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:

PMC-EF2a

(2.01.02)

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:

NEPA Compliance Officer

Date:

Date:

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:

Field Office Manager

The state of distinction provide E400,000 in Recently Act Reside particles. Vellag College 34: Resident, 31 for the excelution of a ground mount from parts (ODEC) as part who was 20000 reams that (Stimmer and Multimentic) (Description Building, The GBMP will be a 400-just attend to be writted system that will contract of 194 browleten spiral is a section of Difference.

The problem is because the statistical of which and this frequence (Special The problem Colored and the territory and failed by NGP (Matternet Territory 1), and the problem of the DOC first of band and the territory of the set of an and the problem is the statistical of the state and problem (South Statistical State) of the state of the state of the problem is the state of the state and problem (South State) and the state of the state and the state and the state of the state of the free state of the state o

The particular and that will be easily of the new tasking in an open group prior press that is to become the turbing's from your. No mathematic or throughout will be effected by the institution. The property time is not in a branch prove. There are to differe taked manifered or trainingened apprior. Hence there is not the property time, mathematic times. Mathematical theory of the particle to the parting to the parting to th

The system (tags) had been prepared in socializers with the restarding annual and accepted standards protocols of the international Grand Results that Plans Association (PEPHPA). The Gastinemal Cool science is subset to Carries with three standards and partment and galaxies and the relation of the second and a matching or the matching to protocols afrom the paraget induces that he wells its an at the relation of the second and a matching or the matching representation with gentlement to the second to protocols and the relation of the second and a matching or the matching representation with gentlement to the second systems with the relation of the second and a matching or the matching the second and the second second to the second to a second to the second and an at the matching of the second of the second and an at the second second second to the second second and a matching of the second of the second and the second of the second second of the second second and the second second second second second to the second second

We beyon any to be elemented and their elements and and a sublement element interesting builded based and been constructed for the above of the UNIOD devoted and any device to the base and the tell base to how and the sub-tells protein at the project location. One for increase for increasing elements while and the second second and the protein will a devoted attraction the profession for increase and part of an available and the protein will a devoted attraction for particular for increase for increasing elements while at a particular and the protein will a devoted attraction for particular for increase for increasing elements while at a particular and the protein will be devoted attraction.

A more on the elements a provided by the dilate and response and as prevanited sizers. (In event with sci a converteed

PRODUCTION AND A

International and printing the AVEV bank a class and 3 (1).