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1.2 Assignment of Responsibility and Accountability for Safety

Note: The safety information in the corporate policies do not take precedence over Occupational Health and Safety regulations. All employees are familiar with the OH &S Act, Regulations and Codes.

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Section 1 – Management Involvement and Commitment

1.1 Safety Policies

1.1.1 Corporate Health and Safety Policy

Dobbyn Electrical Services Ltd. (DES) is an ethical safety conscious company committed to the following:

- The personal safety of our employees, subcontractors, contractors, worksite personnel and others who may interact with the company
- Protecting the environment
- Controlling and minimizing loss

Company management is responsible for providing strong leadership in safety. This leadership includes identification of existing and potential work hazards, provision and maintenance of protective equipment, and development of training programs. With this in mind, it is the intention of the company to establish and maintain effective policies, programs and procedures that will effectively eliminate work related accidents and injuries involving everyone, everyday in every job.

DES believes that each employee and subcontractor is both responsible and accountable for the development of a safe working environment. The success of our accident prevention program depends on everyone being responsible for obeying all safety rules, following recommended safe work procedures, enhancing the policies and rules of our Customers and Government Regulatory Agencies, using personal protective equipment and participating in safety training programs. Compliance with all aspects of this program is a condition of working for DES and will be strictly monitored. Failure to comply will result in disciplinary action, dismissal or legal action.

DES believes that effective communications between all levels of the company are necessary to monitor and improve work performance and safety. All employees and subcontractors have the right and obligation to insist upon unsafe conditions being corrected before proceeding with the work. If you are aware of any unsafe conditions and/or work practices, report them to your immediate supervisor. Work must be done safely, correctly and efficiently. By fulfilling our safety responsibilities, everyone who works with and through DES will share the benefits of a safe workplace.

Tom Dobbyn – Safety Officer

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1.1.2 Environmental Policy

ENVIRONMENTAL POLICY STATEMENT

Sound Environmental management is one of the core values of Dobbyn Electrical Services Ltd. Pollution prevention, conservation and conformity to all applicable environmental laws, regulations and contracts are the cornerstones of this policy.

ENVIRONMENTAL POLICY

Dobbyn Electrical Services Ltd. (DES) is dedicated to the provision of electrical services and affirms its conviction that success can only be achieved through the respectful use of natural resources.

DES is committed to helping its clients and employees continuously improve the integration of environmental protection issues into all their activities.

As part of its commitment, DES will ensure that all of its activities are in compliance with municipal, provincial and federal environmental laws and regulations.

DES will raise the awareness of its employees and managers so environmental protection is an integral part of their activities.

DES is committed to supporting the City of Calgary's Environmental Policy.

This policy will be communicated to all employees and made available to the public upon request.

The president and owners of DES are responsible for implementing and monitoring this policy. All employees, contractors and outside consultants working for DES must share this commitment.

Tom Dobbyn – Safety Officer

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1.1.3 Inspection Policy

Dobbyn Electric conducts a detailed Hazard Assessment on each project under taken. Hazard assessments are recorded and updated, when required, during the project as on site conditions change. All site personnel are made aware of site conditions prior to commencement work are notified of any condition changes.

Based on hazard assessments, equipment or tools, such as barricades or caution tape are provided to identify hazards inherent to the project and the work scope will be altered to minimize any risk.

Upon project completion, Dobbyn Electric personnel will re-grade affected areas as required, remove all unused, recyclable, or redundant materials and notify the appropriate authorities that project is complete and ready for final inspection.

The standards established by the Canadian Electrical Code will be adhered to on all projects.

Tom Dobbyn – Safety Officer

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1.1.4 Training and Safety Meetings

It is Dobbyn Electric’s policy to provide training to all employees on our day-to-day procedures, including the use , operation and maintenance of our Bucket and Auger Trucks.

The minimum standards of the Canadian Electric Code will be followed at all times for every task performed.

Tool Box meetings are held on site at commencement of work and weekly Shop Safety Meetings are held and chaired by supervisory personnel.

Agenda items are presented to staff for discussion, with resolution of agenda and new issued recorded in the minutes of the meeting.

Tom Dobbyn – Safety Officer

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1.1.5 Policy for Maintenance Program

The maintenance program covers all electrical contracting equipment, personal protective equipment, electrical hand tools, service vehicles, bucket trucks and auger trucks.

All equipment is inspected prior to commencement of work on a daily basis. Personal protective equipment found deficient is discarded and replaced. Electric hand tools found deficient are removed from service and repaired or replaced as required. Each vehicle is inspected prior to use by the crew assigned for operation. Lights, tire pressure and fluid levels are maintained prior to usage and at completion of shift assignment.

All vehicles are serviced regularly and servicing recorded in vehicle maintenance binder.

Tools, equipment and machinery are maintained to standards contained in OH & S code section #25.

Tom Dobbyn – Safety Officer

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1.1.6 Substance Abuse Policy

DES is committed to maintaining a safe and healthy work environment for all workers and the public at large. Alcohol and drug abuse is recognized by DES as a safety, health, and security problem. All workers and management are expected to maintain a safe work environment that is free of illegal drugs and alcohol.

The possession and/or consumption of alcohol or illicit drugs, or the misuse of prescription or “over the counter” drugs, is prohibited on DES premises, on work sites, in DES or contractor vehicles, at camps owned or operated on behalf of DES, or in any circumstance deemed to present risk to the concerns of DES including the protection of its public reputation.

DES recognizes the importance of making its workers aware, through education, of the actual and potential workplace risks related to the consumption or use of alcohol or drugs.

The use of alcohol and/or drugs, to the degree that safety and job performance are affected, will be treated as a major misconduct, a serious violation of this policy, and cause for corrective measures.

When deemed necessary alcohol and/or drug testing will be conducted.

DES is proactive in communicating all aspects of our Drug and Alcohol policies to ensure that each employee has a complete understanding of the policies intent.

Note: The safety information in this policy does not take precedence over Occupational Health and Safety regulations. All employees are familiar with the OH &S Act, Regulations and Codes.

Tom Dobbyn – Safety Officer

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1.1.7 Hazard Identification Policy

Dobbyn Electric provides service for a wide variety of projects, each of which has specific safety requirements that are dealt with on site, by assigned personnel.

Hazard identification, control and emergency planning are assessed and appropriate field level documentation is completed and reviewed with on site personnel prior to work commencement.

Tom Dobbyn – Safety Officer

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1.1.8 Policy for Spill and Release Incidents

Dobbyn Electrical Services operates two types of vehicles equipped with hydraulic tools. Each vehicle carries a spill kit designed to contain any spill or release of fluids contained on the vehicle.

During normal field operations no transfer of fluids is required on the vehicles and hazardous materials are not handled by Dobbyn Electric personnel, however, in the event of an accidental release or equipment failure, the prime contractor and site supervisory personnel will be informed immediately.

In the event that sub-contractors i.e.: hydro-vac units, utility locators etc., are involved Dobbyn Electric activities, they will be considered Dobbyn Electric employees, and will be cognizant and compliant with Dobbyn Electric's safety policy in all matters.

Dobbyn Electrical Services will assist in containment and clean-up as deemed necessary by Alberta Environment.

Tom Dobbyn – Safety Officer

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1.1.9 Traffic Control Policy

Dobbyn Electrical Services Ltd., engages in projects that require traffic control equipment and permits to satisfy each projects requirements.

With safety of personnel and property as our prime focus, street or lane closure permits will be secured through the City of Calgary permit department and traffic control signage and/or barricades will be supplied, installed and removed by city services in co-ordination with the permitting department.

On all projects requiring traffic control devices deployed by City Services, Dobbyn Electric provides vehicles with directional flashing lights and beacons to maintain high visibility on site to augment controls supplied by the city.

Temporary traffic control manuals are on site at all times, as well as the original documentation acquired through the City Street Use Permit department.

Permit acquisition and traffic controls coordinated by Tom Walls, Service Manager.

Site supervision executed by Darren Dobbyn

Tom Dobbyn – Safety Officer

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1.1.10 Discipline Policy

Dobbyn Electric is committed to providing its workers with a safe workplace and an atmosphere, which allows them to protect workers inventory and other assets placed in their care. Employees are expected to be in suitable mental and physical condition while at work, allowing them to perform their job effectively and safely.

Dobbyn Electric has implemented a system for consistently enforcing their Health and Safety Program.

DES Health and Safety Officer is responsible to train new employees and upgrade training to all employees when new policies are implemented or job procedures are changed for employee safety.

Owners and Safety Officer's must ensure that their employees receive adequate training in the areas to be enforced (i.e. rules, regulations, practices and procedures).

Violations should be handled in an objective, but firm manner and employees must be instructed during job orientation, what the enforcement policy is.

Enforcement policies vary from organization to organization, but they often follow a similar progression. DES handles violations in a similar manner unless otherwise specified.

- 1st offense - verbal warning
- 2nd offense – written warning
- 3rd offense – suspension
- 4th offense – dismissal

Documentation must be done at each stage of the enforcement policy.

Tom Dobbyn – Safety Officer

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1.1.11 Emergency Procedures Policy

All DES vehicles are equipped with city maps highlighting hospitals and medical clinics.

Upon arriving at a worksite employees are required to familiarize themselves with the nearest medical facility and quickest route to the facility. In addition, employees must be aware of the job site address – to enable emergency response.

Emergency services will be contacted immediately when required with personal injuries being given top priority. First aid assistance will be rendered until emergency services arrive on site.

DES contact – Tom Walls – (403) 312-5897 will be notified.

The emergency procedures provided in the Occupational Health and Safety Act, Part 7, 115-118 are read, understood and carefully followed by every DES employee.

Tom Dobbyn – Safety Officer

Date

Contacts	Phone Numbers
Work Place Health & Safety Contact Centre	1-866-415-8690
Fortis Emergency	310-9473
Enmax Emergency/Trouble	403-514-6100
Ambulance Fire Police	911
Spill/Release Reports	1-800-222-6514

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1.2 Assignment of Responsibility and Accountability for Safety

All management, employees and subcontractors are trained in the DES Health and Safety Program. Subcontractors must meet or exceed DES program standards.

DES conducts regular safety meetings to convey responsibility and accountability to employees and subcontractors.

Manager

1. Establish a safety policy
2. Provide a safe workplace
3. Maintain a safety program
4. Ensure proper training of workers
5. Ensure PPE are available
6. Ensure regular inspections are done
7. Correct unsafe conditions
8. Provide first aid
9. Investigate all accidents
10. Report injuries to W.C.B.
11. Ensure compliance with regulations
12. Set a good example

Supervisor/Foreman/Subcontractors

1. Promote safety awareness
2. Establish safe work procedures
3. Instruct workers
4. Correct unsafe practices
5. Detect troubled employees
6. Correct unsafe conditions
7. Enforce safety rules
8. Inspect for hazards
9. Investigate all accidents
10. Ensure proper maintenance
11. Comply with regulations
12. Set a good example

Worker

1. Use safe work procedures
2. Report unsafe conditions
3. Correct unsafe conditions
4. Report unsafe acts
5. Report any injury
6. Comply with rules and regulations
7. Make safety suggestions
8. Set a good example

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Section 2 – Hazard Identification, Elimination & Control

2.1 Workplace Hazard Assessment and Control

2.2 Spill Response and Clean Up

2.3 Identifying Hazards

2.4 Minor Operation Hazard Analysis

2.5 Field Level Hazard Assessment

2.6 Hazard Assessment Checklist and Corrective Action Form

2.7 Fall Protection Plan

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Section 2 – Hazard Identification, Elimination & Control

2.1 Workplace Hazard Assessment and Control

Dobbyn Electric provides service for a wide variety of clients with worksites that are unique. Most projects engaged are short in duration, but present challenges both logistical in nature and safety specific. Hazard Assessment analysis is performed by management and/or supervisors and/or subcontractors on each project and recorded and discussed with all personnel on site to ensure awareness and control of on-site hazards. Monthly workplace hazard assessment surveys are conducted on projects of larger scale to remain current with changing project scope.

2.2 Spill Response and Clean Up

For each work site, a hazard assessment plan is discussed and documented and includes spill response and clean up.

- 1). Identify all possible occurrences that could practically, occur from our actions.
- 2). Pre-determine way to contain and stop spill.
- 3). Have proper spill kit on each vehicle.
- 4). Each employee to contact job foreman when spill occurs.
- 5). Each job foreman to contact prime contractor immediately.
- 6). Contaminated material to be removed from site properly and shipped to authorized site disposal yard.

Contact number for disposal 1-800-222-6514.

2.3 Identifying Hazards

Activity: Working near traffic (street, parking lot, construction site).
Working around equipment (ours, others)
Working on buildings (above, around, behind).

Hazard Identification: Check and assess site before set-up, after set-up. Be aware of what is happening around you during operations. Check site before removal/dismantle of job completion.

