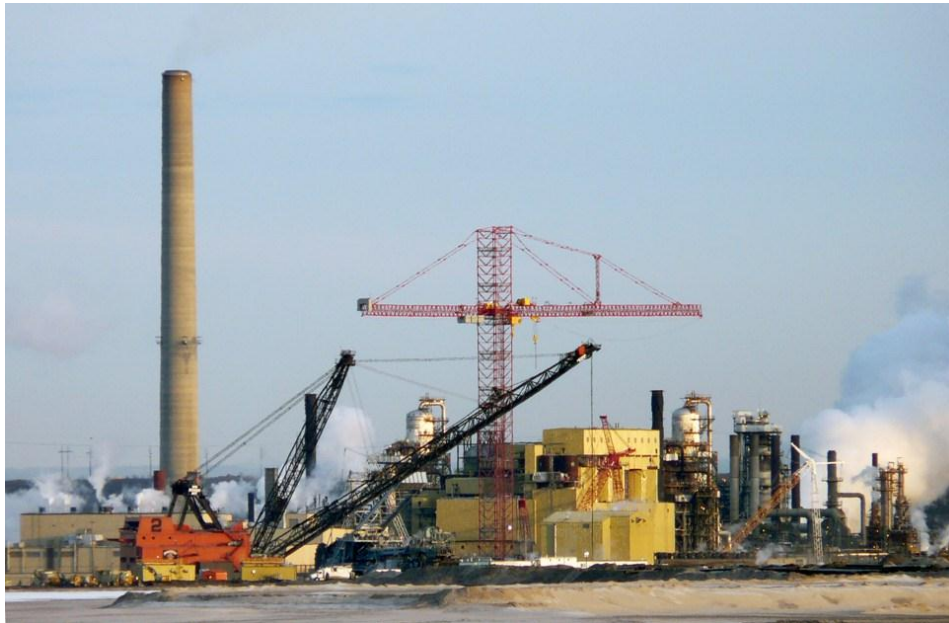


# SERP Joint Workface Study - A Tri-Partite Approach to Improved Performance



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# Background

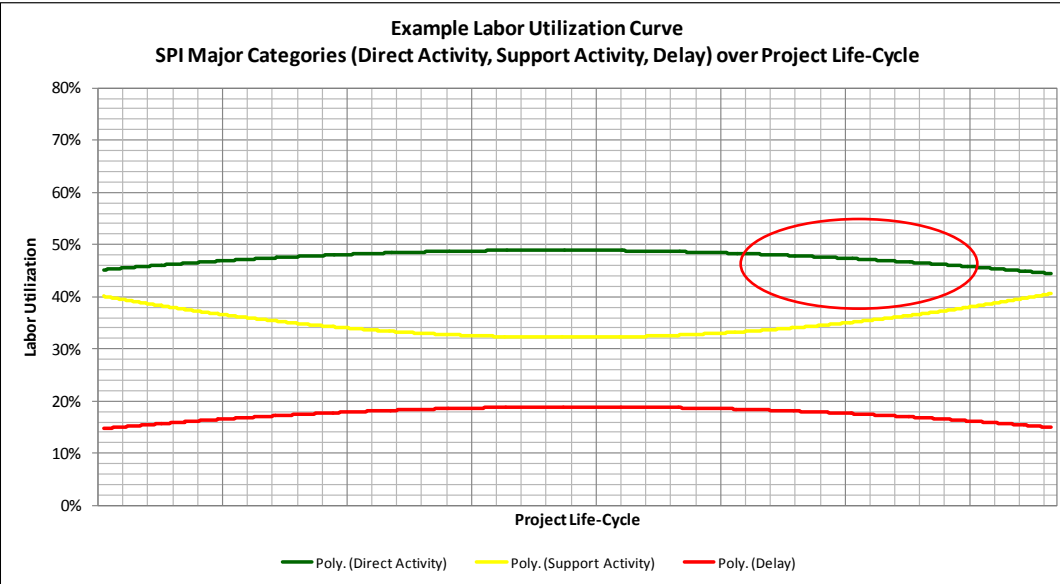
- Productivity on the Syncrude Emissions Reduction Project was a concern.
  - Earlier quantitative “Time on Tools” studies had indicated high craft travel, low direct activity
  - Qualitative views had indicated low levels of foreman time at the workforce
- In the fall of 2010, the Building Trades were approached by Syncrude to assist in funding a study on “Foreman Time at the Workface”
- A Tri-partite study was jointly funded by Syncrude, Jacobs, and the Building Trades
  - Conducted by Productivity Enhancement Resources Inc.
  - Baseline study in Jan/11. Follow-up study May/11

