5585  
 Sask. 1<sup>st</sup> Call ..... 1-866-828-4888  
 Sask. Power (from out of Province)..... 1-888-355 5589  
 ..... Or in Sask 310 2220  
 SaskGas..... 1-888-700-0427  
 Sask. Tel ..... Call Sask 1<sup>st</sup> Call  
 AB OH&S Division (Edmonton) ..... 1-866-415-8690  
 AB Workplace Health and Safety..... (780) 427-4952  
 Saskatchewan OH&S Division (Saskatoon).... 1-800-667-5023

## Emergency Numbers

<b>Most Emergencies – Most Areas</b>	<b>911</b>
<b>Fire - Lloydminster</b>	<b>911 OR 306-825-0558</b>
<b>Fire – Britannia/Wilton</b>	<b>306-825-7411</b>
<b>Police</b>	<b>911 OR 306-825-6350</b>
<b>Ambulance</b>	<b>911 OR 306-825-7077</b>
<b>Shop – Lloydminster</b>	<b>780-875-6226</b>
<b>Shop - Edmonton</b>	<b>780-460-1199</b>

Lloydminster Workers - Remember that depending where you are (border and Sasktel/Telus issues) some numbers may not work as you expect them to. Remain calm and use an alternate method to secure assistance.

Common Alberta Utilities such as Telus, ATCO Gas, ATCO Electric, and almost 700 others are all contacted via Alberta One Call.

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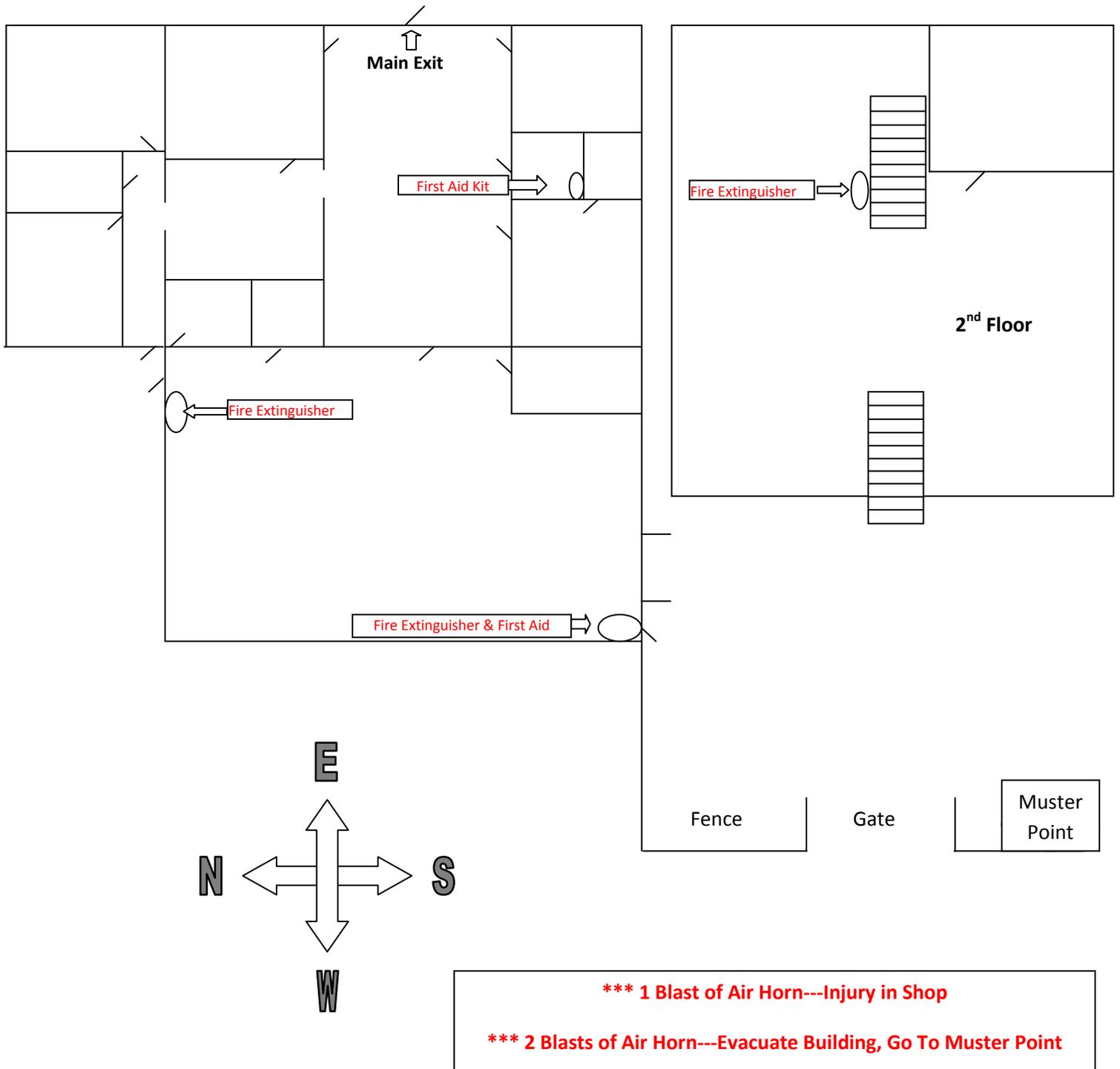
Insert St Albert ERP here