Precautionary Action: Wear reflective safety vest. Always be cautious of traffic. Use flashing beacons on trucks, portable barricades, flag persons. Always be aware of equipment in area. Have pre-work hazard assessment meeting and follow DES Health and Safety Manual.

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2.4 Minor Operation Hazard Analysis Form

Minor Operation
Hazard Analysis

Date: _____ (one/two days)

Operation: _____

Procedure: (1) _____
(2) _____
(3) _____
(4) _____
(5) _____
(6) _____

Hazards: (1) _____
(2) _____
(3) _____
(4) _____
(5) _____
(6) _____

Precautions: (1) _____
(2) _____
(3) _____
(4) _____
(5) _____
(6) _____

Signatures: _____

Have you made your hazard analysis today?

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2.5 Field Level Hazard Assessment Form

FIELD LEVEL HAZARD ASSESSMENT		Company Name:	
<i>Work to be done:</i>		<i>Date:</i>	
<i>Task Location:</i>	<i>Emergency Meeting Location</i>	<i>Permit job #</i>	
<i>Identify and Prioritize the tasks and hazards</i>			
<i>TASKS</i>	<i>HAZARDS</i>	<i>PLANS TO ELIMINATE/CONTROL</i>	
<i>Require Gloves to be Removed</i> Yes No		<i>Warning ribbon needed?</i> Yes No	
<i>Is the worker working alone:</i> Yes No		<i>If Yes, explain:</i>	
JOB COMPLETION			
<i>Are all Permit(s) closed out:</i> Yes No		<i>Are there Hazards remaining:</i> Yes No	
<i>Was the area cleaned up at end of job/shift?</i> Yes		<i>Explain:</i>	
<i>Were there any incident/injuries:</i> Yes No		<i>If Yes, explain:</i>	
<i>Worker(s) Signature</i> _____		<i>Foreperson's Signature</i> _____	
_____		_____	
_____		<i>Reviewed by:</i> _____	

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2.6 Hazard Assessment Checklist and Corrective Action Form

	N/A	OK	Priority	Action Required / Completed by Whom / Date and Time
1. Overhead Lines	_____	_____	_____	_____
2. Underground Installations (Locates Done)	_____	_____	_____	_____
3. Transformers	_____	_____	_____	_____
4. Traffic Concerns	_____	_____	_____	_____
5. Road Signs, Barricades	_____	_____	_____	_____
6. Flag Person	_____	_____	_____	_____
7. Visibility: Fog, Dust, Mist	_____	_____	_____	_____
8. Trenching Depths, Sloping, Shoring	_____	_____	_____	_____
9. Spoilage piles distance from Excavation	_____	_____	_____	_____
10. PPE Used and Maintained	_____	_____	_____	_____
INSPECTION:				
1. Equipment inspected prior to use	_____	_____	_____	_____
2. Site activities inspected for Compliance of rules and regs	_____	_____	_____	_____
3. No Cracking in boom	_____	_____	_____	_____
4. Beacon working	_____	_____	_____	_____
5. Back-up warning system	_____	_____	_____	_____
6. Slow moving signs in place	_____	_____	_____	_____
7. Safety hooks on front bucket And boom	_____	_____	_____	_____
8. Hoses all OK. No leaks.	_____	_____	_____	_____

Priority Index:

- 1. Imminent Danger**
- 2. Serious**
- 3. Minor**
- 4. Acceptable**
- 5. Not Applicable**

Date: _____ **Location:** _____ **Operator:** _____

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2.7 Fall Protection Plan

Branch	Date	Job Location
Job No.	Supervisor	Superintendent
<p>Supervisor to inspect the work area and at the beginning of the project and check-off the fall hazards that apply. A checkmark indicates a fall hazard that requires protective measures. Check-off the controls that apply. Explain below what additional control measures were implemented. All workers must be instructed in the following procedures and sign the back confirming their review and understanding of this Fall protection plan. Superintendent to review, revise if necessary, sign, date and forward to Risk Manager.</p>		

Fall Hazard

<input type="checkbox"/> 1. Working on unprotected leading roof edge	<input type="checkbox"/> 2. Working off aerial work platform	<input type="checkbox"/> 3. Assemble/dismantle of working off scaffold
<input type="checkbox"/> 4. Working off ladder	<input type="checkbox"/> 5. Holes in deck/roof	<input type="checkbox"/> 6. Swing stage
<input type="checkbox"/> 7. Sloped roof	<input type="checkbox"/> 8. Assemble dismantle fall protection	

Fall Protection Measures

<input type="checkbox"/> 13. Fall arrest protection	<input type="checkbox"/> 14. Fall restraint protection	<input type="checkbox"/> 15. Employees trained
<input type="checkbox"/> 16. Full body harness	<input type="checkbox"/> 17. Energy absorbing lanyard	<input type="checkbox"/> 18. Vertical lifeline
<input type="checkbox"/> 19. Horizontal lifeline	<input type="checkbox"/> 20. Restraint lifeline	<input type="checkbox"/> 21. Rope grab
<input type="checkbox"/> 22. Retractable lanyard	<input type="checkbox"/> 23. Anchor sling	<input type="checkbox"/> 24. 5000 lb anchor point
<input type="checkbox"/> 25. 90 lb anchor point	<input type="checkbox"/> 26. Guard handrails	<input type="checkbox"/> 27. Control zone
<input type="checkbox"/> 28. Barricade tape	<input type="checkbox"/> 29. Safety monitor	<input type="checkbox"/> 30. Surface opening protection
<input type="checkbox"/> 31. PR 600		

Rescue Plan

<input type="checkbox"/> 34. Fire Dept. high angle rescue	<input type="checkbox"/> 35. Additional AWP on site for rescue	<input type="checkbox"/> 36. Competent ground man to bring AWP down
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Additional information, instruction, procedures

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Section 3 - Safe Work Practices**3.1 Lifting - Hoisting****3.2 Live or Hot Equipment****3.3 Use of Auger Truck****3.4 Use of Bucket Truck****3.5 Use of Head Protection****3.6 Use of Hearing Protection****3.7 Use of Limb and Body Protection****3.8 Use of Portable Ladders****3.9 Use of Step Ladders****3.10 Fire and Use of Fire Extinguishers****3.11 Use of Chain Saws****3.12 Use of Explosive/Powder Actuated Fastening Tools****3.13 Use of Hand-Held Power Circular Saws****3.14 Lockout / Tag Out (LOTO)****3.15 Control of Hazardous Energy****3.16 Respiratory Protective Equipment**

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Section 3 - Safe Work Practices

Dobbyn Electric has a company safety manual which includes instructions and guidelines for tasks most commonly required on job sites. Safety is the primary focus in these instructions with alterations made as equipment and tools are changed or replaced.

3.1 Lifting – Hoisting

Evaluating the Load

Determine the weight of the object or load prior to a lift to make sure that the lifting equipment can operate within its capabilities.

Balance Loads

Estimate the centre of gravity or point of balance. The lifting device should be positioned immediately above the estimated centre of gravity.

Landing the load

Prepare a place to land the load, lower the load gently and make sure it is stable before slackening the sling or chain.

- Select only alloy chain slings and NEVER exceed the working load limit(s).
- Make sure the hoist or crane is directly over the load.
- Use slings of proper reach. Never shorten a line by twisting or knotting. With chain slings, never use bolts or nuts.
- Never permit anyone to ride the lifting hood or the load.
- Make sure all personnel stand clear from the load being lifted.
- Never work under a suspended load, unless the load is properly supported.
- Never leave a load suspended when the hoist or crane is unattended.
- Inspect all slings thoroughly at specified intervals and maintain them in good condition. Inspect each chain or sling for cuts, nicks, bent links, bent hooks, etc. before each use. If in doubt, do not use it.
- Ensure the safety latches on hooks are in good working condition.
- Make sure a tagline is used to control the load.
- Use a signaler (properly identified) who understands techniques of proper signaling.

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Section 3 - Safe Work Practices

3.2 Live or Hot Equipment

Working on Live or Hot Equipment

- All workers that may engage in “live” electrical work must be a Journeyman Electrician or Lineman, or an indentured Electrical Apprentice working under the direct supervision of a Journeyman Electrician.
- All work to be done within the Guidelines of the Canadian Electrical Code.
- Panels or disconnects should be locked off.
- Access to electrical rooms to be locked if there is no means of locking the panel.
- Never work alone.
- Turn off Power supply if possible.

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Section 3 - Safe Work Practices

3.3 Use of Auger Truck

Protective equipment must be worn at all times while being around, operating or working in the equipment.

- Hard Hats
- Steel-toed Boots
- Protective Gloves
- Safety Glasses
- Safety Vests

Safe Operating Steps

- Select location of truck.
 - Park on as flat as ground as possible.
 - Park where safe from traffic, check for overhead clearances.
 - Check that Alberta First Call has been done before any digging.
 - Position the truck so as to move auger with proper clearance to complete job.
- Level the Truck with outrigger.
- Inspect auger teeth, hoses and fittings.
- Inspect wire rope and chain before lifting boom.
- Have ground man in place inspecting site/hole.

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3.4 Use of Bucket Truck

Protective equipment must be worn at all times while being around, operating or working in the equipment.

- Hard Hats
- Steel-toed Boots
- Protective Gloves
- Safety Glasses
- Safety Vests
- Fall protection safety harness - must be worn while in the bucket.
-

Safe Operating Steps

- Decide on location of truck.
 - Park on as flat as ground as possible.
 - Park where safe from traffic.
 - Position the truck so as to move boom as little as possible to complete the job.
- Set emergency/air brakes.
 - Stay required distance from overhead power line.
 - Use cones or barricades when on public property.
- Level the truck with outriggers.
- Remove boom straps.
- Attach fall arrestor harness to boom.

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3.5 Use of 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.

In construction, the recommended type of protective headwear is a hard hat, which has the required 'dielectric strength' and meets CSA requirements for Class G (general use) and Class E (electrical trades).

Most head protection has two parts, the shell – light and rigid to deflect blows and the suspension – to absorb and distribute the energy of a blow.

Both parts of the headwear must be compatible and maintained according to manufacturer's instructions. Bump caps or laceration hats are not considered safety helmets. In Alberta they can only be used when the 'only hazard' is a strike to the head against a stationary object.

Inspection and Maintenance

Proper care is required for head gear to perform efficiently. The usual maintenance is simply washing with a mild detergent and rinsing thoroughly.

Replace head gear that is pitted, holed or cracked or brittle.

Replace any head gear that has been subjected to a blow or if its serviceability is in doubt.

Do not drill - remove any peaks and alter the shell or suspension in any way.

Do not use solvents or paints on the shell.

Do not put chin straps over the brims of certain classes of head gear.

Do not use any liner that contains metal or conductive material.

Do not carry anything in the hard hat while wearing the hard hat.

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3.6 Use of 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 cannot carry on a conversation at a normal volume of voice when you are 3 feet (920 millimeters) apart.

Remember this is only a rule of thumb. Any sound over 80 dba requires hearing protection. Hearing loss can be very gradual, usually happening over as number of years.

The most common types of protection are earplugs and earmuffs.

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 and 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 (they take the sharp edge off the noise).

Workers should have their hearing tested at least every year, twice a year if they work in a high noise area.

Note - If your hearing protection does not take the sharp edge off the noise, or if the workers have pain, headaches, discomfort or ringing in the ears, your operation requires the advice of an expert.

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3.7 Use of Limb and Body Protection

General

Due to the nature of the construction workplace and the number and kinds of hazards, it is not possible to cover specialized limb and body protection in detail.

These types of hazards are known as ‘job exposure’ fire, temperature extremes, body impacts, corrosives, molten metal’s, or cuts from sharp or abrasive materials.

PPE in the category would be items such as:

- Gloves
- Flame and chemical resistant clothing
- Steel toed boots

Trade job specialty can be obtained through Occupational Health and Safety.

Follow manufacturer’s instructions for use and replacement.

Inspect PPE for defects before use.

Wash off chemicals and fluids before removing clothing.

Ensure that gloves fit properly.

Do not wear hand PPE with metal parts near electrical equipment.

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3.8 Use of Portable Ladders

General

Ladders can be used safely if they are given the respect they deserve.

Before using any ladder, make sure that it is in good condition and is the right ladder for the job to be done.

Safe Operating Steps

- When setting up a ladder, secure the base and “walk” the ladder up into place.
- The ladder should be set at the proper angle of one (1) horizontal to every four(4) vertical.
- Before using a ladder, make sure it is secured against movement.
- When in position, the ladder should protrude one (1) meter above the intended landing point.
- Workers shall not work from the top two rungs of a ladder.
- Don't overreach while on a ladder. It is easier and safer to climb down and move the ladder over a few feet to a new position.
- Always face the ladder when using it. Grip it firmly and use the three-point contact method when moving up or down.
- The minimum overlap on an extension ladder should be one (1) meter unless the manufacturer specified the overlap.
- Keep both metal and wood ladders away from electrical sources.

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3.9 Use of Step Ladders

General

As with all ladders, make sure that the step ladder is in good condition, and that it is the right ladder for the job to be done.

