Overview

- WGR’s Program Overview
- 2002 Report Summary
  - Historical Survey
  - 2002 Methane Emission Reductions
- Methane Emission Reduction Activities
WGR’s Gas STAR Program Overview

- WGR Submitted first annual report April 2003
- Included an historical review of reductions back to 1990
- Semi-Annual Update for Field Managers
2002 Report Summary

2002 Reductions
132,922 MCF/year
Estimated Value (@$4/MCF): $ 539,688 per year

Historical Review back to 1990
One Time Reductions (Hot Taps)
46,373 MCF
Estimated Value (@$4/MCF): $ 185,492

Annual Reduction
446,361 MCF/year
Estimated Value (@$4/MCF): $ 1,785,444 per year
Methane Emission Reduction Activities

Compression Consolidation and Optimization

- Removal of net compressors
- Based on 2002 Report by Clearstone Engineering
  - 3,242 MCF/year reduction for each unit removed

- Net 68 Units Removed ~ 220,456 MCF/year

West Texas Area (2002)
- Net 32 Units Removed ~ 103,744 MCF/year

Total: 324,200 MCF/year
- Estimated Value (@$4/MCF): $1,296,800 per year
Compression Consolidation and Optimization

Skid Mounted Compressors
Methane Emission Reduction Activities

Hot Taps/Clamp and Fuse

2002: 190 procedures ~ 3,910 MCF
1990-2001: 2304 procedures ~ 46,373 MCF
Total: 50,282 MCF

Estimated Value (@$4/MCF): $ 201,128
Methane Emission Reduction Activities

Convert Gas to Pneumatic Controls

1994 Fontenelle Station
164 Control Loops
Reduction of 86,198 MCF/year
Estimated Value (@$4/MCF): $344,792 per year
Installation of Liquid Stabilizer Skid at San Juan Plant
- Eliminated venting of pigging liquids and vapors (2002)
- Estimated Methane Emission Reduction: 1,332 MCF/year
- Estimated Value (@$4/MCF): $ 5,328 per year
Methane Emission Reduction Activities

Replace Dehy with Methanol Injection

Four Corners Station 2001
Eliminate gas pump and overheads
Estimated Methane Emission Reduction: 3,050 MCF/year
Estimated Value (@$4/MCF): $ 12,200 per year
Methane Emission Reduction Activities

Change Gas to Electric Chemical Pump

Red Mesa (San Juan Area) 2001

Estimated Methane Emission Reduction: 1,324 MCF/year

Estimated Value (@$4/MCF): $ 5,296 per year
Methane Emission Reduction Activities

Install Flare to Prevent Pipeline Maintenance Venting

Valve Station #1 (San Juan Area) 2001

Estimated Methane Emission Reduction: 23,137 MCF/year

Estimated Value (@$4/MCF): N/A
Methane Emission Reduction Activities

Route Dehy Overhead Emissions to Flare
San Juan Plant 1999
Estimated Methane Emission Reduction: 7,120 MCF/year
Estimated Value (@$4/MCF): $ 28,480  per year
WGR’s Gas STAR Programs continues to grow as it is kept before our field managers. Values of gas saved can be used to enhance the economics of capital projects. Gas STAR enhances environmental awareness.