



*Duke Energy, formerly Cinergy Generation Services*

## Partnering with a Key Customer to Resolve a High-Impact Problem

### SCORECARD

- Vendor assisted customer in resolving a high-impact problem
- \$150,000 in equipment retube costs avoided
- Major upheaval in process avoided
- No recurrences or related problems

**CLIENT:** Duke Energy, which merged with Cinergy Corp. in 2005, is a diversified, Fortune 500, energy company with a portfolio of natural gas and electric businesses. In Tuscola, Illinois, Duke Generation Services supplies steam, electricity, and other utility services to the Equistar chemical production facility. When the plant's power station was sold to Cinergy, Equistar focused on its core business while benefiting from the energy company's expertise in running the power plant, managing energy costs, and promoting environmental responsibility.

**CHALLENGE:** Impressed by the results achieved with Kepner-Tregoe® (KT) Problem Analysis at the power station, Equistar asked engineers at the power plant, trained in Problem Analysis, to facilitate an analysis of a problem with cracked tubes in a heat exchanger at the chemical plant.

**SOLUTION:** A joint team worked through a problem specification using the KT IS/IS NOT approach. They systematically described details about what, where, and when the deviation occurred—and did not occur—along with the extent and trend in occurrences. By analyzing distinctions and changes, the team had enough detail (for instance, the deviation only occurred between the second and third baffles and only on tubes under tensile stress) to focus a solution on specific changes in inlet steam chemistry control.

**RESULTS:** The cost to retube the heat exchanger is over \$150,000 and placing a spare heat exchanger in service causes major upheaval. By following the systematic Problem Analysis process, the team quickly discovered what caused the tubes to crack, took corrective actions to stop continued damage, and avoided the need to retube.

*“We had invited our customer to participate in a Problem Analysis process at the Cinergy facility. They were so impressed with the method that they asked us to conduct a KT analysis for their organization.”* —Bill Brockman, Senior Engineer