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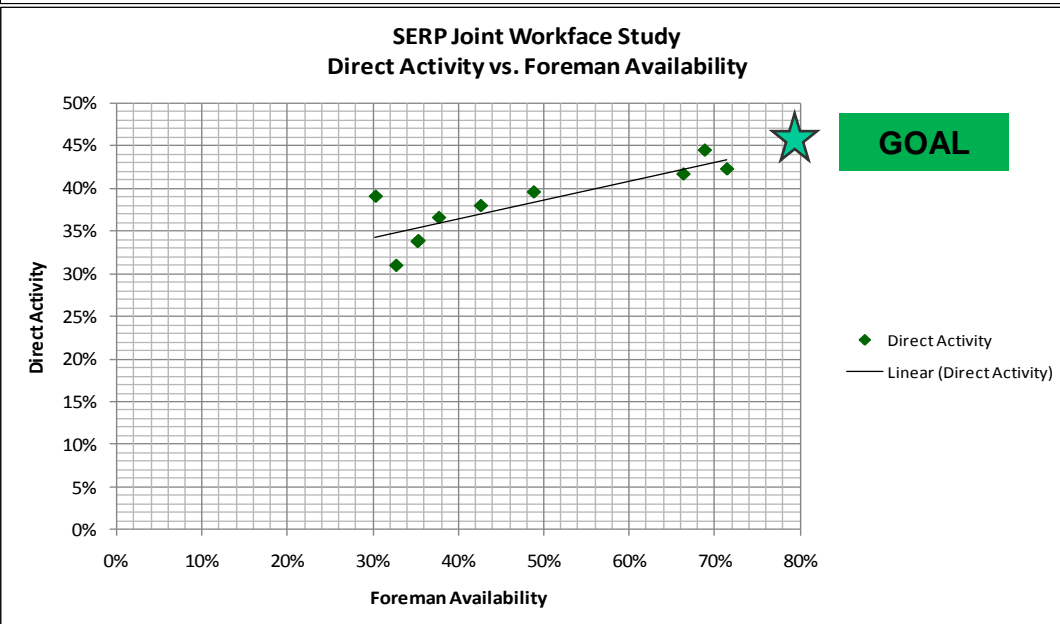
# Findings

- **Baseline Data** - January 2011 results indicated foreman availability of **34.7%** corresponding to direct craft activity of 36.9%
  - Foreman choosing to conduct administrative duties elsewhere
  - Time at workplace not considered a high priority
  - Erosion of standards
  
- Joint improvement initiatives conducted to drive accountability and engagement
  - Communications and alignment of expectations
  - Logistics Improvements
  - Building Trades Business managers meetings with craft.
  - Positive feedback, recognition, and promotion
  
- **Final Data** - May results saw a 32% improvement in foreman availability to **45.9%**
  - Corresponding 21% drop in craft travel time and 4% improvement in direct activity
  - Corresponding reduction in number of safety incidents and improved productivity

