

# Hydraulic Fracturing: STRONGER Reviews of State Regulations

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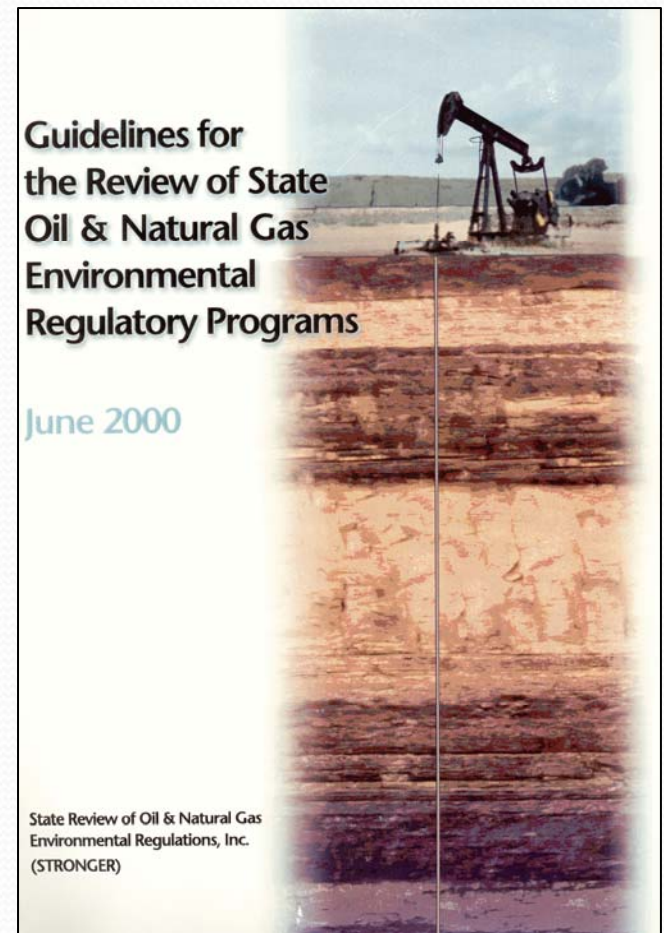
# STRONGER

- State Review of Oil and Natural Gas Environmental Regulations, Inc.
- A multi-stakeholder collaborative effort to
  - Benchmark state regulatory programs
  - Develop recommended state program guidelines
  - Establish a review process to evaluate state regulatory programs against those guidelines



# STRONGER

- Stakeholders
  - States
  - Industry
  - Environmental Organizations
- Supporters
  - IOGCC
  - GWPC
  - Federal agencies (EPA, DOE)
  - API





# Background

- RCRA definition of solid waste
- Hazardous waste regulated under Subtitle C
- Exemption until EPA study
- Report to Congress – December 1987
- EPA regulatory determination – July 1988
- 3-prong approach

# State Review Process

- Established by IOGCC with support from EPA
- Stakeholder involvement
- Guidelines developed
- State reviews against Guidelines
- Guidelines updates and revisions
- Follow-up reviews



