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PMC-EF2a

(20102)

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



RECIPIENT: General Electric, GE Global Research

STATE: NY

PROJECT TITLE : Pressure Sensor and Telemetry Methods for measurement while drilling in Geothermal wells

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-EE0000075	DE-EE0002755	GFO-10-122	GO2755

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:

- A9** Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.
- B3.6** Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

Rational for determination:

General Electric (GE) would design and develop a pressure sensor and telemetry methods for measurement while drilling geothermal wells. Laboratory testing would take place at the existing GE Global Research Center in Niskayuna, New York and Braun Hall at Auburn University (AU) in Auburn, Alabama. The project is divided into six tasks.

Phase I

- Task 1 Develop sensor and Telemetry Architecture
- Task 2 Develop analog and digital IC components for pressure sensor and telemetry module
- Task 3 Fabricate sensor testbed, package and test sensor transducer and electronics
- Task 4 Build and test a measurement while drilling (MWD) capable sensor system

Phase II

- Task 5 Integrate and test sensor system with telemetry module
- Task 6 Project Management and Reporting

GE and AU claim no additional permits are needed and there would be no generation of air emissions associated with this work. Vented gas cabinets and fumehoods are used with scrubbers to prevent release of air pollutants. The laboratories claim all liquid effluent, hazardous, and toxic waste is disposed of according to university, local, state, and federal regulations where applicable. According to AU and GE, environmental and safety protocols are in place monitored by the Environmental Health and Safety departments.

This project comprises information gathering, bench-scale research projects, and conventional laboratory operations; therefore the DOE has categorized this proposal into Categorical Exclusion A9 and B3.6.

NEPA PROVISION

DOE has made a final NEPA determination for this award

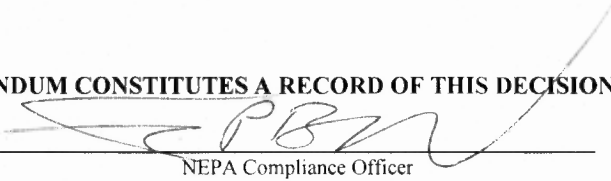
Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



NEPA Compliance Officer

Date: _____

12/29/09

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: _____

Field Office Manager

Date: _____