Loading Dock Safety: Domtar’s Recent Experience

PPSA, June 22nd, 2011
• Drivers
• Process
• Findings and Conclusions
• Path Forward
Drivers

• Two severe incidents drove focus and energy into evaluating loading dock safety:
  • Separate incidents where employees fell out of un-locked trailers as the trailers were moving. The employees sustained severe hip & leg injuries
  • Both docks had locks, policies and procedures.
  • One was prior to activating the lock, the other was after it was unlocked.
Process

- Safety Incident Investigations
- Team identified to study and develop minimum requirements for loading dock safety:
  - Corporate Safety Manager
  - Corporate Converting Manager
  - Mill Safety Managers (2)
  - Mill Operations Managers (3)
  - Converting Plant Manager
  - Distribution Safety Manager
Incident Investigation

- Employees involved lost focus
- Dependence on human intervention and/or compliance
- Reliance on a single safe guard
Recommended Minimum Requirements

1. **Primary system (dock lock) required for all truck docks for tractor-trailer rigs**

2. **Secondary system required to prohibit employees from entering trailers when dock lock not engaged**

3. **Policy and Procedures w/ Job Safety Analyses**
   1. Loading and Unloading procedures with periodic reviews
   2. All employees require initial training with documentation
   3. Annual refresher training

4. **Minimum PPE: high vis vest, safety shoes, safety glasses, hearing protection**
Primary System

• Dock lock system
  – Holds trailer to dock while loading
    • Ensures no trailer creep
    • Accepted industry standard
    • Actuated inside by the operator, does not rely on driver
    • Removes dependence of chocks, taking keys, etc.
  – Most Mills & Converting sites have primary systems in place
  – Less prevalent in warehouse/distribution operations
Secondary System

- **Targeted at losing focus, human compliance, single safeguard**
- **Two options:**
  1. Safety gate located in front of door – provides physical barrier
     - Hinged or mechanized lift gate
     - Allows dock doors to be open or closed
     - Better fit for mills where security is not a concern and where doors typically remain open in the summer
  2. Interlock existing dock door
     - Keep door closed, when truck not in place, for safety **AND** security
     - Better fit for converting sites & warehouses where doors provide added security
Secondary System

- **Secondary systems are to be interlocked with primary dock lock system**
  - Dock lock cannot be released unless safety gate or door is down (proximity switch interlock)
  - Gate or door cannot be raised unless dock lock engaged

- These systems would prevent both “entering prior to trailer lock up” and “entering after dock lock released” incident scenarios from occurring
“Thanks to Rite Hite!”

- Dan Quarles and the entire Rite Hite team
- Hosted a visit to their Milwaukee facility and show room
- See actual units installed and operational
- Very beneficial visit
Lift gate with light weight rails
Example of Dok Lok Guardian and Interlock
Safety lift gate with heavier rails
Hinged safety gate w/light weight plastic rails
Dock door panel with screen sections & cover
Dock door with screen section & screen cover
Lift Truck Dock Bays

- Lift trucks have a back lift gate installed and can not be “locked up” with the primary dock lock system
  - By comparison to trailer bays, very few truck bays dedicated to lift gate trucks
  - Some truck wheel lock systems, but expensive relative to traditional dock locks

- At this point, administrative controls appear to be the most practical approach
Other Considerations &/or Requirements

- **Maintenance – levelers & truck restraints**
  - Formal & documented preventive maintenance checks are in place
  - There is a “shelf life” associated with levelers and dock locks… equipment over 10 years should be routinely checked for weld & mechanical integrity
Summary

• Primary and Secondary Systems
• Interlocked
• Procedures with annual refresher training
• Proper Maintenance
Path Forward

• All sites to develop plans and install/retrofit to meet minimum requirements by facility

• Target 100% compliance by EOY 2011
Questions?