FINDING OF NO SIGNIFICANT IMPACT
FOR
SOUTHEAST REGIONAL CARBON SEQUESTRATION PARTNERSHIP
PHASE III ANTHROPOGENIC TEST PROJECT
CITRONELLE, ALABAMA

RESPONSIBLE AGENCY: U.S. Department of Energy (DOE)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE completed the Final Environmental Assessment for the Southeast Regional Carbon Sequestration Partnership (SECARB) Phase III Anthropogenic Test Project (DOE/EA-1785D). Based on the analyses in the environmental assessment (EA), DOE determined that its Proposed Action – awarding a federal grant to SECARB to inject 125,000 tons of carbon dioxide (CO_2) per year for three years into a deep saline aquifer – would result in no significant adverse impacts.

BACKGROUND: In one of many governmental efforts to address global climate change concerns, DOE established the Carbon Sequestration Program in 1997 with the focus of conducting research and development activities to evaluate and develop carbon storage technologies. Carbon sequestration involves capturing and storing CO_2 emissions prior to release into the atmosphere as well as enhancing natural carbon uptake and storage processes. Geologic sequestration involves the permanent storage of CO_2 in coal seams, depleted oil and gas reservoirs, or saline (saltwater-filled) formations. Impermeable cap rocks and other geologic structures retain the CO_2 in the formation.

The proposed action of providing federal funding for these projects requires compliance with the National Environmental Policy Act of 1969 (NEPA; 42 U. S. C. §§ 4321 et seq.), the Council on Environmental Quality regulations (40 CFR Parts 1500 to 1508) and DOE's NEPA implementing procedures (10 CFR Part 1021). DOE prepared an EA to evaluate the potential environmental consequences of providing a grant to this proposed project under the program.

PURPOSE AND NEED: The overall purpose for DOE action pursuant to the Carbon Sequestration Program is to test large volume sequestration of CO_2 in regionally significant geological formations in North America. This project is needed to increase scientific understanding of geological carbon sequestration and to validate monitoring, verification, and accounting technologies. Reliable modeling and monitoring are required to demonstrate that geologic sequestration is an effective method for reducing atmospheric concentrations of CO_2.

DESCRIPTION OF THE PROPOSED ACTION: DOE's Proposed Action is to provide a grant to provide partial funding for the injection and monitoring of CO_2 in the existing Citronelle oilfield by SECARB. The project would include the drilling of up to two injection wells, reconditioning four existing wells for monitoring, and installing two new shallow water wells. Connected actions include the CO_2 source at Plant Barry; the 12.3-mile long, 4.5-inch diameter pipeline to transport CO_2 to the oilfield; and the two electric service lines of a total of 3,275 feet.

No connected actions are receiving federal money. DOE would provide approximately $30.0 million in financial assistance in a cost-sharing arrangement in order to facilitate the injection of CO_2 captured from a power plant into a deep saline aquifer for enhanced oil recovery and geologic sequestration. The total cost of the project is estimated at approximately $39.3 million.

ALTERNATIVES CONSIDERED: In addition to the Proposed Action, DOE considered the No-Action Alternative as required under NEPA. Under the No-Action Alternative, DOE would not provide funds for SECARB's proposed project. For the purposes of the EA, DOE assumed that the project would not proceed without DOE funding. This assumption establishes a baseline against which the potential environmental impacts of the proposed project are compared.

ENVIRONMENTAL CONSEQUENCES: DOE evaluated the potential environmental consequences of the proposed project and the No-Action Alternative, including the activities necessary to implement the proposed project that would be funded by SECARB rather than DOE.

DOE considered 11 environmental resource areas in the preparation of the EA. However, not all areas were evaluated at the same level of detail. DOE focused more detailed analysis on areas that would require new or revised permits, have the potential for significant adverse environmental impacts, or have the potential for controversy. The areas DOE evaluated in more detail included air quality; geology and soils; terrestrial vegetation; wildlife; and human health and safety. For these areas, DOE determined there would be minimal potential adverse environmental impacts. Air and water emissions may require modifications to existing permits or issuance of new permits, but the changes would be minor and not trigger major impacts or controversy.

DOE also evaluated socioeconomics to determine the potential positive benefits of the proposed project on the affected communities. The proposed project is anticipated to result in small increases in local employment opportunities and local spending, potentially providing a minor beneficial impact to the local community.

The other environmental areas DOE evaluated for potential impacts were water resources; wetlands and floodplains; land use; waste management; and cultural resources. DOE determined that there would be no potential for adverse impacts for these resource areas, or that the impacts would be minimal, temporary, or both. The EA provides more detail on the reasons DOE did not conduct more detailed evaluations.

Under the No-Action Alternative, the project would either be delayed, as SECARB sought other funding sources, or abandoned altogether. The potential environmental consequences, if the project was delayed, could be different if the project were modified. If abandoned, the potential environmental consequences would not occur. Furthermore, the potential beneficial impacts would change or not occur.

PUBLIC AVAILABILITY: DOE issued the Draft EA on September 19, 2010, and advertised its release in Mobile's *Press Register* on September 19, 20, and 21. In addition, DOE sent a copy for public review to the Citronelle Memorial Library in Citronelle. DOE established a 30-

day public comment period that began September 19, 2010, and ended October 19, 2010. DOE announced it would accept comments by mail, e-mail, and facsimile.

The Draft EA was distributed to various state agencies. DOE conducted formal consultations by mail with the U.S. Fish and Wildlife Service, State Historic Preservation Office, and Tribal contacts in Alabama as well as Bureau of Indian Affairs, who requested additional Tribes be contacted. In each case, DOE received correspondence supporting a determination of no potential impacts to threatened or endangered species, and no potential impacts to properties listed on or eligible for inclusion to the *National Register of Historic Places*.

Copies of the Final EA and this FONSI are available at DOE's National Energy Technology Laboratory web site at http://www.netl.doe.gov/publications/others/nepa/ea.html or by sending a request to:

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DETERMINATION: On the basis of the evaluations in the Final EA, DOE determined that its Proposed Action – to provide a $30 million federal grant to SECARB's proposed project – would have no significant impact on the human environment. All potential environmental impacts identified and analyzed in the EA would be less than significant. Therefore, preparation of an environmental impact statement is not required, and DOE is issuing this Finding of No Significant Impact.

Issued in Pittsburgh, PA, this 18th day of March 2011.

Anthony V. Cugini
Director
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