



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
WASHINGTON, D.C. 20460

OFFICE OF  
WATER

JUL 5 - 2006

Dear State/Regional UIC Contact,

In light of research efforts underway on carbon dioxide (CO<sub>2</sub>) geologic sequestration (GS), and ongoing Department of Energy (DOE) support for CO<sub>2</sub> sequestration activities, we wanted to communicate to you the United States Environmental Protection Agency's (EPA) views regarding its role in assisting these efforts. Also, because it is likely that several GS pilot projects, supported by the DOE-sponsored Regional Carbon Sequestration Partnerships, will begin to seek approval from EPA Regions or States to inject carbon dioxide within the next few months, we wanted to share our initial thoughts regarding the regulatory status of such projects under the Safe Drinking Water Act (SDWA). For more information on the Partnerships, please search on [www.netl.doe.gov/technologies/carbon\\_seq/partnerships/partnerships.html](http://www.netl.doe.gov/technologies/carbon_seq/partnerships/partnerships.html).

The Intergovernmental Panel on Climate Change (IPCC) defines carbon capture and storage (CCS) as a process consisting of the separation of CO<sub>2</sub> from industrial and energy-related sources, transportation to a storage location, and long-term isolation from the atmosphere. CCS is considered one option in the portfolio of mitigation actions for the stabilization of atmospheric greenhouse gas concentrations. CCS has the potential to reduce overall mitigation costs and increase flexibility in achieving greenhouse gas emission reductions.

In August 2004, EPA convened the Geologic Sequestration Workgroup comprised of staff from EPA Headquarters Offices, the Regional Offices, and EPA's National Laboratories. The workgroup's charge is to coordinate EPA efforts on sequestration, monitor domestic and international technology and policy development, identify key research needs to address any environmental issues that may arise, develop and conduct risk assessments, and provide clear and consistent support to DOE and the public as the Regional Carbon Sequestration Partnerships plans are further developed.

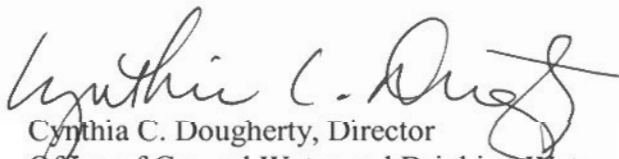
Earlier this year, the Agency concluded that geologic sequestration of carbon dioxide through well injection meets the definition of "underground injection" in section 1421(d)(1) of the Safe Drinking Water Act. As a result, the Agency and Primacy States as co-regulators anticipate protecting underground sources of drinking water (USDWs) from any potential endangerment by CCS pilot projects using appropriate SDWA mechanisms, including the issuance of underground injection control (UIC) permits. Among the options being considered by EPA is a regulatory revision of its current UIC well classification system to more specifically address large volume injection of carbon dioxide.

In the interim, and until such time as the Agency further establishes regulatory, technical, and policy positions, EPA believes it is appropriate to follow the approach taken by States, such as Texas (*e.g.* the Frio Brine Project), and permit injection wells associated with research and development projects as UIC Class V experimental technology wells. The EPA Regions and Primacy States have existing authority to evaluate these permits on a case-by-case basis to ensure protection of USDWs. At this time, EPA has not determined whether, or in what manner these operations' well classification might change if and when, in the future, they begin to sequester CO<sub>2</sub> for permanent storage or disposal on an other-than research-and-development basis. Wells injecting CO<sub>2</sub> for the purpose of enhancing oil or natural gas production should continue to be regulated as Class II injection wells by the appropriate federal or state permitting agency.

EPA is also aware that there are several efforts underway to evaluate the applicability of existing federal and state laws and regulations to the underground injection of carbon dioxide for long-term sequestration, including efforts by DOE/NETL and the Regional GS Partnerships. These efforts may provide useful information that EPA will consider as it develops technical and/or regulatory guidance to ensure protection of underground sources of drinking water.

EPA will continue to evaluate the need for future technical and/or regulatory guidance to ensure that CCS injection wells do not endanger USDWs. EPA is preparing technical program guidance to assist EPA Regions and Primacy States in permitting those DOE-sponsored pilot projects that are not enhanced recovery projects as Class V experimental technology wells. We plan to share an initial draft of this guidance with you for comments in the near future. In the meantime, if you have any questions or concerns regarding CO<sub>2</sub> injection for sequestration, or have information that could benefit our research on this issue, please contact Bruce Kobelski, OGWDW's Geologic Sequestration Workgroup co-chair at (202) 564-3888, or [kobelski.bruce@epa.gov](mailto:kobelski.bruce@epa.gov).

Sincerely,

  
Cynthia C. Dougherty, Director  
Office of Ground Water and Drinking Water