

Training Personnel in Complex Procedures for the Petroleum and Chemical Industries

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Client Challenge

- Reduced time-to-competency for operators - 75% had not been involved in previous SU-SD (Startup -Shutdown)
- Implement new technology - ensure understanding of training
- Maximize profits by eliminating errors and increasing worker confidence
- Implementation of a world-class performance support system

Solutions

The client selected RWD to partner with their own personnel to gain their involvement and expertise in developing and implementing RWD's TOPS (Technical Operator Performance Support) shutdown and startup process.

RWD provided the following solutions:

- Establishing partnerships with key client personnel for input and involvement
- Development of large control diagrams (LCDs) to convey the function of the unit from feed to products, including all instrumentation equipment, and process flows
- Development of procedure sequence flow diagrams (PSFDs) to summarize complex procedures into a one page easy-to-follow format to eliminate errors
- Reducing complex technology into easy-to-understand knowledge blocks
- Development and delivery of unit specific training
- Development of user-friendly job aids and performance support tools

Solution Implementation

- Provided LCDs and PSFDs as ongoing learning tools
- Developed problem scenarios as training tool
- Jointly developed personnel performance improvement package
- Provided PSFDs as an easy-to follow procedure map

Return on Investment

- Completed startup and shutdown process five days ahead of schedule, resulting in an additional 27.5 million pounds of ethylene production (\$6.6million of additional revenue)
- No incidents during startup
- Accelerated learning (50% less time) by operators on new technology