## Direct Activity vs Foreman Availability

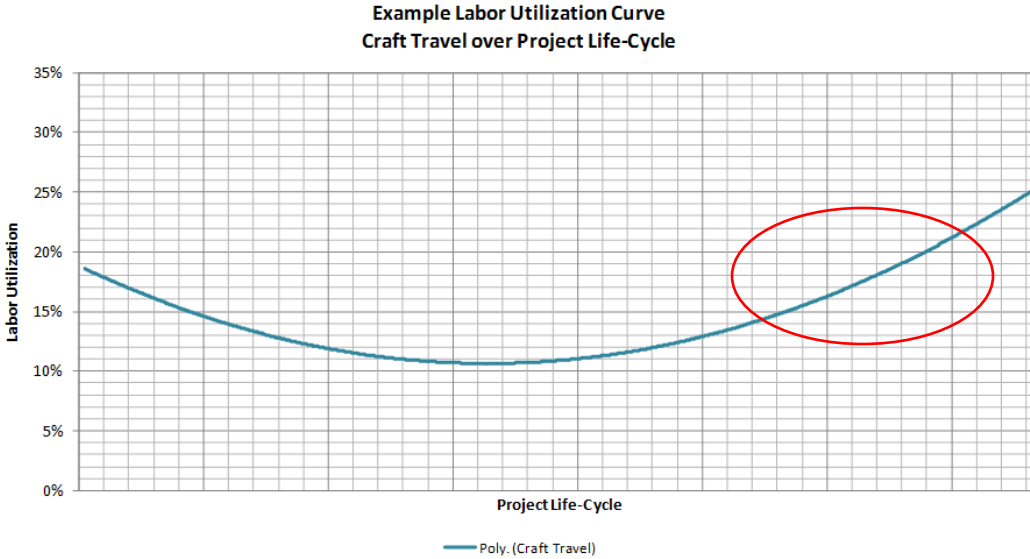


- Overall Direct Activity improved 1.4 percentage points (4%) during study period (36.9 to 38.3%)
  - Normally expect to see a decline in direct activity of 5.3% during this period of the project
  - Net improvement 9.3%

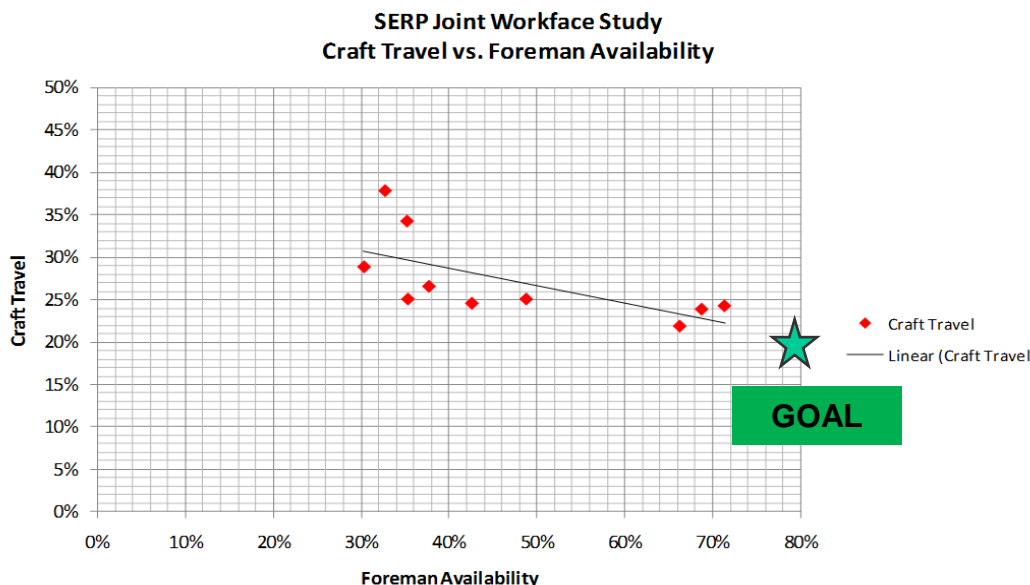


- A linear relationship was found between foreman availability and direct activity
  - Trades with lower foreman availability worked at ~ 35% Direct Activity
  - Trades with higher foreman availability worked at ~ 43% Direct Activity

