




WESTCARB Annual Business Meeting

Arizona Utilities CO2 Storage Pilot Project Permitting and Insurance

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Arizona Utilities CO2 Pilot Project - Permits

- Arizona Oil & Gas Conservation Commission
Stratigraphic Test Well Permit
- Arizona Department of Environmental Quality (ADEQ)
Aquifer Protection Permit
- EPA UIC permit

WEST COAST REGIONAL CARBON SEQUESTRATION PARTNERSHIP



Arizona Utilities CO2 Pilot Project - Permits

- All three agencies were very supportive of the project.
- ADEQ worked with EPA to draft permit requirements acceptable to both agencies recognizing Arizona existing aquifer protection laws.
- ADEQ and EPA open to innovative methods
 - Permitted a new method for performing the step rate injection test

Arizona Utilities CO2 Pilot Project - Insurance

- The Utility Partners approached the insurance companies for liability coverage.
 - First to contact insurance industry for research project
 - Insurance companies familiar with enhanced oil recovery with CO₂
 - They were not familiar with injection into saline aquifers

Arizona Utilities CO2 Pilot Project - Insurance

- Met several times with insurance companies to provide technical background
- Insurance companies wanted expert opinion on:
 - Local geology
 - Target zone
 - Capping formations
 - Confidence that CO₂ would not migrate off APS property
 - Knowledge about interaction with CO₂ and saline aquifers
 - To some extent the discussion covered issues about full scale sequestration

Arizona Utilities CO2 Pilot Project - Insurance

- Issues important to the insurance companies included:
 - Potential natural resource damage
 - Accidents during transport and injection of CO₂
 - Planned monitoring post injection
- Issued policy to Utility Partners
 - \$15-Million liability coverage
 - 3 year term
- Insurance companies now marketing this product to others