Safe Operating Steps

- Step ladders are to be used only on clean and even surfaces.
- Do not work from the top two steps of the ladder (counting the top platform as a rung).
- When in the open position ready for use, the incline of the front step section shall be one 1) horizontal to six (6) vertical.
- The step ladder is only to be used in the fully opened position with the spreader bars locked.
- Tops of step ladders are not to be used as a support for scaffolds.
- Don't overreach while on the ladder. Climb down and move the ladder over to a new position.
- Only CSA Standard ladders will be used

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3.10 Fire and Use of Fire Extinguishers

Good housekeeping is essential in the prevention of fires. Fires can start anywhere and at anytime. This is why it is important to know which fire extinguisher to use and how to use it.

Always keep fire extinguishers visible and easy to get at. Fire extinguishers have to be properly maintained to do the job. Where temperature is a factor, ensure that care is taken in selecting the right extinguisher.

Types of Fires

Class A: These fires consist of wood, paper, rags, rubbish and other ordinary combustible materials.

Recommended Extinguishers - Water from a hose, pump type water can, pressurized extinguisher, and soda acid extinguishers.

Fighting the Fire: Soak the fire completely – even the smoking embers.

Class B: Flammable liquids, oil and grease.

Recommended Extinguishers - ABC units, dry chemical, foam and carbon dioxide extinguishers.

Fighting the Fire-Start at the base of the fire and use a swinging motion from left to right, always keeping the fire in front of you.

Class C: Electrical Equipment

Recommended Extinguishers - Carbon dioxide and dry chemical (ABC units) extinguishers.

Fighting the Fire - Use short bursts on the fire. When the electrical current is shut off on a Class C fire, it can become a Class A fire if the materials around the electrical fire are ignited.

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3.11 Use of Chain Saws

Chain saws are used for many jobs in construction. Since this tool was primarily meant for use in the logging industry it can be an unfamiliar tool to some workers.

Workers must be trained in it's safe use and the training must include a minimum of the following elements.

The proper personal protective equipment to be worn is set out by the manufacturer and Occupational Health and Safety Legislation.

Fueling of the saw must be done in a well ventilated area and not while the saw is running or hot.

An approved safety container must be used to contain the fuel used along with a proper spout or funnel for pouring.

The correct methods of starting, holding, carrying, or storage and use of the saw as directed by the manufacturer must be used.

Ensure that the chain brake is functioning properly and adequately stops the chain.

The chain must be sharp, have the correct tension, and be adequately lubricated.

When carrying / transporting a chain saw the bar guard must be in place, the chain bar must be toward the back and the motor must be shut off.

The chain saw must not be used for cutting above should height.

Chain saws will comply with CSA Standards Z62.1-M-77.

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3.12 Use of Explosive/Powder Actuated Fastening Tools

There are a number of tools utilizing an explosive charge in use through-out the industry to drive fastenings.

The manufacturers of these devices provide detailed instructions regarding their use and maintenance. These instructions along with the legislation specifically set out for their use, shall be closely adhered to at all times.

The following general recommendations apply to all explosive/powder actuated tools.

- Only properly trained and qualified operators are to use this type of tool.
- The tool must be CSA standard approved.
- The tool should be loaded just prior to use with the correct load for the job anticipated. Tools should never be loaded and left to sit or be moved to an alternate work site after being loaded.
- The tool should never be pointed at anyone, whether loaded or unloaded. Hands should be kept clear of the muzzle end at all times.
- Tools should always be stored in their proper lockable boxes.
- Explosive/powder actuated tools must never be used in an explosive atmosphere.
- When used the tool must be held firmly and at right angles to the surface being driven into.
- Eye protection must be worn by the operator. Hearing protection is also worn in confined areas.
- To prevent free-flying studs ensure that the material being driven into will not allow the stud to completely pass through (ie. glass block, hollow tile, etc)
- Manufacturer's recommendations should be consulted and followed whenever there is doubt about the material being driven into.

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3.13 Use of Hand-Held Power Circular Saws

This type of power hand tools is one of the most commonly used in construction. Because of this, common use, there are numerous accidents due to thoughtless acts.

The following are the minimum accepted practices to be used with this saw.

- Approved safety equipment such as safety glasses or a face shield should be worn.
- Where harmful vapors or dusts are created, approved breathing protection is to be used.
- The proper sharp blade designed for the work to be done must be selected and used.
- The power supply must be disconnected before making any adjustments to the saw or changing the blade.
- Before the saw is set down be sure the retracting guard has fully returned to its down position.
- Both hands must be used to hold the saw while ripping.
- Maintenance is to be done according to the manufacture's specification.
- Ensure all cords are clear of the cutting area before starting to cut.
- Before cutting, check the stock for foreign objects or any other obstruction which could cause the saw to "kick back".
- When ripping, make sure the stock is held securely in place. Use a wedge to keep the stock from closing and causing the saw to bind.

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3.14 Lockout / Tag Out (LOTO)

Purpose

To provide the necessary guidance and direction to personnel in an effort to prevent injury and/or death during servicing or maintenance activities.

Responsibility

Management's Responsibility – Ensure that a Lockout / Tag Out Site-Specific Procedure is developed for all work locations and that it is read and understood by all supervisors, employees, and contractors who may be affected by it. It is the responsibility of management to provide the resources necessary for all work locations to effectively implement this safe work practice.

Supervisor's Responsibility – Enforce this safe work practice. Supervisor's must ensure that employees and contractors have been thoroughly familiarized with the program and associated procedures and that management has been made aware of any deficiencies. Supervisors are also responsible for developing equipment-specific lockout procedures as detailed in this program.

Worker, Contractor and Sub-Contractor's Responsibility – Apply the conditions and requirements of this safe work practice and any associated site specific procedures, and to inform supervisors of any problems or deficiencies in its application.

Note: Only authorized personnel are allowed to remove lockout and tag out devices. Personnel must at no time attempt to remove, bypass, or disable these devices.

Training

Service and Maintenance Employees or Contractors – Authorized employees or contractors who are required to do servicing and maintenance on equipment require training related to site-specific lockout / tag out procedures and equipment-specific LOTO procedures. They must be competent to apply LOTO and de-energize / isolate that particular equipment (Safe Work Practice 3.18 Control of Hazardous Energy)

Affected Employees or Contractors – Employees or contractors who may be affected by the application of LOTO need to be familiar with this control program, particularly the meaning of locks and tags on operational controls. These personnel are referred to as affected employees.

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3.14 Lockout / Tag Out (LOTO) - Continued

Resources and Equipment

Isolation Devices – specialized lockout / tag out materials are commercially available from most safety supply vendors, and cover a wide range of products suited to most types of isolation devices.

1. Locks

- High quality pin type (combination locks are not acceptable) and each lock is to be keyed differently.
- Master keys are prohibited. The lock holder should be the only person in possession of the unique key to the specific lock.
- Each lock should be permanently marked with a number, colour code, or name to allow for quick identification of the lock holder.
- Locks to be stored on a lock station.

2. Scissors and Lock Boxes

Scissors – can be applied to most hasps and other devices that can be secured with a padlock. The scissors allow more than one lock to be placed on a lockout, as would be the case if two or more workers were performing maintenance on the locked out equipment.

Lock Boxes – enable several workers to lockout a piece of equipment with one lock, place the key to that lock into the lock box, and then secure the lock box with multiple locks.

Circuit Breaker Lockouts – Each work location shall have at its disposal lockout supplies which are most suited to the types of equipment and energy sources that may need to be locked out at that work site.

3. Control Mechanism

A control mechanism must be devised and implemented that will ensure isolation of devices, locks, and tags are accounted for on completion of the work activity. The control mechanism is typically in the form of a master control board and a log sheet / book.

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3.14 Lockout / Tag Out (LOTO) - Continued

Notification

1. Advance Notice

Prior to taking any piece of equipment offline, all workers who may be affected by the shutdown shall be notified in advance by the worker responsible for the lockout / tag out. Notification should include the equipment and the energy sources involved in the shut down, length of time off-line, and the fact that the locks and tags will be applied.

2. Pre-Job Safety Meeting

For lockout jobs involving high hazard work or unusual circumstances, a pre-job safety meeting shall be conducted for all affected workers before shutting down and prior to lockout / tag out of affected equipment.

Withdrawal from Service

Only workers who are authorized may shut down equipment and apply LOTO.

Authorized workers shall be specifically trained in the shut down of that particular piece of equipment according to the manufacturer's specifications and/or the DES's safe operating procedures.

Isolation of Energy Sources

A key component of LOTO is the isolation and/or zeroing of all energy sources associated with a particular piece of equipment. It is imperative that all energy sources are considered and blocked, isolated, or de-energized according to Safe Work Practice 3.15.

Locking and Tagging

1. Signs

All lockout points should be appropriately identified so that workers are familiar with their position and condition. Preferably, signage is provided on both the equipment and the switchgear clearly stating which switchgear serves which equipment.

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3.14 Lockout / Tag Out (LOTO) - Continued

2. Isolation of Controls

Where operator controls (e.g., local start/stop stations) present the best solution for isolation of that piece of equipment.

- Turn the controls to the “off” position.
- Lock the controls to the “off” position.

Note: If the controls cannot be locked in the off position, then another source of lockable isolation must be found.

- If the controls are reversing controls, then they should be locked in both directions.
- If the controls are equipped with an override, then the override must be locked out rather than the controls and a tag indicating lockout placed on the controls.
- If the power supply shut off is located away from the controls, then an assistant shall be placed at the controls to ensure that they are not operated while the power supply is being locked out.

3. Locking Out Power Supply

When locking out the power supply is the best method of isolation, the following procedure shall be applied.

- It is imperative the equipment to be locked out is first shut down at its controls. If the machine is still running when the power supply is turned off, an electric arc produced at the electrical junction box can result in serious injury.
- Once the equipment is shut off, don safety glasses and/or full face shield, ensure the correct switch is in hand, stand back from the electrical panel (power box), and turn head away before throwing the switch.

Note: If the vehicle or mobile equipment is to be locked out for an extended period, arrangements for moving that equipment in the event of an emergency shall be made.

4. Motor Vehicle Ignition Keys

When the equipment to be locked out is a vehicle or other mobile equipment, the keys shall be removed from the ignition and, if only one person will work on that equipment, the ignition keys shall remain in that person’s possession until the work is completed.

If more than one person will work on the equipment, the ignition key shall be placed in a lock box, and each worker will place an individual lock on the lock box. In addition to isolating the ignition, the brake shall be applied and the wheels blocked to prevent the release of potential energy. If the equipment is to be jacked up, it will be blocked in the elevated position to prevent the release of potential energy.

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3.14 Lockout / Tag Out (LOTO) - Continued

Note: If the vehicle or mobile equipment is to be locked out for an extended period, arrangements for moving that equipment in the event of an emergency shall be made.

5. Valve Locks and Blinding Methods

When the equipment to be locked out requires the isolation of hydraulic or pneumatic energy, appropriate valve locks and blinding methods shall be used. If more than one person will be working on the equipment, then the valve lock key shall be placed in a lock box, and each worker shall place their individual padlock on the lock box.

6. Tagging

Tags shall be applied at the point of lockout. In addition, a tag shall be placed on the equipment operating controls if they are located separately from the energy isolation point.

Tags shall:

- Have the name and signature of the worker installing the lockout and performing the work written on them. In the case of a group lockout, the supervisor will sign the tag.
- Show the date of the lockout and estimated completion time.
- Include the name of the equipment being serviced.
- Be legible and understandable.
- Be securely attached.

Note: Tags and/or plastic tie straps shall never be used as a lockout device.

Test Start

Once Equipment has been locked out and tagged, the “authorized worker” shall ensure all personnel and tools are clear, then test (bump) start the locked out equipment as a final check to ensure that the lockout is successful

Restoration to Service

The process for returning equipment to service is just as important as the lockout process. All personnel shall apply the following steps when returning equipment to service:

- Check that all work has been completed. This is particularly important in the case of a group lockout.
- Ensure all tools, parts, equipment, debris, and personnel are clear of the work area.
- Close any open pressure relief valves or bleed lines, and ensure the integrity of any impacted fitting or piping connections.

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- Where possible, remove blocking. In some cases, removal of blocking may have to wait until power is restored.
- Remove blanks and blinds from lines.
- Replace guards and shields.
- Ensure that the controls are off and stay off while locks are removed. Use a second worker to assist in this process, if necessary.
- Allow each worker to remove their individual locks.
- Replace electrical fuse or reset breaker.
- Warn all affected workers, don safety glasses and/or face shield, stand clear, turn face away and turn power on.
- Warn all affected workers prior to function testing. Test operator controls and equipment operation.
- Remove all lockout tags from the system.

The equipment is now considered in-service and the lockout concluded.

Section 3 - Safe Work Practices

3.15 Control of Hazardous Energy

Purpose

To manage the control of hazardous energy to safely protect workers and the environment.

