CARBON CAPTURE AND STORAGE IN SOUTHERN CALIFORNIA

IDENTIFYING THE LONG TERM LIABILITIES

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ABSTRACT

Geologic storage of CO_2 from large point sources of emissions is a promising strategy for reducing atmospheric carbon dioxide. Before this technology can be deployed, it is vital to understand the liabilities associated with such storage. GIS modeling was done to identify the risk features and quantify the leakage out of the storage area for four sedimentary basins in Southern California. Faults and fractures, and certain types of well penetrations in the study area were the two main leakage pathways, and leakage was found to be greatest in the Ventura Basin. The results indicate that overall, the Cuyama Basin is better suited to use as a storage site than others in this study. Some refinement of the model is possible, and the potential ArcGIS tools that could be used are recommended.