PMC-EF2a
(20402)

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

RECIPIENT: Ohio Department of Development **STATE:** OH

PROJECT TITLE : SEP ARRA - French Creek Bioenergy

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	EE0000165	GFO-0000165-022	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.

Rational for determination:

Proposed Project – The Ohio Department of Development would allocate $1,000,000 in SEP ARRA funding to French Creek Bioenergy for purchase and installation of an anaerobic digester in Sheffield, OH. The project involves installation of the following components with a site footprint of 1.5 acres, but less than 1 acre of ground disturbance:

- 750,000 gallon dual purpose tank
- Combined heat and power unit (generator)
- Pump container
- Storage container
- Biomass equalization tank
- 12,000 gallon underground receiving tank
- Transformer
- Flare

The facility will accept 77.5 wet tons/day or 28,288 wet tons/year of biosolids and food waste. Biosolids from the neighboring waste water treatment plant will be delivered by conveyor to the digester. Food waste will be delivered in dump and tank trucks. These waste streams are currently being sent to regional landfills and waste water treatment plants. The facility would generate digestate which will contain plant nutrients (NPK) and organic matter. The biosolids will be dewatered onsite and hauled out seasonally when field conditions allow for beneficial agronomic application rates. Dewatered solids would be trucked to PPG's ongoing Lime Lakes Reclamation project in Norton, Ohio – approximately 50 miles from the digester site. The biosolids will be mixed with lime spoil to create a stable soil matrix that supports long-term vegetation growth and wildlife habitat. The WWTP currently manages the biosolids generated by land application of a similar quantity of material and stores biosolids onsite seasonally. Filtrate from dewatering goes back to WWTP head works. Biogas stays on property to run the 710 kW generator to make renewable green energy. Electricity will be sold back to the utility grid. Electricity will be transferred via site specific transformer and interconnection to the existing power source. In the WWTP, lines are trenched in underground or are placed in existing service tunnels. Electric cable will run through a concrete encased PVC conduit for approximately 300 feet. At this point, the electricity will transfer from underground to overhead wires for approximately 200 feet. Electricity will be metered and sold to the local utility. Additional poles will not be required.

New Facilities and Infrastructure – The site location for the proposed project is immediately adjacent to the existing French Creek Wastewater Treatment Plant. This facility will be located at an existing municipal waste water treatment plant. The facility was established over forty years ago. Adjacent activities include agricultural fields; and isolated residences. The closest residence is 800 feet from the proposed digester site. The infrastructure for the proposed

digester consist of a 750,000 gallon dual purpose tank (62ft diameter x 59ft height), a combined heat and power unit (40ft length x 10ft width), a pump, heat exchanger, and controls building (40ft length x 40ft width), a storage container (20ft length x 10ft width), a biomass equalization tank (15ft diameter), a 12,000 gallon underground receiving tank (17ft length x 9ft width x 14ft depth), and a transformer. Foundation depth is typically 4 feet. Other ground disturbance related to the project will be a 250ft x 40ft entrance and exit road for unloading of feedstock and 300ft of trenching for electrical conduit from the transformer to the existing power line. The proposed site location is flat, ground disturbance will be temporary for the construction process, and there are no nearby rivers, streams, or other bodies of water that would be adversely affected by potential erosion and sedimentation. Adverse visual effects are not expected from the installation of the digester as the site is fairly isolated, surrounded by large, wooded areas, and the WWTP already contains similar infrastructure. Noise attenuation from the generator will be handled by a container. Noise levels at two meters are estimated at 68db. The nearest residence is 800ft away from the proposed digester. Waste (feedstocks) in the capacities outlined above represent approximately 3-4 tanker trucks or dump trucks per day. In addition, approximately 5 trucks per day will manage the system's dewatered solids. Filtrate from dewatering goes back to the WWTP headworks.

Air Emissions – The recipient is in the process of obtaining a Permit to Install and Operate from the Ohio EPA. This permitting process will assess potential impacts from all sources of emissions resulting from the proposed anaerobic digestion facility including storage of feedstock and electricity generation. It is expected that the diversion of waste materials, currently being incinerated or sent to landfills for disposal, to the proposed anaerobic digestion facility will have a beneficial impact to air quality as all gas from the digestion process would be intentionally captured where emissions from incineration and landfills go directly into the atmosphere. "U.S. EPA recognizes in its waste management hierarchy that technologies for recovering energy from waste are preferable to simply incinerating waste or disposing of waste in landfills. This is due to the benefits associated with waste-to-energy technologies. Chief among these benefits are lower pollution emissions, creation of alternatives to fossil fuels, and reduced reliance on landfills" (2009 State Solid Waste Management Plan, Ohio EPA DSIWM. Pg.16). There will be a net decrease in odor as the incoming biomass would be placed into the in-ground receiving tank which is enclosed, and the displaced air when material is being received would be sent to a bio-filter. The anaerobic digestion process would break down the volatile organic solids in the biomass that are responsible for the offensive off-gassing of hydrogen sulphide in the air at landfills where waste is currently disposed.

Biological Resources – The Ohio Dept. of Natural Resources and the U.S. Fish and Wildlife have been consulted and determined that the proposed project will not result in adverse effects to threatened and endangered species (Documentation attached).

Cultural Resources – The Ohio State Historic Preservation Officer has reviewed a detailed application and agrees that historic and/or archeological buildings and/or assets such as Native American protected lands (burial grounds) are not present; therefore, the proposed project will not result in adverse effects to cultural resources (Documentation attached).

After a thorough review of the information submitted for the proposed project, it has been concluded that the proposed project will not have a significant impact to human health and /or the environment. Therefore the proposed project is hereby Categorically Excluded under B5.1 "actions to conserve energy."

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: 5/17/11

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required