



# EPA Briefing to the SEAB Natural Gas Subcommittee to Examine Fracking Issues

May 19, 2011





# Overview of EPA's Role

- Responsible development of America's shale gas resources offers important economic, energy security, and environmental benefits.
- EPA plays an important role in addressing public concerns, ensuring environmental protection, and in working with federal and state partners to manage the benefits and risks of shale gas production.
- The Agency is committed to improving scientific understanding of the potential environmental impacts of shale gas extraction and using tools at hand to address any known concerns.



# EPA's Approach

- Research to improve our understanding of potential impacts, to provide accurate information, and to respond to Congressional requests.
- Guidance to explain how regulations apply.
- Regulations to update standards where they may be outdated.
- Coordination and partnerships with external stakeholders.
- Enforcement to ensure compliance with environmental laws.

# Research

- US Congress asked EPA to study relationship between hydraulic fracturing and drinking water resources.
- **Peer-reviewed** study with first results due in late 2012 and final report in 2014.
- **Lifecycle approach**, use of **case studies**, focus on **sources** and **pathways** of potential impacts to water resources.
- **Stakeholder involvement** throughout process.



- Topics that are not within the scope of the study include:  
**air quality, impacts on land and aquatic ecosystems, seismic risks, public safety and occupational risks**

# Related Efforts

- Information Request
  - EPA issued a voluntary information request to nine natural gas service companies on the chemical composition of hydraulic fracturing fluids, impacts of the chemicals on human health and the environment, standard operating procedures and locations of wells which were hydraulically fractured within the last year.
  - This information will be used to inform the research, the report, and as the basis for gathering further detailed information on a representative selection of sites.
- Technical Workshops
  - EPA recently held four technical workshops to inform the study:
    - Chemical and Analytical Methods
    - Well Construction and Operations
    - Fate and Transport
    - Water Resource Management

# Outreach for the Study

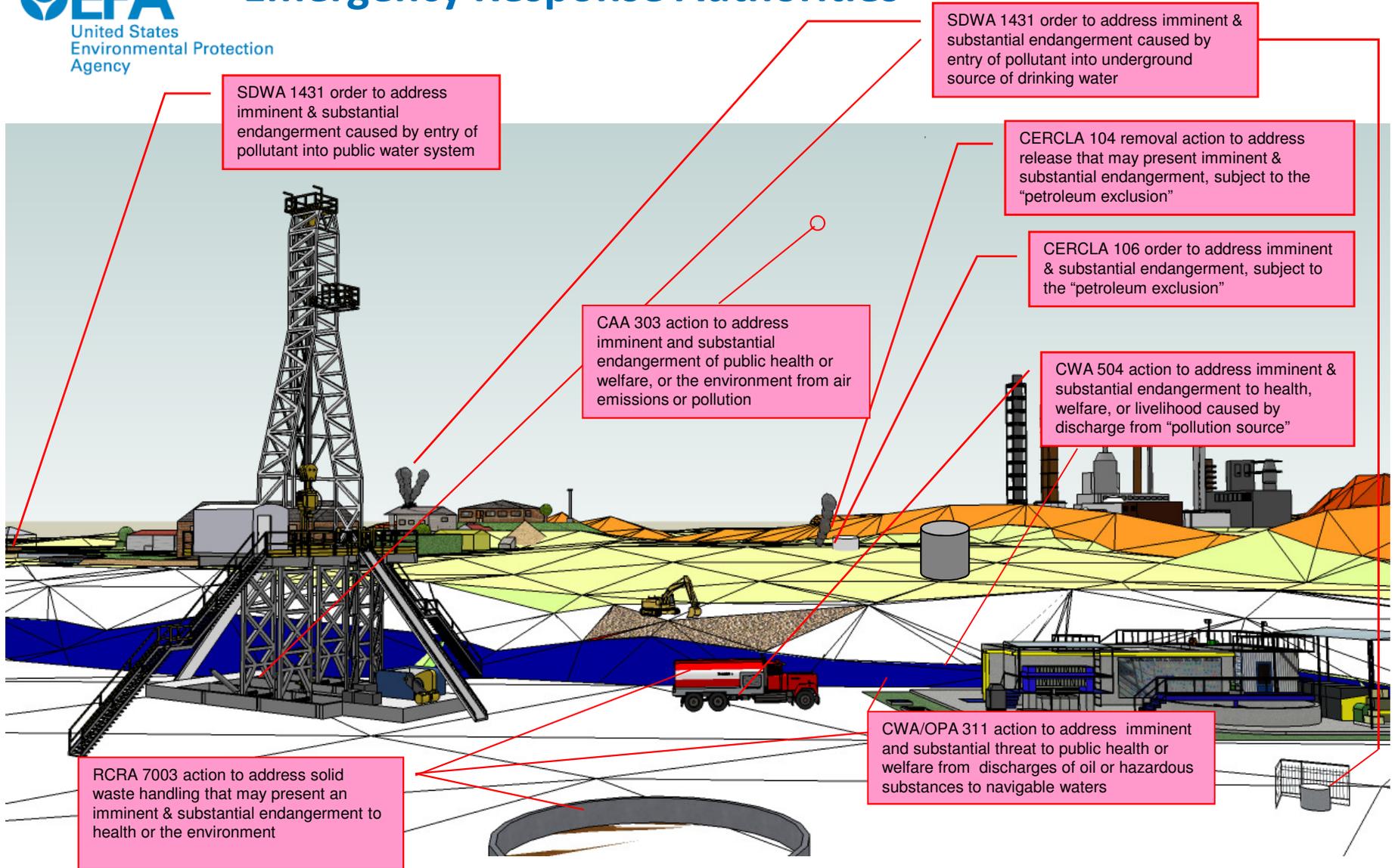
- Public meetings
  - July-September 2010 in Binghamton, NY; Canonsburg, PA; Fort Worth, TX; and Denver, CO.
  - EPA heard concerns many have for their families and communities as well as hopes that natural gas production will provide sorely needed income.
- State and federal partner consultations
- Sector-specific meetings
  - Meetings held from June-August 2010 and February-March 2011 with industry, environmental organizations, tribal governments, and the public.