General

The main types of energy sources are:

1. Electricity
2. Hydraulic Energy
3. Pneumatic Energy
4. Potential Energy
5. Kinetic Energy
6. Thermal Energy
7. Chemical Energy

Employees and/or contractors who are required to utilize the lockout / tag out procedure (Safe Work Practice 3.14) must be knowledgeable of the different energy sources and the proper sequence of shutting off or disconnecting energy means.

More than one energy source may be utilized on some equipment and the proper procedure must be followed.

Procedures

Electricity

Electricity is a common energy source and can be isolated in a number of ways:

- Shut off and lock the breaker.
- Pull and lock the plug.
- Shut off and lock the generator.
- Pull and lock all fuses.
- Ground / discharge capacitors

Hydraulic Energy

Hydraulic energy (fluid under pressure) is another energy source that may need to be isolated. Hydraulic energy can be isolated in the following ways:

- Lower moving parts to lowest energy position (if work to be done requires parts to remain in a raised position, then the parts must be securely blocked).

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3.15 Control of Hazardous Energy - Continued

- Shut down and lock out the prime mover for the pump
- Open pressure bleed lines and lock them open.
- Blind/block pipe ends or flanges upstream of work to be done.
- Close and lock hand wheels, butterfly valves, or ball valves upstream of the work.

Pneumatic Energy

Pneumatic energy is air (or other gas) under pressure. Compressed air can be a hazardous source of energy. Compressed air systems can be isolated in the same way that hydraulic systems are. Care must be taken to ensure that all residual compressed air is bled from the system after isolation is in place and prior to maintenance work commencing.

Note: Some oil and gas processing facilities utilize compressed natural gas for instrument and valve operation. The following isolation precautions must be applied:

- Isolate the gas supply.
- Open pressure bleed lines and lock them open.
- Ensure that the atmosphere is safe to conduct the work activity, and continually monitor the atmosphere to identify any change in conditions.

In the event that a process system containing any substances under pressure is to be serviced, repaired, tested, adjusted, or inspected, the flow must be stopped or regulated to a safe level, and the location at which the work is to be carried out must be isolated and secured.

All hazardous, flammable, or toxic products and inert non-hazardous products over 350 kPa pressure must have:

- Installation of clearly marked and identified blinds/blanks or
- Double block and bleed system of isolation between the work and any source of pressure or source of hazardous products. The isolation valve system must provide a double set of seals with a bleed-off between the seals. All sealing units must be secured in the closed position, and the bleed-off systems must be secured in the open position. All bleed-off systems must be monitored for flow and piped to a safe location that will not endanger the workers.

Inert non-hazardous products under 350 kPa pressure must have:

- Installation of clearly marked and identified blinds/blanks or
- Single block and bleed system of isolation from all sources of pressure.

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3.15 Control of Hazardous Energy - Continued

Potential Energy

Potential energy is the energy stored in an elevated object. The only way to isolate potential energy is to either lower the object to ground level, or block or brace the object in its elevated position.

Kinetic Energy

This is the energy stored in an object in motion such as a rotating fan, electric motor, or flywheel. The object may continue to move several minutes after shutdown until all kinetic energy has dissipated. Some equipment may have a brake that can be applied to kinetic energy sources; however, in most cases, work must be delayed until all kinetic energy has dissipated.

Thermal Energy

Thermal energy is the transference of heat, whether by conduction, convection, or radiation. It is a stored form of energy that must be guarded against. The two methods for dealing with thermal energy are direct cooling and natural dissipation over time. Whichever method is used, workers must bear in mind that different materials dissipate heat at different rates.

Chemical Energy

Chemical energy often refers to the reaction of one substance with another. Care must be taken to ensure that if a chemical is used in the maintenance routine, then the MSDS is consulted first for information pertaining to reactivity and safe handling.

Section 3 - Safe Work Practices

3.16 Respiratory Protective Equipment

General

Respiratory protection is required when the breathing atmosphere is:

- Deficient in oxygen.
- Is toxic due to the presence of toxic or hazardous substances.
- Has a respiratory irritant.

Proper Selection of Respiratory Equipment

All personnel who may be required to use respiratory protective equipment shall be properly trained in the selection, use and care of all the types of respiratory protective equipment which they may be expected to use in their work activities.

Supplied Air Respirator Systems (SCBA, SABA)

SCBA (self contained breathing apparatus) or SABA (supplied air breathing apparatus) must be used in work tasks or in emergency situations when the breathing atmosphere is made toxic by any substance including, but not limited to

- Presence of hydrocarbon gas.
- H2S concentrations above 15 ppm (Alberta).
- The concentration of oxygen is less than 19.5% by volume.

Air Purifying Respirators

Air purifying respirators work on the principle of removing toxic contaminants from the air but cannot be used:

- When the breathing atmosphere contains less than 19.5% oxygen.
- When the toxicity of the breathing space exceeds the protection factor of the respirator.
- For protection against Hydrogen Sulphide.

The following is the colour coding standard for air purifying respirator cartridges:

Black	- Organic vapours (hydrocarbons)
White	- Acid gases (which combined with water in human tissue will form an acid)
Green	- Ammonia, Methylamine
Yellow	- Organic vapours and acid gases
Purple	- HEPA (High Efficiency Particulate Air) filter

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- 4.2 Installing Pre-Cast Concrete Bases**
- 4.3 Installing Street Light Davits**
- 4.4 Installing Overhead Wiring and Span Guy-Wire**
- 4.5 Installing Wood Poles**
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- 4.21 Handling and Transporting Hazardous Substances**

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Section 4 - Standard Operating Procedures

4.1 Installing New Flat Glass Luminaire

Purpose

To install new Flat Glass Luminaire in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. Have crew familiarize themselves with site hazards, overhead wire, and traffic and ground conditions by conducting a site hazard assessment followed by a tail-gate safety meeting for crew.
2. Inspect all equipment to ensure proper working condition prior to use including hydraulic lines and fittings to guard against leakage. The use of drip trays / pads are to be utilized at possible leakage or drip locations.
3. Use Bucket Truck as per manufacturer specifications.
4. If work is conducted on roadway, ensure traffic control people are available to ensure worker safety.
5. Use fall protection equipment in bucket and rotating beacons on truck.
6. Remove old style Cobra Head fixture from pole and disconnect wiring. Secure wires at top of pole to ensure they do not drop down pole.
7. Take Cobra Head fixture to ground man and have him hand you the new Flat Glass Luminaires.
8. Install new Luminaires on pole and fasten securely.
9. Level Luminaire and square with street.
10. Set to proper voltage.
11. Isolate / disconnect wire at hand hole if working on wiring.

Hazards

Traffic

Overhead wires

Falling out of bucket

Objects falling

Hydraulic Fluid Leak

Controls

Flag man for traffic control

Mandatory use of fall protection gear

Standing under objects prohibited

Inspect hydraulic lines and fittings

Use drip trays / pads at possible leakage / drip locations

Use traffic safety "always" be aware of vehicles

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Section 4 - Standard Operating Procedures

4.2 Installing Pre-Cast Concrete Bases

Purpose

To install new Pre-Cast Concrete Bases in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. Pick up bases at city yard and transport to job site.
2. Ensure site “under ground locates” have been done (obtain copy) and reviewed by crew.
3. Conduct a site hazard assessment followed by a tail-gate safety meeting for crew.
4. Inspect all equipment to ensure proper working condition prior to use including hydraulic lines and fittings to guard against leakage. The use of drip trays / pads are to be utilized at possible leakage or drip locations.
5. Determine location of base in print and on site with survey stakes (minimum of 2 offset stakes with clear and specific elevations properly marked).
6. Use Auger Truck with proper sized bit to dig hole to pre-determined depth as per manufacturer specifications.
7. Use Auger winch-line and angle base lifters together with lifting straps (rated for 6,000 lbs) to lift base into hole. Base is then lifted and dropped five or six times to tamp hole bottom. Base is then levelled and positioned perpendicular to curb and road.
8. When base is properly adjusted (so it is 6 inches above finished grade it then can be back-filled and tamped with hydraulic tamper.
9. 4 inch opening on base to face road side.

Hazards

Objects dropping
Base falling
Falling into hole
Overhead lines
Hydraulic Fluid Leak

Controls

Check equipment before use
Be aware of all hazards and discuss prior to commencing work
Inspect hydraulic lines and fittings
Use drip trays / pads at possible leakage / drip locations

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4.3 Installing Street Light Davits

Purpose

To install Street Light Davits in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. Transport out Street Light Davits to work site un-assembled.
2. Conduct a site hazard assessment followed by a tail-gate safety meeting for crew.
3. Inspect all equipment to ensure proper working condition prior to use including hydraulic lines and fittings to guard against leakage. The use of drip trays / pads are to be utilized at possible leakage or drip locations.
4. Assemble two sections of street light pole at job site where it will be erected.
5. Install #12 RW 90 conductors in street light pole and mount 400 watt HPS Luminaires (comes with lamp) on pole and terminate ground wire to pole bolt in hand hold.
6. Auger truck erects Street Light Davit Pole and fits base over bolts extending up from pre-cast concrete base. At hand hold install in-line fuse-holders and fuses and connect to underground street light feeds.
7. Ensure pole is straight and level and tighten nuts appropriately. Then double nut to ensure no loosening of it.

Hazards

Pole falling

Rope breaking

Object falling

Hydraulic Fluid Leak

Controls

Do not stand under objects overhead

Check Ropes before use

Inspect hydraulic lines and fittings

Use drip trays / pads at possible leakage / drip locations

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4.4 Installing Overhead Wiring & Span Guy-Wire

Purpose

To install overhead wiring and span guy-wire in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. Conduct a site hazard assessment followed by a tail-gate safety meeting for crew.
2. Inspect all equipment to ensure proper working condition prior to use including hydraulic lines and fittings to guard against leakage. The use of drip trays / pads are to be utilized at possible leakage or drip locations.
3. Use Bucket Truck as per manufacturer specifications.
4. Use light beacons or barricades to protect employees and work area.
5. Use safety harness and tether line when in bucket.
6. Do not over extend to work on something out of reach.
7. Ground man never to walk under bucket.
8. Dead-end Triplex at first pole with a wedge grip, through-bolt and clevis.
9. Move to second pole, use hand winch to jack Triplex up to pole top clevis.
10. When proper sag is achieved attach to clevis with wedge grip.
11. Repeat procedure for entire length of overhead wiring.

Hazards

Falling out of bucket
Objects falling
Traffic
Hydraulic Fluid Leak

Controls

Use fall protection gear
Do not stand under objects overhead
Check Ropes before use
Inspect hydraulic lines and fittings
Use drip trays / pads at possible leakage / drip locations

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4.5 Installing Wood Poles

Purpose

To install wood poles in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. 1st Call locates for utilities. **Must be done before anything is started!**
2. Check for overhead power lines or other hazards by conducting a site hazard assessment followed by a tail-gate safety meeting for crew.
3. Inspect all equipment to ensure proper working condition prior to use including hydraulic lines and fittings to guard against leakage. The use of drip trays / pads are to be utilized at possible leakage or drip locations.
4. Use Auger to drill hole.
5. Need at least 2 man crew.
6. Ground man to stay clear of boom and stand with his side to Auger (in case of bolt flying off).
7. Use Auger Truck to stand pole
8. Check winch line for signs of wear.
9. Do not walk under boom or pole being lifted.
10. Do not overextend when tamping in deep hole.
11. Ensure the crane operator will not move boom until ground man gives word.

Hazards

Pole falling

Objects falling

Rope breaking

Hydraulic Fluid Leak

Controls

Do not stand under objects overhead

Check lines/ropes before use

Follow ground man signals

Inspect hydraulic lines and fittings

Use drip trays / pads at possible leakage / drip locations

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4.6 Vehicle and Equipment Re-Fuelling

Purpose

To fuel equipment in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

When possible, fuelling should be conducted at commercial transfer locations. In the event that fuelling must occur on work-site location, these steps must be followed:

1. Assess possible hazards primarily for threat of spill/leakage and ignition sources.
2. Vehicle and equipment must be turned off to control ignition sources.
3. The use of cell phones while fuelling is strictly prohibited.
4. The transfer of fluid must always be directly supervised and transferred by an approved pump.
5. Spill kits must be accessible.
6. The use of drip trays / pads are to be utilized at possible leakage or drip locations.
7. Fuelling or maintenance of equipment must not take place with 30 meters of water ways, storm sewer system or environmentally sensitive areas.

Hazards

Ignition sources including static causing explosion / fire

Spill or leakage causing pollution

Controls

Shut off / remove all sources of ignition

Smoking prohibited

Ensure person fuelling equipment is grounded and does not touch metal surfaces

Spill kits accessible

Drip trays to be used

Fuel containers must be properly labeled

Fuelling must not take place anywhere where contamination to waters or environmentally sensitive areas is possible

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4.7 Chemical Management

Purpose

To store fuel in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. Assess possible hazards primarily for threat of spill/leakage and ignition sources.
2. Flammable fluids must be stored in special areas, away from heat, spark, flame, direct rays of sun and in a location where flammable vapours cannot be communicated to open flame. Containers must be securely sealed to prevent vapour loss.
3. When flammable liquids must be stored inside building, approved safety cans must be used.
4. Volatile or flammable liquids must not be carried on a vehicle transporting workers unless such materials are carried in an isolated compartment or an inside compartment separated from all persons by a firewall.
5. The use and storage of all chemicals and dangerous goods must be in compliance with municipal, provincial and federal laws and regulations, manufacturer's instructions and the relevant Material Safety Data Sheet.
6. Stored fuel quantities will be kept to a minimum on work sites.
7. Stored fuel must be contained in a drip tray to prevent spills / leakage.
8. Fire extinguishers and spill kits must be readily available.
9. Fuelling or maintenance of equipment must not take place with 30 metres of water ways, storm sewer system or environmentally sensitive areas.

Hazards

Ignition sources including static causing explosion / fire
Spill or leakage causing pollution

Controls

Shut off / remove all sources of ignition
Smoking prohibited
Spill kits accessible
Drip trays to be used
Fuel containers must be properly labeled

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4.8 Rigging / Lifting Loads

Purpose

To conduct rigging and lifting of loads in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. Have crew familiarize themselves with site hazards, overhead wire, and traffic and ground conditions by conducting a site hazard assessment followed by a tail-gate safety meeting for crew.
2. Inspect all equipment to ensure proper working condition prior to use including hydraulic lines and fittings to guard against leakage. The use of drip trays / pads are to be utilized at possible leakage or drip locations.
3. The manufacturer shall supply all lifting devices with documentation that defines permissible operating conditions, design criteria, documentation of testing, maintenance requirements and examination and inspection requirements
4. Name one man to act as signalman and instruct the equipment operator to recognize signals from that person only. The signal man must be careful not to order a move until he has received the "all ready" signal from each member of the crew. Identify the signalman by the use of distinctive vests, armbands, etc.
5. Each rigger must be sure he is in the clear before he gives an "all ready" to the signalman. Release sling / choker, if possible, before you give the "all ready" signal.
6. Ensure the load is secured in such a way that it cannot move around.
7. The load is positioned such that is easy and safe for the receiver to handle the material when unloading the load carrier.
8. Ensure that multi-leg chain slings are not crossed when attached to load
9. If the sling or choker must be held in position, ensure hand is clear of pinch points. Hands must be far enough away to eliminate the possibility of frayed wire catching a glove and jerking hand into a pinch point. (Frayed cables are to never be used).
10. Always observe load and watch for roll or swing. It is very difficult to position hook exactly over the load centre. Always expect swing and work away from and anticipate the direction or the swing.
11. Never be between material, equipment or any stationary object and load swing. Stay away from stacked material that may be knocked over. Never stand under the load or the boom.
12. Check and remove unnecessary blocks or other objects that might fly up if struck by the load. Set the load down easily and slowly so that if it rolls on the blocking it will be a slow shift and therefore allow for personnel to get out of the way.
13. Use tag lines to control the leads.

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4.8 Rigging / Lifting Loads - Continued

Hazards

Traffic

Overhead wires

Objects falling

Injury from swing

Environmental damage due to swing

Hydraulic Fluid Leak

Controls

Flag man for traffic control

Signalman to instruct operator

Standing under objects prohibited

Standing between objects and load prohibited

Stay clear of pinch points

Inspect hydraulic lines and fittings

Use drip trays / pads at possible leakage / drip locations

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4.9 Vehicle / Equipment Operation and Maintenance

Purpose

To maintain vehicle and equipment as per maintenance program to ensure that they are safe and will not cause damage or pollution to the environment.

Procedure

The maintenance program covers all electrical contracting equipment, personal protective equipment, electrical hand tools, service vehicles, bucket trucks and auger trucks. Inspection is always conducted by trained maintenance personnel.

1. All equipment is inspected monthly regardless of usage, and inspected and maintained prior to each use. Tools are kept in a tool crib with a deficiency repair list.
2. All vehicles are serviced regularly as per preventative maintenance schedule and documented as to specific work done, location or service work and price of servicing.
3. Service records for vehicles are kept in a truck maintenance binder, recording all dates, mileage and work done.
4. Tools, equipment and machinery are kept up to standards in part 25 of the Occupational Health and Safety Code.
5. Temporary repairs such as tape, wire, string, cardboard and plastic shall not be used for permanent repairs.
6. All repair parts and tools shall be stored in designated areas.

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4.10 Erosion and Sediment Control

Purpose

To control erosion and sediment on jobsites from contaminating storm drains, water sources and environmentally sensitive areas by assessing and controlling hazards.

Procedure

1. Comply with all applicable legislation and adhere to requirements in the current edition of “The City of Calgary Guidelines for Erosion and Sediment Control” to ensure protection of water bodies, storm water, public and private property and the environment.
2. For sites less than 2 hectares which involve disturbance of soil require a minimum or good housekeeping practices to ensure sediment does not leave the site or enter onsite or adjacent storm sewers.
3. “Wastewater” should be contacted to determine requirements if the site is adjacent to a water body, is located on steep slopes or is adjacent to environmentally sensitive areas for sites less than 2 hectares which involve disturbance of soil.
4. Sites greater than 2 hectares in size require and Erosion & Sediment Control Report to be approved by “Wastewater”. “Wastewater’s Erosion and Sediment Control Coordinator must be notified prior to project start-up (268-2655) to discuss requirements.
5. Divert clean runoff away from exposed soils or unstabilized areas.
6. Minimize the area of disturbed ground that is exposed to erosion at any one time.
7. Control erosion at the source by preventing soil detachment and transportation.
8. Provide sufficient capture and storage to contain sediment-laden runoff within site.
9. Monitor the effectiveness of controls regularly including during and after precipitation.
10. Plan for and implement emergency measures.
11. Correctly install, maintain and repair erosion and sediment controls.
12. Minimize and control wastewater discharge from surface water or groundwater removal, surface washing, grit blasting, saw cutting, washing vehicles, and any other activities that could result in discharge.
13. Remove all temporary erosion and sediment controls when no longer required and at the end of contract.

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4.11 Material and Equipment Management

Purpose

To store materials and equipment in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. Assess possible hazards primarily for threat of spill/leakage and ignition sources.
2. Flammable fluids must be stored in special areas, away from heat, spark, flame, direct rays of sun and in a location where flammable vapours cannot be communicated to open flame. Containers must be securely sealed to prevent vapour loss.
3. The use and storage of all chemicals and dangerous goods must be in compliance with municipal, provincial and federal laws and regulations, manufacturer's instructions and the relevant Material Safety Data Sheet.
4. Fire extinguishers and spill kits must be readily available.
5. Vehicles are to be removed from job sites and end of every work day.
6. Only required materials will be stored on jobsites and in designated areas.
7. Materials to be removed once no longer required or at the end of contract.

Hazards

Ignition sources including static causing explosion / fire
Spill or leakage causing pollution

Controls

Shut off / remove all sources of ignition
Smoking prohibited
Spill kits accessible
Drip trays to be used
Fuel containers must be properly labeled

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4.12 Waste Management and Reduction

Purpose

To manage waste in a safe and environmentally responsible manner.

Procedure

1. Assess possible hazards primarily by proper inspection of waste.
2. Waste will be handled, stored, transported and disposed of according to municipal, provincial and federal requirements.
3. Waste must be characterized, and recycled when possible.
4. Construction materials with recycled content should be used when reasonably practical.
5. Retain copies of all waste records for materials disposed and recycled.
6. Provide appropriate on-site collection containers for debris and waste and remove waste materials regularly from worksite.
7. Dispose of waste material from projects to disposal sites designated for the appropriate material.
8. Ensure all proposed waste disposal sites are approved licensed landfills.
9. Do not burn or bury materials or waste.
10. Do not dispose of materials or waste into waterways, storm or sanitary sewers.

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4.13 Substance Release Response and Reporting

Purpose

To respond and report any spills that may impact people or the environment.

Procedure

1. A corporate spill report is required for:
 - i. Any spill or an undetermined volume or of any unrecoverable volume,
 - ii. An unrecovered spilled substance likely to contaminate surface or ground water.
 - iii. Ground water and/or surface water contamination.
 - iv. Release or spill that may result in odour complaints.
2. Control the release.
3. Report release to prime-contractor, sub-contractors, police, fire and applicable government agency if required.
4. Assess adverse effects of the release.
5. Implement remedial action.
6. Keep readily available a list of key contacts and phone numbers for reporting purposes.
7. Keep adequate quantities or absorbent material for spill containment.

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4.14 Environmental Training, Education and Awareness

Purpose

To ensure and demonstrate that employees and contractors are adequately trained, educated and competent to perform job tasks.

Procedure

1. Provide employee / contractor orientations.
2. Train employees / contractors in the use of personal protective equipment.
3. Ensure employees possess and maintain all required tickets.
4. Issue employee warning reports for infractions to company rules.
5. Ensure employees / contractors have read and understand all company policies.
6. Ensure employees have been adequately trained in their job procedures.
7. Maintain company training records for employees and contractors.
8. Maintain employee / contractor records acknowledging training in The City of Calgary Environmental Policy and the Contractor Environmental Responsibilities Package. It is our mandate that The City of Calgary Environmental Policy and the Contractor Environmental Responsibilities Package will be followed and communicated to employees and contractors.

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4.15 Working Alone

Purpose

A working alone procedure is the legislated responsibility of every employer. A working alone procedure applies when:

- a worker is working alone at a site, and
- assistance is not readily available if there is an emergency or the worker is injured or ill.

Procedure

Low Risk Working Alone Procedure

1. Notify a “contact” of check in times and locations of work.
2. If multiple travel routes are an option, then the route selected will also be noted.
3. If your arrival at a check in location is delayed by more than 1 hour, you must notify your “contact” of your new estimated time of arrival.

High Risk Working Alone Procedure

4. Notify a “contact” prior to departure and advise your “contact” of your estimated time of arrival.
5. Notify a “contact” at time of arrival at location.
6. Assess the problem or job scope, notify your contact, discuss the nature of the problem or job, work procedure to be used, and any additional required safeguards, and provide an estimation of how long you will be at location.
7. Notify a “contact” when you are finished and ready to leave location and estimated time of arrival at next worksite, base or home.
8. Notify “contact” of arrival at next check point, base or home.
9. Notify “contact” if a delay is expected or if you are delayed for more than 1 hour.

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4.16 Right to Refuse Unsafe Work

Purpose

Imminent danger is defined as:

- a danger that is not normal for that occupation
- a danger under which a person engaged in that occupation would not normally carry out the person's work.

Procedure

No worker shall:

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

A worker must notify supervisor at the worksite of the reason for the work refusal.

A supervisor must investigate and take action to eliminate danger, record the worker's notification and give worker a copy of notification.

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4.17 Fit for Work

Purpose

ES adheres to the following principles:

- 1) employers have the responsibility to provide employees with a safe work environment;
- 2) employers have the right to require employees to show up to work both fit and ready to work.

DES will not allow seriously and visibly ill or overly fatigued employees to remain at work. It is the mandate of DES to promote a safe and healthy workplace for all employees.

Procedure

If an employee is visibly and seriously ill, they must notify supervisor immediately before commencement of work. Seriously ill is defined by uncontrollable coughing, visible infection or by obtaining a doctors note.

If an employee is overly fatigued due to personal circumstances which may hinder a safe job performance, they must notify supervisor immediately before commencement of work.

In instances where illness or fatigue may hinder the safe work of an employer and are obvious to employer, employee will be sent home.

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4.18 Traffic Control

Purpose

To protect workers and the public by providing appropriate means of temporary traffic control when conducting work on or along roadways.

Procedure

1. Management to conduct a pre-job inspection to identify what type of traffic control is required.
2. If work is to be conducted on or alongside a major artery or intersection, the city must supply traffic control plan and traffic control such as lane closures.
3. If work is to be conducted on or alongside a minor artery, DES will supply a plan for traffic control to the City of Calgary for approval.
4. If work is to be conducted on a residential street with minimal traffic, DES will supply a plan for traffic control to be approved and utilized internally.

Some Types of Traffic Control

- Lane closures using barricades.
- Lane closures using traffic cones placed in the road tapering back to safe distance for workers.
- Use of flashing beacons available on all DES trucks.
- Use of arrow boards on DES trucks.
- Re-routing traffic.

Note: Work on roadways are conducted only between the hours of 9 am and 3 pm and after 7 pm.

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4.19 Excavations and Trenching

Purpose

To conduct trenching and excavation when necessary in a safe and environmentally responsible manner by assessing and controlling hazards.

