PMC-EF2a

(2.04.02)

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

RECIPIENT: Ohio Energy Resources Division **STATE:** OH

PROJECT TITLE: Hippodrome/Colony Theatre

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	EE0000165	GFO-0000165-025	GO0

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 Ohio Energy Resource Division is proposing to use SEP ARRA funds for efficiency upgrades and installation of a 63 ton ground source heat pump (GSHP) system as part of a $5 million restoration of the historic Colony Theatre/Hippodrome located at 2221/2 Putnam Street, Marietta, OH. The USEPA Revolving Loan Fund is providing financial assistance for the restoration of the building outside of the GSHP/geothermal component of the project.

The proposed ground source heat pump system will be an open-loop system that will draw ground water from an existing well previously used to cool the theatre and circulate the water thorough the heat pump systems installed in the building, and then discharge the circulated ground water into the Marietta Municipal Storm Sewer system which drains into Goose Creek.

The existing well for the geo-thermal system was originally used to cool the Hippodrome Theatre in 1919 and will be used as a water source for the geothermal system to heat and cool the theatre property. The proposed system will employ only potable water with corrosion control for the facility circulation system. Ground water will be piped to water sourced geothermal units in the stage left and right area, first and second floor lobby area and electric room. There will be a water barrier on the thermal exchange system/temperature interface separating the groundwater from system water. The building system will be completely separate from the supply and return lines thereby minimizing the risk of contamination to ground water sources. The system will also be equipped with a pressure sensor to detect water leakage.

A sand and gravel aquifer with a water table at 30 to 70 feet exists under the theatre; however, no drilling or boreholes will be required as the system will be using an existing source well for heating and cooling of the building. The source well was tested by the Ohio Drilling Company and the maximum capacity available was determined to be 225 gallons per minute (gpm). The estimated maximum flow rate for the water sourced portion of the GSHP system is 175 gpm. The water sourced portion of the system will consist of 63 tons out of a total system of 191 tons. Based on the well feasibility study performed, since there is no contemplated injection into the water table and the amount of recharge in the aquifer is more than sufficient to compensate for the withdrawal, the impact to the underlying aquifer is deemed insignificant. There are no potential drinking water sources in the immediate area as the theatre is located in the downtown district and the City of Marietta water supply system is hydrologically upgradient of the Colony Theatre and located approximately three miles away.

As stated above, the recipient will be using potable water pumped from the existing well and discharged into the Marietta Municipal Storm Sewer system. Project specifications require that all exterior ground work and piping installation guidelines associated with the ground source system be performed by an International Ground Source Heat Pump Association (IGSHPA) certified installer. The recipient confirmed that the system installation will follow

IGSHPA and National Ground Water Association (NGWA) recommendations for Open Loop GSHP systems. A 4-inch discharge pipe, total pipe length of 100 feet, will be installed and buried to connect the system to the city storm sewer system which drains into Goose Creek. A shallow (3 to 4) feet trench will be created to connect the well source to the building and storm water sewer system. The small area disturbed will be restored to its previous grade and original condition.

The theatre is located in an urban environment and installation of required equipment will occur in areas which have been previously disturbed; therefore, there will be no adverse impacts to wetlands or threatened and endangered species. The Colony Theatre is located in a 100-year flood plain. The recipient has obtained a floodplain permit in addition to building, mechanical and electrical permits for construction and installation as part of the larger renovation of the historic Colony Theatre/Hippodrome to which the GSHP system will be connected.

Asbestos abatement has taken place as part of total renovation of the building. The recipient stated that the Colony Theatre previously removed a majority of the asbestos in the building though trace elements of asbestos are contained in the plaster. The asbestos abatement was performed according to the recipient's waste management plan. The plaster removal and other environmentally sensitive abatement will be monitored and implemented according to best management practices for protective measures.

The Hippodrome/Colony Theatre facility was constructed in 1919. The Ohio Historic Preservation Office issued a letter on April 18, 2011 stating that the "project will conform to the Secretary of the interior's Standards for Rehabilitation and should have no adverse effect on historic properties."

After a thorough review of the information submitted for the proposed project, it has been concluded that the proposed project will not have a significant impact to human health and /or the environment. Therefore the proposed project is hereby Categorically Excluded under 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 :

EF2a completed by Lizelle Espinosa

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 4/25/11

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