PMC-EF2a

(2.06.02)

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

RECIPIENT: Ohio Wesleyan University **STATE:** OH

PROJECT TITLE: Geothermal Project

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-FG36-06GO86037	GFO -10-608	0

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 (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.

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.

B3.1 Onsite and offsite site characterization and environmental monitoring, including siting, construction (or modification), operation, and dismantlement or closing (abandonment) of characterization and monitoring devices and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis. Activities covered include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. Specific activities include, but are not limited to:

Rational for determination:

Ohio Wesleyan University (OWU) has constructed a new indoor natatorium called the Meek Aquatics and Recreation Center that utilizes a geothermal heating and cooling system on a 4.5 acre parcel of land at 150 South Henry St. in Delaware, Ohio. The geothermal grant administered through the Golden Field Office would support architectural design and engineering services related to geothermal, test wells and conductivity tests to verify the viability of utilizing geothermal at the designated site, and LEED certification efforts as well as specific facility features including the actual geothermal bore field and displays to monitor well activity and other geothermal-related measures.

The project was divided into two phases with multiple tasks that includes geothermal tests, background geothermal studies, preliminary design work, permitting/approvals, construction, and project management and reporting.

Prior to project implementation in July 2009, the Ohio Historic Preservation Office (OHPO) was informed of the project as part of the consultation required by the National Historic Preservation Act. After review of the project information that was submitted, OHPO determined that construction of the Meek Aquatics and Recreation Center would not affect historic properties.

Clearing and grading work for the project began July 16, 2009. The site previously had been occupied by tennis courts and a football practice field. Each aspect of the construction was documented on a daily to weekly basis with site photos as work progressed. As of August 24, 2010, the majority of the project work for construction of the Meek Aquatics and Recreation Center had been completed with only interior work and exterior finishing/landscaping to be done. Storm water and erosion control plans, approved as part of the building permit process, were implemented and enforced during the construction process.

The geothermal bore field (90 boreholes drilled to a depth of 240 feet) was completed on previously disturbed land. No wetlands/floodplains were impacted by project implementation. The Ground Source Heat Pump system is a 350 ton closed-loop vertical design utilizing municipal water with polyglycol added as an antifreeze solution (19.4% ratio). The Ground Loop Heat Exchanger consists of Polyethylene piping, heat fusion joined into vertical loops and connected with horizontal headers. Grouting material is a thermally enhanced bentonite grout. Grouting procedure was

completed in accordnace with the IGSHPA standards. Grout was installed from bottom to top of borehole. No aquifers were penetrated by the boreholes.

DOE's action is specifically for the funding of the geothermal related measures of the project. DOE has reviewed the project work completed to date and determined that this project work had no significant impacts upon the human environment; therefore, the DOE has determined that funding of the project would have no significant impacts to the human environment.

This project is comprised of information gathering, data analysis, and document preparation; onsite site characterization activities; and actions to conserve energy through small-scale renewable energy research and development; therefore the DOE has categorized this proposal into Categorical Exclusions A9, B3.1 and B5.1.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

EF2a prepared by Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 9/13/10

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