

GW Accelerating Greenhouse Gas Reductions Policy, Technology & the Law Carbon Sequestration TROUTMAN SANDERS ATTORNEYS AT LAW

Legal Issues in Carbon Sequestration

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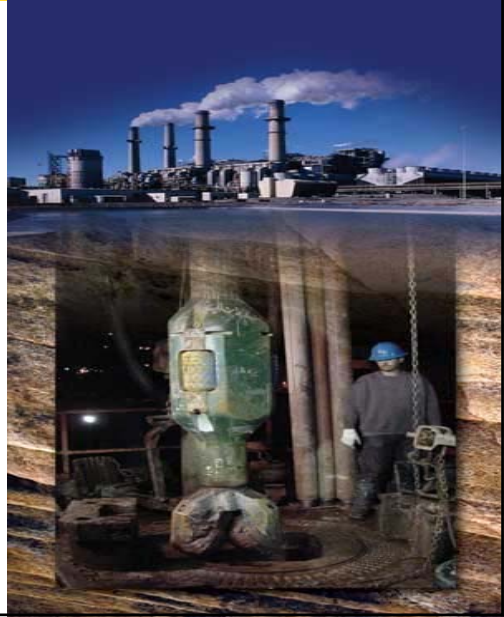
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Preliminary Issue #1

President-Elect Obama supports carbon sequestration

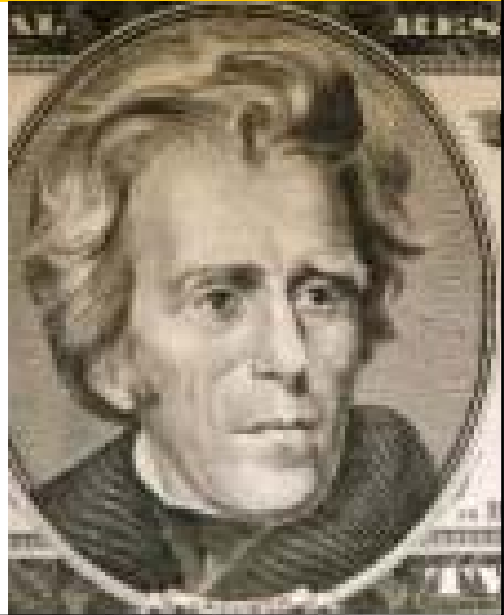
Preliminary Issue #2

Let's assume CCS is technically available—a big assumption



Preliminary Issue #3

Let's assume CCS is acceptable financially—a big assumption



The Liability Barrier to CCS Development

Preliminary Issue #4:

Just where are the legal issues in CCS?



In Congressional Legislation on Carbon Sequestration?

No, not much on CCS liability in proposed legislation



In Existing Environmental Statutes?

No, not clear overall.

USEPA Has Authority to Regulate CO₂ Injection Under SDWA





In U.S. EPA Advanced Notice of Proposed Rulemaking on Climate Change?

ANPR

No, not much on CCS liability in ANPR



In the U.S. EPA Notice of Proposed Rulemaking on SDWA UIC Injection of CCS CO2?

No, not much on CCS liability in NOPR



Federal Register

Friday,
July 25, 2008

Part II

Environmental Protection Agency

40 CFR Parts 144 and 146
Federal Requirements Under the
Underground Injection Control (UIC)
Program for Carbon Dioxide (CO₂)
Geologic Sequestration (GS) Wells:
Proposed Rule

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Just what are the CCS legal issues?

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CCS Legal Issues

- Is CO2 in CCS a "Waste"?
- Acquiring CCS Formations
- Liability for CCS Injection, Operation, Closure and Post-Closure?
- Remedies for CCS BI Damage?