## Craft Travel vs Foreman Availability



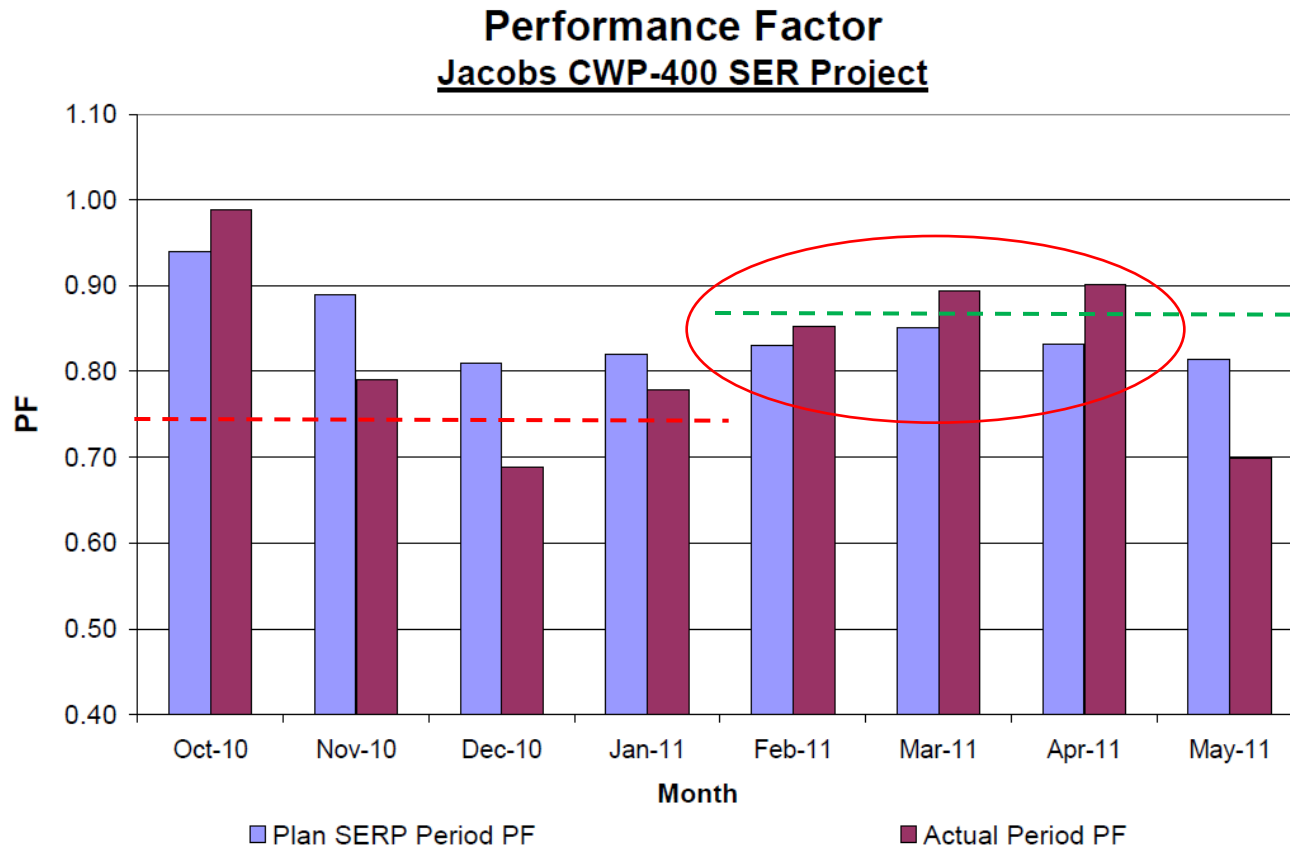
- Overall craft travel dropped 5 percentage points (21%) during study period (29.1 vs 24.2%)
  - Normally expect to see an increase in craft travel of 26% during this period of the project
  - Net improvement 47%



- A linear relationship was found between foreman availability and direct activity
  - Trades with lower foreman availability had ~ 31% Craft Travel
  - Trades with higher foreman availability had ~ 23% Craft Travel

