

PMC-EF2a

(20102)

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



RECIPIENT: Illinois Department of Commerce &amp; Economic Opportunity

STATE: IL

**PROJECT****TITLE :**

Columbia Community Unit School District 4; Columbia CUSD 4 - Middle School Renovation

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0000052	EE0000119	GFO-10-465	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 is providing \$90,000 in Recovery Act funds to Columbia CUSD # 4 to cover costs associated with the installation of a vertical, closed loop ground source heat pump system and corresponding HVAC equipment in the middle school. The project location is Columbia CUSD 4 Unit Building, 113 S. Rapp, Columbia, IL.

The ground source heat pump system has a capacity of 90 tons feeding 27 heat pump units in individual class rooms. At this time, the installation of the geothermal well fields is complete and all the heat pump units have been installed. There are two separate well fields at the middle school, one consisting of 49 boreholes and one with 32 boreholes. The areas affected by the construction included an asphalt parking lot, grass playground, and a large gravel parking lot. The recipient states that:

- The drilling was performed by a state licensed or certified driller and followed the IGSHA and NWGA guidelines and design standards for geothermal installations.
- The boreholes were fully grouted with a thermally enhanced bentonite grout designed to withstand cracking from the temperature changes.
- The system is using a high density polyethylene pipe that is heat fused at the joints to minimize the risk of leaks in the system.
- The system is using a non-toxic refrigerant that is a 20% mixture of propylene glycol and potable water.
- All local, state and federal laws and ordinances were followed.

The area surrounding the geothermal installation at the middle school is fully developed residential. There were no adverse impacts to threatened and endangered species, wetlands, floodplains or cultural resources due to the installation of the geothermal well fields. There are no known hydrological resources affected by the activity.

DOE is aware that the installation of the geothermal system is complete. A post construction site visit was conducted on June 15th, 2010 by personnel from the DOE Golden Field Office to inspect the project site and assess potential environmental impacts. Through a detailed inspection of the installed geothermal system site, it is concluded that there were no adverse impacts to the site or the surrounding area. The geothermal system was installed as described by the information above.

After a thorough review of the submitted information and a post-construction site visit, it has been determined that the project has not had a significant impact to human health and/or environment. Based on the information obtained through the site visit, the work conducted is consistent with activities identified in Categorical Exclusion B5.1.

**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 \$90,000. As the work is complete and the State is paying in arrears, payment based on invoice may be warranted.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: \_\_\_\_\_ Date: 6/24/10  
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