



SAFETY NOTICE

DIVISION: Mackenzie Wood Products Division
DEPARTMENT: Site II Sawmill
INJURY: Crushing
TIME OF ACCIDENT: Between 6:35 – 6:40 a.m.
TIME OF INVESTIGATION: Preliminary Report Nov. 22, 2006
TYPE OF ACCIDENT: Fatal

OBJECT / EQUIPMENT / SUBSTANCE INFLICTING HARM

Canter Section (Side Heads) of the Quad-saw. The Quad-saw is a processing line which chips the edges of a log to produce a cant and then saws the cant into boards.

EVENT DESCRIPTION:

Summary:

The operator straddled the bed plate (Guide bar) of the Canter to replace dull blades on the chipper heads. While he was in this position the Side Heads cycled inward, inflicting fatal injuries. Cycle was initiated as part of the hydraulics warm-up prior to shift start.

Detail Linear Analysis Event Timeline Description:

The following was deduced from interviews with witnesses and inspection of the accident scene.

On Wednesday, November 22, 2006 the Canter/Quad Saw/Band Saw/Barker (Quad-saw) Operator, arrived at the mill as usual. He entered the mill at approximately 0630. The Quad-saw operator employee met two other workers on the way to his operator's booth and both reported that he seemed in a normal frame of mind. Quad-saw operator employee first task was to replace the dull knives in the canter section of the Quad-saw. The operator performs this task every morning before the production shift starts at 0700. The Quad-saw is de-activated at that time, as it does not run on the graveyard shift. {This knife change process is completed in the 30 minutes prior to the start of the production shifts.}

This morning was slightly different than the usual, in that for unknown reasons; Quad-saw operator employee entered the mill by a different route than the one he usually

followed. The route he usually followed took him past the Motor Control Centre (MCC) where he would de-energize and lockout the Canter/Quad Saw/Band Saw. This lockout is engineered so that it only requires one lock, which the Quad-saw operator employee carried with him. The lockout also requires pinning the top head of the quad, so that if there is a hydraulic hose failure the head cannot lower from the force of gravity. Both the lockout and pinning the top head are performed from the west side of the Quad-saw.

On this morning, the Quad-saw operator employee did not pass the MCC on the west side but went directly to his operating booth via the east side of the Quad-saw, where he left his lunch kit and put on his smock prior to changing the knives.

During the night, the Saw Filer had activated the hydraulics in order to tension newly installed band saws, and so the hydraulics, which controlled the movement of the side heads and top head, as well as the power to the electric motors that run the Quad-saw Line were energized.

During the night, the Oiler had raised and chained in place the chip deflector guards, on either side of the bottom-head.

The Quad-saw operator employee left his booth, and proceeded along the catwalk and down the stairs approximately 54 feet on the east side of the Quad-saw where he opened the rear barrier screen and entered the area in the Quad-saw slightly behind the bottom-head.

In this location he positioned himself between the side-heads of the Quad-saw, straddling the guide bar. With the Quad-saw turned off but the hydraulics energized, the side-heads are approximately 22 inches apart, and the top-head is approximately 24 inches high.

He proceeded to change four knives, using an air activated impact wrench. He brought a box of sharp knives with him from his cabinet on the east side of the Quad-saw.

On cold winter days, the Electrician on graveyard shift puts the Quad-saw hydraulics on what is referred to as "exercise mode" or "winter mode" prior to start of the day shift. He does this to circulate {warm up} the hydraulic oil prior to the start of shift so that when the Quad-saw is started for the shift, it runs more smoothly.

The temperature on November 22, 2006 was approximately -16°C.



The Electrician puts the hydraulics into exercise mode by going into the operator's booth, setting the scanner selector switch to "manual" on the console and pushing the "4 inch set" button. In exercise mode the side-heads move in and out from 22 inches to 4 inches, and the top head moves up and down from 24 inches to 4 inches. A typical cycle from open to closed position takes 3.5 seconds.

While the Quad-saw operator employee was positioned between the side-heads changing the knives, the shift Electrician entered the operator's booth from the other end of the mill. This meant that he did not pass the Quad-saw and so he did not know that the Quad-saw operator employee was changing knives. The Electrician looked down at the MCC panel from the operator's booth and saw from the lights on the MCC Quad-saw panel that the hydraulics were energized.

He proceeded to put the Quad-saw into exercise mode and then watched the monitors to ensure that all of the equipment was responding properly. After one cycle of the equipment he saw what he believed to be a glove appear on one of the monitors. He

immediately stopped the equipment and ran down to the Quad-saw where he saw the Quad-saw operator employee slumped down between the side- heads.

The Electrician called for help and first-aid was dispatched immediately but despite the best efforts of all involved, the Quad-saw operator employee was later pronounced dead at the hospital.

SafeStart ANALYSIS	
STATES 	Which of the Four States were involved in this incident? <input type="checkbox"/> Rushing <input type="checkbox"/> Frustration <input type="checkbox"/> Fatigue <input checked="" type="checkbox"/> Complacency
Explanation: It appears that the Quad-saw operator employee simply forgot to de-energize and lock out the equipment.	
SafeStart ANALYSIS	
ERRORS 	Which Critical Error(s) increased the risk of this incident? <input type="checkbox"/> Eyes not on Task <input checked="" type="checkbox"/> Mind not on Task <input checked="" type="checkbox"/> Line-of-Fire <input type="checkbox"/> Balance/Traction/Grip
Explanation: Had the Quad-saw operator employee realized that he had not de-energized and locked out the equipment, he could have stopped the work and removed himself from harm's way.	

KEY CONTRIBUTING FACTOR (Linear Sequence Analysis) AND FINDINGS:
The Quad-saw operator employee entered the mill from a different route and so upset his routine where he de-energized and locked out the MCC for the Quad-saw on his way to his operator's booth.
The Quad-saw operator employee did not de-energize and lock out the Quad-saw.
The electrician did not know that the Quad-saw operator employee was changing knives.
The electrician put the quad saw into exercise mode while the Quad-saw operator employee was changing knives.

RECOMMENDATIONS/CORRECTIVE ACTIONS:

FOLLOW-UP ACTION(S) TO CONTROL AND PREVENT REOCCURRENCE:			
FOLLOW-UP ACTION REQUIRED	WO#	PERSON RESPONSIBLE	DATE TO BE COMPLETED
Meet with sawmill site 2 crews prior to start-up to discuss the accident and the need for lockout vigilance.		Dave Letnes	Nov. 24/06
Meet with sawmill site 1 crews to discuss the accident and the need for lockout vigilance.		Gary Doucet	Nov. 24/06
Introduce a pilot project as described below: Interlock an alarm on the barrier guards on the Quad-saw so that if a worker forgets to de-energize the equipment before opening the barrier to access the equipment, an alarm will sound. {This is to support the Lockout procedure, and not to take the place of the Lockout procedure.}		Darrell Mark	Jun. 30/07
Contact WorkSafeBC to discuss the production of a WorkSafeBC slide show for locking out the Quad-saw prior to changing knives.		Tom Blake	Nov. 30/06
Above and beyond the present process of education for zero-energy, schedule a follow-up crewtalk with the "Lockout" theme by Dec. 31, 2006.		Dave Letnes Gary Doucet	Dec. 31/06

ATTACHED LOCATION DRAWING & PHOTOS:

Photo 01 – Site II Quad West Side Location; Electrician View from Control Booth



Photo 02 – Site II Quad West Side Location; MCC #3 Lockout Location Close-up view.



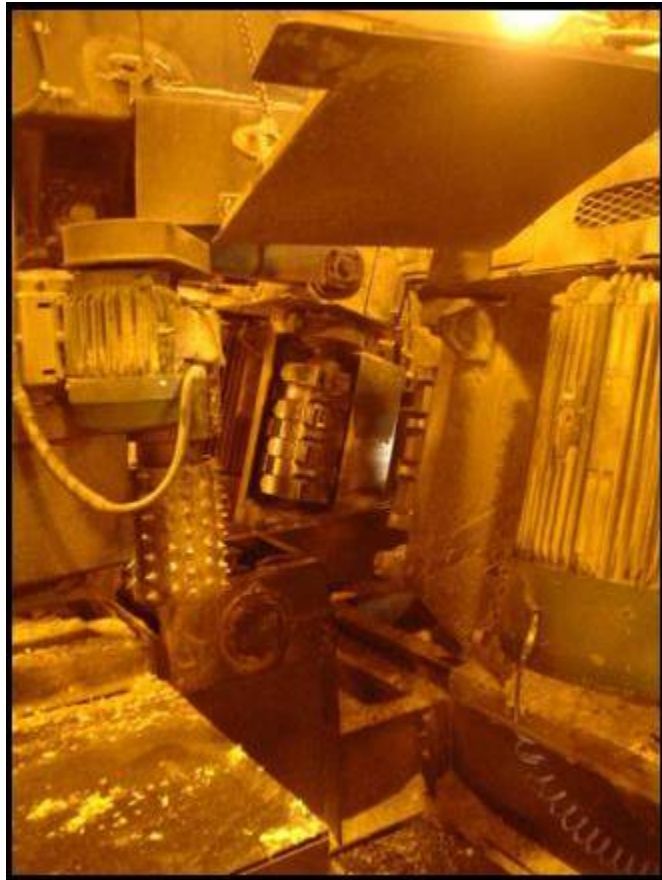
Photo 03 – Site II Quad CA1 Camera View of Chipping Side & Top Heads from the East Side Location



