PMC-ND
(1.08.09.13)

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION

RECIPIENT: NREL **STATE:** CO

PROJECT TITLE: NREL-19-002 University of Georgia - EASyer - Accelerating a Method to Evolve New Enzymes

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-19-002	GO28308

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:
Description:

B3.6 Small-scale research and development, laboratory operations, and pilot projects	Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) proposes to enter into a subcontract with the University of Georgia (UGA) to further develop a bacteria, Acinetobacter baylyi ADP1, as a rapid generator of new genes, enzymes and metabolic information that can be applied to tasks as part of the Agile Biofoundry project.

The proposed project would involve the design, construction, and evolution of bacterial strains from ADP1 using EASy (Evolution by Amplification and Synthetic biology) to produce cell populations with new DNA fragments for analysis. Laboratory activities would include the serial dilution and growth of bacterial cultures and whole genome sequencing to analyze the new cell populations. At the conclusion of the experiments, the cell cultures would be autoclaved, and the resulting non-hazardous material would be disposed of in accordance with UGA policies and procedures.

All research activities would occur in existing UGA laboratories using existing laboratory equipment, and no new equipment or infrastructure would be needed to support the experiments. No change in the use, mission, or operation of existing facilities would result from the proposed project. If required, the responsible researcher at UGA will obtain any United States Department of Agriculture Animal and Plant Health Inspection Service (APHIS) permits needed for the work. Any work associated with this proposed project shall not proceed until all required permits have been received.

Existing UGA health and safety policies and procedures would be followed, including safe handling of organisms, proper waste disposal, and the use of employee personal protective equipment. In addition, the UGA Institutional Biosafety Committee has issued an "Authorization for Use of Recombinant DNA, Infectious Agents, or Biological Toxins" for ADP1. The authorization requires ADP1 be managed in accordance with Biosafety Level 1 handling procedures (assigned to materials that pose the lowest potential hazard to laboratory personnel and the environment), follow NIH Guidelines (Appendix C-II), and that solid wastes are autoclaved prior to disposal.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action and the integral elements of 10 CFR 1021 subpart B outlined in the DOE categorical exclusion selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410(2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper

interim action. This proposal is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Any work associated with this proposed project shall not proceed until all required permits from the United States Department of Agriculture Animal and Plant Health Inspection Service have been received.

NREL
Nicole Serio 11/8/2018

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin Date: 11/8/2018

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☑ Field Office Manager review not required
☐ Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____

Field Office Manager