Class VI Underground Injection Control (UIC) Program Implementation and Permitting

Mary Rose Bayer
Ground Water Protection Council Meeting
Houston, Texas
January 24, 2012
Class VI Rule Background

• October 2007 – December 10, 2010:
  – Rule Development – Final Rule publication

• December 10, 2010 – September 6, 2011:
  – 270 day primary enforcement responsibility (primacy) application period

• September 7, 2011:
  – EPA directly implements the Class VI Program in all States, Tribes, and Territories
  – All GS permit applicants must submit applications to the EPA (Regions)
New well class established: Class VI
Class VI Implementation

• Guidance document development
  – Public participation and environmental justice (final)
  – Financial responsibility (final)
  – Well construction (pending post)
  – Project plan development (pending post)
  – Area of Review and corrective action
  – Site characterization
  – Primacy application and implementation manual
Class VI Implementation

• Guidance document development
  – Testing and monitoring
  – Injection depth waivers
  – Class II – Class VI transition
  – Well plugging, post-injection site care, and site closure
  – Class V experimental technology wells
  – Reporting and recordkeeping

• Technical, subject-specific GS webinars will commence in early 2012
Class VI Implementation

• GS Data System development
  – 10:30 a.m. – 12:00 p.m. session

• Coordination with
  – EPA Program Offices and Regions
  – State and Federal partners
  – Non-governmental organizations
  – Industry and other stakeholders
  – CCS Presidential Task Force members
  – 9:00 a.m., Wednesday, January 25, 2012 session
Class VI Permitting: Permit Applications

• Region 5:
  – Archer Daniels Midland: Decatur, Illinois
    • Two Class VI permit applications (CCS #1 and #2) received in December and July 2011, respectively
    • Injection formation: Mount Simon sandstone
    • Proposed injection volume and duration: approximately 4.75 million tons of CO₂ over 5 years

  – Tenaska: Taylorville, Illinois
    • Two Class VI permit applications received in September 2011
    • Proposed injection formation: Mount Simon sandstone
    • Proposed injection volume and duration: 63 million tons of CO₂ over 30 years
Class VI Permitting: Project Discussions

• Region 4:
  – Tampa Electric Company: Polk County, Florida
    • Proposed injection formation: A deep saline formation
    • Proposed injection volume: 300,000 tons of CO₂
    • Proposed injection duration: 12-18 months

• Region 5:
  – FutureGen: Illinois
    • Proposed injection formation: Mount Simon sandstone
    • Proposed injection volume: ~1.3 million tons of CO₂/year
    • Proposed injection duration: ~30 years

• Region 7:
  – Kansas: Sumner County, Kansas
    • Proposed injection formation: Arbuckle saline formation
    • Proposed injection volume: 40,000 tons of CO₂
    • Proposed injection duration: ~1 year
Class VI Permitting: Project Discussions

• Region 8
  – Gordon Creek: Gordon Creek, Utah
    • Proposed injection formation: Navajo sandstone
    • Proposed injection volume and duration: ~1 million tons of CO$_2$ per year for 4 years (for a total of ~3 million tons)

  – Big Sky: Kevin Dome, Montana
    • Proposed injection formation: Kevin Dome
    • Proposed injection volume: 1 million tons of CO$_2$
    • Proposed project duration: 8 year project
Additional Information

• Contacts
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• References
  – http://water.epa.gov/type/groundwater/uic/wells_sequestration.cfm