



Gulf Coast Carbon Center Progress Update, August 2004

The Gulf Coast Carbon Center (GCCC) is applying its technical and educational resources in order to implement, on an aggressive time scale, geologic sequestration of anthropogenic carbon dioxide. Our focus is on the Gulf Coast of Texas, Louisiana, and Mississippi, an area where opportunities for early implementation are numerous and diverse and one that has a high potential of being economically viable. 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.

Frio Brine Pilot—MMV demonstration

August accomplishments: Injection and monitoring wells were perforated in the upper “C” sandstone, and wells were developed. USGS researchers collected downhole fluid samples. The Australian CO₂CRC funded collection of baseline cased-hole crosswell EM in the same zone as crosswell seismic. Baseline surface monitoring included NETL installation of soil samplers for PFT’s and USGS sampling of aquifer monitoring wells.

September forecast: Baseline data will be completed with collection of a radioactive tracer test to demonstrate successful isolation of the injection interval and an LBNL hydrologic, unconfined single-phase tracer test. CO₂ injection (Praxair) is scheduled for September 27th.

Economically based options for carbon sequestration

August accomplishments: Geological characterization funded through the DOE Southwest and Southeast Regional Carbon Sequestration Partnerships completes the GIS database for Texas oil and gas reservoirs. This database has been integrated with brine formation and CO₂-source databases. Screening of oil fields for CO₂ EOR potential has identified 117 additional fields.

On August 16, Jay Kipper and Susan Hovorka met Valero Energy Corporation (Charlie Leroy, Senior VP of Refining, and George Stutzmann) in San Antonio. GCCC presented an overview of its activities and had discussions on refinery perspectives of carbon sequestration. Valero explained that high-purity, low-cost CO₂ is volumetrically limited from hydrogen plants and ethylene crackers and much has already been marketed. Other CO₂ from boilers and “cat crackers” is at low concentrations from multiple sources. Work is needed to identify efficient capture options, which will start with a review of CCP study applicability to regional refineries.

September forecast: The *Atlas of Offshore Northern Gulf of Mexico Oil and Gas Reservoirs* and BEG’s oil reservoir database will be integrated further. LGS and MMRI are concurrently compiling Louisiana and Mississippi oil and gas reservoirs in GIS to be merged eventually. Derek Wood, graduate student, UT PGE, will join our team to develop needed Gulf Coast models to support better reservoir economics.

Outreach

August accomplishments: Sue Hovorka reviewed GCCC outreach activities for the Regional Partnerships Outreach Phone Conference and provided practical advice.

August 9–11 Mark Holtz participated in teaching at the U.S.-Norway summer school for *Carbon Capture & Storage in Geologic Formations* in Santa Fe, New Mexico.

On August 18, Eugene Kim participated in the DOE Regional Partnerships Geological Characterization Working Group teleconference meeting.

On August 20, Susan Hovorka and Eugene Kim met with representatives of the Texas Clean Coal Technology Foundation (Chuck McDonald and Julie Taylor) to follow up on the Longview meeting on Texas FutureGen efforts and to provide information and advice on geologic opportunities in the state.

On August 26, Ian Duncan and Sue Hovorka and other GCCC members participated in the CO₂ symposium hosted by Dow Chemical Company in Houston.

On August 27, Sue Hovorka hosted the Houston Sierra Club visit to the Frio Brine Pilot Site.

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