TOOLBOX TALK

DISCUSS WITH CREWS	mm/dd/yyyy

ELECTRICAL SAFETY

Topic Overview

Electricity must be treated with respect. If you work around power lines, follow the 3 Keys to Electrical Safety.

Electrical awareness: How Electricity Behaves

Ripple effect

If anything contacts a high-voltage power line - a tree or an uninsulated boom on a truck, or a broken power line falling to the ground or landing on a vehicle - electricity will flow to the ground and spread out in concentric circles like ripples in a pool of water.

Voltage is very high at the point where electricity contacts the ground. The level of intensity decreases as the distance increases from the point of contact. Zero voltage is approximately 10 metres (33 feet) from the point of contact.

Step potential

Due to the difference in voltage as one moves towards or away from the source of electricity, it is possible to "step" between differences in high and low voltage.

As the human body is usually a better conductor of electricity than the ground, the electricity can flow between the feet through the body with sometimes devastating results. This is referred to as "step potential".

Touch potential

Trees can be very conductive. If a tree contacts a high voltage power line and a person is touching the tree or touching a ladder leaning against the tree, there will be a high- to low-voltage difference between the person and the ground.

This will force electrical current to flow through them to the ground and may easily result in serious injury or worse. This is referred to as "touch potential."

Shuffle or hop – don't step

If the ground becomes energized while you work, avoid shock by keeping your feet close together and shuffle away – never allowing the heel of one foot to move beyond the toe of the other.

If you cannot shuffle approximately 10 metres (33 feet) away from the energized area, put your feet together and hop, but never walk.

Electrical awareness: How Electricity Behaves

Electricity must be treated with respect. If you work around power lines, you need to know the 3 Keys of Electrical Safety.

1. LOOK UP & DOWN

- Plan your work to prevent electrical contact – and call for assistance.
- Identify overhead and underground power lines.

2. KEEP BACK – KNOW YOUR LIMITS

- On foot, stay at least 10 metres (33 feet) away from equipment operating around power lines.
- Use a spotter to make sure you keep equipment back at least 6 metres (20 feet) from power lines.

3. STAY BACK & CALL FOR HELP

- Stay back 10 metres (33 feet) from a fallen power line, exposed underground power line or any object in contact with a line.
- If your equipment contacts a line, stay put until help arrives.
- In a life-threatening situation, jump clear of your vehicle, feet together, and shuffle away keeping both feet close together. Never contact the ground and your vehicle at the same time.

Do not attempt a rescue until directed by BC Hydro personnel.

Plan ahead to prevent an accident.

Here are a few ideas to help you prepare:

- Take electrical safety training.
- Get overhead power line voltage information and/or complete WorkSafeBC's 30M33 form.
- Call the BC Hydro Electric Service Coordination Centre at 1 877 520 1355.
- Call before you dig. BC One Call's number is 1 800 474 6886 (*6886 on your cell).

PRACTICAL CHALLENGE

In case of electrical contact, is there an immediate threat to life or a fire?

If the answer is **YES**, call 911. They will contact BC Hydro to shut off the power.

If the answer is **NO**, call 1 888 POWERON (769 3766 or *49376) to have BC Hydro shut off the power.

BCCSA
BC Construction Safety Alliance

TOOLBOX TALK

LOCATION		**DATE**	
PRESENTED BY		**TIME**	

Review previous Workplace Inspections

Review previous Accident/Incident/Near Misses

Other Safety Issues or Suggestions made by Staff

Attendance Record

NAME	SIGNATURE	NAME	SIGNATURE

TOOLBOX MEETING REVIEWED	NAME (PRINT)	SIGNATURE	DATE
MANAGEMENT REP			
WORKER REP			