

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

National Environmental Policy Act; Finding of No Significant Impact for the Proposed Geothermal Ground Source Heat and Cooling System Installation for New Town Project at NASA Langley Research Center

AGENCY: National Aeronautics and Space Administration (NASA) Langley Research Center (LaRC)

ACTION: Finding of No Significant Impact

SUMMARY: Pursuant to the National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500 - 1508), and NASA's policy NPR 8580.1, "Implementing the National Environmental Policy Act and Executive Order 12114," NASA has made a Finding of No Significant Impact (FONSI) with respect to the proposed geothermal ground source heat and cooling system installation for the New Town Project at NASA LaRC. The Proposed Action consists of installing and utilizing the geothermal systems for new facilities constructed as part of the LaRC New Town project. The installation of geothermal systems would allow LaRC to implement cost-effective, energy-efficient, and sustainable heat and cooling systems which are estimated to produce a 40% energy savings over conventional heat pump systems. Each geothermal well field would consist of a series of vertical wells drilled into the earth into which "U tubes" of piping would be inserted for circulating water in a large closed loop. The vertical wells would typically be 13 or 15 centimeters (5 or 6 inches) in diameter and from 80 to 120 meters (250 to 400 feet) deep depending on soil and groundwater conditions.

FOR FURTHER INFORMATION CONTACT: Mr. Philip McGinnis, NASA LaRC Environmental Management Office, MS 213, Hampton, VA 23681-2199, (757) 864-2073.

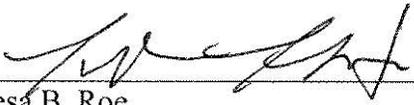
SUPPLEMENTAL INFORMATION: NASA has reviewed the Supplemental Environmental Assessment (SEA) prepared for the proposed installation project and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. The SEA is incorporated by reference in this FONSI.

The Proposed Action and the No-Action Alternative were considered in the SEA. Under the No-Action alternative, LaRC would not implement geothermal ground source heat and cooling systems, and instead the New Town project would proceed with the use of conventional heat and cooling systems. LaRC would not take advantage of the energy savings, cost savings, and reduction in corresponding emissions that the geothermal systems would provide over conventional systems. Additionally, LaRC would forego the opportunity to increase its useable energy from renewable sources, which would permit LaRC to better meet or exceed the requirements of the Energy Policy Act of 2005.

The SEA addressed environmental impacts in the areas of Land Use; Noise; Cultural Resources; Hazardous Materials and Hazardous/Solid Waste; Pollution Prevention; Health and Safety;

Visual Resources; Air Quality; Soils and Geology; Water Resources; and Ecological Resources. The impact of the Proposed Action on the identified resource areas would be very minor and temporary.

On the basis of the information provided in the SEA, NASA has determined that the environmental impacts associated with this project will not individually or cumulatively have a significant effect on the quality of the human or natural environment. Therefore, issuance of a FONSI is warranted, and preparation of an Environmental Impact Statement (EIS), pursuant to the National Environmental Policy Act of 1969, is not required.



Lesa B. Roe
Director, NASA Langley Research Center

5/4/09

Date