U.S. DEPARTMENT OF ENERGY - NETL

CATEGORICAL EXCLUSION (CX) DESIGNATION FORM

Project No.: DE-FG032062
Recipient Name: Battelle
Project Location: Columbus, OH

Sub-recipient(s) and Locations:
Paulsson Inc., Van Nuys, CA
Ohio Department of Natural Resources, Division of Geological Survey, Columbus, OH

NETL Sponsoring Org.: FE/TDC/ACCM/CUS Team
NETL Contact: Kyle Smith

Brief Title of Proposed Action: Acoustic Emissions Sensing for Tracing CO2 Movement in Caprock of a CCUS System

Brief Description of Activities:
Develop theoretical model; design and develop "acoustic emissions" sensor system; conduct coreflooding lab experiments with sensor system; perform fluid flow modeling/simulations w/ lab experiment data.

THE PROPOSED ACTION FALLS WITHIN THE FOLLOWING CATEGORICAL EXCLUSION(S) FROM APPENDICES A AND B TO SUBPART D OF DOE NEPA IMPLEMENTING PROCEDURES (10 CFR 1021):

- General Administration/Management
  - A1 – Routine business actions
  - A9 – Info gathering, analysis, documentation, dissemination, and training
  - A11 – Technical advice and planning assistance

- Facility Operations
  - B1.3 – Routine maintenance and custodial services
  - B1.7 – Communication system and data processing equipment acquisition, installation, operation, removal
  - B1.15 – Support building or structure, non-waste storage, construction/operation

- Safety and Health
  - B2.1 – Modifications to enhance workplace habitability
  - B2.2 – Installation/improvement of building/equipment instrumentation
  - B2.3 – Installation of equipment for personnel safety and health

- General Research
  - B3.1 – Site characterization/environmental monitoring
  - B3.6 – R&D or pilot facility construction/operation/decommissioning
  - B3.7 – New infill exploratory, experimental oil/gas/geothermal well construction and/or operation
  - B3.9 – Certain CCT demonstration activities, emissions unchanged
  - B3.11 – Outdoor tests, experiments on materials and equipment components

- Electrical Power and Transmission
  - B4.4 – Power management activities (storage, load shaping, and balancing)
  - B4.6 – Transmission support addition/modifications at developed facility site
  - B4.11 – Construction of power substations and interconnection facilities
  - B4.13 – Upgrading and rebuilding existing power lines (< 20 miles)

- Conservation, Fossil, and Renewable Energy Activities
  - B5.1 – Actions to conserve energy, no indoor air quality degradation
  - B5.3 – Modification/abandonment of wells
  - B5.5 – Short crude oil/gas/steam/geothermal/carbon dioxide pipeline const/oper within an existing right-of-way (< 20 miles) between existing facilities
  - B5.13 – Experimental wells for injection of small quantities of carbon dioxide (< 500,000 tons)
  - B5.15 – Small scale renewable energy research/development/pilot projects
  - B5.22 – Alternative fuel vehicle fueling stations
  - B5.23 – Electric vehicle charging stations

- Other
  - Specify category:
  - Specify category:
  - Specify category:

This action (1) would not present any extraordinary circumstances such that the action might have a significant impact upon the human environment; (2) is not connected to other actions with potentially significant impacts; (3) is not related to other actions with cumulatively significant impacts; and (4) is not inconsistent with 10 CFR 1021.211 - Interim Actions or 40 CFR 1506.1 - Limitations during the NEPA process.

SELECT ONE OF THE FOLLOWING:
- This Categorical Exclusion includes all tasks and phases in the Statement of Work or Statement of Project Objectives for this project.
- This Categorical Exclusion is only valid for the following tasks/phases

The DOE initiator acknowledges the responsibility to obtain a NEPA determination prior to initiating any activities outside the scope of this Categorical Exclusion.

SELECT ONE OF THE FOLLOWING:
- This Categorical Exclusion includes all locations and activities for this project.
- Additional sites, sub-recipients, or activities cannot be identified at this time. The DOE initiator acknowledges the responsibility to obtain a NEPA determination prior to initiating any activities outside the scope of this Categorical Exclusion.

NOTE: ANY CHANGE(S) TO THE PROJECT SCOPE OR LOCATIONS MAY REQUIRE A NEW NEPA DETERMINATION.

DOE Initiator Signature: Digitally signed by Kyle S. Smith
Date: 2021.06.02 16:02:23-07'00' 06/02/2021

NEPA Compliance Officer: JESSE GARCIA
Digitally signed by JESSE GARCIA
Date: 2021.06.02 16:02:23-07'00' 06/02/2021

The following special condition is provided for the consideration of the Contracting Officer: