

## COAA - TWICE as SAFE, TWICE as PRODUCTIVE by 2020

### LEDCOR

#### Site Services – Civil and Earthworks

##### **Quotable Quote:**

Integrating our safety team with our operations team has strengthened our safety culture and improved our safety performance.

##### **Success Story:**

Last year we moved the reporting structure of our safety team into our operations stream, having the Safety Coordinators on the job report to the Project Manager, and the Safety Manager reporting to the Divisional Construction Manager. Breaking down these silos has resulted in a much more integrated team, with all team members having common goals and objectives. It has allowed for more effective communication between team members, improving the quality of job planning, better identification and mitigation of hazards in the field, and a reduction in risk tolerance at an individual level. Leading indicators are conducted jointly and are meaningful and effective, the team members have a greater level of understanding and respect of each other's roles. Our lagging indicator statistics were the best results we have had in years, with TRIF of zero on more than 500,000 man-hours. It is worth noting that we have kept "dotted line" relationships for the safety folks to the corporate safety leadership team, which has ensured consistency with corporate policies and procedures, allowing for performance management and career development for the safety folks to be done consistently with safety team members from other groups

##### **Quotable Quote:**

Ledcor Site Services started monitoring and discussing our non-work time and client delays at site in 2014. Helped increase total time on tools by 10% over a 12 month period

##### **Success Story:**

Ledcor always looks to add more value at any project we are awarded. At the Shell Albion site, Fort McMurray, we have a maintenance contract and many tasks are performed each day by our crews. They range from welding, bolt-ups, removing old worn out pipelines to replacing new pipelines. The crews perform a number of these tasks during any given day and challenge was to make sure that we were being efficient with their time. In order to find out how efficient, we broke down the foreman's timesheets to track non work and work time activities. We came up with a total of 10 areas that the foreman could record their time ranging from time working, travelling between jobs, permit delay, client delay and Ledcor delay. Each day the time was entered into our system which populated a spreadsheet that was reviewed each week by our supervisors and reviewed each month by our client. Over the course of 4 months we were able to increase our time at the work face by 10% with the big wins being our set up time in the morning and client permitting/material streamlining.

#### Industrial Group (Encana Saturn)

##### **Encana Comments:**

- The combination of a 15-6 dayshift and a small, managed 14-7 nightshift with clear work front accountabilities resulted in high productivity and quality of workmanship with little to no rework.
- We operated with a small QA oversight team, allowing contractors to own the responsibility of ensuring quality control standards were met.
- Without having a backshift, extra work was better managed by having the same personnel track and report hours expended on timesheets, resulting in accurate time reporting.

- There was excellent communication between the teams and goals were clearly understood by both parties. This resulted in less required meetings and allowed our Construction supervisors to remain in the field longer.
- Our Construction Coordinators were effective in removing roadblocks and providing the answers to problems in a timely manner, allowing our teams to manage extra work to our approved estimates.
- Having Turnover involved at the beginning of the process allowed us to identify sub-systems for contractors before they started working.
- Process equipment skids weren't welded until all piping connections were checked to avoid rework.
- Construction Managers were effectively aligned, meeting many times a day to manage any problems that arose.
- Encana and Ledcor Field Engineers worked together to review and resolve issues with field trouble reports (FTRs).

**Ledcor Comments:**

1. 15/6 Shift with no cross shift
2. Great working relationship between EnCana and Ledcor Groups
3. Communication lines between EnCana and Ledcor always open.
4. Listened to each other's ideas.
5. Amount of Preplanning EnCana allowed Ledcor to perform at the beginning. More staff and in directs than usual
6. Not requiring a baseline schedule at the beginning of project. Allowed to baseline when ALL the information was available and a good plan was in place
7. Quick response to queries and RFI's
8. Bucket trends to allow for quick approval of small trends on site without waiting for everyone's approval. This maintained a constant workflow.
9. Team was open to any type of idea to advance schedule and reduce costs (Night shift / Increasing offsite pipe fabrication and adding additional break flanges)
10. Decent Engineering and when there was an issue, there was a quick response
11. Really good working relationships between EnCana and Ledcor counterparts at site/home office levels
12. Turnover and Scoping was completed at the beginning of the project, not left till the end of the project
13. Senior Management let the site teams implement ideas even if some objections (night shift vs cross shift)
14. Celebrated Milestones together (Safety/Christmas) – Played large role in eliminating the “us” and “them” mentality
15. Taking the additional time at the beginning of the project to re-evaluate vendor building nozzles to ensure piping would fit. This initially took more time, but it saved many RFI's later in the project.