

Training for Efficient Startup & Shutdown for the Petroleum and Chemical Industries

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Client Challenge

- Achieve an incident-free startup
- Efficiently shut down and start up an Alkylation unit
- Reduce time-to-competency for operators to minimize turnaround time
- Update and develop training documentation
- Reduce Process Quality Index (PQI) and safety violations



Solutions

The client partnered with RWD to utilize RWD's expertise to develop a world-class training system for their shutdown and startup process. The solution provided by RWD consisted of the following:

- Development of large control diagrams (LCDs) which provided a clear, concise picture of each process
- Development of procedure sequence flow diagrams (PSFDs) to summarize complex procedures into a logical, easy-to-follow format which identifies dependent relationships
- Establishing partnerships with key client personnel to gain their expertise and involvement
- Development of Alky operator startup/shutdown/emergency procedure training

Solution Implementation

- Utilized large control diagrams (LCDs) as alignment tools to define a shutdown sequence
- PSFD sessions identified that current configuration did not require a complete shutdown to enable maintenance on tower systems; partial shutdowns would allow continued production, and downstream units could remain online resulting in potential savings of \$3,000,000
- Incident-free shutdown and startup
- Alky unit training system prototype became the refinery's best practice