

EPA NATURAL GAS STAR PROGRAM



EPA Welcomes a new Natural Gas STAR Partner



Devon Energy becomes an official partner in the EPA Natural Gas STAR Program on July 21, 2003

Focus

Primary focus for a successful program

- Encouragement and support from upper management
- Select the right implementation manager
- Roll the program out to operations
- Educate the field on the goals of the program
- Recognize successes
- Research historical reductions
- Locate documentation for reductions
- Develop a tracking system

Challenges

Previous Company Participation in the STAR Program

- Pennzoil Company
- Mitchell Energy
- Ocean Energy

Ocean Energy was the only company to submit emission reductions

- Numbers were inconsistent
- No documentation
- Inaccurate reports

Moving Forward

Devon requested EPA take Ocean's reductions off of the books to allow Devon to start fresh

Strategy

- Track down accurate accountable reductions
- Assure thorough documentation
- Encourage future reporting from the field

Results

- Competition amongst divisions
- Accurate numbers
- Good documentation
- Team spirit

Keeping the Program Alive

Co-authored a SPE paper on the optimization of separator pressure to reduce methane emissions.

- Paper was presented at the annual SPE conference held in Galveston, Texas.
- Authored with the intent of creating a PRO Fact Sheet for the STAR Program.

Named EPA Natural Gas STAR 2004 “Rookie of the Year” & 2005 E&P Sector “Partner of the Year”

Keeping the Program Alive

Developed a monthly STAR newsletter to be distributed to managers to assure communications regarding the status of the Program. Newsletter contains:

- A STAR PRO Fact Sheet
- Graph reflecting Devon's emission reductions annually
- Status table providing a breakdown by
 - Division
 - Area
 - Activity



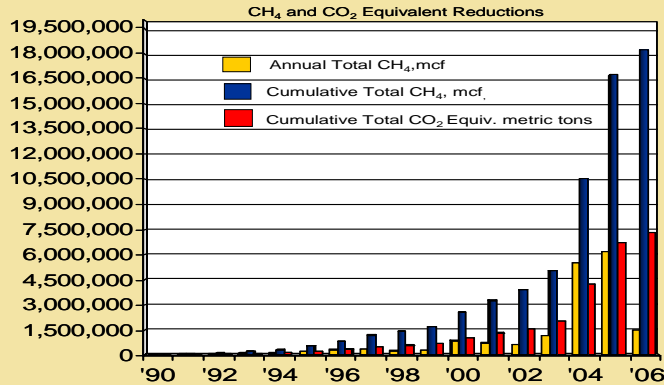
Winter 2006

Welcome

This is the Winter 2006 installment of a quarterly newsletter highlighting Devon's activities in the Environmental Protection Agency (EPA) Natural Gas STAR Program. These quarterly installments summarize Devon's methane emission efforts and a specific partner reported emission reduction opportunity that might be of benefit at certain Devon operations.

STAR Reductions

Methane Reduction Activity	Methane Reductions (Cumm)	2006 YTD
Central Division	6,885,807	2,156,618
FWB	6,171,961	2,156,618
Mid-Continent	713,846	0
Southern Division	11,285,056	4,469,536
South Texas	3,072,792	355,787
Carthage	4,707,021	1,899,639
Groesbeck	3,505,243	2,214,110
Western Division	3,419,461	141,178
Rockies	1,321,664	125,813
Permian	2,097,797	15,366
Gulf Division	153,574	12,045
Midstream	1,849,879	96,053
Total Reductions	23,593,777	6,875,430



PRO Fact Sheet

"Installing Electric Starters"

This quarter, the highlighted PRO (Partner Reported Opportunities) Fact Sheet document is related to the Installation of Electric Starters. The attached PRO Fact Sheet feature provides more details about this reduction opportunity.

If you have an idea or recognize an opportunity for a process change or pressure setting to improve efficiencies or reduce venting, please discuss these ideas with your EHS specialist or call Steve O'Connell at (405) 552-4672.

Each monthly newsletter contains a PRO Fact Sheet and a link to a Lessons Learned on the EPA Gas STAR website

In this Issue:

Welcome

Division Status Table

Annual Reduction Graph

PRO Fact Sheet

Check out Devon's EPA

video on the K drive at:

K:/Universal/

Permanent/EHS Dept.

Presentations/

Natural Gas STAR

2006 Accomplishments

Devon continued to support EPA in the Program in 2006 through the following efforts:

- Sponsorship of EPA Natural Gas STAR Technology Workshop in Fort Worth, Texas.
 - Extending STAR activities into the operations of recently acquired properties in the FWB.
- Completion of a database, in conjunction with LSU and COMM Engineering, to track future methane reduction activities.
 - Database will be turned over to EPA for other Partners use upon completion.

Summary of Devon Reductions

- Overall Reductions - 24.1 Bcf (through 2006)
 - Low Bleed Pneumatics 3.191 Bcf
 - Reduced Emission Completions 16.470 Bcf
 - AOF Testing 618 Mmcf
 - VRU's 1.286 Bcf
 - Dehy Controls 92.14 Mmcf
 - Plunger Lift Systems 1.225 Bcf
 - Flared Volumes 1.254 Bcf

Devon's Accomplishments

- Over 18.4 BCF in total methane emission reductions since 1990 (projected through 2005)
- 6.16 BCF reported for the year 2005
 - 78% from RECs
 - 7% from low bleed pneumatics
 - 3% from VRUs
 - 4% from flared volumes/reduced venting
 - 7% from plunger lift systems

Success Story

- Implementation Manager discussed STAR opportunities with the Production Supervisor in the FWB
- Reviewed opportunities to reduce venting during cleanup procedures after fracs
 - Evaluated portable flare systems
 - Supervisor discussed it further with superintendents and foreman
- Completions Superintendent decided there was a better option available

FWB Reduced Emission Completions (RECs)

Previous procedure upon completion of the frac job

- Flow well back to frac tanks until clean up is completed
- Snub tubing in the hole while venting gas back to reduce the pressure on the well
- Run required tests to atmosphere to calculate the absolute open flow potential

FWB RECs

Current procedure upon completion of the frac job

- Install temporary flowline and meter run on location during completion process
- Flow well back to frac tanks until gas is encountered



FWB RECs

- Turn well down line and sale gas while cleaning up the well
- Snub tubing in the hole while selling gas back to reduce the pressure on the well
- Run required tests through sales to calculate the absolute open flow potential



Benefits of FWB RECs

- Reduces the volume of methane emissions
- Allows wells to be cleaned up longer with better results
- Additional gas sales
- Safer work environment



Economics of FWB RECs

Initiated RECs in the FWB in March of 2004

Gas Recovered * (mcf)	\$6.57/mcf	Incremental Cost	Net Gas Sale Value
3,729,787	\$24,504,701	\$2,243,780	\$22,260,921

* STAR credits - 3,151,670 mcf (methane - 84.5%)

Economics of FWB RECs

Average Additional Sales	\$64,486
Average Incremental Cost	\$5,904
Additional Revenue	\$58,582

devon



Thank You

Devon STAR Implementation Manager

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devon

