

MANUFACTURING: Boise Cascade's DeRidder mill

Night in the wood yard opens eyes, saves millions



By Shawn Martin

CUTTING WASTES: Boise Cascade's Southern Operations Ground Optimization Task Force is, from left, Tommy Linder, Ward Crowe, Jim McKnight, Don Moses, Danny Smith. At the tire, from left, Mike Runge, Chris Nelsen, Judy Lassa. Standing, from left, Stuart Martin and Tom Lester.

By Paul Wiseman
USA TODAY

DERIDDER, La. — Tommy Linder brought the burgers. Jim McKnight showed up with chocolate-chip cookies baked by his wife.

Nearly everyone involved that night at the Boise Cascade paper mill here recalls a carnival atmosphere. No wonder they still call it The Big Night Out.

But it wasn't good eating that made Dec. 19, 1991, an evening to remember for the 10-member team set up to improve the way the mill makes newsprint, the paper used by newspapers.

By spending the night in the wood yard counting and sorting fresh-cut pine that went into the mill, team members who usually work days learned some shocking things about the operation.

They found that the mill was using far more wood than anyone realized. They also found that mill workers had needlessly been diverting wood suitable for newsprint into cheap liner board.

The Big Night Out was just part of the team's effort to find out why the mill's wood costs were soaring. The seven-month mission has yielded annual savings of at least \$1.5 million, maybe \$4 million. And the group — Boise Cascade's Groundwood Optimization Team — has won this year's RIT/USA TODAY Quality Cup for manufacturing.

"This team stood out," says Quality Cup judge Kenneth Farrell, a consultant from Redondo Beach, Calif. "They created change in a business where things had been done the same way for 20 years."

The basic lessons the team learned still haven't sunk in at many companies: Question old assumptions; base decisions on accurate information, not guesswork.

Built in 1969, the Boise Cascade plant here turns pine into two products — liner board, used in corrugated boxes and other types of packaging; and newsprint.

Lower-quality, lower-cost top wood went into liner board. Top wood is rough

What the team did

A 10-member team cut the cost of producing newsprint by at least \$1.5 million a year after learning more expensive wood didn't make better paper.

What a judge said

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— Kenneth Farrell, management consultant from Redondo Beach, Calif.

and bumpy because it comes from the top of pine trees, where there are a lot of branches. Higher-quality, more expensive ground wood went into newsprint.

The assumption at Boise Cascade: The better the ground wood that went into the mill, the better the pulp and, ultimately, the newsprint that came out.

To improve the quality of the newsprint, the mill kept buying better and better ground wood — wood good enough to be used in products such as plywood that would be far more profitable than newsprint to Boise Cascade.

The mill's wood costs soared. Employees worked harder to sort premium ground wood from top wood and ground wood that didn't meet tough standards. But newsprint didn't improve. So the mill demanded even better ground wood. Costs kept rising. Sorting became more frenzied. "The pain got so great we couldn't handle it any more," says team member McKnight, a manager.

The team's mission was to find out what was going wrong. Members came from three departments. Some were managers, others hourly workers.

QualPro, a Knoxville, Tenn., consulting

firm, helped the team learn to collect and analyze information that could pin down the problems. Armed with the new tools, team members went to work.

What they found during the Big Night Out and other excursions appalled them. "All these things we'd taken for gospel were absolutely wrong," says team member Linder, another manager.

The team conducted experiments on the quality of the wood going into the mill and the quality of the pulp coming out. Its stunning finding: There was no connection. "They found they could make high-quality paper out of poor-quality wood," says Art Hammer of QualPro.

Therefore, the mill could substitute cheap top wood for costly ground wood without giving up quality.

Before the findings, newsprint was created from nearly 100% ground wood. Now, that's down to 50% — and might go lower. And that saves Idaho-based Boise Cascade at least \$1.5 million a year.

Another surprise: For years, the plant thought the woodyard crane picked up 12 cords (each cord weighs 2.7 tons) of wood with every bite. They found it really picked up 17 cords. That explained something that had troubled wood-purchasing manager J. Ward Crowe. He'd been convinced that he was supplying more wood than the mill said it was using. He was right. Everything was based on the flawed assumption about the crane.

At first, the Boise Cascade team's findings seem obvious. Why hadn't the plant always accurately measured how much wood it was using? Why did it go for years without running tests on the connection between the quality of wood and the quality of paper?

But things aren't much different at other U.S. manufacturers. "That's what I see everywhere I go," Hammer says. "The state of our measurement systems in this country is a scandal."

But at the DeRidder mill, team members now joke about a new motto: "In God we trust; all others must have data."