PMC-EF2a

(2.06.02)

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

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

PROJECT TITLE: SEP ARRA - Hord Livestock

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	EE0000165	GFO-0000165-024	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 Hord Bioenergy for purchase and installation of an anaerobic digester near Bucyrus, OH. The project involves installation of the following components with a footprint of less than 1 acre:

- 733,435 gallon digester tank
- Combined heat and power unit (generator)
- Feedstock reception building
- Solids storage bunker
- Transformer
- Flare

The proposed project will use 7.5 million gallons/year of cow and swine manure as feedstock. Biogas generated from the anaerobic digester would be routed to the combined heat and power (CHP) unit consisting of a biogas-fired reciprocating engine and generator with a capacity of 1200kW of electrical energy while sending thermal energy (heat) back to the digester and the dryer. The project will interconnect to existing utilities. The facility would generate digestate which will contain plant nutrients (NPK) and organic matter. The digestate will be handled in one of three ways depending on time of year and market demand for each product. Digestate will be mechanically separated into solids and liquids, with the solids conveyed to concrete storage bunkers and covered with tarps. The solids will then be used as fertilizer on cropland or as bedding on the owners' premises. The liquid will be returned to the Chapel Hill and Pine View lagoons in proportion to the amounts extracted from the lagoons to initially feed the digester. Portions of the separated solids will be sold off-site for use as soil amendment or compost. The solids will be transported by truck and deposited within a 50 mile radius at a rate of two truckloads/week.

New Facilities and Infrastructure – The site location for the proposed project is an actively farmed agricultural plot directly adjacent to the existing Chapel Hill swine operation. The infrastructure for the proposed digester consist of a 733,435 gallon digestion tank (78ft diameter x 39ft height), a combined heat and power unit container (14ft length x 22ft width), a solids storage bunker (16ft length x 30ft width), a feedstock receiving and processing building (36ft width x 50ft length x 24ft height), a transformer, and a flare stack. Foundation depth is typically 5ft. There will be some ground disturbances associated with trenching for the installation of underground piping and electrical conduits. Approximately 735ft of piping will be installed between the lift pumps behind the Chapel Hill swine barns, the lagoon and the digester. An additional 4,300ft of piping will be installed to allow for treatment of manure from the Pine View AFO site located across State Hwy 98, and for the return of treated manure to the lagoon located behind the Pine View barns. Approximately 3,200ft of electrical conduit will be installed between the digester and a sectionalizing cabinet. Excavation for underground piping will be approximately 6ft deep using a narrow trenching tool in some areas

and horizontal boring machines in others, resulting in minimal surface disturbance for much of the piping distance. 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. Adjacent to the project site is an access road, farmland, animal housing facilities, manure storage lagoons, and animal mortality composting bunkers. There are existing roads and access drives at the site. The proposed project will require coverage under the Ohio General Construction Stormwater permit which will be obtained before the project begins. The proposed digester has been reviewed by the Ohio Dept. of Agriculture which determined that no changes in AFO permitting status are required. Adverse visual effects are not expected from the installation of the digester as the digester infrastructure is physically similar to existing farm infrastructure that is commonly found throughout the area. Noise attenuation from the generator will be handled by a container.

Air Emissions – The proposed project will have a positive effect on air quality since manure will be contained within the digester, and methane created during digestion will be captured and conveyed to a biogas utilization system. An application will be submitted to the Ohio Air Quality Development Authority for determination on air quality permitting.

Biological Resources -- The proposed project will occur within the existing Chapel Hill swine operation footprint. This area has been previously disturbed for construction of the infrastructure of the swine operation. Other ground disturbance related to the project will occur in actively cultivated farm fields. There are not expected to be adverse effects to threatened and endangered species, wetlands, or floodplains as these resources are not present at the project site.

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

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