U.S. DOE: Office of Energy Efficiency and Renewable Energy - Environmental Questionnaire

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

RECIPIENT:South Dakota State University

PROJECT TITLE Biomass Feedstock Regional Partnership South Dakota State University, North Central Regional Sun : Grant Center

Funding Opportunity Announcement Number

DE-FC36-08GO88073

Procurement Instrument Number NEPA Control Number CID Number GFO-GO88073-006

STATE: SD

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 (including, but not limited to, literature surveys, inventories, site visits, and audits), data Information analysis (including, but not limited to, computer modeling), document preparation (including, but not limited gathering, 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 analysis, and dissemination and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

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

SDSU proposes to improve sustainable biomass feedstock production systems, and enhance research, development and outreach efforts focused on sustainable biomass feedstock production systems and utilization. Proposed project activities would include genetic engineering, lab testing, manufacture and field testing of the fungus Aureobasidium pullulans for poly-lysine production and excretion. Genetic manipulation and lab testing would occur at the Biostress facility on campus at SDSU in Brookings, SD. Manufacture of genetically engineered organisms would be completed by Prairie AquaTech's aquaculture research facility also located in Brookings, SD. Field testing of a product equivalent would take place at the Agriculture Technology Center for Rural Enterprise (ATCRE) in Brookings, SD. This field testing would involve fish feeding trials utilizing soybean meal that has been bioprocessed with the wildtype A. pullulans strain, and supplemented with lysine and beta-glucans (to simulate the final intended product) which is a fish food with immunostimulatory benefits in fish/animals. The facilities in which lab work, manufacturing and field testing would occur are purpose-built for these types of activities; therefore, no adverse impacts to sensitive resources are expected as a result of the proposed project. No change in the use, mission or operation of existing facilities would arise out of this effort and the facilities have all applicable permits in place. No genetically engineered organisms would be used in any outdoor capacity.

The genetic engineering work would use ethidium bromide in agarose gels. The gels containing ethidium bromide would be disposed of through the certified chemical hazardous waste office at SDSU. Non-hazardous waste generated from the genetic engineering work at SDSU would include solid and liquid medium, pipettes, PCR reactions, and test tubes. All media containing live organisms would be autoclaved before disposal. Liquid waste would be diluted with tap water and flushed into the domestic waste water treatment system. The Brookings Municipal Solid Waste Facility would be used for disposal of all non-hazardous waste products. Non-hazardous waste generated from the fish feeding trials conducted at the ATCRE would include fish feces, which would be disposed of through the domestic waste water treatment system. Each facility where proposed project activities would occur has

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existing health and safety policies in place. All work would follow the guidelines set forth in those policies and pose no threat to statutory, regulatory or permit requirements for environment, health and/or safety.

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," 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 Program

This NEPA determination does not require a tailored NEPA provision. Review completed by Rebecca McCord 09/16/2015.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

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:

Date:

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