Targa Midstream Services Limited Partnership’s Experience with EPA’s Natural Gas STAR Program

Processors Technology Transfer Workshop
July 27, 2006
Hobbs, NM
Monument Gas Plant

Monument Gas Processing Facility, Monument, NM
Monument Gas Plant

- 17 old slow speed engines were replaced with 4 high speed reciprocating compressors driven by 2,500 HP electric motors
- 14,000 HP replaced with 10,000 HP more efficient and properly sized compressors
- The old slow speed engines had significant fuel consumption
Monument Gas Plant

★ Cost of this project $ 8.3 MM

★ Amount of fugitive methane losses saved was estimated at ~41 MMSCF/yr

★ Ancillary Benefits Include – Significant reductions in $NO_x$, $CO_2$, CO and HAPs pollutants
Monument Gas Plant
Monument Gas Plant
Passive Remote Optical Infrared Leak Detection, Quantification, and Speciation
Pipeline Leak Study

★ Driving – visible signs (e.g. vegetation stress)
★ Driving with sniffer trucks twice a year
★ 25 – 40 miles per day
Pipeline Leak Study

★ Mass Balance Discrepancy Identified Need for Survey

★ Infrared Remote Sensing from helicopter

★ 200-400 miles per day

★ Amount of methane estimated at ~146 MM SCF /yr or (0.5 MMSCFD)
Monument Gas Plant

- Infrared survey conducted to identify sources of leakage
- ~200 leaking sources identified
- Largest opportunities - blow down vents, valve packing and relief valve seats.
- Amount of methane saved is ~146 MMSCF/yr $1022K @ $7/MSCF
Phase I Study

★ Two gas plants in study
★ Cost was $ 30 K
★ Amount methane saved = 100 MMSCF/yr
  ($700K @ $7/MSCF)
★ Savings Realized within 18 Months – Largest
Cost-Effective Leaks Repaired
Phase II Study

- Two plants and four Compressor stations
- Cost was $40 K
- Amount methane saved = 198 MMSCF/yr
  ($1.3 MM @ $7/MSCF)
- Savings Realized within 12 Months – Largest Cost-Effective Leaks Repaired
Future Plans

- Planning another electrification project in NM
- Conduct more pipeline Leak Studies in SE New Mexico and West Texas on a periodic basis
- Purchase our own infrared camera to do more frequent surveys
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