

## Long-term Liability of CO<sub>2</sub> Geo-Sequestration

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## **Geo-Sequestration Liability**

- A CO<sub>2</sub> geologic sequestration program can be divided in to four broad categories..... Assessment, Operation, Decommissioning and Closure.
  - Assessment Reasonable and approved protocols should be developed to assess the suitability of a CO<sub>2</sub> Sequestration site.
  - Operation Reasonable and approved protocols should be developed for the injection and monitoring of sequestration sites.
  - Decommissioning A short period after injection operations cease where the operator monitors the site for stability and prepares it for transference of responsibility to an appropriate Government agency.
  - Closure A Government agency assumes future responsibility for the sequestration site.

## We believe.....

- The field operator should make all reasonable attempts to contain the CO<sub>2</sub> during injection and decommissioning period. This may be accomplished by:
  - Sub-surface modeling.
  - A simple but effective above ground monitoring program.
  - Appropriate well plugging and abandonment procedures.
  - A legislated and standardized injection & decommissioning monitoring program.
  - A financial responsibility plan for a decommissioning modeling program.
- In the event of a leak in the decommissioning period, the field operator should be responsible for re-establishing the formation seal.
- The field operator should be responsible for offsetting or re-injecting any CO<sub>2</sub> above the minimum threshold level that is emitted to the air during the specified decommissioning period.
- After the decommissioning period, the full liability for monitoring, maintenance and future CO<sub>2</sub> emissions would be transferred to an appropriate Government agency.





## The goal.....

- Ideally, a suite of generalized policies & guidelines should be adopted to clarify expectations and promote compliance efficiency in all phases of a project.
- In addition, the policies & guidelines should have flexibility to allow operators to design monitoring programs appropriate for each site.
- Regulatory development should accelerate the adoption of cost-effective geological sequestration strategies for the long-term management of industrial carbon dioxide.
- A "Cap & Trade" mechanism &/or incentives are likely in order to promote CO<sub>2</sub> sequestration until CCS becomes more economically viable.