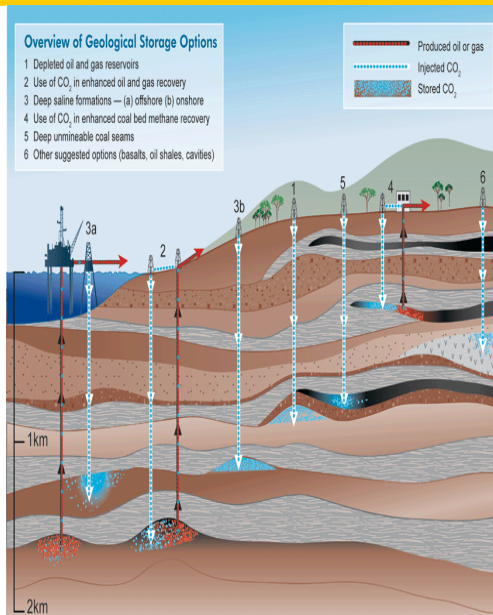
Key Statutory Question

- ❑ Is CCS CO₂ a: “solid waste,” a “hazardous waste,” a “pollutant,” or a “hazardous substance”?
- ❑ Answer will determine injector’s liability under CERCLA and RCRA
- ❑ CCS crippled if CCS CO₂ is a “waste”

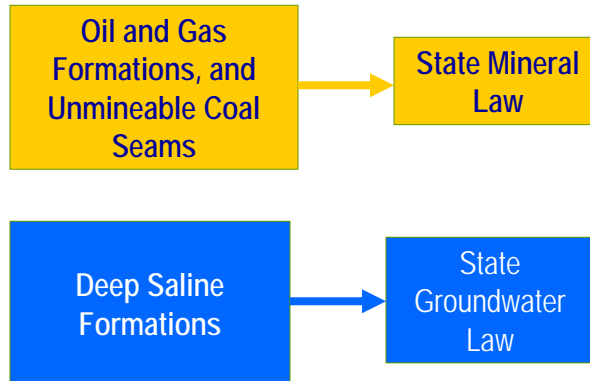


Property Rights and GS

- ❑ Who Owns the GS Formation?
- ❑ Who Owns CO₂ After Injection?
- ❑ The Key CCS Siting Issue



So Who Owns The CCS Formation?



Mineral Law Basics:

Under the American Rule, surface owner owns geologic formation.

But prospective injectors can't interfere with mineral interest holder's rights to explore for and extract minerals in formation.





Basic Groundwater Law— Saline CCS

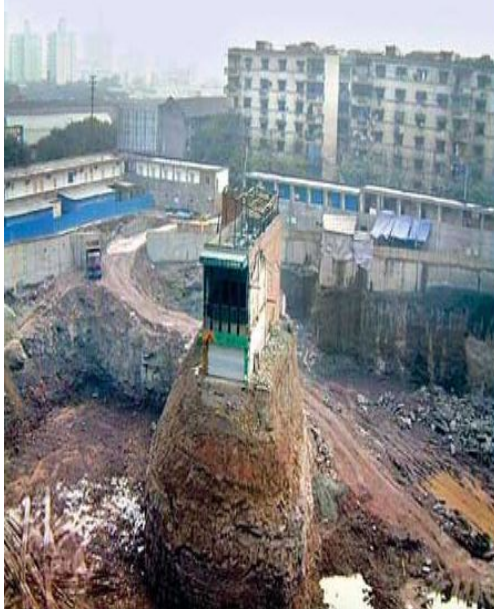
- ❑ Absolute Dominion (landowner “owns” groundwater)
- ❑ Reasonable Use (landowner can use “reasonable” amount)
- ❑ Correlative Rights (landowner owns in proportion to area)
- ❑ Restatement (okay if no harm to neighbors)
- ❑ Prior Appropriations (“first in time”)



Acquiring CCS Formations Through Condemnation

If a regulated power producer, may have right to condemn CCS formation--“public purpose” likely met given climate change

Not available to independent power producers and others unless federal or state laws revised



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Ownership of CO₂ Injected into Formation

- Issue of First Impression
- Likely to be Liability of Injector
- Could be a “rule of capture”
- Key Legal Issue



