

NETL OVERSEES LANDMARK RESEARCH TO PROTECT CAPROCK INTEGRITY AT CARBON STORAGE SITES

Research studied important subsurface behaviors to ensure that carbon dioxide (CO₂) stored underground remains safely and securely sequestered in the subsurface.

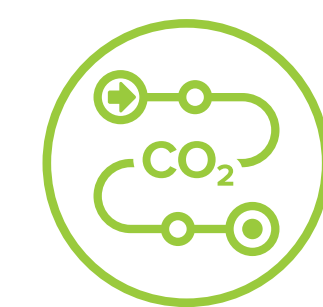


Research was conducted at a depth of approximately 1,200 feet below the surface at the Mont Terri Underground Research Laboratory in Switzerland.

Carbon storage reservoirs are layers of porous rock underneath a layer of impermeable rock that acts as a seal. The caprock prevents injected CO₂ from returning to the surface or migrating to aquifers that provide drinking water.

- The work completed by NETL partners at the Lawrence Berkeley National Laboratory and Rice University marked the first time a mixture of CO₂ and water was injected into a fault.
- The injection caused a controlled CO₂ -induced fault slip to determine its impact on the caprock that prevents CO₂ leakage.
- The experiment provided significant observations about fault slip and strain related to CO₂ injection and the effect that CO₂ -induced fault activation has on storage reservoir caprocks zones.

RESEARCH PRIORITY



CARBON STORAGE AND TRANSPORT

PERFORMERS



RICE UNIVERSITY



NETL ANNUAL
ACCOMPLISHMENTS
2023



U.S. DEPARTMENT OF
ENERGY

Fossil Energy and
Carbon Management



NATIONAL
ENERGY
TECHNOLOGY
LABORATORY