ROAD TO A GREENER ENERGY FUTURE

CO_2 STORAGE:

A LEGAL AND REGULATORY GUIDE FOR STATES

IOGCC Legal and Regulatory Affairs Committee

Long Beach, California

November 6, 2013

Lawrence Bengal, Chairman

IOGCC CGS Task Force

“The Only Wisdom Is In Knowing You Know Nothing”

Socrates

Efforts of IOGCC CGS Task Force

- Following "Alta Summit" in 2001, Task Force established in 2002 to study potential of CGS and role of States.
- 2005 Phase I Report - broadly examined legal, policy and regulatory issues of CGS.
- 2007 Phase II Report - State focused model statute and regulations for CGS.
- 2010 Progress Report - Biennial Review - update on state efforts. (USEPA UIC Class VI Rules released late 2010)
- 2013 Phase III Report – guidance for states on CGS liability issues (Funded by DOE/NETL thru PCOR)

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Task Force Participants Represented 15 States

- IOGCC member state and provincial oil and gas agencies
- DOE sponsored Regional Carbon Sequestration Partnerships
- Association of State Geologists
- US DOE
- US EPA
- US BLM
- Academic experts
- Industry representatives
- Environmental organization observer

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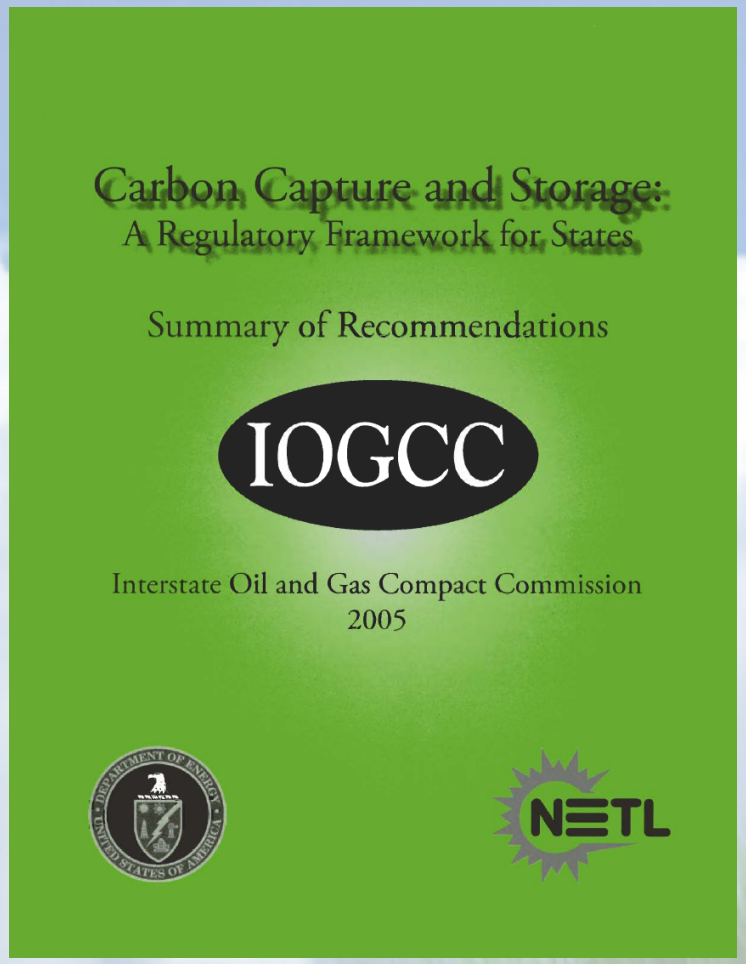
Phase I Report Summary



- Industry and states have 30 years experience in the production, transport and injection of CO.
- States have necessary regulatory analogues in place to facilitate development of a comprehensive CCGS regulatory framework.
- CO_2 should be regulated as a commodity to allow the application of oil and gas conservation laws which will facilitate development of storage projects.
- Involve all stakeholders including general public in the development of regulatory frameworks.

