



Gulf Coast Carbon Center Progress Update, June 2004

The Gulf Coast Carbon Center (GCCC) is applying its technical and educational resources to implement geologic sequestration of anthropogenic carbon dioxide on an aggressive time scale. Our focus is in the Gulf Coast of Texas, Louisiana, and Mississippi, an area where opportunities for early implementation are numerous, diverse and have a high potential of being economically viable. The GCCC will develop and distribute information needed to inform and engage all critical contributors to the system, and seek a competitive next-stage field demonstration at an appropriate scale to demonstrate competence in measurement, monitoring, and verification (MMV) as well as project economic viability.

June accomplishments

- The 2nd quarterly GCCC member meeting was held at BEG's Houston Research Center, Houston, Texas. All members (Jackson School of Geosciences, BP, KinderMorgan, and ChevronTexaco) were in attendance, as well as guests from Praxair, AirLiquide, Saudi Aramco, Anadarko, and Dow. GCCC quarterly accomplishments were discussed in detail. Key presentations were made by GCCC personnel, as well as by Dr. Steve Bryant, GCCC research affiliate from the Department of Petroleum and Geosystems Engineering, The University of Texas at Austin. Future research directions were set under the guidance of GCCC members.
- The GCCC Geographic Information System (GIS) database is being upgraded with geological sink characterization efforts. Along with our current anthropogenic CO₂ source and Texas oil-reservoir data, we have included the saline aquifer formation database. Through subcontract activities with DOE's SW and SE regional carbon sequestration partnerships, we are currently digitally compiling the atlas of Texas major oil and gas reservoirs. We will further complement the GCCC source-sink GIS database with major oil and gas reservoirs of the offshore northern Gulf of Mexico.
- Associate Director of BEG, Jay Kipper, met with the Valero, Texas City refinery manager, the Marathon, Texas City refinery manager, and the BP, Texas City refinery planning manager to discuss GCCC initiatives.
- Attended the DOE Southwest Regional Carbon Partnership Meeting in Albuquerque, New Mexico (June 7–9), where geological characterization of Texas oil and gas reservoirs that were being prepared in GIS for the Southwest Regional Carbon Partnership was discussed.
- Analysis of log, core, and downhole water samples is under way. The Core Lab's analysis of porosity and permeability in the selected injection interval in the upper Frio "C" sandstone is very high—as much as 35% porosity and 3 Darcys in poorly cemented sandstone. Brine composition analyzed by Yousif Kharaka is dominated by NaCl, reflecting proximity to a salt dome and near-saturation by dissolved methane. The upper Frio sandstone is very well sorted, very fine to fine sandstone deposited in fluvial and marine reworked environments.

July goals include

- Holding potential GCCC membership meeting with Praxair in Austin on July 14.
- Attending Texas Clean Coal Technology meeting in Longview, Texas, July 28–29.
- Meeting with key Texas Gulf Coast legislators affected by carbon sequestration.
- Meeting with the Texas Chemical Council and contacting the American Chemical Council to discuss GCCC initiatives.
- LBNL's commencing field pre-injection cross-well seismic and VSP at the Frio Pilot. USGS, ORNL, and LLNL will collaborate on collecting preinjection in-zone geochemical data. Surface background data collection, including work by NETL, will continue.
- Active stakeholder recruitment and public outreach.

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