Procedure

1. Ensure site “under ground locates” have been done (obtain copy) and reviewed by crew.
2. Conduct a site hazard assessment followed by a tail-gate safety meeting for crew.
3. Inspect all equipment to ensure proper working condition prior to use including hydraulic lines and fittings to guard against leakage. The use of drip trays / pads are to be utilized at possible leakage or drip locations.
4. As per hazard assessment remove, support or safeguard all surface encumbrances located at the site that may create a hazard to site personnel.
5. Subsequent inspections may be required throughout the job in the event of:
 - After every rainstorm or other hazard increasing occurrence
 - As dictated by the activity taking place in the trench
 - When fissures, tension cracks, sloughing, under cutting, water seepage, bulging at the bottom or other similar circumstances occur
 - When there is any change in the size, location or placement of the soil pile
 - When there is any indication of change or movement in adjacent structures
 - Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmosphere, or other hazardous conditions, remove exposed employees from the hazardous area until safety measures are in place.
6. No site personnel shall be permitted underneath loads handled by lifting or digging equipment. Associates shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.
7. When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals. If possible, the grade should be away from the excavation.
8. Where oxygen deficiency or a hazardous atmosphere exists or could reasonably be expected to exist, such as excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation shall be tested before workers enter excavations. Precautions such as proper respiratory protection or ventilation may be required.
9. When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing shall be conducted as often as necessary to ensure that the atmosphere remains safe.
10. Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment shall be attended while in use.

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4.19 Excavations and Trenching - Continued

11. Workers shall not work in excavations where there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect workers against the hazards posed by water accumulation. The precautions necessary to protect workers adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.
12. If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to ensure proper operation.
13. If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation, and to provide adequate drainage of the area adjacent to the excavation.
14. Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard-increasing occurrence. These inspections are only required when worker exposure can be reasonably anticipated.
15. Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed associates shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

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4.20 Confined Space Entry

Purpose

To protect workers against the hazards involved in confined spaces. This procedure establishes the controls and responsibilities for entering, working in, and exiting confined spaces.

Confined spaces are areas such as manholes, ducts, tanks, etc., which may potentially contain hazardous atmospheres or conditions.

Responsibilities

Management - Shall ensure that personnel under their direction maintain compliance with this procedure and shall ensure that only trained employees assume roles and perform work in confined spaces in accordance with DES confined space procedure. A periodic review of the overall effectiveness of the Confined Space procedure must be completed.

Supervisors – Shall be responsible for initiating and controlling this procedure on shift and ensure that the proper procedure for isolating all energy sources have been controlled. Supervisors must also ensure that entry supervisors are inspecting work in spaces to ensure adherence to procedures.

Entry Supervisors - Be aware of hazards of the space to be entered, and signs, symptoms and consequences of exposure and specific space control procedures. Execute all requirements of this instruction before work begins within a confined space. Authorizes entry into a confined space when acceptable entry conditions have been met. Ensures that all personnel entering and leaving the confined space are accounted for. Terminate entry and cancel the permit if conditions warrant. Verify that rescue services have been identified and that means for summoning them are operable. Remove unauthorized individuals who enter or who attempt to enter the permit space during entry operations.

Entrants - Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure. Use all equipment as required by this instruction and the specific permit space entry procedures. Communicate with the attendant as necessary to enable the attendant to alert entrants of the need to evacuate the space as required by this instruction and for attendant to be able to monitor status of entrants. Alert the attendant whenever:

- The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or
- The entrant detects a prohibited condition.

Exit from the confined space as quickly as possible whenever:

- Order to evacuate is given by the attendant or the entry supervisor.
- The entrant recognizes any warning sign or system of exposure to a dangerous situation, or the entrant detects a prohibited condition or an evacuation alarm is activated.

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4.20 Confined Space Entry – Continued

Attendants - Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure. Be aware of the possible behavioral effects of hazard exposure in authorized entrants. Continuously maintain an accurate count of authorized entrants in the permit space and ensure that the means used to identify authorized entrants in the permit under this procedure accurately identifies who is in the permit space. Remain outside the permit space during entry operations until relieved by another attendant. Communicate with authorized entrants as necessary to monitor entrant status and to alert entrant of the need to evacuate the space if conditions warrant. Initiate onsite rescue procedures and if necessary, summon additional rescue and other emergency rescue services when self-rescue is not possible. Perform no duties that might interfere with his/her ability to monitor and protect the authorized entrants. Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space. Warn unauthorized persons to stay away and advise those who may have entered the permit space that they must leave. Inform authorized entrants and Entry Supervisor of unauthorized persons.

General Rules

When practical, all confined spaces shall be permanently marked. A sign shall be installed at each opening of the Confined Space. Signs should contain “**DANGER – PERMIT REQUIRED CONFINED SPACE - DO NOT ENTER**”.

All confined spaces where there is an opening that can easily be walked into (floor openings, manhole openings, etc.) shall have a physical barrier (guardrail, gate, etc).

When required, isolating energy sources to the confined space shall be performed in accordance with Lockout/Tag out Procedure.

If “hot work” conditions exist, precautions shall be taken in accordance with DES Hot work procedure. Cylinders of compressed gases are never permitted in a confined space.

No smoking is permitted in a Confined Space or near the entrance/exit area.

Air monitoring is required before entering any Permit Required Confined Space (PRCS).

Portable electrical equipment used in Confined Spaces, which have wet surfaces, shall be supplied power through a ground fault interrupter or be battery powered.

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4.20 Confined Space Entry – Continued

Confined Space Personnel

The following individuals are required when entry into a PRCS is necessary. Employees shall receive the appropriate level of training before entry into the Confined Space is permitted. Note: An attendant can also act as an entry supervisor if properly trained.

- Entry Supervisor
- Attendant
- Entrant(s)

Procedure

Confined Space Entry Permit

Before entry is authorized, the entry supervisor shall document the safety measures taken in order to enter the Confined Space by preparing a Confined Space Entry Permit (See Attached).

Before entry begins, the entry supervisor identified on the permit shall complete and sign the entry permit to authorize entry. Acceptable entry conditions must be met in order for entry to be authorized.

The completed permit shall be made available at the time of entry to all authorized entrants, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations have been completed.

The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit.

The entry supervisor shall terminate entry and cancel the entry permit when:

- The entry operations covered by the entry permit have been completed or
- A condition that is not allowed under the entry permit arises in or near the permit space.
- Canceled entry permits shall be retained for at least one year to facilitate the review of the PRCS program. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the program can be made.

Air Testing

The atmosphere within the space will be tested to determine whether dangerous air contamination and/or oxygen deficiencies exist. Direct reading instruments, detector tubes, alarm only gas monitors and explosion meters are examples of monitoring equipment that may be used to test confined space atmospheres.

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4.20 Confined Space Entry – Continued

Employees who have successfully completed air-monitoring training for the type of monitor they will use shall perform the air testing. Air testing equipment shall be calibrated (bump tested using span gas) and certified according to the manufacturer's recommendations. Calibration records shall be kept.

The minimum parameters to be monitored are oxygen deficiency, LEL and, if applicable, contaminants that may be present which are over OSHA's PEL's. When testing for atmospheric hazards, first test for oxygen content, then for flammable gases or vapors and lastly for toxic gases or vapors. The initial air readings shall be recorded on the Permit and kept at the work site for the duration of the job. The employees shall be able to review the testing results.

Prior to atmospheric testing, check air readings outside of the Confined Space to ensure proper operation of the instrument and that air readings are within normal ranges. Record air test readings on the Permit.

Air testing for Confined Spaces having a top entrance (manholes, tanks, etc.):

- From each entrance, drop the sampling probe of the Meter to the bottom of the space. Additionally, use other available openings, which would facilitate air testing for that confined space.
- Slowly raise the sampling probe, stopping at intervals of two feet to ensure that the atmosphere is not stratified. The rate of sampling shall be slowed to accommodate detector response due to the length of the sampling line and probe.
- Record air testing data on the confined space permit.

Air testing for Confined Spaces having a side or bottom manway (ducts, tanks, etc.):

- From each entrance, move the sampling probe of the Meter to the opposite side of the space. Use rods, poles or other means to extend the probe to the opposite side of the space.
- Slowly test all areas inside the Confined Space. The rate of sampling shall be slowed to accommodate detector response due to the length of the sampling line and probe.
- Record air testing data on the confined space permit.

Upon initial entry, all areas that could not be tested from the manway shall be tested. Slowly test the areas with the sampling probe out in front of you, checking all areas that were missed.

If there are no non-atmospheric hazards present and if the pre-entry tests show there are no dangerous air contamination and/or oxygen deficiency within the space, entry into and work within the space may proceed.

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4.20 Confined Space Entry – Continued

The atmosphere within the space shall be periodically tested as necessary to ensure no accumulation of a hazardous atmosphere. If conditions exist that could change the atmosphere of the Confined Space, it will be necessary to monitor the atmosphere continuously during occupancy. Air monitoring shall be performed at the actual work location in the confined space. The results of this monitoring shall be documented on the confined space permit, at a frequency established by the Entry Supervisor.

The workers will immediately leave the permit space when any of the gas monitor's alarm set points are reached as defined. After a suitable ventilating period, repeat the testing. Entry may not begin until testing has demonstrated that the hazardous atmosphere has been eliminated.

Entry Procedures

Each PRCS to be entered shall have specific procedures developed to ensure the safety of all affected personnel, including, but not limited to, the following:

- Specifying acceptable entry condition
- Isolating the permit space,
- Purging, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards,
- Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards and
- Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.
- Retrieval and rescue equipment is required for entry into permit required confined spaces. The use of a harness is not required if it will create a greater hazard to the wearer.

Alternative Procedures

Alternative entry procedures may be used in the following circumstances:

- The only hazard posed by the permit space is an actual or potential hazardous atmosphere.
- The employer can demonstrate that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry.
- The employer develops monitoring and inspection data that supports the demonstration that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry.
- The atmosphere within the space shall be continuously monitored to ensure that forced air ventilation is preventing the accumulation of a hazardous atmosphere.
- Training shall be provided to the employees who enter permit spaces under the alternative procedures and to the employer's representatives who verify that permit spaces are safe for entry under the alternative procedures.

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4.20 Confined Space Entry – Continued

- The Attendant and Entry Supervisor are not required by the Alternative Procedures as well as retrieval and rescue equipment.
- The Entry Supervisor is responsible for documenting the basis for determining that all atmospheric hazards in the permit space have been eliminated or controlled through a certification that contains the date, the location of the space, any air sampling data to support this and the signature of the Entry Supervisor making the determination. This certification shall be made available to all employees involved.

Reclassifying a Permit Required Confined Space

A space classified as a PRCS may be reclassified as a non-permit confined space:

- If the PRCS poses no actual or potential atmospheric hazards or if all hazards within the space are eliminated without entry into the space and without the use of forced ventilation, the permit space may be reclassified as a Non-Permit Confined Space for as long as the non-atmospheric hazards remain eliminated.
- If it is necessary to enter a PRCS to eliminate a hazard or to test for atmospheric hazards, such entry shall be completed under a confined space permit.
- Once the space is reclassified, it may be treated as a Non-Permit Confined Space for the duration of the work being performed. The permit is no longer required as well as an attendant, supervisor, retrieval and rescue equipment. Air monitoring should be conducted each day before entering the non-permitted space. Once a job is complete, the space reverts to a PRCS.
- The Entry Supervisor is responsible for documenting the basis for determining that all hazards in the permit space have been eliminated through a certification that contains the date, the location of the space, any air sampling data to support this and the signature of the Entry Supervisor making the determination (the use of a confined space entry permit will meet this requirement). The Supervisor will sign on the permit that the space has been reclassified, as non-permit required. This certification shall be made available to all employees involved.

Confined Space Rescue

In the event of an emergency of any type in the confined space, entrants in the space shall evacuate as quickly as possible. Injured employees are encouraged to use self-rescue when applicable.

If rescue from within the confined space is required, the attendant should immediately call emergency services and give the emergency service the location, the type of confined space, and the hazards associated with the space.

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4.20 Confined Space Entry – Continued

Training

All personnel involved with confined space activities shall receive training consistent with their duties. Employees will receive training in order to acquire the understanding, knowledge and skills necessary for the safe performance of the duties assigned under this procedure.

Training shall be provided to each affected employee that may be designated as a supervisor, entrant or attendant:

- Before the employee is first assigned duties,
- Before there is a change in assigned duties,
- Whenever there is a change in confined space operations which presents a hazard to an employee who has not been previously trained and
- Whenever the employer has reason to believe that there are deviations from the confined space entry procedures or that there are inadequacies in the employee's knowledge or use of these procedures.
- The training shall establish employee proficiency in the duties required and shall introduce new or revised procedures, as necessary, for compliance.

Training content shall include:

- Duties of Entry Supervisor, Entrant and Attendants,
- DES Confined Space procedure and other procedures relating to Confined Space Entry (Lockout/Tagout, Hot Work, etc.),
- Hazards of Confined Spaces,
- Use of Air Monitoring Equipment,
- Use of ventilation equipment,
- Emergency Action & Rescue Procedures,
- Confined Space Entry Equipment, including Personal Protective Equipment

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Section 4 – Standard Operating Procedure

4.21 Handling and Transporting Hazardous Substances

Purpose

To provide guidance and direction to employees, contractors and sub-contractors on the steps to be taken in developing, applying and enforcing the necessary measures for workers exposed to any hazardous substances and to ensure that exposure is kept as low as reasonably practicable and does not exceed occupational exposure limits.

