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MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Recreation and Parks
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FINAL TECHNICAL REPORT

Proposal No.: M-108
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SUMMARY:

The project involved the installation of water-to-air heat pump heating/cooling systems in three structures at Leroy Percy State Park. The three structures include the assistant manager's residence, Cabin #1 and Cabin #2.

The project is now completed and the three structures are successfully heated by the natural hot artesian water source and are cooled by cold water available from the park's water system.

BODY:

The objective or goal of the project was to demonstrate the feasibility of heating park facilities with available hot artesian water.

The approach used to obtain the desired objective was to design the heating/cooling systems for operation by means of a water-to-air heat pump system complete with air distribution system. Underground waste distribution piping for availability of hot and cold water was utilized also.

Attached are the engineer's plans and specifications which explain in technical detail the complete installation of these heating/cooling systems of each of the three structures incorporated into this system.

All three park structures have been in full operation with these water-to-air heat pumps since April, 1982. The heating/cooling systems are fully successful. Hopefully, an energy savings in electricity consumption will be realized after a few months of evaluation.

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CONCLUSIONS AND RECOMMENDATIONS

Other areas in the United States that have natural geothermal hot water, such as Hot Springs, Arkansas or Warm Springs, Georgia, could convert to this heating/cooling system. This conversion would likewise conserve electricity while not adversely affecting the environment.

This project proves that natural hot artesian water can heat a building as demonstrated by the installation and operation of the three structures presently in use at Leroy Percy State Park.

At the present time, a new cabin which has recently been constructed will be heated and cooled by this procedure.

Also, professional interpretive exhibits are presently under contract for the Leroy Percy Interpretive Center. As a part of this exhibit, educational information will be included on the natural hot artesian water and its use as a result of this project to heat selected park structures.

Attachments

cc: Mr. Bob Smira, Mgr.
Dept. of Energy & Transportation
510 George St., Jackson, MS

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