PMC-EF2a

(2.04.02)

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

RECIPIENT: Illinois Department of Commerce & Economic Opportunity **STATE:** IL

PROJECT TITLE : Rock Valley College; Rock Valley College Science and Mathematics Classroom Building

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	EE0000119		EE119

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:

The State of Illinois will provide $420,000 in Recovery Act funds to Rock Valley College, in Rockford, IL for the installation of a ground source heat pump (GSHP) as part of a new 90,000 square foot Science and Mathematics Classroom Building. The GSHP will be a 420-ton closed loop, vertical system that will consist of 164 boreholes drilled to a depth of 370 feet.

The geothermal loop will use a mixture of water and 25% Propylene Glycol. The grouting compound will be certified and listed by NSF (National Sanitation Foundation International) to ANSI/NSF Standard 60, "Drinking Water Treatment Chemicals - Health Effects." The State has assured the DOE that all local, state, and federal regulations will be met for borehole grouting and that the slurry mixture and grouting process will conform to "Grouting Procedures: As published by IGSHPA 1991." A NPDES permit will be obtained from the Illinois EPA, a City Grading Permit from the city of Rockford, and a Well Drilling Permit from the Winnebego County Health Department.

The geothermal field will be south of the new building in an open grassy area that is to become the building's front yard. No wetlands or floodplains will be affected by the installation. The project area is not in a coastal zone. There are no State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

The system design has been prepared in accordance with the materials standards and accepted installation practices of the International Ground Source Heat Pump Association (IGSHPA). The Geothermal Contractor is required to comply with these standards and practices along with all state and local regulations pertaining to the installation. Specifications for the project include that the installer must be IGHSPA certified with a minimum of three years of experience with geothermal systems, including systems 100 tons and larger.

All bores are to be installed per IGSHPA and NSF standards. Although detailed hydrology studies have not been conducted for this site, review of the USGS database indicates aquifers between 30 and 150 feet 10 miles southeast of the site, but not at the project location. Soil boring reports for foundation studies and the drilling of a test bore indicate some water movement beneath the surface, but not necessarily related to an aquifer.

Based on the information provided by the State and recipient and as presented above, the work outlined is consistent with provisions identified under Categorical Exclusion 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 :

According to the project officer, funding for this project is $420,000. Unless there is a significant change in scope, a change in funding will not affect my determination.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 4/28/10

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