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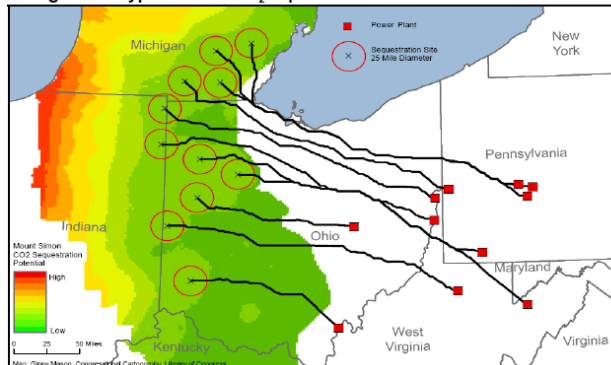
Liability Concerns

- Personal Injury (contaminated drinking water, air emissions)
- Property Devaluation
- Interference with Mineral Rights
- Damage to Natural Resources
- Monitoring Costs
- Seismic Activity
- Displacement



Liability Concerns in Transportation

Figure 3. Hypothetical CO₂ Pipelines to the Mt. Simon Formation



Source: Paul W. Parfomak and Peter Folger, Pipelines for Carbon Dioxide (CO₂) Control: Network Needs and Cost Uncertainties. CRS Report for Congress, Jan. 10, 2008.

Tort Liability and GS

The Problem?

Trespass
Nuisance
Negligence
Strict Liability

Regulatory Compliance Provides No Defense to Tort Lawsuits, in general—the “Preemption” Issue?

Bottom Line:

Currently, Key Decision Makers on Vast Majority of CCS Liability Issues Are State Court Judges



Remedies to Address CCS Liability

- Bonding—the Current SDWA UIC Approach?
- Revise CERCLA So CO₂ is Not a “Hazardous Substance”/Revise RCRA so CO₂ is Not “Solid Waste”?
- Mandatory Insurance with Liability Cap (Price-Anderson Act)? *(EPA STUDYING THIS APPROACH)*
- Regulatory Compliance Pre-empts State Tort Actions?
- Create Administrative Compensation Fund (Trans-Alaska Pipeline Fund, Vaccine Injury Compensation Fund, Black Lung)?

Other Proposals



- Hybrid Public/Private Response: CO₂ as Commodity
- CCS Operators Have Condemnation Rights
- Demonstrate Prior Acceptability of CCS Structure
- Injector Would Own CO₂
- Injector Liable for Damages Until Project Completed, Then Liability Transferred to State & Operator Released
- Trust Fund to Administer Once Program Transferred to State—Fee Based on Risk Assumed
- Trust Fund Administered by State



- Failed amendments to fund FutureGen allowed DOE to indemnify consortium and its members
- Texas and Illinois Agreed to take title to CO₂ if they won FutureGen—Not clear if that legal strategy will continue

Recent State Efforts to Regulate CCS Liabilities

- 31 States: Some Form of CCS Statutes Being Considered
- 30 Don't Deal with Liability!



- Wyo. Stat. § 34-1-152 (2008): provides pore space underneath the surface estate owned by surface owner.
- Wyo. Stat. § 30-5-501 (2008): allows mineral interest owner to drill through sequestration sites.
- Also adopts EPA UIC program for CCS

2009 Wyoming Proposal:

- Injector liable, not property owner



Mo. SB No. 391: for CCS, limits liability of PI or death to \$2 million; no punitives (2-17-09)

Insurance as Remedy?



Carbon Capture and Sequestration (CCS) Liability Insurance

- pollution event liability,
- business interruption,
- control of well,
- transmission liability, and
- geomechanical liability.

Geologic Sequestration Financial Assurance (GSFA):

- closure and post closure activities.

Zurich HelpPoint

Best Case Scenario: Address CCS Liability Issues in Federal and State Climate Change Legislation

"You don't ever want a crisis to go to waste; it's an opportunity to do important things that you would otherwise avoid."

Rep. Rahm Emanuel



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Carbon
Sequestration



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