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# Emergency Plan



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## Procedures for Rescue of a Worker Suspended in a Safety Harness

The rescue of a worker who has fallen and is being suspended in their safety harness needs to be undertaken as quickly as possible for several reasons:

- The worker may have suffered injuries during the fall or may have fallen due to a medical problem (heart attack, seizure, etc) and may need medical attention.
- Workers suspended in their safety harness for long periods may suffer from blood pooling in the lower body which can result in "suspension trauma" – a potentially life threatening condition. (See attached information on treating suspension trauma — have this available on site to provide to First Aid team and to external emergency crews.)
- The suspended worker may panic if they are not rescued quickly.
- The event that led to the fall may create additional risks that need to be addressed.

### General Rescue Procedures:

If Elevating Work Platform such as scissor lift, articulated lift, etc. (EWP) is available on site:

- Bring the EWP to the site and use it to reach the suspended worker.
- Ensure that rescue workers are protected against falling.
- Ensure that the EWP has the load capacity for both the rescuer(s) and the victim.
- If the victim is not conscious, 2 rescuers will be needed to safely handle the weight of the victim.
- Position the EWP platform below the worker and disconnect his lanyard when it is safe to do so. **DO NOT LAY THE WORKER DOWN UNLESS LIFE THREATENING INJURIES REQUIRE IMMEDIATE TREATMENT — SEE "SUSPENSION TRAUMA" INFORMATION attached**
- Treat the victim for Suspension Trauma and any other injuries.
- Arrange for transport to nearest hospital.

If no Elevating Work Platform is available:

- Where possible, use ladder(s) to reach the victim.
- Rig separate lifelines for rescuers to use while carrying out the rescue from the ladder(s).
- If worker is not conscious or cannot reliably help with his/her own rescue, at least 2 rescuers may be needed.
- If worker is suspended from a lifeline, where possible, move the suspended victim to an area that can be safely reached by the ladder(s) or from an adjacent work area.
- If victim is suspended directly from his/her lanyard or from a lifeline, securely attach a separate lowering line to the victim's harness.
- Other rescuers should lower the victim while he/she is being guided by the rescuer on the ladder.
- Once the victim has been brought to a safe location, administer First Aid and treat the person for Suspension Trauma and any other injuries.
- Arrange for transport to nearest hospital.

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If the injured person is suspended near the work area and can be reached safely from the floor below or the area they fell from:

- Ensure that rescuers are protected against falling.
- If possible, securely attach a second line to the workers' harnesses to assist in pulling them to a safe area. (Note: at least 2 strong workers will be needed to pull someone up.)
- Ensure that any slack in the retrieving lines is taken up to avoid slippage.
- Once the victim has been brought to a safe location, administer First Aid and treat the person for Suspension Trauma and any other injuries and arrange for transport to the nearest hospital.

If a person has fallen and is suspended in an inaccessible area (e.g. a tower, against a building or structure that has no openings):

- Specialized rescue techniques are needed for this type of situation. It may involve a rescuer rappelling or being lowered down to the victim, it may involve using the lifeline to retrieve the fallen worker, or the use of high-reach emergency equipment.
- Due to the inherent risk to the rescuers and/or the victim, this type of rescue should not be undertaken by people without specialized training and experience.

SEE SUSPENSION TRAUMA SECTION ON THE PAGES FOLLOWING

## Suspension Trauma Treatment

### This information is to be given to Emergency Response and Medical Personnel

Treating someone with suspension trauma is NOT standard First Aid. If you follow the normal advice for 'fainting' you can harm your patient. Read Reflow Syndrome at the end of this report.

