

PMC-ND

(1.08.09.13)

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



RECIPIENT: South Dakota State University

STATE: SD

**PROJECT TITLE** : Optimize multifunctional catalysts for efficiently converting lignocellulosic biomass to advanced biofuels

**Funding Opportunity Announcement Number**      **Procurement Instrument Number**      **NEPA Control Number**      **CID Number**  
 DE-FC36-08GO88073      DE-FC36-08GO88073      GFO-GO88073-005

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

**CX, EA, EIS APPENDIX AND NUMBER:**

## Description:

- A9 Information gathering, analysis, and dissemination** Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
- 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 (DOE) is proposing to provide federal funding to South Dakota State University (SDSU) to develop multifunctional catalysts to aid in the development of drop-in advanced biofuels from lignocellulosic biomass based on the SDSU proprietary accurate control catalytic fast pyrolysis (ACCFP) technologies.

Proposed project activities would include formulating, testing, and screening a series of multifunctional catalysts for efficiently converting wood sawdust and corn stover to advanced biofuels using the ACCFP reactor system developed by SDSU. The drop-in advanced biofuels produced would be characterized for determinations of their quality and conversion efficiencies. Characterizations of the catalysts used would be carried out to determine the optimal multifunctional catalyst combination. All these activities would occur in the Advanced Biofuel Development Laboratory located at SDSU in Brookings, SD.

All work would occur indoors in a dedicated laboratory. The facility in which work would occur has safety and waste disposal procedures in place for use of the materials and equipment contained within. The facility is designed for this type of research; therefore, no modifications or new permits, additional licenses and/or authorizations would be necessary. This project would not involve the modification of existing facilities, or the construction of new ones. There would be no ground disturbing activities. No equipment would be installed outdoors. There would be no change in the use, mission or operation of existing facilities. All activities at existing facilities would be conducted in compliance with university, local, state, and federal safety and environmental regulations.

Based on review of the project information and the above analysis, DOE has determined that the proposed activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusion A9 "information gathering, data analysis and computer modeling," and B3.6 "Small-scale research and development, laboratory operations, and pilot projects" and is categorically excluded from further NEPA review.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Bioenergy Technologies Office

This NEPA Determination does not require a tailored NEPA provision.

NEPA review completed by Logan Sholar, 9/16/15

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:



Electronically Signed By: Kristin Kerwin

Date: 9/18/2015

NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

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

Field Office Manager's Signature:

Field Office Manager

Date: