

PMC-ND

(1.08.09.13)

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



RECIPIENT: Vertimass LLC

STATE: CA

PROJECT TITLE: Biological and Chemical Upgrading for Advanced Biofuels and Products

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001085	DE-EE0006875	GFO-0006875-001	

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 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 funding to Vertimass, LLC to develop the data and documentation needed to support process guarantees, engineering, procurement and construction packages suitable for process commercialization to result in a definition of the most promising strategies in cellulosic and other ethanol producers to reduce energy demands and costs.

The proposed project activities would include using existing pilot scale catalytic reaction systems to convert ethanol into gasoline, diesel and jet fuel, and optimize catalyst performance with changing conditions (time, water content in fuel, regeneration times). Additionally, the project would develop commercially robust catalysts, complete basic engineering package for the Vertimass system, and optimize catalysts specific to the gasoline, diesel and jet fuels.

Catalytic conversion of ethanol to these three fuels would occur at Technip's research and development facility in Weymouth, MA. Basic engineering package would be completed at Technip's Boston, MA engineering facility. Formulating catalysts to optimize gasoline, diesel and jet fuel production would be completed at Oak Ridge National Laboratory (ORNL) in Oak Ridge, TN. Project activities that would be completed at ORNL may be subject to additional NEPA review by the cognizant DOE NEPA Compliance Officer.

Technip would need to install small catalyst reactors. Interior retrofitting would be required for a support structure to accommodate the small reactors, but there would be no outside ground disturbing activities, and no change in the use or operation of the current facility.

Project work occurring at each laboratory facility would conform to existing facility usage. All facilities have existing health and safety policies in place for the anticipated project work. Each facility has dedicated hazardous material handling and disposal practices and all hazardous materials would be managed in accordance with federal, state, and local environmental regulations. Existing corporate health and safety policies and procedures would be followed including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. ORNL operates under the HAZCOM laboratory standard. Both ORNL and Technip would conduct project/lab safety work scope reviews prior to initiation of the project. Additional policies and procedures would be implemented as necessary as new health and safety risks are identified.

Based on review of the project information, DOE has determined that project activities would not have a significant

individual or cumulative impact to human health and/or the environment. DOE has determined that these activities are consistent with actions contained in DOE categorical exclusion 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 :

Bioenergy Technologies Office
This NEPA Determination does not require a tailored NEPA provision.
NEPA review completed by Diana Heyder, 05/12/15

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:



Electronically Signed By: Kristin Kerwin

Date: 5/15/2015

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:

Field Office Manager

Date: