PWC Consulting
Operations Analytics Projects

- **Client Business Need**
  - Koch Nitrogen Company (KNC) produces and purchases ammonia for use in commercial fertilizers. It distributes this product via pipeline, tanker, truck, and rail to a network of storage terminals where it is then sold. KNC must determine how much ammonia to ship by each possible mode and route to each storage terminal on a recurring basis, given expected demand, shipping costs, and storage costs. KNC's existing linear programming model for ammonia distribution was of questionable accuracy and was not being used.
- **PwC Solutions**
  - PwC supervised a multi-vendor team of consultants in defining, designing, building, testing, and implementing a revised linear programming model to identify the most profitable way to ship ammonia in order to satisfy expected demand. The model also helps analyze potential sales transactions with respect to feasibility, profitability, and risk. The model was developed using PIMS, a powerful linear programming package tailored specifically for the petroleum industry, with a user interface developed using Visual Basic.
- **Benefits to the Client**
  - Lower costs through more efficient distribution and storage of ammonia
  - Higher revenue through less unsatisfied demand for ammonia
  - Flexible, easy to use model
  - Model is directly linked to other KNC data systems under development