Harmful Substances – means a substance that, because of its properties, application, or presence, creates or could create a danger, including chemical or biological hazard, to the health and safety of the worker exposed to it.

General Requirements

1. DES will ensure that a worker's exposure to any substance listed in the respective provincial chemical substances listing is kept as low as reasonably practicable.
2. If no occupational exposure limit is established for a harmful substance present at a work site, DES will ensure that all reasonably practicable steps are taken to keep each worker's exposure to that harmful substance as low as reasonably practicable.
3. If a worker is exposed to a substance listed in the respective provincial chemical substance listing at a concentration that exceeds its 8 hour occupational exposure limit but is less than its 15 minute occupational exposure limit, DES will ensure that:
 - Each 15 minute period of exposure is followed by a period of at least 60 minutes during which the airborne concentration of the substance is at or below its 8 hour occupational exposure limit.
 - The worker cannot be subjected to more than 4 of the 15 minute periods of exposure in a continuous 24 hour period.
 - The 8 hour occupational exposure limit cannot be exceeded.
4. A worker may not be exposed to a substance listed in the respective provincial chemical substance listing at a concentration exceeding its ceiling limit at any time.
5. If no 15 minute occupational exposure limit or ceiling occupational exposure limit is listed for a substance in the respective provincial chemical substance listing, DES will:
 - Comply with the 8 hour occupational exposure limit.
 - Ensure that a worker's exposure to that substance does not exceed 3x the 8 hour limit for more than a total of 30 minutes during a continuous 24 hour period and 5x the 8 hour exposure limit or the concentration that is immediately dangerous to life and health, whichever is lower.

Exposure to Multiple Substance

DES will take all reasonably practicable steps to ensure that, if a worker is exposed to more than one substance listed in the respective provincial chemical substance listing during a single work shift and the toxicological effects have similar modes of toxic action, the value of D in the formula

$$D = (C_1/T_1) + (C_2/T_2) + \dots + (C_n/T_n)$$

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4.21 Handling and Transporting Hazardous Substances - Continued

does not exceed 1, where C₁, C₂...C_n refer to the airborne concentrations during exposure to contaminants 1, 2, ...n, and T₁, T₂,...T_n are their respective occupational exposure limit values expressed in the same units as C_n.

Exposure During Shifts Longer than Eight Hours

1. If a worker is exposed to a substance listed in the respective provincial chemical substance listing during a single work shift that is longer than 8 hours, DES will ensure that equivalent protection from adverse health effects is achieved by adjusting the 8 hour exposure limit using the following formulas: adjusted exposure limit = 8 hour occupational exposure limit x daily reduction factor,

Where daily reduction factor = $(8/h \times (24 \text{ hours}/16))$, and h = hours worker per day.

2. Subsection (1) does not apply to a substance for which the number “3” appears in the “Substance Interaction” column of the respective provincial chemical substance listing.
3. DES may adjust the 8 hour exposure limit by another method that uses recognized scientific principles that is approved by a Director of Occupational Hygiene.

Potential Worker Exposure

1. If a worker may be exposed to a harmful substance at a work site, DES will identify the health hazards associated with the exposure and assess the worker’s exposure.
2. DES will ensure that workers who may be exposed to a harmful substance at a work site:
 - are informed of the health hazards associated with exposure to that substance.
 - Are informed of measurements made of airborne concentrations of harmful substances at the work site and
 - Are trained in procedures developed by DES to minimize the worker’s exposure to harmful substances and that they understand the procedures.
3. Workers who are provided with training under subsection (2) must use the procedures appropriately and apply the training.

Worker Overexposure

1. If a worker may be exposed to an airborne concentration that is more than the occupational exposure limit of a substance, DES will conduct measurements of the concentrations of that substance at the work site.
2. If a worker is exposed to more than the occupational exposure limit of a substance, DES will immediately:
 - Identify the cause of the overexposure.
 - Protect the situation so that no other workers are exposed to the substance at airborne concentrations that are more than the occupational exposure limit.

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4.21 Handling and Transporting Hazardous Substances - Continued

- Control the situation so that no other workers are exposed to the substance at airborne concentrations that are more than the occupational exposure limit.
 - Explain to the worker the nature and extent of the overexposure.
3. As soon as reasonably practicable, DES will inform the joint work site health and safety committee (if there is one), in writing, that a worker has been exposed to more than the occupational exposure limit of a substance and advise them of the steps taken to control the overexposure.

Worker Decontamination

If a worker may be contaminated by a harmful substance at a work site, DES will provide the facilities (or make the facility available by a third-party service provider), including showers. The worker needs to remove the contamination before the worker leaves the work site.

Emergency Baths, Showers, and Eye Wash Equipment

If a worker is present at a work site where chemicals harmful to the eyes or skin are used, DES will ensure that the worker has immediate access at the work site to emergency baths, showers, eye wash equipment, or other equipment appropriate for the potential level of exposure.

Prohibited Activities

DES will ensure that workers do not eat, drink, or smoke in a part of a work site contaminated by a harmful substance.

A worker must not eat, drink or smoke in a part of a work site contaminated by a harmful substance.

Storage of Harmful Substances

DES will ensure that a harmful substance used or stored at a work site:

- Is clearly identified, or its container is clearly identified.
- Is used and stored in such a way that the use or storage is not a hazard to workers.

Transportation of Harmful Substances

The transportation of harmful substances fall under the category of TDG (Transportation of Dangerous Goods). Dangerous goods include potentially hazardous materials, such as explosives, compressed and liquefied gases, flammable liquids and solids, and oxidizing materials, and other substances that are poisonous, infectious, radioactive or corrosive. The Transportation of Dangerous Goods Act exists to protect people, the environment, and property when goods are being transported by road, rail, sea or air. Shippers, carriers and receivers are all responsible for ensuring shipments of dangerous goods comply with federal, provincial and municipal laws. Fines or lawsuits are the responsibility of those failing to comply.

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4.21 Handling and Transporting Hazardous Substances - Continued

All DES employees, contractors, and sub-contractors must have TDG training if they organize the shipment of, carry, or receive dangerous goods.

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Section 5 - Company Rules

5.1 General Rules

5.2 Discipline Enforcement Form

Health and Safety Manual	Doc Ref:	Section 5
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Section 5 - Company Rules

5.1 General Rules

Dobbyn Electric is committed to providing its workers with a safe workplace and an atmosphere, which allows them to protect workers, inventory and other assets placed in their care. Employees are expected to be in suitable mental and physical condition while at work, allowing them to perform their job effectively and safely.

- Accidents, injuries or 'near misses', regardless of their nature, shall be promptly reported to supervisors.
- Long pants, shirt and steel toed boots shall be worn at all times.
- Approved hard hats, gloves and coveralls shall be worn when required.
- Safety glasses shall be worn when concrete breaking, metal chipping, welding, grinding and for other operations where eye protection is required.
- All service vehicles shall be circle checked and inspected before use each day.
- Tool Box meetings shall be held monthly and documented.
- Weekly Safety meetings are attendance requirement.
- Hand tools shall not be used for any other purpose other than intended.
- All damaged or worn parts shall be promptly repaired or replaced.
- All electrical hand tools shall be grounded or double insulated.
- Possession or use on the job of intoxicating beverages or unauthorized drugs is strictly forbidden and constitutes grounds for dismissal.
- Horseplay, fighting, gambling and possession of firearms are strictly forbidden on the job and constitute grounds for dismissal.
- Explosive/powder actuated tools shall be used only by persons who have been instructed or trained in their safe use.

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5.2 Discipline Enforcement Form

Dobbyn Electric is committed to providing its workers with a safe workplace and an atmosphere, which allows them to protect workers, inventory and other assets placed in their care. Employees are expected to be in suitable mental and physical condition while at work, allowing them to perform their job effectively and safely.

Employee: Dated:

- Type of Offense
- _____ 1st offense - verbal warning
 - _____ 2nd offense - written warning
 - _____ 3rd offense - suspension
 - _____ 4th offense - dismissal

Employer Statement:

Employer Signature Dated:

Documentation must be done at each stage of the enforcement policy

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Section 6 – Personal Protective Equipment PPE

6.1 General

6.2 Employee Training Report for Use of Harness

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Section 6 – Personal Protective Equipment PPE

6.1 General

The Dobbyn Electrical Services safety policy requires all personnel to wear and use personal protective equipment. Items provided by Dobbyn Electric include:

- Gloves
- Fire retardant coveralls
- Hard Hats
- High visibility clothing
- Safety glasses
- Fall restraint harness and accessories

All employees are required to provide steel-toes boots, full pant and shirt combinations.

Specialized equipment is provided as required.

The rules regarding Personal Protective Equipment is followed co-operatively between management and employees, and is refined as required dependant on site specific requirements.

Personal Protective Equipment will be maintained as per Section 7.2.

Note: The Safe Work Practices for use of limb and body protection, head protection, and hearing protection are located in Section 3 of the DES H&S Manual.

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6.2 Employee Training Report for Use of Harness

Employee Training Report

Use of Harnesses

Employees were shown how to assemble harness and properly put on harness.

Importance of having the fit properly and snugly aligned to body without any slip or play in legs and shoulders.

Inspection of tether prior to each use is imperative.

Proper storage of harness is important. Store by hanging. Store when dry, be free of any oil or dirt before storage.

Employees were shown the use of safety lines in conjunction with harness.

Employees were shown the use of safety grab to safety lines.

Signed: _____ Printed Name: _____

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Section 7 – Preventative Maintenance

7.1 Maintenance Program for Equipment and Trucks

7.2 Maintenance Program for Personal Protective Equipment

Health and Safety Manual	Doc Ref:	Section 7
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Section 7 – Preventative Maintenance

7.1 Maintenance Program for Equipment and Trucks

The maintenance program covers all electrical contracting equipment, personal protective equipment, electrical hand tools, service vehicles, bucket trucks and auger trucks.

All equipment is inspected monthly regardless of usage, and inspected and maintained prior to each use. Tools are kept in a tool crib with a deficiency repair list.

All vehicles are circle checked oil and fuel levels checked prior to each use. Each truck has a logbook and record inspections.

All vehicles are also serviced regularly and documented as to specific work done, where service work was done and price of servicing.

Service records for vehicles are kept in a truck maintenance binder, recording all dates, mileage and work done.

Tools and equipment must only be used for their intended purpose.

Tools and equipment and machinery are kept up to standards in part 25 of the Occupational Health and Safety code.

7.2 Maintenance Program for Personal Protective Equipment

All Personal Protective Equipment such as gloves, coveralls, hard hats, high visibility clothing, safety glasses, restraint harnesses and accessories must be inspected prior to use and properly maintained as per manufacturer specifications.

PPE must be replaced when necessary and when signs of wear and tear are evident.

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Section 8 – Training and Communication**8.1 Training and Safety Meetings****8.2 New Employee Orientation****8.3 Substance Abuse Policy Consent Form****8.4 Employee Warning Report****8.5 Employee Training Report – Use of Harness**

Health and Safety Manual	Doc Ref:	Section 8
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Section 8 – Training and Communication

8.1 Training and Safety Meetings

It is Dobbyn Electric's policy to provide training to all employees on our day-to-day procedures, including the use, operation and maintenance of our Bucket and Auger Trucks.

The minimum standards of the Canadian Electric Code will be followed at all times for every task performed.

Tool Box meetings are held, following a hazard assessment, on site at commencement of work to relay safety information to all workers and visitors. Hazard assessments are readily available for viewing as requested. All employees and subcontractors must attend tool box meetings. Usually management and/or supervisory personnel conduct toolbox meetings, but if necessary the subcontractor will be required to do so.

Weekly Shop Safety Meetings are held and chaired by supervisory personnel.

Agenda items are presented to staff for discussion, with resolution of agenda and new issues recorded in the minutes of the meeting.

Annual employee performance reviews and post-job reviews (subcontractors) are conducted to determine job performance and commitment to safety.