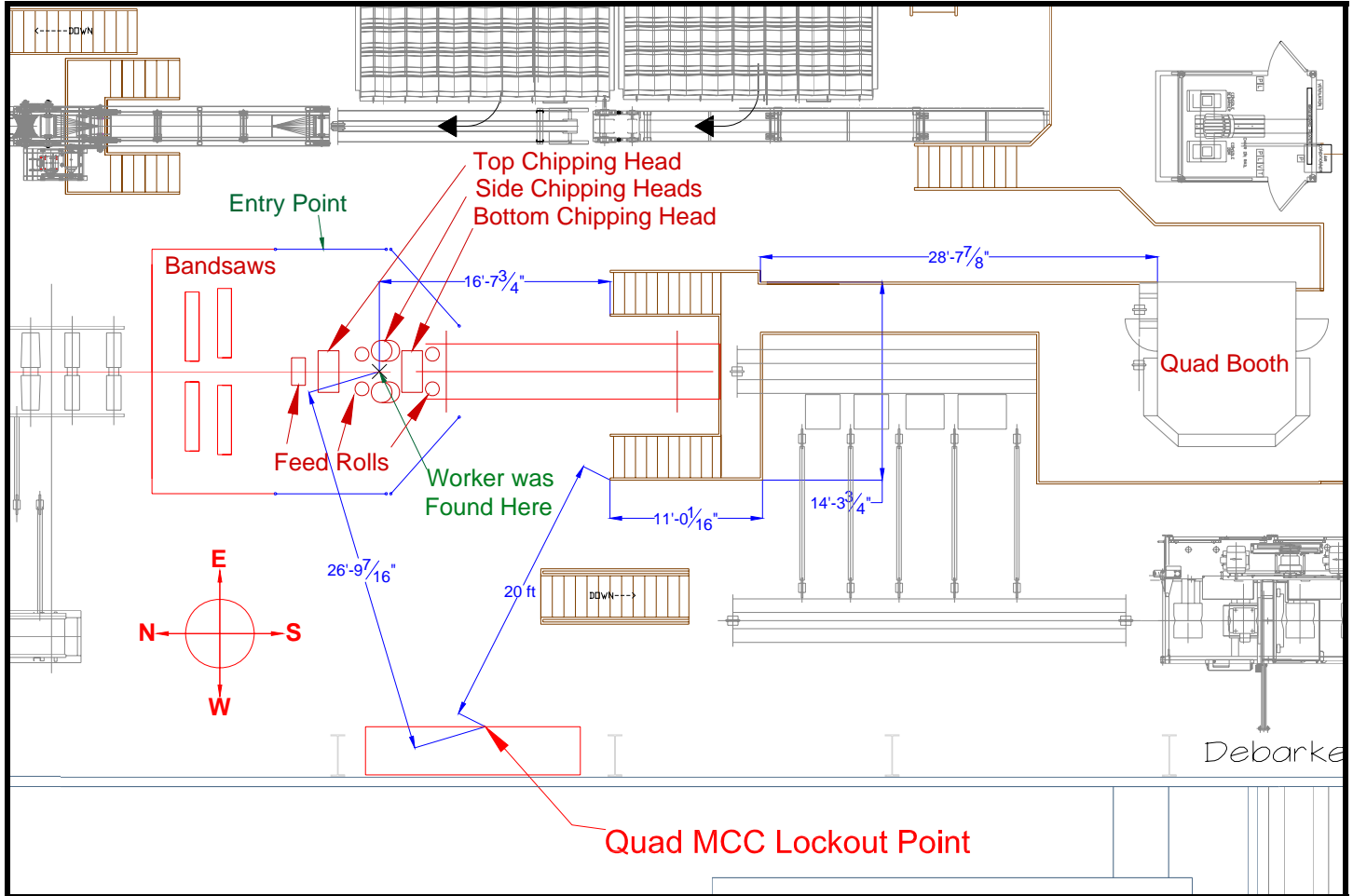
Photo 04 – Site II Quad East Side Location



Photo 05 – Site II Quad East Side Location; View of the West Side Chipping Head and point of entry to change the Top Head Chipping Knives.



Location Drawing – Site II Quad Location



S2SM – Quad Area