## Productivity vs Time

- PF rose from a nominal 0.75 PF to 0.86 PF, partially attributable to increased foreman time at the workface, resulting in greater direct activity and reduced craft travel
- Productivity during the improvement period exceeded plan numbers for 3 out of 4 months
  - May was impacted by environmental conditions (forest fire smoke)

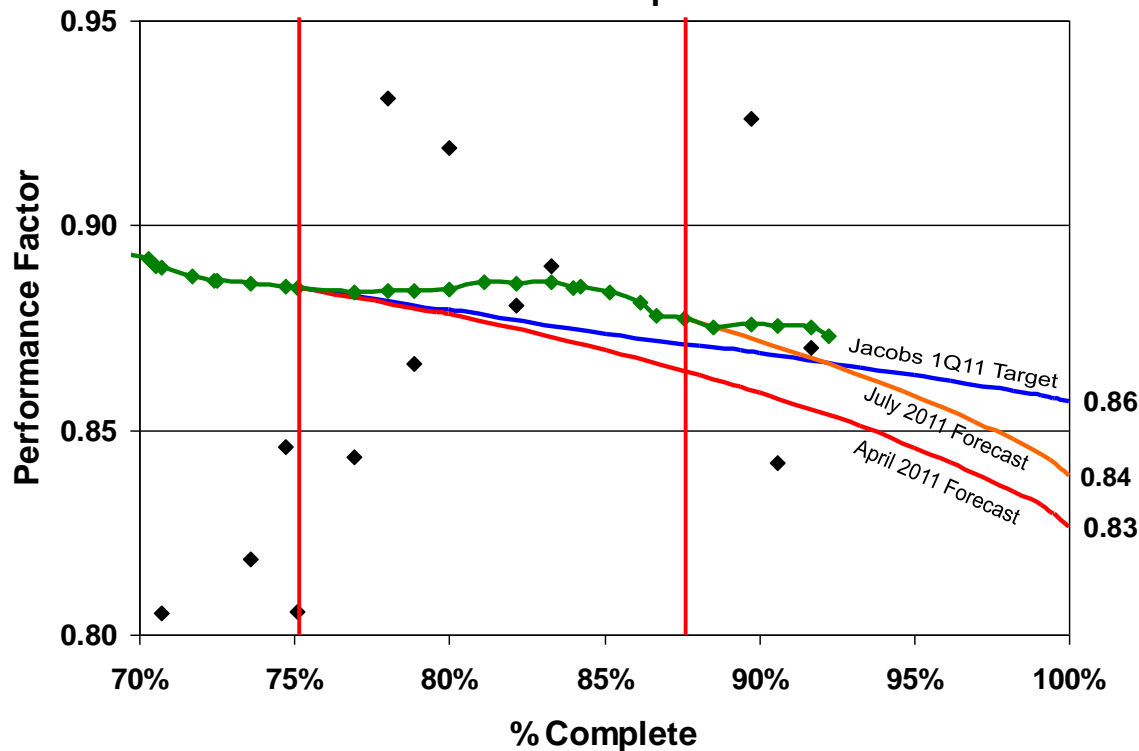


## Productivity vs Percent Complete

- Productivity levels did not follow the typical decay curves experienced on most projects
- PF levels continuously exceeded plan numbers during improvement cycle
  - Overall cost outlook reduced by \$11M due to better than plan PF

