

FMC-EF2a

(20402)

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



RECIPIENT: Vermont Sustainable Jobs Fund

STATE: VT

**PROJECT TITLE :** Vermont Biofuels Initiative: GSR 2

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-FG36-08GO88182	GFO-GO88182-030	GO88182

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:

**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:**

DOE is proposing to provide federal funding to General Systems Research (GSR), a subcontractor to Vermont Sustainable Jobs Fund, to address challenges in developing native algae feedstock for oil production and to integrate algae production with the treatment of effluent, such as farm manure wastewater.

GSR is proposing to isolate native algal strains to develop algal feedstock for oil production. GSR would utilize advanced methods and develop a rapid screening method of lipid quantification that could help avoid wet biochemical methods currently used, which are both time and labor intensive.

The proposed project would entail utilization of the FACS sorting apparatus to sort and isolate high-lipid algal cells using fluorescent lipophilic dye. High-lipid cells would be isolated, cultured, and tested for viability. Wet biochemical standard methods would be used, initially, to test and characterize lipids. The isolated high-lipid cells would be grown in farm/industrial wastewater with and without CO2 supply. The cells would be tested for nitrogen, phosphorous, and carbon content, as well as oil and lipid production.

All work would be completed at the University of Vermont, College of Agriculture and Life Sciences, Plant and Soil Science Department located at 85 South Prospect Street, Burlington, Vermont 05405. UVM completed an R&D questionnaire, which addressed the protocols in place including laboratory safety, risk management, chemical handling and waste disposal. The UVM Environmental Safety Office oversees and specifies the guidelines for safety in labs. Lab workers must receive training in chemical waste disposal, emergency response and laboratory oversight services. All waste is disposed of according to University protocol. Environmental Safety technicians regularly pick up and dispose of hazardous waste. No GMOs would be used in the process and all handling and testing would be performed via standard protocols established by the University, OSHA, and the EPA.

The proposed project is comprised of conventional research and development within an existing facility on the UVM campus; therefore CX B3.6 applies.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Cristina Tyler 6.27.2011

Total Project Cost: \$81,250  
DOE Share: \$65,000  
Cost Share: \$16,250

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: Kymon Lee  
NEPA Compliance Officer

Date: 6/30/2011

**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: \_\_\_\_\_