PMC-EF2a
(2.06.02)

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

RECIPIENT: Battelle Memorial Institute Corporate **STATE:** OH

PROJECT TITLE : Upgrading of Biomass Fast Pyrolysis Oil (Bio-oil)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000342	DE-EE0004391	GFO-0004391-001	EE4391

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).

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.

Rational for determination:

DOE is proposing to provide federal funding to Battelle Memorial Institute to develop a catalytic bio-oil upgrading process that will produce a final liquid transportation hydrocarbon fuel that can be blended at up to 30% by weight with ASTM petroleum fuels or that can produce an upgraded bio-oil compatible with existing petroleum refining unit operations. Project funds will be used to procure and pre-process biomass feedstock (Task 1), produce an intermediate bio-oil using Battelle's existing Catalytic Fast Pyrolysis Laboratory (Task 2), develop an upgrading catalyst at PNNL's lab (Task 3), procure, install and commission a hydrotreating system that will be integrated with the existing Battelle equipment (Task 4), perform corrosion testing at all stages of the process (Task 5), perform 1000 hours of extended run time using the developed catalyst and integrated hydrotreating system (Task 6), conduct hydrocarbon product analysis at Marathon's existing Refining, Analytical & Development (RAD) facility (Task 7) and conduct a Techno-Economic Analysis and Life Cycle Assessment using information gleaned from the project (Task 8), a final project management task is included as well (Task 9).

The project scope will be executed at existing Battelle Memorial Institute Corporate facilities in Columbus, OH. Additional work will take place in existing facilities at Pacific Northwest National Laboratory (PNNL), Marathon Petroleum Company LP – Refining, Analytical and Development (RAD) facility in Catlettsburg, KY, Domtar facilities in Kingsport, TN and Plymouth, NC, Praxair facilities in Buffalo, NY, Intertek's labs in Romeoville, IL and Emerging Fuels Technology's labs in Tulsa OK. Sud Chemie will be supplying lab scale quantities of catalysts and technical expertise, but no additional work will take place at Sud Chemie's facilities.

This project comprises information gathering, data analysis, and research and development activities. CX A9 and B3.6 apply.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 8/15/2011
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