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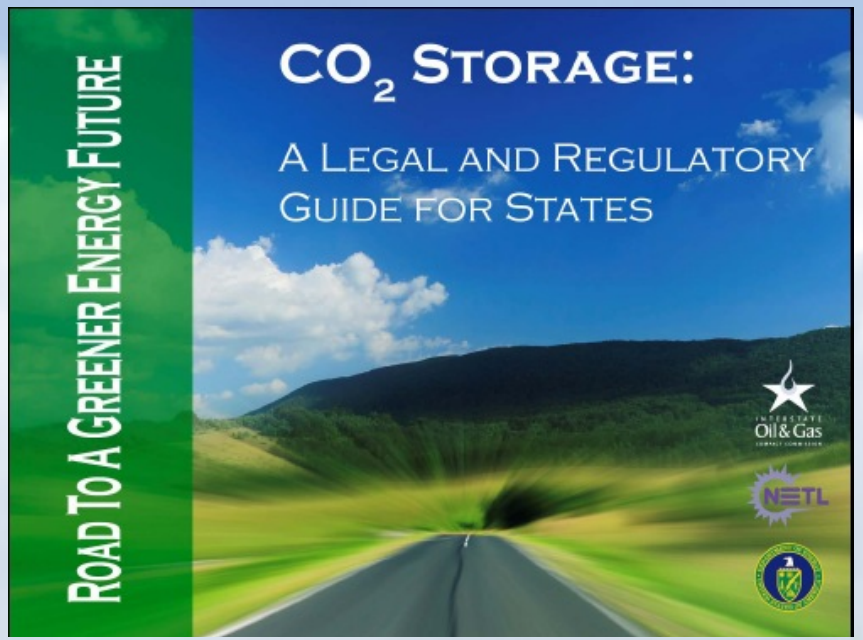
Phase II Report Summary



- **Model Statute and Regulations**
- **White Paper "Analysis of Property Right Issues related to CGS"**
- **Resource Management Philosophy articulated**

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Keep Regulatory Framework –

“Doable, Effective and Simple”

New Paradigm Proposed: IOGCC Resource Management Philosophy For CCS

- Given the regulatory complexities of CO_2 storage: environmental protection, ownership and management of the pore space, maximization of storage capacity and long term liability, geologically stored CO_2 should be treated under resource management framework as opposed to waste disposal framework.

- Regulating the storage of CO_2 under a waste management framework sidesteps the public role in both the creation of CO_2 and the mitigation of its release into the atmosphere and places the burden solely on energy industry to rid itself of "waste" from which an "innocent" public must be "protected".

- A resource management framework, allows for the integration of these issues into a unified regulatory framework and facilitates a "public sector-private sector partnership" to address the concerns and issues associated with CO_2 storage, and in particular long-term liability.

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State "Core Group" Which Developed Regulatory Frameworks Based on IOGCC Model Documents

- North Dakota
- Wyoming
- Washington
- Montana
- Kansas
- Oklahoma
- Ohio
- Texas
- Louisiana

"Do not go where the path may lead you, go instead where there is no path and leave a trail"

Ralf Waldo Emerson

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EPA UIC Class VI Rule

- **Task Force recommended States take lead, however UIC Class VI proposed.**
- **Representatives from several states participated in EPA Class VI workgroup**
- **Task Force had recommended a well class slightly more rigorous than Class II.**
- **Final rule adopted on September 7, 2011 more rigorous than anticipated, exceeding Class I well requirements in some areas.**

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Only Small Number of States Are Moving Forward to Secure Class VI Primacy

- **North Dakota** **(EPA Class VI Primacy pending)**
- **Wyoming**
- **Montana**
- **Kansas**
- **Mississippi**
- **Alabama**

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Phase III Report Summary

- Broad Discussion of Liability Associated With CGS

  - Violation of Law (state and federal)
  - Common Law (negligence, trespass, nuisance)

- Discussion of Risk Associated With CGS Project Phases
- Discussion of FA Types Best Suited for Associated Risks
- Discussion of Long Term Liability and a State Trust Fund
- Examples of Current Project Responses to Liability Issues

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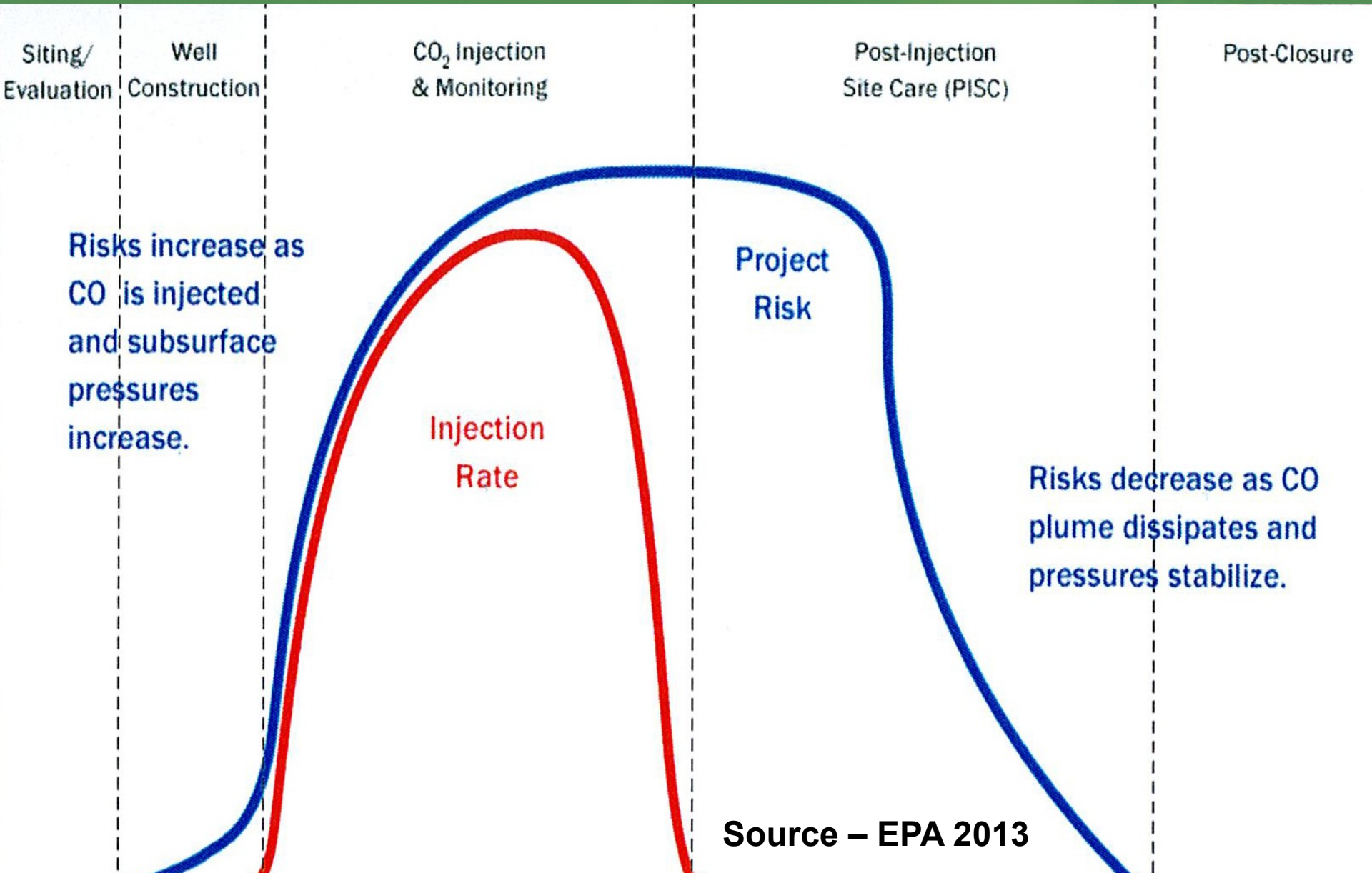