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8.2 New Employee Orientation

Employee Name: _____ Trainer: _____

Introduction:

- Company History
- Company Safety Policy

Responsibility for Safety

- Worker
- Supervisor
- Manager

Emergency Procedures

- Fire
- Ambulance
- First Aid
- Security/Police
- Incident Reporting

General Rules

- Alcohol, Drugs
- Horseplay, Fighting
- Vehicle Operation
- Theft

Personal Protective Equipment

- Hard Hats
- Safety Glasses
- Hearing Protection

Safe Work Practice

- General Housekeeping
- Scaffolds
- Floor Openings
- Ladders
- Excavations
- Cutting/Welding
- Manual Lifting
- Rigging
- Hoisting
- Fall Protection
- Respirators
- Electrical Equipment
- Grounding
- Other: _____
- Other: _____

Meetings

- Safety Committee
- Tool Box

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8.3 Substance Abuse Policy Consent Form

Substance Abuse Policy
Consent Form

Date: _____

Company Name: Dobbyn Electrical Services Ltd

Name and Title: _____

Authorized Signature _____

Of Employer: _____

I, the undersigned, have read and understand the Dobbyn Drug and Alcohol Policy and agree to abide by the rules set out, consent to the drug testing if required and understand that failure to comply will result in my immediate removal from a Dobbyn controlled job-site. I also understand that a positive result as verified by an accredited laboratory and a qualified Medical Review Officer is accepted standard by which the tests are verified. A positive result will mean that you will not be allowed on any Dobbyn controlled job-site as an employee or as a subcontractor or as an employee of a subcontractor.

The costs incurred in performing the tests will be paid by Dobbyn.

Dated: _____

Employee Name: _____

Employee Signature: _____

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8.4 Employee Warning Report

Employee Warning Report

Employee Name: _____

Date of Warning: _____

Project: _____

Warning Issued by (print) _____

Type of Violation: _____ Safety _____ Other

Company Statement: _____

Signature : _____

Employee Statement:

_____ I agree with the company's statement.

_____ I disagree with the company's statement for the following reasons:

Signature: _____

Dated: _____

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

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

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8.5 Employee Training Report – Use of Harness

Employee Training Report

Use of Harnesses

Employees were shown how to assemble harness and properly put on harness.

Importance of having the fit properly and snugly aligned to body without any slip or play in legs and shoulders.

Inspection of tether prior to each use is imperative.

Proper storage of harness is important. Store by hanging. Store when dry, be free of any oil or dirt before storage.

Employees were shown the use of safety lines in conjunction with harness.

Employees were shown the use of safety grab to safety lines.

Signed: _____ Printed Name: _____

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Section 9 – Inspections

9.1 Site Inspections

9.2 Work Site Safety Inspection

Health and Safety Manual	Doc Ref:	Section 9
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	Revised:	May 2010

Section 9 – Inspections

9.1 Site Inspections

DES conducts a detailed Hazard Assessment and Worksite Safety Inspection on each project undertaken. Hazard assessments are recorded and updated, when required, during the project as on-site conditions change. All site personnel are made aware of site conditions prior to commencement of work and are notified of any condition changes.

Usually DES management and/or supervisors will conduct site inspections, but on occasion subcontractors may be required to do so. Subcontractors will be properly trained in conducting Hazard Assessments and Worksite Safety Inspections.

Based on hazard assessments, equipment or tools such as barricades or caution tape are provided to identify hazards inherent to the project and the work scope will be altered to minimize any risk.

Upon project completion, Dobbyn personnel will re-grade affected areas as required. Remove all unused, recyclable, or redundant materials and notify the appropriate authorities that project is complete and ready for final inspection.

The standards established by the Canadian Electrical Code will be adhered to on all projects.

All personnel are responsible for keeping themselves and others safe and to report to project co-coordinator anything that may or may not be hazardous.

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Section 10 – Investigations and Reporting

10.1 Investigations

10.2 Conducting Investigations

10.3 Incident / Accident / Near Miss Investigation Report

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Section 10 – Investigations and Reporting

10.1 Investigations

Every accident or near miss is thoroughly investigated by management as to causes, action taken and prevention in the future.

These incidents are documented and then thoroughly discussed with employees and subcontractors to educate and to aid in further prevention.

It is the requirement of DES that management, employees and subcontractors report all incidents, accidents and near misses.

Further checks are done to make sure new procedures are being followed.

In the event of an emergency situation an investigation will be undertaken after necessary responses have been executed and the site is secured. Pertinent information will be documented on accident report forms, including photographs where applicable, interviews with witnesses and analysis of equipment or tools being employed. Conclusions will be reached, corrective action initiated and any changes to procedures will be monitored to ensure corrective action is effective.

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10.2 Conducting Investigations

The person or team conducting the investigation of an incident should proceed as follows:

1. Take control of the scene.
2. Initiate the Emergency Response Procedure.
3. Ensure that any injured persons are cared for.
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 failures or injuries, until the incident has been investigated.
8. Take photographs of the scene.
9. Interview witnesses and obtain written statements where appropriate.
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 reoccurrence.
13. Complete the report
14. Follow-up to ensure corrective action is completed.

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

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10.3 Incident / Accident / Near Miss Investigation Report

Incident/Accident/Near Miss Investigation Report	
Date:	
Who Was Involved:	
What Happened?	
When? Date:	Time
Where:	Reported to OH & S Branch <u>Y</u> or <u>N</u>
What was the immediate cause?	
What was the underlying causes?	
What training, instruction, orientations, and cautions were given before in incident?	
How can similar incidents be prevented in the future?	
Recommendation for further action:	
Comments/Recommendations:	
Recommendations Completed by	Date:
Person in Charge	
Reviewed by Owner:	Date:

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Section 11 – Emergency Preparedness

11.1 Emergency Response - Procedure

11.2 Emergency Response – Fire

11.3 Emergency Response Drill Form

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Section 11 – Emergency Preparedness

11.1 Emergency Response - Procedure

DES personnel and subcontractors conduct hazard assessment reviews prior to work commencement on each project. Emergency response contingencies are established based on site specific requirements and where practical, will include the following capabilities:

1. Identification of potential emergencies.
2. Logistics to deal with identified emergencies.
3. Location and operation of emergency equipment, i.e. fire extinguishers, first aid equipment.
4. Identifying trained personnel.
5. Use of alarm and communication devices.
6. Designation of evacuation signals and procedure for rescue.
7. Designation of evacuation routes and supervisory personnel for co-ordination of efforts.
8. Providing transport to medical facilities.
9. Contacting outside agencies for assistance.

Emergency medical services are summoned for all emergency situations.

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11.2 Emergency Response – Fire

Emergency response procedures in the event of fire, either on job sites or within the confines of company property are designed with the safety of all personnel as the prime consideration. Fire extinguishers supplied by Dobbyn Electric in each field vehicle and within the warehouse/shop area are designated Class ABC and are suitable for all combustible materials with the exception of combustible metals such as magnesium or sodium. Dobbyn Electric personnel have been briefed and are familiar with the operation of fire extinguishers and follow the actions noted in the event of fire consuming solid materials:

1. Recognize the hazard and alert all personnel.
2. Where practical, remove combustible material from fire location.
3. Extinguish fire.
4. If fire fighting apparatus is exhausted, leave the area immediately and contact emergency services at 911.
5. For Fire involving flammable liquids.
6. Evacuate all personnel ensuring that all crew and staff members are accounted for.
7. Contact emergency services at 911.
8. Liquid fires will be fought with specifically trained professionals and at no time will Dobbyn Electric personnel fight liquid fuelled fires.

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11.3 Emergency Response Drill Form

Date of Drill: _____ Location _____

Time of Drill: _____ Drill Conducted by: _____

In Attendance: _____

Describe the type of emergency drill conducted: _____

Summary of completed drill (i.e. what worked well, what needs improvement etc):

Follow-up action required: _____

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Section 12 – Records and Statistics

12.1 Year End Report

12.2 Year End Summaries

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12.1 Year End Report

For the Period Ending:

Monthly

Quarterly

Yearly

Number of Workers Hired: _____ Number completed Orientation: _____

Number of Tool Box Meetings Scheduled _____

Number Conducted _____ Percentage Attendance: _____

Number of Formal Inspections Scheduled: _____ Number Completed _____

Total Unsafe Acts/Conditions Identified: _____

Number Corrected _____ Number Outstanding _____

Number of Incidents _____ Damage Only _____

Injury Only _____ Injury and Damage _____

Near Miss Number of Investigations _____

Completed _____ Outstanding _____

Number of Recommendations Made:

Completed _____ Outstanding _____

Comments: _____

Managers Signature:

Date:

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Section 13 – Safety and Legislative Compliance**13.1 Purpose****13.2 Occupational Health & Safety Legislation (OH&S)****13.3 Workers' Compensation Board (WCB)****13.4 Workplace Hazardous Materials Information System (WHMIS)****13.5 Canada Labour Code, Part II****13.6 Canadian Electrical Code**

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Section 13 – Safety and Legislative Compliance

13.1 Purpose

Employees, consultants, contractors, sub-contractors and visitors shall abide by the applicable Acts, Regulations, Codes and other statutes in the jurisdiction in which their work is to be performed. Relevant legislation may include, but not limited to:

- Federal and provincial OH & S Acts, Regulations, Codes and municipal by-laws,
- Provincial Workers' Compensation Board (WCB) Act and Regulations,
- Workplace Hazardous Material Information System (WHMIS)
- Canada Labour code, Part II
- Canadian Electrical Code

13.2 Occupational Health & Safety Legislation (OH&S)

A copy of the provincial Occupational Health & Safety (OH&S) Act, Regulation, and Code is available at the head office and work sites.

Workers are expected to know how to access these documents and to be reasonably familiar with their content.

13.3 Workers' Compensation Board (WCB)

Workers' Compensation is a no fault disability insurance that protects the Company and its workers from the impact of work injuries. It compensates injured workers for lost income, health care, and other costs due to a work-related injury.

1. Significant financial risk is assumed by the Company if consultants, workers, or contractors are temporarily employed by the Company and are without current WCB coverage. Therefore DES has made a business decision to hire only those consultants, workers, and/or contractors that can provide proof of WCB coverage and general liability insurance.
2. Confirmation of WCB and insurance coverage is typically obtained in one of three ways:
 - I. Referring to the Company's Contractor Management Program which effectively manages the Company's/contractor relationship,
 - II. For those employees with the authority to procure the services of outside agencies, to personally conduct and assessment of all independent workers', consultants', and contractors; business documentation in an effort to ensure appropriate coverage is provided, or
 - III. Obtaining required information (e.g. clearance letter) via the WCB website. This site also supplies daily notification of any changes to accounts listed.

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13.3 Workers' Compensation Board (WCB) - Continued

3. A worker, for WCB purposes, is any person who provides a service under a contract of service or apprenticeship, written or oral, expressed or implied, whether by way of manual labor or otherwise. A worker includes full-time, part-time, temporary, casual, family members, contractors / sub-contractors and consultants.
4. Contractors, sub-contractors and consultants must have WCB coverage related to their services being provided.
5. Related Resources
 - I. Online Regulations and Codes at <http://www.hre.gov.ab.ca/cps/rde/xchg/hre/hs.xsl/307.html>
 - II. Online Reporting Forms with directions at <http://www.wcb.ab.ca/publications>

13.4 Workplace Hazardous Materials Information system (WHMIS)

WHMIS is Canada's national hazardous communication program for hazardous workplace chemicals.

The hazard communication elements of WHMIS include appropriate labeling of controlled products and hazardous material, comprehensive Material Safety Data Sheets (MSDS), and worker education and training programs.

Material Safety Data Sheets are made available to employees and contractors on site (DES vehicles) when necessary and in DES office.

WHMIS is implemented through complementary and interlocking federal, provincial, and territorial legislation.

The Canadian Hazardous Product Act, Part II, and associated Controlled Products Regulations, administered by the federal agency Health Canada, requires suppliers and importers to appropriately label controlled products and to transmit or obtain MSDS as a condition of sale or importation. The legislation also places a de facto requirement on suppliers and importers to assess their products against specified hazard classification criteria established in the Part IV or the Controlled Products Regulations.

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13.5 Canada Labour Code, Part II

In the past 10 years, approximately 800 Canadian workers have died each year as a result of workplace accidents. Although the injury rate is declining, the annual costs for compensation to injured workers have been billions of dollars.

Workplace Health and Safety is a serious problem, Part II of the Canada Labour Code, Occupational Health and Safety, reflects the desire to reduce workplace injuries and accidents in federal jurisdiction.

The purpose of the overview of the Canada Labour Code, Part II, is to explain the legislation which applies to all areas under federal jurisdiction. This information is designed for client education and will help to promote, through health and safety committees and health and safety representatives, self-regulation and the internal resolution of occupational health and safety-related complaints and problems raised by employers and employees. It will also help to establish a mechanism conducive to current affairs management and union participation.

Canada Labour Code

<http://lois.justice.gc.ca/en/L-w/index.html>

Part II: Occupational Health and Safety

<http://lois.justice.gc.ca/en/L-2/248827.html>

Canada Labour Code, Part II overview

<http://www.hrsdc.gc.ca.asp/gateway.asp?hr=/en/lp/lo/ohs/publications/overview.shtml&hs>

13.6 Canadian Electrical Code

The electrical code provides requirements for protection.

Canadian Electrical Code

http://en.wikipedia.org/wiki/Canadian_Electrical_Code

Electrical Code Guide

<http://www.electrical.2uweb.info/>

Electrical Code: Definitions and Much More from Answers

<http://www.answers.com/topic/electrical-code>