

PMC-EF2a

(2.04.02)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: CORNELL UNIVERSITY, INC/Attn: JOANNE WILLIAMS

STATE: NY

PROJECT TITLE : Large-Scale Production of Fuels and Feed from Marine Microalgae

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-000123	DE-EE0003371	GFO-0003371-001	GO3371

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.

Rational for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Cornell University for the Algal Biofuels Consortium. The primary objective of the proposed project would be to deliver a design report, including cost and life-cycle analyses, for a commercial-scale, upstream algae cultivation and harvesting process. The consortium, comprised of private industry, university laboratories and commercial partners would address feedstock supply through strain development and cultivation; feedstock logistics, focusing on harvesting and dewatering processes; and co-product development.

A previous NEPA determination was made for this award, GFO-10-616 (A9, B3.6 9/22/10) with the original prime recipient, Cellana. Cellana was no longer able to fulfill the cost share financial obligations therefore, Cornell University, an original subrecipient, took over as the prime. Cellana will remain a subrecipient and new subrecipients (Sahara Forest Project, Cinglas, IMS, and KCPM) were selected and incorporated into the original scope of work.

Cultivation work would be completed at Cellana's Kona Pilot Facility (KPF) located on the west coast of Hawaii Island, adjacent to Keahole International Airport, within the National Energy Laboratory of Hawaii. The six-acre facility is designed to execute and support all stages of the production process at pilot scale. The Cultivation system at KPF uses a "hybrid" system of 24 photobioreactors (PBRs) and open ponds. Cellana has completed an R&D questionnaire addressing the protocols in place for laboratory safety, risk management, chemical handling and waste disposal. Cellana complies with standard laboratory safety procedures and labs are inspected by staff and safety personnel. All handling and disposal of liquids, gases, chemicals and hazardous waste are executed by Cellana personnel who comply with appropriate regulations of OSHA. No GMO's would be produced during the course of work.

Three of the four new subrecipients (Cinglas, IMS, and KCPM) would be completing desktop computer work only. Sahara Forest Project (SFP), located in Qatar, would conduct research and development work on Halotolerance cultivation trials. SFP's outdoor algae cultivation system is located in Mesaieed Industrial City, Qatar, on the site of the world's largest ammonia production plant. The 1000 square meter algae cultivation system is part of a 1.0 hectare integrated agriculture and renewable energy system. The outdoor algae cultivation system consists of three bag cultures; three PBRs, and three open ponds; all have a capacity of 200, 3,000, and 12,000 liters. Saltwater produced from industrial cooling towers of the ammonia plant is used for algae production in a three-day production process. One pond is harvested daily, producing concentrated algae and process water of elevated salinity that is further evaporated by a passive solar process to produce cooling and freshwater for intensive agriculture.

SFP completed an R&D questionnaire addressing the protocols for laboratory safety, risk management and waste disposal. All handling and disposal of gases, chemicals, and liquid effluents would be executed by Qatar Fertilizer Company (QAFCO) personnel who comply with appropriate regulations similar to OSHA. All permits are currently in place for the proposed scope of work. No toxic waste, air pollutants, or GMO's would be used or produced during the course of work.

Based on review of the project information and the above analysis, DOE has determined the research and development 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

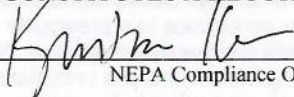
Insert the following language in the award:

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.

Note to Specialist :

Kelly Daigle 2/13/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Date: 2/14/2013
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