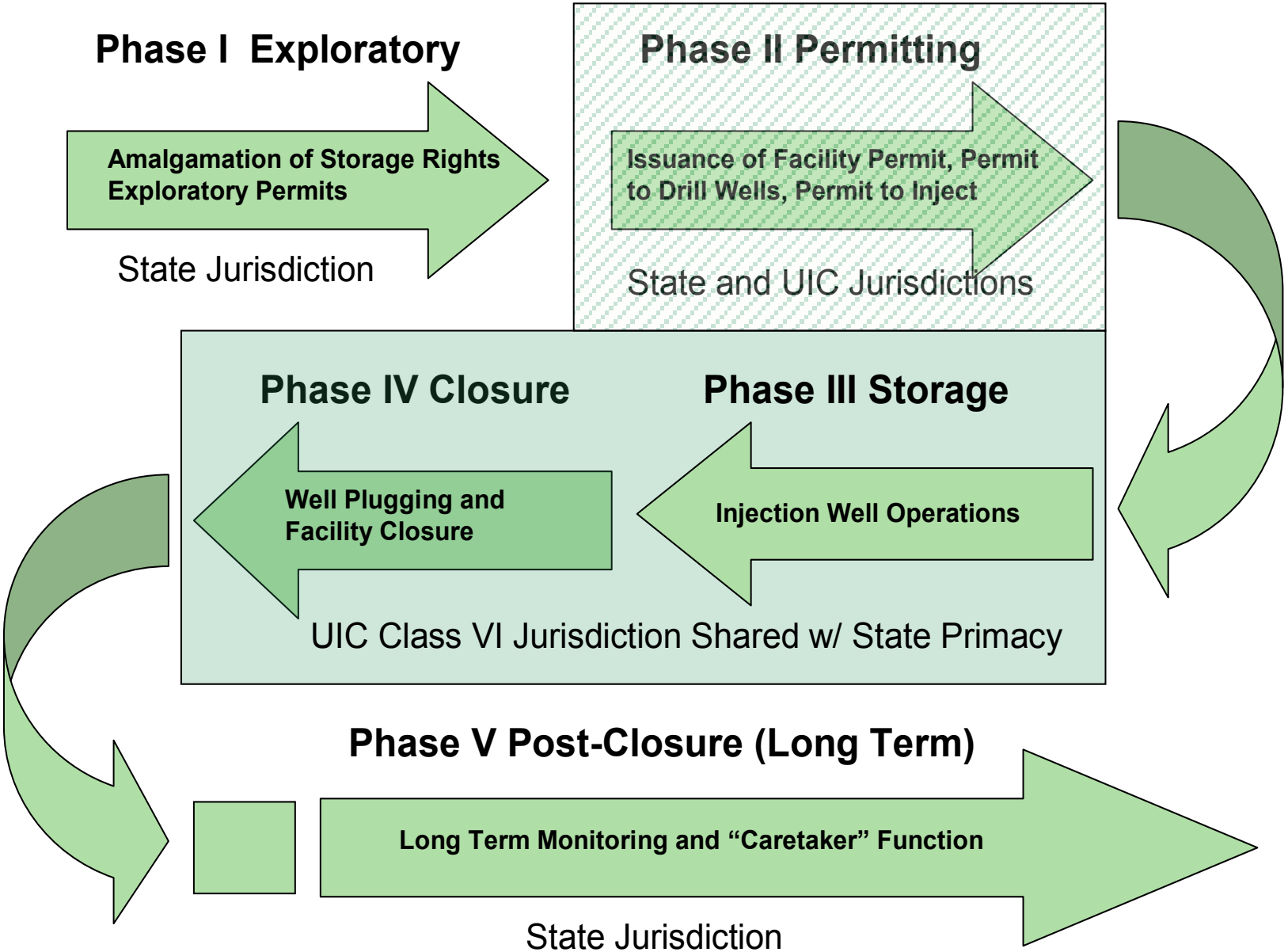
Geologic Storage – Theoretical Risk Curve
Phase III Analysis of Associated Risk

