Integrating Mt. Simon Injection Data with CO2 Storage Reservoir Simulations for the Arches Province of the Midwest United States

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Operational information from Mt. Simon injection sites was integrated with CO2 storage reservoir simulations for the arches province of the Midwest United States. Data from the injection sites included the general geological setting, geotechnical test properties, hydraulic parameters, and historical operational information such as injection rates and pressures. This information was integrated into a geological model for the arches province, which will provide the framework for numerical simulations of large scale CO2 storage. Information on injection pressures and flow rates also provide valuable calibration points for the model. The basin-scale simulations are focused on evaluating the infrastructure necessary to implement large-scale CO2 storage along the province. The analysis also addresses technical and infrastructure questions related to simulation methods, monitoring options, and risk assessment.
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