PMC-ND
(1.08.09.13)

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

RECIPIENT: Yixin Huo/Easel Biotechnologies, LLC **STATE:** CA

PROJECT TITLE : Bio-Oxo Technology

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000560	DE-EE0005773	GFO-0005773-001	GO5773

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.

Rationale for determination:

Easel Biotechnologies, LLC (Easel) would utilize DOE and cost share funds to use a lignocellulosic biomass source as a feedstock to produce Oxo chemicals such as isobutyraldehyde in an effort to increase yields and reduce the energy consumption of the Oxo chemical production process. All proposed project activities would occur at the existing incubator/laboratory space located on the University of California, Los Angeles (UCLA) campus and include laboratory scale testing, pilot process testing for commercial feasibility, and project management/reporting activities.

Existing corporate health and safety policies and procedures developed by UCLA would be followed including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. Additional policies and procedures would be implemented as necessary as new health and safety risks are identified. The project would involve the use and handling of various hazardous materials, including industrial solvents, in-lab with dedicated proper hazardous material handling and disposal practices. All hazardous materials and wastes would be managed in accordance with federal, state, and local environmental regulations. No new permits or modifications to existing permits are needed for the proposed activities.

Easel would be genetically modifying non-pathogenic Escherichia coli strains which are Biosafety Level 1 (BSL-1) microbes. The UCLA incubator facility is a BSL-1 research facility. BSL-1 lab practices would be used with all recombinant DNA work, even if the work is considered exempt from National Institutes of Health (NIH) Guidelines. All research involving recombinant DNA would be treated as prescribed by the most recent edition of NIH's Guidelines for Research Involving Recombinant DNA Molecules and as prescribed by law. If applicable, the shipment and receiving of all living recombinant and regulated cultures and stocks would be completed in compliance with the policies of the US Department of Agriculture and the US Customs Department. All cultures, stocks, and other regulated wastes containing the E.coli or recombinant DNA would be decontaminated by autoclaving before sending it to UCLA Environmental Health & Safety for disposal.

Based on review of the project information, DOE has determined that the proposed project activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that these activities are consistent with actions contained in DOE categorical exclusions A9 "Information gathering, analysis, and dissemination," and B3.6 "Small-scale research and development, laboratory operations, and pilot projects," and are 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 :

Advanced Manufacturing Office
This NEPA Determination does not require a tailored NEPA provision.
Casey Strickland 12/18/14

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Lori Gray Lori Gray Date: 12/18/2014
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