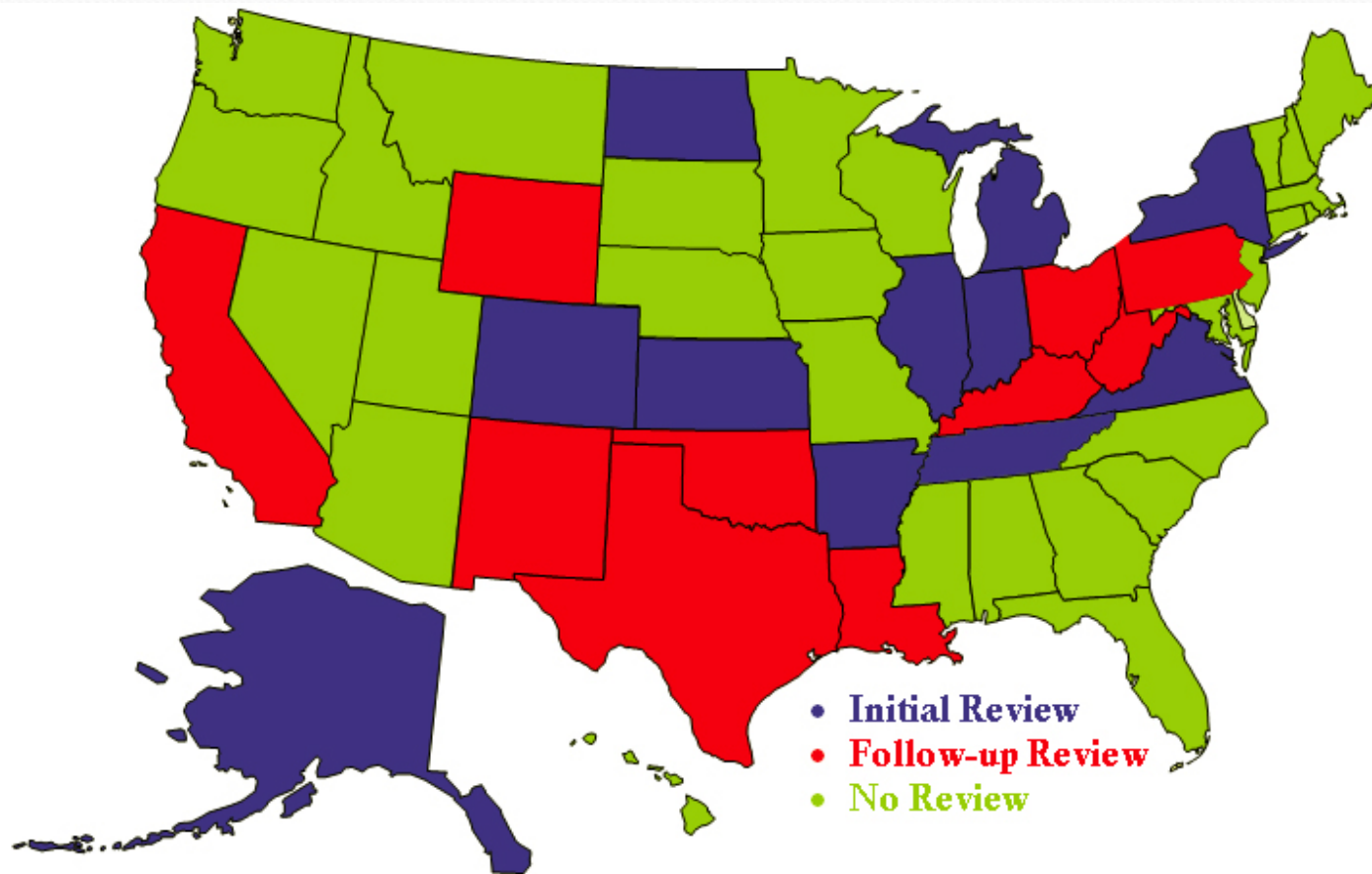
# STRONGER

- Formed June 1999
- Functions:
  - Manage state review process
  - Sponsor new/revised guidelines
  - Develop procedures for reviews, training
  - Assemble review teams
  - Contract administrative/clerical support
  - Settle disputes



# STRONGER

## Status of Reviews





# Results

- 21 states reviewed – 94% onshore production
- North Carolina scheduled for October 2011
- 10 states with follow-up reviews – 76% of recommendations satisfied
- 2009 survey – all states implemented some recommendations
  - 33% fully implemented
  - 27% partially implemented
  - 26% outstanding
  - 14% unknown



# Hydraulic Fracturing Guidelines

- Key elements of effective state regulatory programs
- Developed by stakeholder workgroup (state, industry, and environmental representatives) convened in August 2009
- Guidelines submitted to STRONGER in January 2010

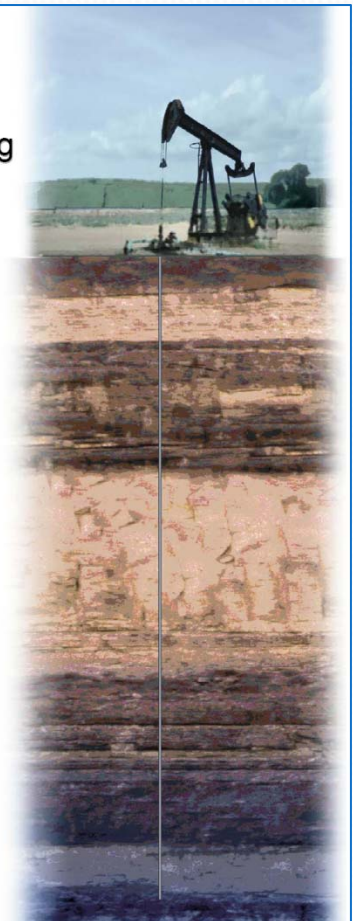
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## Hydraulic Fracturing Reviews

- Conducted by stakeholder teams using the guidelines
- Current status
  - Completed in Pennsylvania, Ohio, Oklahoma, Louisiana and Colorado
  - Scheduled for November in Arkansas

Oklahoma  
Hydraulic Fracturing  
State Review

January, 2011





# State Reviews

- State volunteers, completes questionnaire
- Review team assembled & trained
- In-state interview
- Team drafts report w/findings & recommendations
- Draft distributed for comments
- Final approved by Board, published & posted



# Reports

- Executive summary
  - Highlights program strengths
  - Summarizes key recommendations for improvement
- Discussion of program elements
- Findings and recommendations
- Appendix
  - Response to questionnaire (state's description of its program)

# State Issues, State Solutions

- Key issues vary from state to state, *e.g.*,
  - Discharges to streams in PA
  - Urban drilling in OH
  - Recycling pits in OK
  - Groundwater withdrawals in LA
  - CBM production in CO
- States have acted to address their key issues



# Strengths of Review Process

- All work performed by stakeholder teams
- Guidelines recognize regional differences
- Reviews document program strengths and opportunities for improvement
- Follow-up reviews are conducted
- Process is transparent and timely



# Benefits of Review Process

- State control of E&P waste programs
- Improved state oil and gas environmental regulatory programs
- Process for continuing program improvement
- Opportunity to share and promote new or unique concepts and ideas
- Flexible reviews to meet state needs
- Great educational process for all participants

# SEAB Interim Report

- Improve communication among state and federal regulators: Provide continuing annual support to STRONGER (the State Review of Oil and Natural Gas Environmental Regulation) and to the Ground Water Protection Council for expansion of the Risk Based Data Management System and similar projects that can be extended to all phases of shale gas development.

August 2011 Secretary of Energy's Advisory Board (SEAB) Interim Report on Shale Gas Production recommendations





# NPC Report

- “STRONGER should be bolstered and increase the scope of its activities. All states with natural gas and oil production should actively participate in STRONGER and use its recommendations to continuously improve regulation. It should be adequately funded, including from the federal government.”
- September 2011 National Petroleum Council (NPC) report “Prudent Development: Realizing the Potential of Abundant North A Gas and Oil Resources”





# STRONGER

[www.strongerinc.org](http://www.strongerinc.org)

- Guidelines
- Reports on reviews
- History and accomplishments

