PMC-ND
(1.08.09.13)

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

RECIPIENT: University of Wisconsin, Madison **STATE:** WI

PROJECT TITLE : Catalytic Processes for Production of alpha,omega-diols from Lignocellulosic Biomass

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-001085	DE-EE0006878	GFO-0006878-001	

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:

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.
B5.15 Small-scale renewable energy research and development and pilot projects	Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the University of Wisconsin, Madison (UW) to develop an integrated and efficient process to produce high value chemicals, namely 1,5-pentanediol (1,5-PDO) and 1,6-hexanediol (1,6-HDO), from lignocellulosic biomass.

The proposed project activities would include experimental activities such as design and fabrication of flow reactors; design, synthesis, development and testing of metal catalysts; chromatographic analysis of adsorption/pervaporation; and theoretical activities such as economic analysis based on process simulations; and prediction of adsorption, phase equilibria and transport properties based on molecular dynamics simulations. Experimental activities would take place at one of three locations; UW-Madison's dedicated lab facility in Madison, WI, University of Minnesota-Twin Cities' (UMN) dedicated lab facility in Minneapolis, MN, and Argonne National Lab in Argonne, IL. The facilities where the proposed project would occur have been previously used for work that is similar to the activities included in the proposed project, therefore, no new or modified permits would be required, and no construction of new facilities or physical modifications to existing facilities would occur as a result of the proposed project.

For all work conducted at DOE laboratories, project activities may be subject to additional NEPA review by the cognizant NEPA Compliance Officer for the lab and will be required to meet the labs health and safety requirements.

The proposed project would involve the use and handling of various hazardous materials, including solvents and chemicals. All of the handling of these materials taking place at UW and UMN would occur in-lab, and these materials would be disposed of properly through the Universities' Environment, Health, and Safety (EHS) departments in accordance with federal, state, and local environmental regulations. Handling of these materials at Argonne would fully conform to the criteria defined in the ANL-specified, site-wide, categorical exclusions for bench-scale research in the established facilities.

Based on review of the project information and the above analysis, DOE has determined the research, development and testing 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 exclusions A9 "information gathering, analysis and dissemination," B3.6 "small-scale research and development, laboratory operations and pilot projects and B5.15 "small-scale renewable energy research and development, 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.
Review completed by Rebecca McCord, 01/12/2015.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 1/14/2015
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: _____ Date: _____
Field Office Manager