Incident Sharing

INCIDENT RESULTS IN FINGER AMPUTATIONS

This incident sharing reflects key lessons learned in the importance of management system controls with emphasis on individual/team behaviors. Unfortunate with this incident, the initial surgery to reconnect all the Injured Person's fingers that were severed was successful, but ultimately only one of four fingers fully recovered.

Key messages:

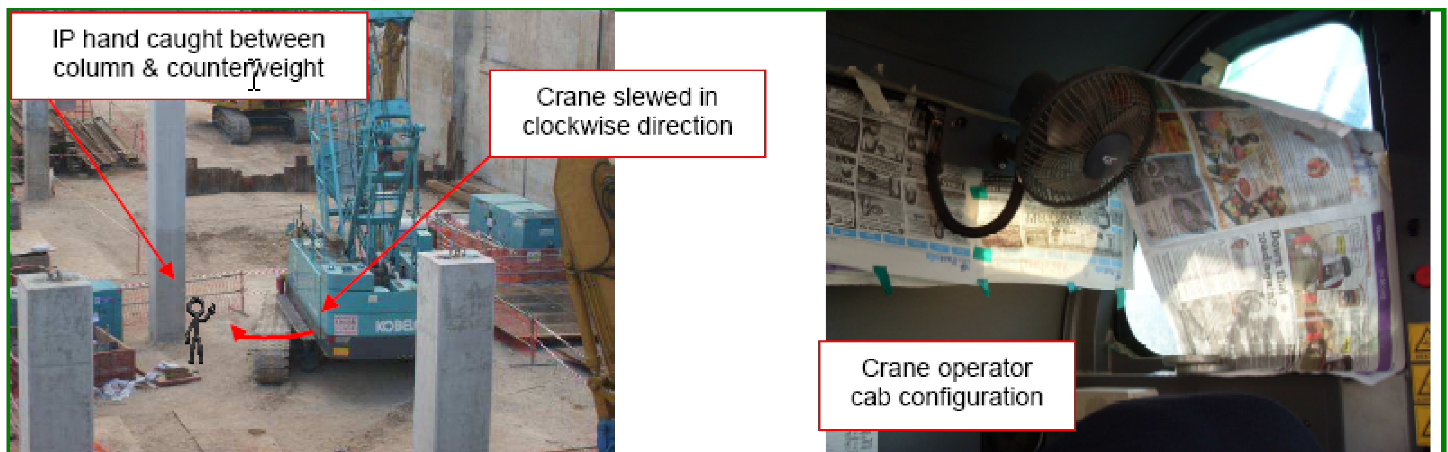
- *Following established safety procedures ensures hazards are identified and mitigated - deviating from procedures and/or taking short cuts can lead to serious incidents & injuries*
- *When the approved work scope changes, the new work hazards and job steps need to be identified and reviewed - a change in the job can change the hazards and risks*

Incident Date: 11 Dec 2009

Classification: Lost Time Injury

Location: **ExxonMobil** Singapore Parallel Train Project, ExxonMobil Asia Pacific

Incident Description: An 80 ton-crawler crane was re-positioned by the Lifting Supervisor and Crane Operator to lift sheet piles due to an unplanned work scope change that was not approved. As a result, the crane was moved closer to a concrete column and the Lifting Supervisor and Crane Operator turned the crane to verify the counterweight would clear the column. The two riggers/signalmen were not present to assist as the Lifting Supervisor had sent them away to collect additional slings. As the crane turned, the Lifting Supervisor was standing near the concrete column. Due to the Lifting Supervisor standing in a blind spot (and possibly because cab windows were covered by newspaper), the Crane Operator could not see the Lift Supervisor. The Lifting Supervisor raised his hand to warn the Crane Operator that the counterweight was going to strike the column and caught his left hand between the counterweight and the concrete column. Four fingers of the Lifting Supervisor's left hand were amputated as a result of the incident.



(continued on following page)

Incident Root Causes:

1. Crane operations conducted without qualified riggers/signalmen; crane checklists improperly completed
2. Lifting Supervisor placed himself in crane's visual blind spot, and Crane Operator turned the crane without full external visibility (blind spot + windows partially covered with newspaper)
3. Pre-task preparation did not address 'unplanned' work change; Approved work plan was not followed
4. Permit To Work (PTW) system not detailed enough regarding specific work location, tasks and controls
5. Use of a crane with high speed turning (4.0 RPM) that was not designed for congested work areas

Lessons Learned:

1. Controls must exist to ensure compliance with crane lifting procedures and effective PTW / Work Planning processes
2. PTW and Lift Management System deficiencies were not identified by audit processes or by field supervision
3. When the work scope changes, the plan, equipment & work environment must also be re-evaluated to ensure adequate mitigations are implemented before work start (i.e. review of PTW, Work Method Statement, procedures, etc.)
4. Two previous observations and interventions on crane high turn speed were not formally recorded and did not identify or correct a critical equipment issue (i.e. crane operator behavior vs. equipment turn speed design)
5. An unreported asset damage incident (counterweight scratches) occurred previously such that potential SHE learnings were not identified or shared