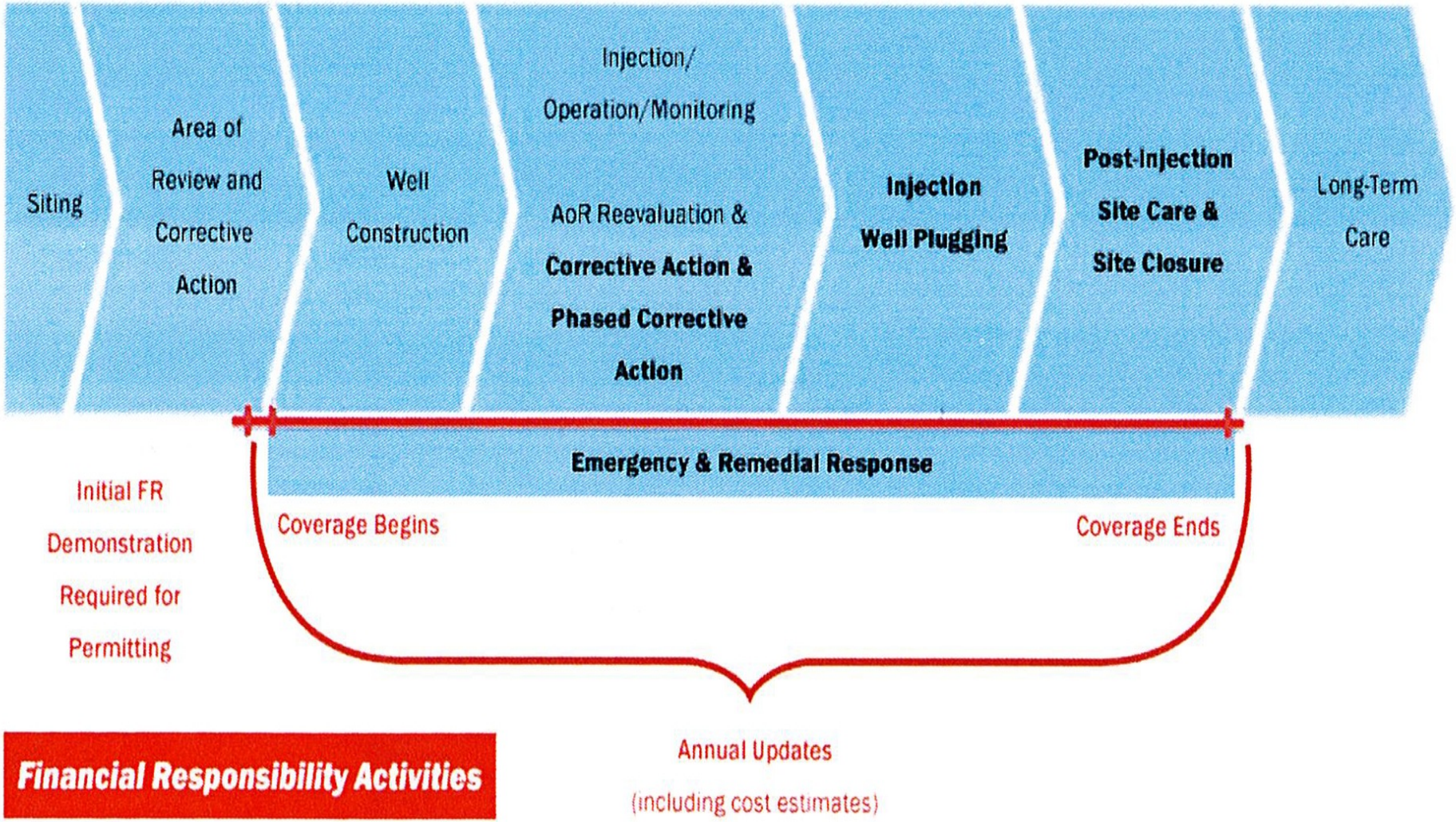


Source – EPA 2013

CGS PROJECT JURISDICTIONAL FLOW DIAGRAM



EPA Guidance Document – Class VI Program Covered Activities



EPA Guidance with Respect To Long Term Liability - Greatest Challenge for States and Industry

"Although owners/operators are not required to demonstrate FA after post injections has ended, owners/operators are still financially liable for the site. SWDA does not provide EPA with authority to indefinitely release owners/ operators from long-term responsibility for potential impacts to USDW's after the post-injection site care has ended."

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Challenge For States – Dealing with Long Term Liability

- Under Class VI, FA released after post-closure, liability not released under SDWA.
- Industry has expressed concern about taking on "perpetual liability" under federal law
- Remedy 1: Federal statutes amended to address the issue: or
- Remedy 2: A State could determine to assume all liability to facilitate projects

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Long-Term Liability

- Although Task Force could not fully recommend in the Phase III report that states assume more liability than a minimum "caretaking" role of monitoring and maintenance – Phase II report recommendation…..

- The Task Force concluded that states which are willing to go beyond that recommendation of assuming the minimum liability will have an advantage in securing CGS projects.

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Phase III Recommendations

States Will Need to Play a Role In CGS Project Development (Phase I and Phase V)

Resource management (reservoir utilization)

Provide for remediation of abandoned sites after release of financial Assurance under Class VI.

Level of Long term liability determination (monitoring – remediation – level of liability assumption)

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Phase III Recommendations

States Should Seek Class VI Primacy to Fully Insure State Interests Are Protected

Provide flexibility with respect to implementation of Class VI program.