#### First Response

Anyone who has developed suspension trauma to any extent will have reduced blood flow to their brain. This initially causes symptoms of shock, and if untreated will lead to loss of consciousness. This in itself could kill by preventing the patient controlling their own airway, but eventually the reduced cerebral blood supply will lead to brain damage and death. The goal of the first responder is to return oxygen to the brain while preventing **Reflow Syndrome**. Never allow the patient to lie down, even for an instant, unless there is a life-critical need to perform CPR. Normally, suspension trauma makes the legs feel numb. If the patient has no other injuries and yet complains of severe pain in their legs, especially when you try to move them, then they may have developed a severe condition called **compartment syndrome**. You should place them in a sitting position and summon an ambulance with great urgency. The patient may deteriorate rapidly. There is nothing you can do for compartment syndrome as a first responder. If managed correctly, patients with suspension trauma - even severe cases - will make a full recovery and have no long-term complications. Normally patients who do not require hospital treatment will be well enough to return to normal duties within 24 hours.

#### If The Patient is Conscious

**If removal from suspension is not going to happen instantly, and you can reach the casualty or they can follow your instructions, lift their knees into a sitting position using a rope, sling, hose, items of clothing etc.**

Your-first-action when they are released from suspension should be to place them in a sitting position with their body upright and their legs flat or bent at the knees. This will reduce the pooling effect of gravity, but will keep most of the pooled blood in the legs, preventing reflow. The patient must not be allowed to stand up, exercise, drink or eat. If possible keep them as calm and relaxed as you can, to reduce the effects of stress on the heart rate. There is no difference in the angle of the knees - the critical issue is that their body is upright, and their legs are no longer dangling.

Obviously they need to be removed from suspension, and kept in the same sitting position at all times. They may feel faint, and so you will have to stay with them and prevent them collapsing onto the floor. **If you have oxygen available, administer it at 100%**. Do not give the patient any other medication or fluids unless you have been trained to do so, and are aware of a pressing need. Summon medical help as soon as possible - a fully conscious and aware patient may be taken to hospital in a private vehicle, but remember that anyone suspended for more than 10-20 minutes should be sent to hospital for routine blood tests, even if they are not injured.

If you cannot reposition the patient or remove them from suspension, then you must expect them to faint at some point. Providing 100% oxygen will help a great deal, but your priority is maintaining their airway and arranging urgent rescue.

#### If The Patient is NOT Conscious

**If removal from suspension is not going to happen instantly, and you can reach the casualty, lift their knees into a sitting position using a rope, sling, hose, item of clothing etc.**

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Loss of consciousness due to suspension trauma itself indicates that the pooling of blood has had time to develop, and that laying the patient flat will probably be counterproductive - maybe leading to death. You will have to manage the airway while keeping the patient in a sitting position. Suspension trauma rarely leads to cardio-respiratory arrest in the short term, but if the patient requires CPR then this overrules the posture policy, and you must of course lay them flat. This specific situation is allowable because without a heartbeat, the reflow effect cannot happen - and the circulation caused by normal CPR is not strong enough to kick-start any reflow issues.

A patient who has been rendered unconscious by another event (such as impact in a fall or electrocution) and who is reached within the first 10 to 20 minutes of suspension can be allowed to lay flat. If you are trained in the use of artificial airways then these may assist in supporting the airway even in a sitting position, but there is no need to use the sitting position unless the casualty has been suspended for a longer time.

### **EMT / Paramedical PHLs treatment**

#### **The following advice is aimed at trained medical and EMT staff**

Note that suspension trauma (orthostatic incompetence) is not part of your standard training program. You should approach the incident as similar to a crush injury in terms of immediate management though there are critical differences in both pre-release and post-release therapy. If the condition is advanced or the patient has lost consciousness, urgent transport to a trauma center is required.

The patient will be cerebrally hypoxic due to gravitational pooling of venous, blood in the legs, the majority being in the thighs. The initial presentation after 5 to 10 minutes of suspension will be of distributive shock leading to tachycardia and tachypnea. Local PP02 from fingertip sensors will be normal, but saturations from earlobe sensors will be reduced. There need be no other injuries. The patient may complain of general symptoms of shock, heat or absence of sensation in the legs. Patients reporting severe pain in the legs with the absence of orthopedic insult are of great concern as it suggests formation of **compartment syndrome**.

