PMC-EF2a
(2.04.02)

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

RECIPIENT: The College of William & Mary **STATE:** VA

PROJECT TITLE : Sustainable Algal Energy Production and Environmental Remediation

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
CDP	EE0003146	GFO-10-449	0

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, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

B3.6 Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

Rational for determination:

The College of William and Mary is seeking federal DOE funding to perform fundamental research in support of two aspects of the use of wild algae for the production of alternative fuels: 1) large-scale algal growth and harvest for biofuel production and 2) environmental remediation of waters through the reduction of nitrogen, phosphorus, carbon, and other nutrients, along with reduction of waterborne impurities by algal uptake. The project would involve two land-based floways and three in-water systems; two "in-water-flumes" and one buoy-flotation screen system. The recipient would maintain these existing land-based floways and in-water prototypes to allow for the harvesting of wild algae; the proposed new feedstock for biofuel research applications.

Tasks involved in the proposed project include: maintaining land-based and in-water wild algae production systems; characterization of the role of pulsed water flow in wild algae growth; characterization of native bacteria and viruses associated with algae; measurement of the effectiveness of wild algae for contaminant removal; and analysis of the advantages of diverse wild algal communities over single strains in contaminant removal.

This project would take place on a laboratory scale at the College of William and Mary. The work to be conducted is of the research nature and not intended to be part of a production or manufacture process. An R & D questionnaire has been completed and submitted to thoroughly address chemical, waste, and safety protocols. Laboratory Environmental Health and Safety staff would collect, store, and coordinate for disposal all wastes in full accordance with all DOT, OSHA, RCRA, EPA, and other regulations. Any toxic waste would be managed in accordance with policies and procedures of applicable with local, state, and federal law. This work would not involve the creation or use of genetically modified organisms.

Permits to place the device in the York River are required. A permit to do research in a specific area near VIMS, at Gloucester Point, VA from the Virginia Marine Resources Commission (VMRC) is required and is being obtained. No device is yet at that location, but the permit has been approved (verbally) and is being issued by the VMRC. We ~~expect~~ The recipient receipt of that permit by Sept. 1. That permit allows for several devices to be placed in a designated area and is a long-term permit, issued to VIMS. A permit for the construction of the device and its proper safety marking is required from the Coast Guard. This permit has been obtained.

The lake is wholly owned by the College of William and Mary and has long-standing research activities of this type. Since nothing is added or removed from the lake, other than the device itself, no permit for operation was required.

This project comprises information gathering, conceptual design processes, design testing and conventional bench-scale research. This project is also comprised of indoor research and development activities with established safety and health protocols in place; therefore Categorical Exclusions A9 and B3.6 apply.

NEPA PROVISION

Note to Specialist :

Douglas Eichler, 8-19-10

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed 8/25 Date: _____

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