USC CONSULTING GROUP™

Empowering. Performance.

Paper mill increases production without capital expenditures.

Client:

Two company-owned mills; one a newsprint mill, the other a kraft pulp mill

Challenge:

Both mills faced growing competition that forced prices down even as recessionary factors reduced demand. Management decided to seek help from an expert in process improvement. USC Consulting conducted a feasibility study to identify key areas for improvement in process control, inventory control, supervision, central management, production and maintenance. The study found paper machine efficiency at 85%, serious communication gaps between production and maintenance and a lack of faith in the mill's ability to produce to budget.

Process:

The USC team worked side-by-side with mill personnel on all shifts. Together, we set new production goals and implemented new plans of action. In the newsprint mill, we set an increased production goal from 546 to 600 tons per day without capital expenditure.

First, we established new benchmarks for process performance and set indices to give operators clear targets. We then standardized methods of operation and trained all operators in optimum practices. Supervisors learned new management skills and effective problem-solving techniques, as well as how to inspire employees to work as a team to maintain productivity at targeted levels.

Our approach emphasized managing the mill's operations in detail. It called for involvement from all levels of management in the daily operating activities, holding them accountable for achieving their goals.

Unlike the newsprint mill, the pulp mill had been operating above its rated capacity. We set a goal of increasing current volume from 624 tons per day to 670 tons per day. After implementing a system of production planning that synchronized all stages of the process, output increased consistently. The area with the least capacity at any one time set the pace for all interdependent areas. This assured a smooth, uninterrupted production process.

To encourage shared responsibility for continuous improvement, senior managers, maintenance crew and support staff met daily for a 15-minute, informal meeting. Everyone was encouraged to raise concerns and suggest solutions. Each participant

contributed solutions from their own hands-on knowledge. As a result, a serious fault in the programming sequence of the batch digesters was uncovered and corrected. This would result in a dramatic drop in lost time and an increase in the number of blows.

Performance Results:

Newsprint Mill

- Digester cycle time reduced 11%
- Stone downtime reduced 47%
- Winder bad starts reduced 34%
- Machine efficiency improved 7%
- Overrun inventory reduced 78%
- Finished goods inventory reduced 19%
- Saleable tons/day increased 10%

Kraft Pulp Mill

- Digester lost time reduced 63%
- Digester losses, due to lack of white liquor, reduced 89%
- Digester production improved 8%
- Chemical cost reduced 11%
- R8 puffs reduced 67%
- Blowbacks reduced 100%
- Saleable tons/day increased 7%

Conclusion:

Thanks to a process of strict accountability through an action control system, a 100% improvement was achieved. Our work also uncovered the cause of a blowback problem that had been occurring for years.

As a result of the project, both mills achieved their production goals. According to the mill manager, “In addition to the increase in tonnage, the project has produced needed gains in process, quality and cost control.”