

BATTELLE NEWS RELEASE

Battelle-led Team Successfully Completes Midwest Regional Carbon Sequestration Partnership CCUS Research

COLUMBUS, Ohio (June 15, 2021)—[Battelle](#) and its team of partners have successfully concluded the carbon capture, utilization and storage (CCUS) research associated with the Midwest Regional Carbon Sequestration Partnership (MRCSP), paving the way forward for commercial deployment.

Battelle led MRCSP in three phases, starting with the initial characterization phase in 2003, moving to multiple small-scale pilot tests in the validation phase in 2005 and culminating in the large-scale development phase starting 2008. Now, the focus moves to commercialization and expanded regional initiatives, especially focused on the storage/sequestration portion of the climate change mitigation approach.

“We are so pleased to have completed this work,” said Dr. Neeraj Gupta, MRCSP Principal Investigator and Battelle’s Technical Director for Carbon Management. “We met all our objectives and stored more than two million tons of carbon dioxide in three phases, effectively and safely. The lessons learned from MRCSP research are now being applied to a number of commercial projects.”

A comprehensive series of MRCSP reports have now been approved by the United States Department of Energy (DOE) and can be downloaded from the announcements page of the newly formed [Midwest Regional Carbon Initiative](#) (MRCI). These include a Final Technical Report, topical reports on characterization, modeling, monitoring, life-cycle assessment, and regional scale-up for the large-scale test in Michigan. Also included are a series of topical reports on selected regional assessments in the 10-state MRCSP region.

In addition, the MRCSP team has published extensively in peer-reviewed journals and conference proceedings to facilitate knowledge sharing.

“We congratulate Battelle and their partners on the MRCSP’s important accomplishments throughout all three phases,” said Dr. Jennifer Wilcox, Acting Assistant Secretary for Fossil Energy and Carbon Management. “We look forward to working with the MRCI to help commercialize those critical technologies.”

The MRCSP work has been funded primarily by the U.S. Department of Energy’s Fossil Energy program through the National Energy Technology Laboratory, with significant co-funding from the Ohio Coal Development Office in the Ohio Department of Development, [Core Energy](#)’s in-kind contributions, and numerous other partners. The MRCSP was a collaboration of nearly 40 government, industry and university partners joined to assess the technical potential, economic viability and public acceptability of CCUS for DOE. The field research was performed on the oilfield sites owned and operated by Core Energy.

“We were proud to collaborate with Battelle, NETL and the other MRCSP stakeholders on this very practical and foundational research over the last 12 years,” said Bob Mannes, President of Core Energy. “The operational expertise of the Core Energy team was vital to this field demonstration proving the safe and secure injection of over two million tons of CO₂ in Michigan. This characterization work will be foundational to commercial projects in the future as it demonstrates that Michigan has the capacity to safely store hundreds of years of carbon emissions.”

In transitioning to the next phase of CCUS development, the MRCSP program has evolved into the MRCI, led by Battelle and the Illinois State Geological Survey. MRCI aims to advance CCUS research by addressing key technical challenges, obtaining and sharing data to support CCUS, facilitating regional infrastructure planning and performing regional technology transfer. The MRCI study region covers 20 states in the Midwest and Northeast United States and includes collaboration with the state geological surveys, industry, and universities across the region.

The Midwest part of the U.S. is undergoing a major energy transition, which includes continued reliance on coal-based energy, but with a sharply increasing natural gas use and potential for deployment of new energy technologies. All of these will require use of

CCUS for disposition of carbon dioxide. Meeting this demand for carbon dioxide storage will require characterization, qualification, and development of numerous storage sites associated with carbon capture. These future projects also offer a major employment opportunity for people currently engaged in oil and gas related industries.

About Battelle

Every day, the people of Battelle apply science and technology to solving what matters most. At major technology centers and national laboratories around the world, Battelle conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers. Headquartered in Columbus, Ohio since its founding in 1929, Battelle serves the national security, health and life sciences, and energy and environmental industries. For more information, visit www.battelle.org.

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