As soon as possible after suspension has begun, the patient should have been repositioned into a sitting posture with the thighs horizontal or slightly elevated with respect to the pelvis, and the spinal column vertical. If this was done within a few minutes, then it is unlikely that a sufficient volume of blood has pooled to cause loss of consciousness, however it can still present a hazard if permitted to return to the core in bulk. A patient who has not been repositioned in time is likely to have progressed beyond distributive shock and lost consciousness via the central ischaemic response. Barometric trigger pathways will produce enforced syncope via bradycardia, leading to decreased cerebral perfusion and an instant LOC. If the patient falls into a prone position at LOC then blood returns to the brain and they recover without artifact, however in suspension the patient is usually unable to fall over, and remains held upright. In this position the LOC persists, as does bradycardia and almost negligible cerebral perfusion. This is in itself fatal within a matter of minutes, but of course the patient is also unable to maintain a patent airway and so primary cause of death is often suffocation.

Stabilization is possible on scene, but great care should be taken to monitor PP02 and ECG during release and transport, as the patient will be electrocardially fragile.

- Do NOT allow the patient to lie flat (unless CPR is required) or to stand up
- Provide oxygen at 100% for all patients
- Prior to release, manually stabilize the airway via all possible means
- During release, be particularly cautious of the patient entering a prone position by accident, for example

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when transferring between stretchers or being passed across an obstruction

- Minimize fluids to those required for unrelated trauma. The patient is not hypovolemic and adding IV will lead to hypervolemia when the patient is repositioned. You may start a keep-open line for future access but operate on minimal flow
- The patient may also be hypothermic if suspended outdoors, and external re-warming may be necessary. Do NOT give warmed IV fluids at this stage.
- Monitor ECG carefully - peaked T waves, prolonged QRS or HTN indicates hyperkalemia and the onset of crush syndrome. If detected, direct and aggressive action is needed. This is beyond current PHTLS training but via direction will require IV bicarbonate, calcium chloride, albuterol or insulin via large-bore IVs running normal saline. This contradicts the earlier fluid restriction policy but is only to be initiated under direction if compatible ECG artifacts are identified.
- Transport the patient, in the sitting position, to the nearest hospital

### **Hospital ER treatment**

If the patient has been in suspension for a prolonged period (variable, but between 5 and 40 minutes is the typical point at which symptoms develop) then venous pooling in the legs will have led to cerebral hypoperfusion and hypoxia. This may have been treated on scene with O<sub>2</sub> or by repositioning into a sitting posture. **DO NOT ALLOW THE PATIENT TO LAY FLAT for at least 30 minutes unless there is a priority need for life support.** Pooled venous blood in the lower extremities has been static for some time, and will be entirely hypoxic. Anaerobic metabolism within the legs will result in toxic levels of metabolites in the pooled volume, and on release into core circulation, it can result in cardiac arrest, dramatic ETCO<sub>2</sub> and PP0<sub>2</sub> fluctuations and transient hypercarbia. Cytochrome-C release and transient renal hypoxia will result in renal artery spasm, tubular necrosis and potential acute renal failure within 60 to 80 hours of the incident. Increased serum creatinine with reduced output, uremia and acidosis are diagnostic. Dialysis would be required in such cases to prevent mortality.

In most cases of suspension in a purpose-designed harness, confined space or litter then the patient will not have experienced soft tissue insult sufficient to cause crush syndrome, however extended suspensions (in excess of 2 hours) or those with thin ropes or straps may initiate the syndrome. It manifests as release of potassium and myoglobin, and can contribute to renal insult. Serum K should be monitored, as hyperkalemia is diagnostic in these cases. Treatment of crush syndrome is based on volumetric support, renal protection and serum K management. Once local reflow has been corrected then IV support may be required to manage hypovolemia, bicarbonate and mannitol are indicated to control acidosis and hyperkalemia. Monitor ECG and regular urine myoglobin, CPK and full chem panel.

In severe cases of vertical immobile suspension where pooled blood has become cytotoxic, a split-form full blood transfusion is possible and effective, with surgical interruption of the femoral arteries and veins placing the lower limbs on bypass, enabling a localized transfusion and management regime for reflow and crush syndrome to be applied while the remainder of the body is managed in isolation. If successful this can remove the need for amputation, though the procedure is complex.

