

U.S. DEPARTMENT OF ENERGY - NETL

CATEGORICAL EXCLUSION (CX) DESIGNATION FORM

Project No.: DE-FE0032352 Recipient Name: Osmoses, Inc Project Location: Cambridge, MA

Sub-recipient(s) and Locations:
GTI Energy in Des Plaines, IL

NETL Sponsoring Org.: FECM/TDC/CM/Hydrogen with CM NETL Contact: Diane Revay Madden

Brief Title of Proposed Action: Optimization and Scale up of Molecular-Sieve Membrane with Record Air Separation

Brief Description of Activities:
Efforts will include: (1) scale-up of polymer synthesis; (2) formation of optimized phase-inversion polymer supports; (3) testing of optimized thin-film composite membranes for relevant times, temperatures, and pressures; and (4) optimization of process and techno-economic modeling.

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: DIANE REVAY MADDEN

Digitally signed by DIANE REVAY MADDEN Date: 2023.07.25 13:30:44 -04'00'

Date: 07 / 25 / 2023

NEPA Compliance Officer: MARK LUSK

Digitally signed by MARK LUSK Date: 2023.08.03 10:14:23 -04'00'

Date: month day year

Date: 08 / 03 / 2023

month day year

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

[Empty box for special conditions]