

# RAILROAD COMMISSION OF TEXAS



## Diesel Fuel in Hydraulic Fracturing: The Federal Initiative and a State's Perspective

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# *Hydraulic Fracturing and Diesel Fuel*



- 2003: MOA between service companies and EPA regarding use of diesel fuel in hydraulic fracturing in CBM wells
- 2004: EPA study of impacts to drinking water by hydraulic fracturing of CBM reservoirs
- 2005: Energy Policy Act of 2005, exempted underground injection of “fluids or propping agents (other than diesel fuels)” pursuant to hydraulic fracturing operations from SDWA

# *Hydraulic Fracturing and Diesel Fuel*



- 2010: EPA updates website to announce plans to require Class II Underground Injection Control permits under the SDWA if diesel fuel used in hydraulic fracturing

# *Hydraulic Fracturing and Diesel Fuel*



- EPA WebSite:

While the SDWA specifically excludes hydraulic fracturing from UIC regulation under SDWA § 1421 (d)(1), the use of diesel fuel during hydraulic fracturing is still regulated by the UIC program. Any service company that performs hydraulic fracturing using diesel fuel must receive prior authorization from the UIC program. Injection wells receiving diesel fuel as a hydraulic fracturing additive will be considered Class II by the UIC program. The UIC regulations can be found in Title 40 of the Code of Federal Regulations Parts 144-148.

# *Hydraulic Fracturing and Diesel Fuel*



- Spring 2011: EPA announces intent to develop guidance on permitting of hydraulic fracturing using diesel fuel
- Spring 2011: Webinars
- Summer 2011: Draft guidance to OMB
- Fall 2011: Comment period

# *Hydraulic Fracturing and Diesel Fuel*



- Important Points
  - Based on existing Class II UIC
  - O&G hydraulic fracturing focus
  - Approaches for permit writers
  - Cannot set new regulations or change existing regulations

# *Hydraulic Fracturing and Diesel Fuel*



- UIC Program Implementation:
  - Direct Implementation by EPA
  - State Implementation
    - Section 1422: states must meet minimum requirements
    - Section 1425: allows states to demonstrate existing standards effective in preventing endangerment of USDWs

# *Hydraulic Fracturing and Diesel Fuel*



- EPA develops UIC regulations
- SDWA 1421(b)(1)(A) requires state UIC programs to prohibit underground injection not authorized by a permit issued by a state or permitted by rule



# *Hydraulic Fracturing and Diesel Fuel*



- UIC Program Components:
  - Site characterization
  - Area of review
  - Well construction
  - Well operation
  - Monitoring
  - Well plugging & closure
  - Financial responsibility
  - Public participation

# *Hydraulic Fracturing and Diesel Fuel*



- 40 CFR 144.52(a)(9): Additional Conditions. The Director shall impose on a case-by-case basis such additional conditions as are necessary to prevent the migration of fluids into USDWs

# *Hydraulic Fracturing and Diesel Fuel*



- Key Issues:
  - Definition of “diesel fuels”
  - Public notification/environmental justice
  - Siting and area of review
  - Construction, operation, monitoring, and reporting requirements
  - Permit duration
  - Financial responsibility requirements

# *Hydraulic Fracturing and Diesel Fuel*



- Guidance Goals:
  - Describe issues unique to HF with diesel fuel
  - Increase consistency of program implementation
  - Streamline coordination
  - Clarify permit expectations for well owners/operators

# *Hydraulic Fracturing and Diesel Fuel*



- Guidance Approaches:
  - Definition of “diesel fuels”
  - Application information
  - Turnaround time
  - Duration for intermittent activity
  - Coordination with state and tribal oil and gas activities

# *Hydraulic Fracturing and Diesel Fuel*



- Siting information
  - Confining layers
  - Fracture pressure of injection zone
  - Existing faults/fractures
- Area of Review
  - Specific distance from well
  - ID artificial penetrations

# *Hydraulic Fracturing and Diesel Fuel*



- Construction:
  - Designed for life expectancy of well
  - Depth of casing
  - Cementing
  - Additional requirements?
- Operation:
  - MIT
  - Blowout preventer?

# *Hydraulic Fracturing and Diesel Fuel*



- Monitoring and reporting:
  - Baseline USDW sampling
  - Logging, sampling, testing frequency?
  - Nature of fluids injected
  - Injection pressure
  - Flow rate
  - Cumulative volume



# *Hydraulic Fracturing and Diesel Fuel*



- Public Notice/Environmental Justice
  - 30-day written notice to public
  - Public hearing
  - Provide for public input upon request

# *Hydraulic Fracturing and Diesel Fuel*



- Alternatives for authorizing
  - Individual permits
  - Area permits
  - Permit by Rule
    - Field rules/hearings
  - Regional general permits (USACE RGPs)

# *Hydraulic Fracturing and Diesel Fuel*



- ISSUES
  - Definition of diesel fuel
  - Guidance v rules
  - Class II regs for production wells
  - EPA regulation of production wells
  - Base fluid v additive

# *Hydraulic Fracturing and Diesel Fuel*



- Definition of diesel fuel
  - Toxic Substances Control Act (15 USC §2601 et seq defines “diesel fuels” as only two compounds:
    - CASN 68476-34-6
    - CASN 68334-30-5
  - Base fluid v additive/threshold amount
  - Definition will determine the number of wells subject to “guidance”

# *Hydraulic Fracturing and Diesel Fuel*



- Guidance vs Rules
  - Limits EPA to existing Class II requirements
  - No formal public comment, economic impact analysis, etc.
  - Not binding
  - Can be changed quickly and easily with minimum review and comment

# *Hydraulic Fracturing and Diesel Fuel*



- Class II regs for production wells
  - Production wells do not fit into definition of Class II wells – not disposal and not enhanced recovery
  - Class II regs not appropriate for HF
    - Intermittant
    - Short-term (hours, not years)

# *Hydraulic Fracturing and Diesel Fuel*



- EPA regulation of production wells
  - Adequate State regulation for 100 years
  - State processes for production wells efficient and quick



# *Railroad Commission of Texas*

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A lie gets halfway around the world  
before the truth has a chance to get its pants on.

Winston Churchill