

PMC-ND
(1.08.09.13)

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



RECIPIENT: The Regents of New Mexico State University

STATE: NM

PROJECT TITLE : Realization of Algae Potential (REAP)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000811	DE-EE0006316	GFO-0006316-002	GO6316

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.
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 New Mexico State University (NMSU) as part of the Realization of Algae Potential (REAP) Research and Development (R&D) Program to develop an integrated process for producing at least 2,500 gallons of bio-fuel intermediate per acre per year within 30 months.

DOE completed a previous NEPA review for the REAP program at NMSU (GFO-0006316-001 CX A9 8/29/2013) which included project management, data collection and data analysis activities. This NEPA determination would apply to all activities described for Tasks 1.1, 1.2 and 1.3 in the attached Statement of Project Objectives (SOPO).

The proposed project would cultivate two strains of microalgae in enclosed, horizontal photo bioreactors (PBR); harvest up to 4,500 liters of pre-processed biomass per PBR; process the biomass into bio-crude oil via hydrothermal liquefaction; and complete a chemical analysis of each process step. New Mexico State University (NMSU) would partner with Los Alamos National Laboratory, the New Mexico Consortium, Pacific Northwest National Laboratory, Washington State University, and UOP Honeywell to complete project objectives.

Chlorella sorokiniana would be genetically modified to increase the yield of bio-fuel intermediate. Outdoor cultivation of genetically modified microalgae would occur in a designated, previously disturbed area at the NMSU Fabian Garcia Science Center in clear, plastic PBRs that are completely sealed. No exposure to the outside environment would be expected. The proposed cultivation process would meet the specific exemptions listed in 40 CFR 725.234 for conducting research activities with intergeneric organisms inside a structure. Further, the PBRs would be placed in a secondary containment system consisting of a 60 foot by 100 foot plastic sheeting with a six inch tall berm around the perimeter to prevent soil contamination in the event of a leak. DOE has determined that the proposed project would not have the potential to result in significant impacts to the environment

All indoor R&D activities would occur in established laboratory facilities with oversight by institutional chemical and bio-safety officers using appropriate material handling and disposal practices such that all procedures are in compliance with federal, state and local environmental regulations.

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.

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 conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:

Phase 2 activities

This restriction does not preclude you from:

Phase 1, Tasks 1.1-1.3

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

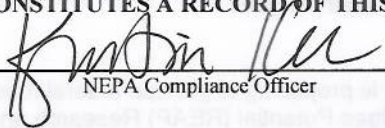
Note to Specialist :

Review completed by Logan Sholar 08/18/2014.

This NEPA determination requires a tailored NEPA provision.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____


NEPA Compliance Officer

Date: _____

8/19/2014

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: _____