### Productivity vs. Progress

#### Jacobs Scope

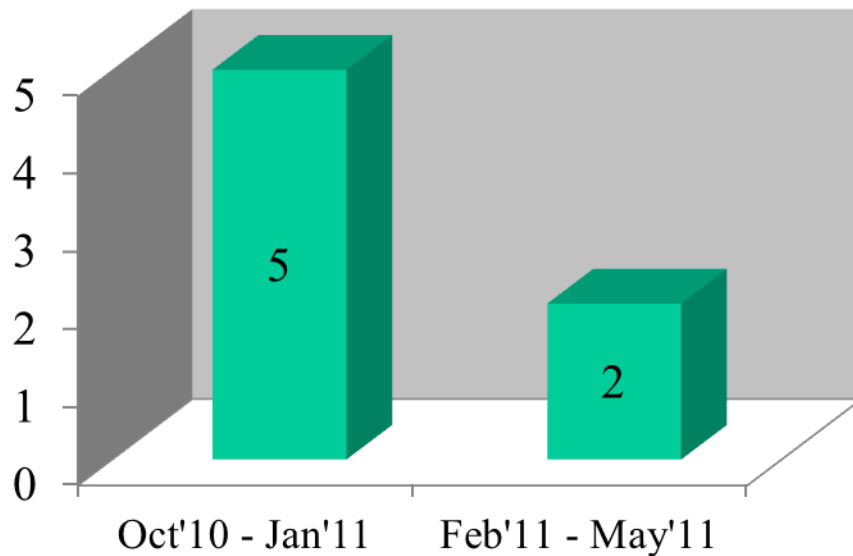


— Jacobs 1Q11 Target    — April 2011 Forecast    — July 2011 Forecast    —◆— SER Cum PF    ◆ SER Period PF

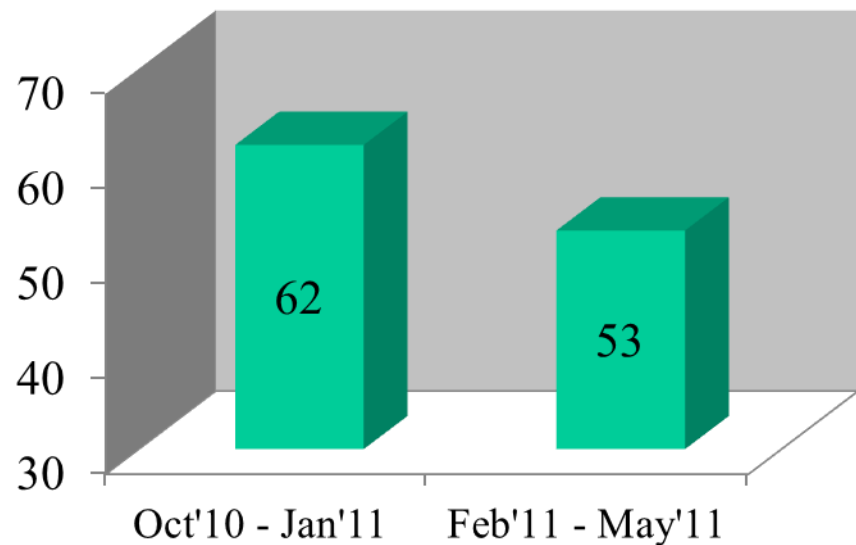
## Additional Observations

- Improved incident rates occurred, partially attributable to improved foreman time at the workface
  - Recordable injuries vs previous period reduced from 5 to 2
  - Total incidents reduced from 62 to 53.
- Project went 87 days with no recordable injuries during period, one of the longest stretches on the project

### Recordable Injuries



### Total Incidents





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## Summary of Findings

- Higher field presence of foreman at the workface has a direct relationship to increased craft work activity and to decreased craft travel
- Improved safety and productivity performance on SERP during the study phase can be partially attributed to increased field presence of foreman at the workface
- Joint participation and ownership of results by Owner, Contractor and Labour is key in improving the foreman time at the workface
- Improved foreman training, role definition, and accountability is required to continuously improve craft performance
- Implementation of efficiency metrics (Time on Tools) as a supplement to traditional execution measures has proven to be an effective tool in continuous improvement of overall project productivity

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# Key Learnings

- Tripartite approach to problem resolution can create significant performance improvement if all sides are aligned to a common goal
- Syncrude has always been a supporter of Building Trades and were pleased to see them actively pursuing improvements to increase their value
- Ongoing, continuous improvement of craft productivity is essential to the success of the Oilsands Industry in Alberta and the Organized Construction Industry as a whole

## Our Common Challenge

The results of this study indicate that we can work together to improve foreman time at the workplace.

However to obtain the maximum benefit, we must continuously improve until we consistently achieve 70-80% of foreman time at the workplace