PMC-EF2a

(2.04.02)

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

RECIPIENT: MI Department of Energy, Labor & Economic Growth **STATE:** MI

PROJECT TITLE : SEP ARRA - The Power Alternative - BioEnergy

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	DE-EE0000166	GFO-0000166-038	GO0

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:

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

B3.8 Outdoor ecological and other environmental research (including siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis) in a small area (generally less than five acres) that would not result in any permanent change to the ecosystem.

Rational for determination:

TPA, Inc is proposing to use SEP ARRA funding to produce a component of biodiesel fuel. The proposed project will consist of the planting, growing, and harvesting of mustard at two semi-urban plots of land. Mustard is not on the prohibited or restricted plant lists in Michigan. No GMO's will be used in the proposed project. Oil will be extracted from the mustard at an existing, permitted TPA facility and incorporated into the existing biodiesel fuel production process. Biodiesel created from the proposed project will be sold to selected buyers.

The planting, growing and harvesting of mustard will occur at two, vacant plots of land in Detroit, MI. The two identified plots are currently not being used. Plot 1 is a 3.5 acre rectangular shaped property located along the west side of Linwood Avenue. There are residences to the south, Linwood Ave to the east, a large industrial building and agricultural fields to the north, and a trash dump to the west. The Linwood site is a brownfield site. Brownfield activities were concluded in 2000 and a "partial" closure was approved. However, the site was closed with levels of lead, arsenic, and manganese that exceed the residential direct contact criteria and levels of lead that exceed industrial direct contact criteria. DOE has confirmed that any of the above listed heavy metals bio-accumulated by the mustard will be removed during the crushing process to extract the oil. Therefore, there are no metals in the oil (Documentation attached). The recipient has a garden permit from the City of Detroit for the Linwood site.

Plot 2 is a 4 acre, irregular shaped property located in a developed commercial and residential area. The recipient has a letter of permission from the property owner, a Mr. Bert Dearing, for the 4 acre Lafayette site identified as Plot 2.

Prior to planting, the plots will be mowed and glyphosate will be applied to rid the ground of weeds. No other herbicides or pesticides are used. Just prior to planting the mustard seed, the areas will be treated with approximately 50 lbs per acre of Triple 19 (N-P-K) fertilizer. No permitting is required for the application of herbicide at either of the proposed sites. Harvest occurs approximately 4 months after planting. The project will use small scale (riding lawn mower size) planting and harvesting equipment. This small scale equipment can easily and safely be trailed in an urban setting without impairment to urban traffic flows. From planting through harvesting, this small equipment will be on site at each area for 3 events which collectively will comprise a total of 5 days per area. The harvested mustard will be stored on site at TPA's existing, permitted facility.

The site will be naturally irrigated with rain water. The recipient will have a Soil Erosion and Sedimentation Control (SESC) permit in place before planting. It is currently in process.

The production of TPA's Mustard oil will be accomplished through the purchase of an efficient crusher that will start the process of oil extraction. The oil will then be treated using citric acid and carbon dioxide; a dryer will then be

purchased to remove water from the extracted oil. Any minimal resulting process water is recycled back into the process. No solvents or toxic materials are employed in the oil extraction process. The remaining meal from the oil extraction process will be sold as a natural pesticide/herbicide.

The proposed project is consistent with activities outlined in B5.1 "actions to conserve energy"; therefore, it 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:

Note to Specialist :

EF2a completed by Logan Sholar

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 5/4/11

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