IMPORTANT INFORMATION FOR THE FOREST WORKERS AND EMPLOYERS OF BRITISH COLUMBIA

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Safety Alert of the MONTH

October 2010

PLEASE PASS THIS ON TO PEOPLE AND ORGANIZATIONS IN BC'S FOREST INDUSTRY

Hazards and Risk: Steep Slope Operations

It was December 21st, 2009; and the whole crew was looking forward to taking a few days off to celebrate Christmas. A feller buncher operator was starting to cut the boundary on a new block. Just above the road a few trees dotted a short steep pitch of frozen ground that was covered with a light skiff of snow. The existing ice lugs on the buncher's tracks were getting worn down and didn't really have enough depth to dig in through the duff. The operator considered leaving the few trees for a hand faller, or coming back later once the welder was able to "cork up" his machine.

Both alternatives would hold things up so the operator decided to go ahead. Just as he finished cutting one of the trees, the buncher lost traction and started sliding backwards. The machine pivoted sideways to the slope and then toppled over the bank onto the road below, landing on top of the cab. The operator was able to turn the machine off, but the cab had twisted and he couldn't get out of either the main door or the roof hatch. He then tried to remove the front windshield but couldn't pop it either. Efforts to contact the crew on the adjacent block by radio didn't work until he was able to move the antenna into a different position in the cab. Within fifteen minutes, several crew members arrived with extra fire extinguishers, first aid supplies, crow bars, and wrenches. In a short period of time they were able to release him through the front window escape hatch. Other than a few bumps and scrapes, the operator was unharmed. The machine was out of service for a few month and repairs totalled over $80,000. Lost time and productivity ended up costing the company much more than that amount.

What caused this incident?

The machine didn't have adequate ice lugs for traction. That's the simple answer; but if you dig a bit deeper you can see how the human factor plays into this. The crew was possibly distracted and rushing due to the impending Christmas break. The operator, the crew's most experienced on steep slopes, had concerns about the slope, but didn't want to slow down the operation. He wanted to do the right thing for the company, but it ultimately turned out wrong. There was the issue that the welder hadn't already been called in to work on the tracks before the operation got into steeper frozen ground.

There also hadn't been an adequate site hazard assessment. The operator didn't realize there was a seep that left an icy patch right under the working surface. Although the operator was following normal safe operating procedures for steep slopes; there was no site-specific risk assessment or working plan that had been developed and agreed to by the supervisor and the operator.

Using the **RADAR** approach, contractors and operators can take action to prevent similar incidents.

Step One: Recognize the Risk

- With more and more harvesting occurring on steep slopes, this is clearly an issue for any mechanical operation. Does your pre-job planning cover the hazards & risk of steep slopes?
- Look for the "Upset Condition," that time when things don't go as planned. Maybe the ground is softer, or harder, than anticipated, or the slope isn't as stable as expected. Stop and reassess.

Step Two: Assess the Situation

- It is a requirement under WorkSafeBC OHS Regulation 26.16 that any tracked equipment operating on slopes over 40% must have a full hazard and risk assessment conducted to identify and document all risk factors. Do your hazard checklists and pre-work orientations include information on hazards related to equipment rollovers? Steep slopes, broken ground, high stumps or slash, bogs, boulders, ice, deep snow, etc. can all contribute to rollovers; and following equipment upsets, can also block escape hatches, or create additional risk to equipment operators.

Step Three: Develop a Safe Solution

- It's not enough to just have good general safe work procedures for operating equipment safely. When planning to work on steep slopes you need to make sure you have a site-specific plan.
- Get a "second set of eyes" to help assess the situation and come up with the operating plan.

Step Four: Act safely to fix the problem

- Before equipment operators work in steep slope areas they should review the plan with their supervisor. If they encounter steep slope areas that have not been identified on the map or in the plan, they should stop and take a few minutes to check things out.
- When working in hazardous conditions have other operators working nearby that can offer assistance. Operators should stay in radio contact and increase the frequency of man-checks.

Step Five: Report and Record the Upset Condition

- If you have had incidents involving equipment upsets; what you've learned may help prevent similar incidents or injuries from occurring to others in the future. Report the hazard or upset condition to whomever you are working for, whether that's a Prime Contractor or licensee. If you are a SAFE Company, there are forms you can use to record the incident and conduct an investigation.

Additional Resources

More information on RADAR is located on the Council website at bcforestsafe.org/RADAR

To get more information on planning and conducting steep slope operations call the Council toll free at 1.877.741.1060. If you have further questions on how you can plan to work safely on steep slopes, Safety Advisory services are available on request to help you with your concerns.

Regulatory Information

WorkSafeBC has a regulation (OHSR 26.16) outlining limitations for steep slope operations. There are also guidelines to applying the regulation. You can review these at worksafebc.com or click here.