Patients are considered equally susceptible to suspension trauma in terms of gender, age, fitness, body mass or race. Those taking tricyclic antidepressants will have increased susceptibility as they contribute to orthostatic hypotension. There is no difference in treatment or medication required for patients on TcaDs.

Patients involved in enforced vertical posture but not caused by a harness can also present with suspension trauma.

Potential candidates include those entrapped in vehicles, buried in snow, sand or grain, etc.

### **Reflow Syndrome In Suspension Trauma**

Anyone who has developed suspension trauma is also at risk from reflow syndrome - caused when the pooled blood in their legs is allowed to flow back into their body. It is potentially fatal.

The exact details of what happens and why are dealt with in our medical treatment section, but the idea is simple enough to summarize. The blood that is pooled in the legs starts off perfectly normal, with oxygen and nutrients dissolved in it. Over time, the cells in the legs use up the oxygen and nutrients - even though they may not be moving much, they still need to stay alive. When all the oxygen is used up, the cells start to burn fats. This process, called anaerobic metabolism, is usually only seen in extreme exercise, and relies on a fast blood flow to keep the process safe. As the blood in the legs is not moving, toxic byproducts of fat burning start to build up in the blood. After quite a short time they can reach dangerous levels.

If the blood is allowed to rush back into the rest of the body then these toxins, and the lack of any oxygen, can cause very serious problems. The heart can stop, the liver, kidneys and brain can be damaged, and in many cases they will die. This will happen if the patient is allowed to lie flat on the floor. It's therefore very important that they stay in a safe position until they reach hospital, or until the blood has had time to gradually clear the toxins. A 'safe position' is the same as for the rest of suspension trauma - sitting upright with their legs bent at the waist. During a rescue, transport to hospital or even when they arrive, they have to be kept in this position and NEVER allowed to lie down. Our guideline is that they should stay sitting for 30 minutes after being released from suspension. It does not matter if they have fainted or not.

*The information above is reproduced from SuspensionTraumaInfo which is a non-profit organization based in the USA and operated by a group of medical and rescue professionals from the USA, UK and elsewhere. Its aim is to provide the best advice and education about suspension trauma and associated conditions, without bias towards particular devices, training providers, protocols or national boundaries. Donations or sponsorship are not permitted to affect the content of this website in any way, and we will never display adverts. Links from our website are only granted to organizations who have no commercial bias.*

*Downloaded April 2008*

## RECORDS AND STATISTICS POLICY

It is the policy of Kondro Electric (1980) Ltd. to keep relevant statistics to assess the success of the program as well as to make necessary modifications and to plan for future activities.

### Records on File

Health and safety related records that will be recorded, analyzed and kept on file

- Workers health and safety training (copies of training certificates such as Driver training, First Aid, WHMIS, etc.)
- Health and safety orientation forms (in each worker file)
- Minutes of health and safety meetings (filed by job / date)
- Hazard Assessments (filed by job / date)
- Maintenance records for tools, equipment and vehicles (filed by Unit #)
- Inspection reports (filed by job / date)
- Emergency response drills
- 

The following are legislative requirements

- Incident investigation reports (filed by date)
- Medical treatment reports (filed by date in worker files, secured.)

### Statistical Analysis

According to the ACSA Audit Document, The ANSI standards for statistical analysis are not accurate for companies with less than 40 employees. For this reason statistics shall be kept regarding type of injury and shall be reviewed after every incident and once per year (at Audit Time) to expose if there is a trend developing

A copy of each incident report, with personal information blacked out shall be kept in one file for this purpose only. At year end, in preparation for the annual safety audit, these incident reports shall be cross referenced to the employees personnel file to find information regarding Lost Time Cases (Off work longer than day of injury) and Days Lost (if LTC).

Signature: \_\_\_\_\_

Date: September 17, 2009

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## Records and Statistics Forms List

Forms in this section are as follows:

- Nature of Injury Form ..... KON-INJ001
- Sample Health and Safety Activity forms

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# Kondro Electric (1980) Ltd

YEAR

Nature of Injury	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	TOTAL
Head													
Eye													
Neck													
Shoulder													
Back													
Ribs													
Arm													
Elbow													
Wrist													
Hand													
Leg													
Hip													
Knee													
Ankle													
Foot - Puncture													
Foot - bruise/crush													
Hernia													
Other Sprains/crushes													
Burns													
Infections/chemical exposures													
Misc cuts													
Miscellaneous													
Fatalities													

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KON-INJ001

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## LEGISLATION POLICY

It is the policy of Kondro Electric (1980) Ltd. to keep relevant legislation available to workers and to refer to this legislation during Job Planning activities

Quality health and safety programs must be based on legislated requirements. The specific legislation that governs the work site depends on the combination of conditions, people, equipment, materials, environment, tools and situations.

