



# **TOLKO**

## Lessons Learned

Coroner's Inquest – Tolko Lavington

## Bradley Haslam

On June 15, 2013 Bradley Haslam, an 18 year old clean up employee, became entangled in the waste belt directly below the sawmill trimmer unscrambler.

Unfortunately, Bradley passed away from his injuries.

... here are our lessons learned.

# Coroner's Recommendation

To produce an educational tool to share across all Tolko operations and industry that describes the lessons learned and depicts the safety standards accomplished since the death of Bradley Haslam.

# Identified Learnings

As a result of the investigation and inquiry,  
we have identified learnings in three key areas :

- Lockout
- Guarding
- Supervision

# Lockout

## In the Past

- Tolko Lavington had lockout procedures in place for all the equipment and provided training on those procedures.
- However, our level of training was inconsistent and all employees were unclear on what the lockout standard was.
- We used a task specific non-area based lockout process.
- This allowed the worker to complete a pre-work hazard assessment and lockout process on his/her own.
- Signage was inconsistent, vague, and did not clearly communicate what was required.

# Lockout

## Lessons Learned

- The Lavington Division is moving to an 'area based' lockout system.
- This system mandates the required lockout(s) to enter into an area, or a specific piece of equipment, regardless of the work occurring.
- Lavington has improved its program on lockout:
  - Enhanced new worker lockout training program.
  - Lockout buddy program put in place. (peer-to-peer verification)
  - Completion of Pre-job hazard assessment process (PASS) mandatory prior to lockout.
  - Introduced Supervisor Observation program to monitor compliance.

# Guarding

## In the Past

- The Lavington Division was upgrading its guarding on what we thought was an adequate Hazard and Risk Assessment process developed internally.
- The program was focused on minimum requirements for compliance based on recognized industry standards.
  - Guarding was not audited from a “how can this be defeated” perspective.
- The guarding improvement program was based on work areas and did not identify or prioritize deficiencies based on severity.

# Guarding

## Lesson Learned

Using WorkSafe BC Safeguarding Machinery and Equipment General Requirement template, ANSI and CSA standards, a comprehensive Hazard Recognition audit was done to prioritize the risk to workers.



# Guarding

## Lesson Learned

- This process created Lavington's Guarding Inventory.
- With the Guarding Inventory system in place, Lavington focused on the most severe hazards first.
- Procurement process involves guarding specification requirements under the CSA and ANSI standards.
- Guarding has become a continuous improvement process in addition with the Plant Safety Committee completing a guarding audit twice per year.

# Perimeter Guarding

Based on the enhanced priority assessment, we installed/modified guards to meet compliance.

The two types of guards in use at Lavington Division are:

## Perimeter Guarding

- Machinery was safeguarded by location, keeping people out of the area due to its potential of serious injury. Walkways, access platforms, or service ladders were guarded and locked.
- To enter these areas to perform any task (e.g. housekeeping), lockout is required.

# Perimeter Guards

Before



After



# Perimeter Guards



# Perimeter Guards



# Fixed Guarding

Fixed Guards are the preferred means of safeguarding when access to the area is required during normal operation.

The **AUTO** method was used to ensure all fixed guards were designed to protect the dangerous areas, where you are not able to reach:

- **A**round the guard
- **U**nder the guard
- **T**hrough the guard
- **O**ver the guard

# Fixed Guarding

Fixed barrier guards needed to:

- Offer good visibility to feed points
- Stand up to normal wear and tear
- Meet normal production and quality needs
- Be difficult to modify or defeat

# Fixed Guarding

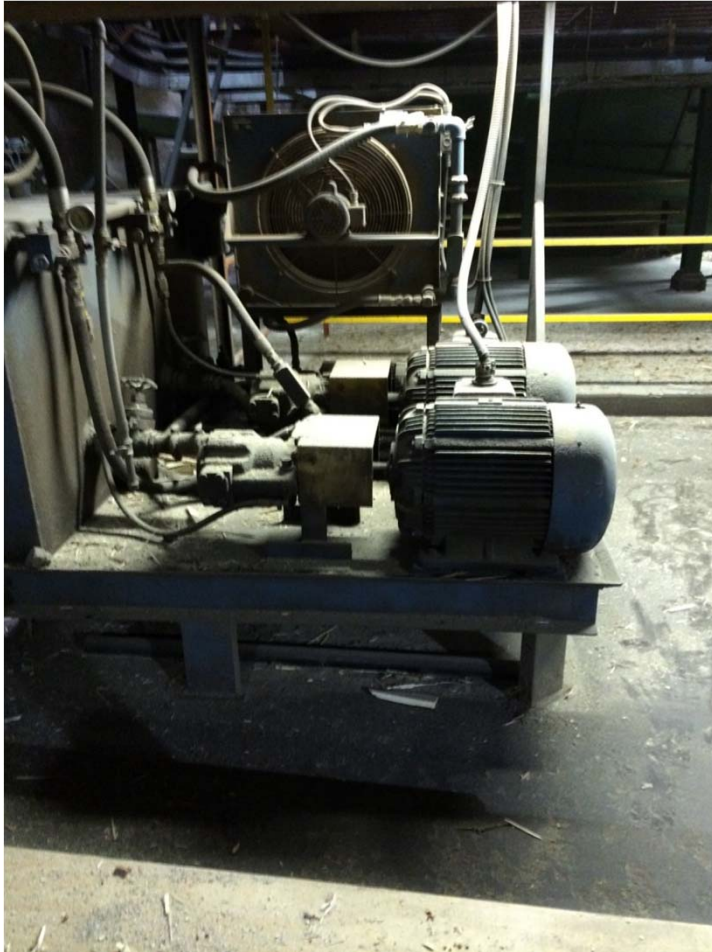
- Guards must be at a safe distance from hazardous moving parts:
  - Use of black mesh or grid guarding material in order to maintain good visual of operating equipment.
  - The relationship between the size of the opening in the guard and the distance to the danger point was determined and the pinch point eliminated.

**Note:** Perimeter and barrier guarding require a tool for removal or access.



# Fixed Guarding

Before



After



# Guarding Audit Process

- Audits are conducted on an ongoing frequency to promote continuous improvement.
  - Supervisors and Workers are always inspecting guards to ensure compliance.
  - Issues are reported and corrected through a safety incident tracking and work order process.
  - The Plant Safety Committee complete frequent site inspections to ensure compliance using a site inspection process.
  - Internal and/or external 3<sup>rd</sup> party audits conducted annually.

# New/Young Worker Training

## In the Past

- Orientations and indoctrinations were conducted by the Supervisors prior to new and young workers commencing work.
  - Classroom orientation
  - Written safety quiz
  - Mill tour with lockout demos
  - Work place hazard identification training
- Lavington did not differentiate the specific needs of Young Workers.
  - Risk tolerance
  - Schedules (fatigue management program)
  - Not all the workers carried a radio for communications
  - Some of the young workers worked alone

# New/Young Worker Training

## In the Past

- Young Workers were hired as casuals to work on graveyard and weekend clean-up crews to meet combustible dust requirements.
- Lavington Division did not have specific standards in place for supervision of new/young workers.
  - Supervisor to worker ratio.
  - Standardized observation process.

# New/Young Worker Training

## Lessons Learned

- New/Young Worker indoctrination has been enhanced and the delivery encompasses more time to ensure critical content is retained.
  - New and young workers are paired up with an experienced worker for the first 6 weeks of employment.
  - An observation process requires more frequent observations and discussions with new and young workers.
- Utilizing experienced workers on a revised clean-up schedule to reduce reliance on young workers.
- Focusing on engineering to eliminate dust at the source to mitigate the reliance on clean-up.

# New/Young Worker Training

## Lessons Learned

- A dedicated Clean-up Crew Supervisor with smaller crew size.
- All workers can be contacted by radio for communications and a 'buddy system' has been put in place.
- We introduced the PASS (Pre-Job Assessment Safety System) card for workers to identify hazards prior and during lock out and upset conditions.

# Supervisors

## In the Past

There was a disconnect from management's expectations of supervisors and the supervisor's ability to deliver on them. (for example; verifying a compliant lockout)

- No processes were in place to measure the effectiveness of our supervision.
- Supervisor training was not structured and we relied heavily on "peer-to-peer" training for new supervisors and chargehands.
- Lack of standards were put in place to clarify expectations.

# Supervisors

## Lessons Learned

- Standards and expectations are clearly communicated to all supervisors and employees.
- Lavington utilizes both internal and external facility audit processes to help determine the effectiveness of their supervision.
- A 'Supervisor Observation' process was introduced to ensure safe work behaviors by all employees are being reviewed frequently.
  - Behaviors are observed one-on-one
    - Feedback is provided
    - Coaching is completed and documented
    - Superintendent audits process



# Supervisors

## Lessons Learned

- Tolko Lavington is moving to a more structured Supervisor Development program that ensures fundamentals are taught early on before someone runs a crew.
- The New Worker evaluation process requires the Supervisor to spend quality time with the new employee to ensure they understand his/her role in dealing with hazards and safety.

# Moving Forward

In order to help distribute these learnings throughout the company, Tolko has:

- Re-structured to include dedicated safety resources.
- Defined and standardized processes and policies in the workplace. I.E. New and Young Workers, PASS cards.
- Established a Safety Leadership Team to deliver on the Safety Strategic Plan.
- Established a Safety Steering Committee to help deliver on company safety initiatives and leverage the work done by facility safety committees.