


WESTCARB Annual Business Meeting

Arizona Aquifer Protection Permit Issues Related to Carbon Sequestration

John L. Boyer
Principal Environmental Scientist
Arizona Public Service Company
john.boyer@aps.com


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Arizona Aquifer Protection Permit Issues

- Arizona Aquifer Protection Permit (APP) Requirements
 - The Arizona Department of Environmental Quality (ADEQ) does not have primacy for UIC permits
 - All Aquifers are designated as Drinking Water Aquifers
 - Aquifer - a geologic unit that contains sufficient saturated permeable material to yield usable quantities of water to a well or spring
 - Usable quantities
 - Five gallons of water per day
 - No clarification in law or regulations regarding water quality
 - Injection wells defined as discharging facilities and therefore must obtain an Aquifer Protection Permit

WEST COAST REGIONAL CARBON SEQUESTRATION PARTNERSHIP



Arizona Aquifer Protection Permit Issues

- APP Requirements (continued)
 - Permit issued if you demonstrate:
 - Facility designed, constructed and operated to ensure the greatest degree of discharge reduction
 - Use Best Available Demonstrated Control Technology (BADCT)
 - Where practicable use a technology permitting no discharge of pollutants
 - And either:
 - pollutants discharged will not cause a violation of aquifer water quality standards (AWQS) or
 - In aquifers that already exceed the AWQS, pollutants discharged will not further degrade the quality of aquifer

Arizona Aquifer Protection Permit Issues

- Point of Compliance
 - A vertical plane down gradient of the facility that extends through the uppermost aquifers underlying that facility
 - The point of compliance is at the edge of the pollutant management area (PMA)
 - The PMA includes the horizontal space taken up with the liner, dike, or other barrier designed to contain pollutants in the facility
 - The Director of ADEQ is provided some flexibility when setting points of compliance
 - Hazardous vs. non-hazardous pollutants
 - Technical feasibility for placing monitor wells

Arizona Aquifer Protection Permit Issues

- Arizona Utilities CO₂ Storage Pilot Test
 - ADEQ is supportive of Carbon Sequestration
 - Working with us to permit pilot test
 - Utilities and ADEQ using this process to help define issues and eventually lead to acceptable regulation for sequestration in Arizona