# EPA Statutory Authorities

- EPA can establish requirements to prevent contamination from oil and gas production activities. For example:
  - Safe Drinking Water Act's (SDWA) Underground Injection Control (UIC) Program applies when diesel fuels are used in fracturing fluids and to wastewater disposal through injection.
  - Clean Water Act (CWA) discharges into publicly owned treatment works (POTWs) and surface waters.
  - Clean Air Act (CAA) New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs), and Mandatory Reporting of Green House Gases.
  - National Environmental Policy Act (NEPA) authority to review and comment on federal actions (e.g. leasing on federal lands).



# Emergency Response Authorities



# Regional Activities

- Several EPA Regions are working with States on hydraulic fracturing-related activities.
  - For example, Regions 2, 3, 6, and 8.
- Recent activity in Region 3:
  - EPA is working with the PA Department of Environmental Protection (PADEP) to ensure that natural gas production takes place safely and responsibly.
  - Last week, EPA asked six natural gas drillers to disclose how and where they dispose of or recycle drilling process water and requested additional info from PADEP.

# EPA is Developing Guidance and Regulation

- **CWA:** Regulations and guidance for **treatment and disposal** of **production wastewater**
- **SDWA:** Guidance to provide framework for use of **diesel fuel in hydraulic fracturing fluids**
- **CAA:** Proposing **air regulations** that govern certain activities at well sites
- **RCRA:** Guidance on how to **construct proper wastewater pits and impoundments**



- Continuing partnership with States – **on the frontlines** of regulating this sector



# Partnering with Industry and Governments

- **Natural Gas STAR ([www.epa.gov/gasstar](http://www.epa.gov/gasstar))**
  - Flexible, voluntary partnership between EPA and oil and natural gas operating companies.
  - **Proven, cost-effective technologies and practices** that improve operational efficiency and reduce methane emissions.
- **Global Methane Initiative ([www.globalmethane.org](http://www.globalmethane.org))**
  - International initiative launched in 2010 building on Methane to Markets Partnership that started in 2004.
  - Focus on cost-effective, near-term methane abatement, recovery and use projects.

# Enforcement Activities

- EPA compiles leads and incidents relating to oil and gas activities that could impact public health.
- Two major goals:
  - Take action where violations cause air or water impacts that threaten human health
  - Ensure companies implement safe practices across operations
- EPA works with state and local governments to:
  - Respond to incidents
  - Encourage diligent accident prevention
  - Provide effective and prompt response when emergencies occur
- EPA has brought some enforcement actions under the CWA, SDWA, and CAA.

# *Some Near-Term Milestones*

- **Next 90 days**
  - Completion of EPA’s Scientific Advisory Board review of study plan.
  - Public meeting on hydraulic fracturing with diesel fuels.
  - Court deadline for proposed oil and gas NSPS.
  - CWA announcements on permitting and guidance.
- **Next 6 Months**
  - EPA will provide one or more updates to stakeholders regarding progress of the research.
  - EPA will release guidance on hydraulic fracturing with diesel fuels and hold a workshop on UIC technical requirements.
  - EPA will collect and review public comments on the NSPS.

## For Additional Info

- EPA will provide additional information on any of our programs and activities.
- We can provide in-depth technical briefings on the subjects below or any others topics of interest to the Subcommittee:
  - Hydraulic Fracturing Study
  - Safe Drinking Water Act and the Underground Injection Control Program
  - Wastewater Treatment and Disposal
  - Air Emissions and Resource Recovery: CAA programs, Natural Gas STAR, and collaboration with other agencies under NEPA
  - Legal Authorities
  - Enforcement Experience and Activities

# Additional Resources

- EPA will send an email to the Subcommittee with web links to more detailed information on our programs and initiatives, including:
  - Hydraulic fracturing website
  - Information on technical research workshops, including agenda, attendee list, presentations, and proceedings
  - Hydraulic Fracturing Study Plan
  - EPA information request to hydraulic fracturing companies
  - EPA outreach regarding the research study
  - SDWA and UIC Program
  - 2004 Coalbed Methane Study
  - Information on Class II enhanced recovery wells
  - Natural Gas Drilling in the Marcellus Shale: NPDES Program Frequently Asked Questions
  - Natural Gas STAR program website and lessons learned on “green” completions
  - EPA Energy Extraction National Enforcement Initiative

# Discussion