PMC-ND
(1.08.09.13)

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

RECIPIENT: Arizona Board of Regents, University of Arizona **STATE:** AZ

PROJECT TITLE: Regional Algal Feedstock Testbed Partnership

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000615	DE-EE0006269	GFO-0006269-002	GO6269

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 the University of Arizona to develop the Regional Algal Feedstock Testbed Partnership (RAFT). DOE funding would be used to create a network of testbeds with the intent to collect long-term algal cultivation data across multiple regions in three phases. RAFT would make available algal research community facilities, equipment, materials and expertise to facilitate efforts to advance the state of the technology.

This project received a previous NEPA determination (GFO-0006269-001; CX A9, B3.6; 7/18/2013) that included Phase 1-Planning and Phase 2-Initial Testbed Operation activities only. At the conclusion of Phase 2, a go/no-go decision was made to move forward with Phase 3-Continued Testbed Operation; therefore, this NEPA determination is for Phase 3 activities which would occur at the same testbeds and laboratories as reviewed in the previous NEPA determination and listed below. Phase 3 activities would span two years and would include characterization of selected production strains, development of cultivation methods and control strategies, collection of long-term productivity data, and testing a sustained, optimized production scenario.

The long-term cultivation would be conducted at the following locations:
- University of Arizona-Pima County, Tucson, AZ
- Texas AgriLife Research Station at Pecos-Reeves County, Pecos, TX
- Pacific Northwest National Laboratory's (PNNL) Marine Sciences Lab (MSL-1)- Clallam County, Sequim, WA
- New Mexico State University- Las Cruces, New Mexico

The bench-scale laboratory work would involve analysis of nutrients, biomass and lipids, and maintenance of algal cultures. Indoor laboratory experiments would be conducted at the following locations:
- University of Arizona- Ogden, Brown, Ryan, and Waller Laboratories, Pima County, Tucson, AZ
- Texas AgriLife Laboratory, Lubbock, Texas

Data management and modeling would be conducted at the following locations:
- New Mexico State University, Las Cruces, New Mexico

• PNNL 's main campus- Benton County, Richland, Washington

The proposed project would use existing traditional and innovative raceways/photobioreactors (testbeds) to cultivate algae at four existing sites. The scale of the cultivation systems ranges between 200L and 4000L. The testbeds would be utilized for 9 to 12 months annually. There would be no genetically modified organisms used during the proposed project. Over 90% of the water used to cultivate algae in the ponds would be recycled. The other 10% that is not recycled would be disposed of according to the applicable state agricultural chemical regulations.

The proposed project would involve the use and handling of various hazardous materials, including industrial solvents for lipid analysis. All handling and disposal of hazardous waste would be executed by trained professionals and conducted in accordance with applicable state and federal regulations. Non-potable water and liquid waste would be disposed of following the appropriate state and local regulations. The work planned under this effort would not require the physical modification of any facilities and as such would not disturb any ground. The proposed project would not require any change in the use, mission or operation of the participating institutes' existing facilities. The facilities are designed for this type of research; therefore, no modifications or new permits, additional licenses and/or authorizations would be necessary as a result of the proposed project.

Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Based on review of the project information and the above analysis, DOE has determined the proposed continuation of long term cultivation feedstock trials and subsequent research and analysis in Phase 3 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, 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.

Insert the following language in the award:

You are required to:
Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

Note to Specialist :

Bioenergy Technologies Office
This NEPA determination requires a tailored NEPA provision. Please see above.
Review completed by Logan Sholar on 11/2/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 11/2/2015

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

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