

# Compressed Air Assessment

## Scope of Compressed Air Assessment

In December 2002, the DOE and Chevron Phillips collaborated on an assessment targeting three compressed air systems at the Cedar Bayou Plant.

## Benefits

- ▶ Saves 6,147,001 kWh, or \$233,587 per year.

## Assessment Recommendations

### System 1 (PEU-1792)

- ▶ Reduce dryer purges.
- ▶ Eliminate open drains.
- ▶ Retrofit eight dust collectors from the bag houses.

### System 2 (PEU-1796)

- ▶ Convert the dryer to vacuum regeneration.
- ▶ Eliminate air horns.
- ▶ Retrofit the bag houses with additional storage.
- ▶ Install a header between the 1792 and 1796 systems to allow the second compressor in the 1796 system to back up the 1792 system, thus eliminating the need for a rental compressor.

### System 3 (Ethylene & AO)

- ▶ Install 600-hp motors on the compressors to increase output.
- ▶ Install new controls on the compressors to automate the system.
- ▶ Increase control air receiver size.
- ▶ Eliminate the crossover valve and increase the pipe size between utilities.
- ▶ Install 20,000 gallons of control storage (air receiver) behind a pressure/flow controller to create a trim station.
- ▶ Base load the utilities centrifugal compressors, allowing the AO screw compressor to serve as the swing compressor for the newly combined AO/Utilities system.



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