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Present and Future Changes in Seawater Chemistry; Erosion of Soil Organic Carbon: Implications for Carbon Sequestration; Assessing the Potential for CO₂ Leakage, Particularly Through Wells, From Geological Storage Sites; Scoping Calculations on Leakage of CO₂ in Geologic Storage: The Impact of Overburden Permeability, Phase Trapping, and Dissolution; Geochemical Impacts of Sequestering Carbon Dioxide in Brine Formations

Quantification of CO₂ Trapping and Storage Capacity in the Subsurface: Uncertainty due to Solubility Models; Quantification of CO₂ Flow and Transport in the Subsurface: Uncertainty due to Equations of State Algorithms; Section 4 Evaluation of Carbon Management Requirements; Verification and Accreditation Schemes for Climate Change Activities: A Review of Requirements for Verification of Greenhouse Gas Reductions and Accreditation of Verifiers-Implications for Long-Term Carbon Sequestration; Sociopolitical Drivers in the Development of Deliberate Carbon Storage

Considerations for Monitoring, Verification, and Accounting for Geologic Storage of CO₂; Integrating Terrestrial Sequestration Into a Greenhouse Gas Management Plan; A Conceptual Framework for Management of Carbon Sequestration Data and Models; Looking Ahead: Research Agenda for the Study of Carbon Sequestration; Index

Sommario/riassunto

Published by the American Geophysical Union as part of the Geophysical Monograph Series, Volume 183. For carbon sequestration the issues of monitoring, risk assessment, and verification of carbon content and storage efficacy are perhaps the most uncertain. Yet these issues are also the most critical challenges facing the broader context of carbon sequestration as a means for addressing climate change. In response to these challenges, Carbon Sequestration and Its Role in the Global Carbon Cycle presents current perspectives and research that combine five major areas: Th