The Alberta Occupational Health and Safety Act, Regulation and Code apply to most work sites in the province. This legislation sets out obligations for Employers, Workers, Suppliers, Manufacturers, Owners, Contractors and Prime Contractors. The legislation stipulates that these groups must be knowledgeable, and must follow the legislation on their work sites. The legislation describes performance standards, assigns responsibility, designates authority and sets penalties.

It is the employer's responsibility to ensure that:

Workers are competent or work under the direct supervision of a competent worker

Workers are aware of their responsibility for their own safety and the safety of other workers as per legislation as outlined in the Handi-Guide and on the orientation form.

Equipment is the correct type for the job

Workplace hazards are identified, evaluated and controlled

Workers have the responsibility to:

Refuse work which presents an imminent danger to themselves, or other workers, which is not normal to their occupation or which would not normally be done

Co-operate with the employer for the purpose of protecting themselves and other workers

A copy of the current OH&S legislation should be supplied for each work site.

Other legislation that may govern our worksites is listed in Section 1

Signature: \_\_\_\_\_

Date: April 20, 2012

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## ENVIRONMENTAL POLICY

The purpose of this policy is to ensure that all workers and subcontractors respect the natural environment by maintaining a clean environmentally friendly work place.

The proper safeguard of our environment is important to our company. While doing our work, we shall consider the environmental impact on humans, animal and plant life, air, water and soil and take the appropriate protective actions and work towards:

- Minimizing the risk to public health, both now and for future generations
- protecting the environment from adverse effects of construction operations
- compliance with all legislated standards and regulations
- assessing potential environmental risks
- cooperating with government, industry and workers to maintain environmental awareness

We expect all persons to do their best to prevent harm to the environment. Our goals on the job can be met without risking harm to the environment.

We shall select, use, store and dispose of products in a manner that will provide appropriate consideration of, and protection to, the environment.

The Company will follow the ACTS Guidelines with respect to the breakdown of job responsibilities in order to maintain a clean work space and to ensure that all materials are properly stored (while work is in progress) and waste is disposed properly according to O.H.&S, WHMIS and TDG Handling Procedures and the Environmental Protection and Enhancement legislation and other applicable legislation.

In addition, the Company will properly notify clients to previously unknown site conditions which might warrant an environmental audit.

Signature: \_\_\_\_\_

Date: September 17, 2009

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## WHMIS

The WHMIS System is an information system to provide workers with the information to safely deal with controlled products in the workplace. Key components in the WHMIS system are Supplier Labels and Material Safety Data Sheets (MSDS). Supplier labels are the first indicator a worker sees that will tell them they are working with a controlled product. Supplier labels contain the following information:

1. Name of the product
2. Supplier Information
3. Hazard symbols (poison, flammable, etc.)
4. Risks when using the product
5. PPE required
6. First Aid treatment if necessary
7. Reference to available MSDS

Alberta OH&S Code Section 395(5)e states (paraphrased) that the requirements for labeling, MSDS sheets and availability of MSDS sheets do not apply to consumer products (available at retail outlets, silicone caulking, household cleaners, etc.) Kondro Electric deals with a limited number of controlled products as well as numerous consumer products. The MSDS sheets for non-consumer products will be incorporated into the safety manuals rather than a separate document.

MSDS sheets for all products (consumer and non-consumer) will be available at the main shop.

### MSDS Sheets Included In This Manual

- A/D Fire Barrier Intumescent Sealant
- Chico A05
- Diesel (Husky)
- Gasoline (Husky)
- Hydrochloric Acid
- Iberville Ductseal (Ciduct-1)
- Ilsco De-Ox
- IPEX Conduit Cement
- Noalox Anti-Oxidant
- Penetrox A-13 Anti-Oxidant
- Propane (Husky)
- WD-40 Aerosol (bulk products have a different MSDS than Aerosol)
- Yellow 77 Wire Pulling Lubricant
- RTV-2 Silicone Caulk

If all MSDS are not in place, contact your supervisor or the Safety Coordinator to update your manual.

CURTAL Herbicide MSDS in shop copy and PENCOR Copy only

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