Provide assurance that CO2 EOR transition requirement in Class VI rule does not adversely impact existing EOR projects.

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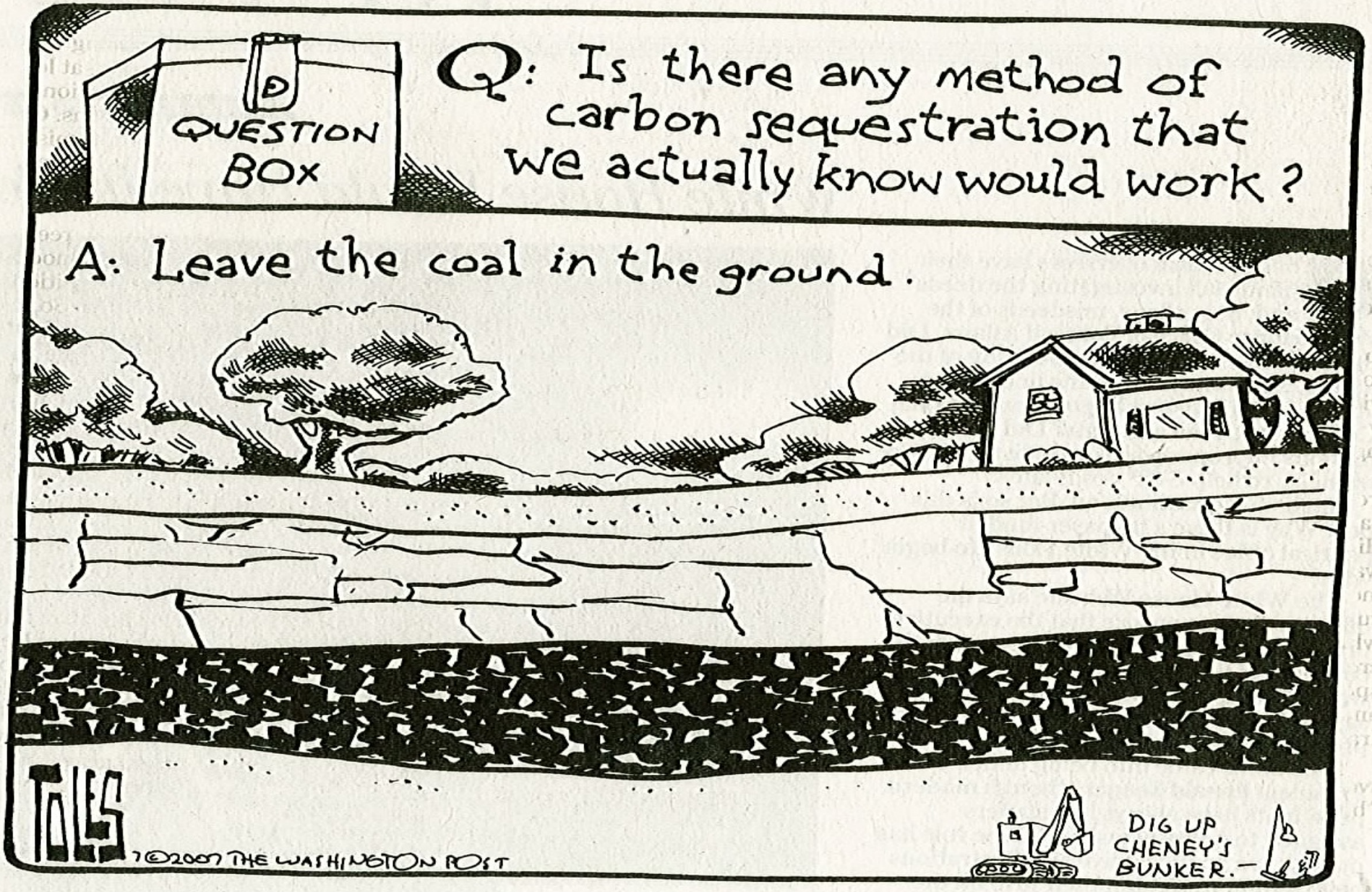
Questions?


Tom Toles
QUESTION BOX
Q: Is there any method of carbon sequestration that we actually know would work?
A: Leave the coal in the ground.
TOLES
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DIG UP CHENEY'S BUNKER.