PMC-EF2a
(2.04.02)

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

RECIPIENT: Oklahoma Municipal Power Authority **STATE:** OK

PROJECT TITLE : OKLAHOMA SEP ARRA - OMPA Large Systems Request AQ

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	DE-EE0000133	GFO-0000133-069	

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:

B5.19 Ground source heat pumps The installation, modification, operation, and removal of commercially available smallscale ground source heat pumps to support operations in single facilities (such as a school or community center) or contiguous facilities (such as an office complex) (1) only where (a) major associated activities (such as drilling and discharge) are regulated, and (b) appropriate leakage and contaminant control measures would be in place (including for cross-contamination between aquifers); (2) that would not have the potential to cause significant changes in subsurface temperature; and (3) would be located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rational for determination:

The U.S. Department of Energy (DOE) is proposing to provide $11,620 in State Energy Program (SEP) funding to the Oklahoma Department of Commerce, who is proposing to fund the Oklahoma Comfort Program through their sub-grantee the Oklahoma Municipal Power Authority (OMPA).

The proposed project is a vertical, closed-loop ground source heat pump (GSHP) system that would be installed at the Mahaffey residence, 1704 Foxboro Drive, Duncan, Oklahoma 73533. The proposed location would be in a newly developed residential area of the City of Duncan. Total tonnage of the system would be 11.6 tons.

The state certified and licensed driller would follow IGSHPA and NGWA regulations during installation. The system would use HDPE piping that is heat fused and all wells would be fully grouted with bentonite. The system would use only potable water. All loops would be pressure tested before and after installation.

The Mahaffey residence is located in a residential neighborhood. The proposed system would consist of one 3.2 ton unit, and two 4.2 ton units with separate borefields and loops. One loop would serve the 3.2 ton unit and a 4.2 ton unit and would have 5 boreholes at a depth of 300 ft. and spaced 15 ft. apart. The second loop would serve the additional 4.2 ton unit and would have 2 boreholes at a depth of 400 ft. and spaced 20 ft. apart. All boreholes would be 4.75 inches in diameter with loops made of 1 inch HDPE pipes inserted into the boreholes. Manifolds would connect the loops to the heat pumps. There would be minimal land disturbance of less than a quarter acre at a newly developed residence. Approximately two cubic yards of sandstone cuttings would be generated and the spoils would be spread across the project site.

There are freshwater ponds located within 1000 ft. of the proposed location. There are no known aquifers within the area. If aquifers were present, they would be protected based on the grouting and well techniques used to protect the groundwater from contamination with the loop fluids.

The U.S. Fish and Wildlife Service Endangered Species Program website identifies three species in Stephens County, Oklahoma; the Whooping Crane, Piping Plover and American Peregrine Falcon. DOE has determined that the ground source heat pump would have minimal ground disturbance at a previously disturbed site and is not likely to adversely affect the resources in the area.

Under a Programmatic Agreement with the State Historic Preservation Office, the Oklahoma State Energy Office can approve sites with buildings that are less than 45 years old. The building is newly constructed and falls within the guidelines of OK SEO approval.

Based on review of the project information and the above analysis, DOE has determined the installation of the proposed 11.6 ton GSHP would not have a significant impact to human health and/or environment. DOE has determined the proposed project is consistent with the actions contained in B5.19 "Ground source heat pumps", and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Diana Scott 9.5.2012

DOE Funding: $11,620

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 9/5/2012

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