PMC-EF2a

(2.04.02)

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

RECIPIENT: University of Texas at Austin **STATE:** TX

PROJECT TITLE : Seismic Technology Adapted to Analyzing and Developing Geothermal Systems Below Surface-Exposed High-Velocity Rocks

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-EE0000075	DE-EE0002749	GFO-10-369	GO2749

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.

B3.1 Onsite and offsite site characterization and environmental monitoring, including siting, construction (or modification), operation, and dismantlement or closing (abandonment) of characterization and monitoring devices and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis. Activities covered include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. Specific activities include, but are not limited to:

Rational for determination:

The University of Texas at Austin (UTA) would utilize rock physics modeling in combination with new cable-free seismic data acquisition technologies to optimize seismic imaging and analysis of geothermal prospects beneath surface-exposed high-velocity rocks.

The project is divided into multiple tasks:

1. Project Management, Planning, and Reporting
2. Technology Transfer
3. Selection of Study Site(s) – potential study sites would be on University Lands and/or State School Lands within the Permian, Val Verde, and Marathon Basins of West Texas.
4. Build Calibration Database
5. Acquire Multicomponent Seismic Data – a conventional cable-based and a cable-free seismic survey would be conducted to collect the same data for comparison of the two systems.
6. Develop Geological Models
7. Develop Rock Physics Models
8. Process Multicomponent Seismic Data
9. Interpret Seismic Data for Geologic Information
10. Construct Maps of Rock/Fluid Properties
11. Post-Mortem, Documentation, and Reporting - Reports and other deliverables would be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

According to the R&D Laboratory Questionnaire, all laboratory work would take place in the principal office building of the Bureau of Economic Geology on the J.J. Pickle Research Campus in North Austin and would consist of numerical processing and modeling of digital seismic and geologic data only.

**NOTE: Prior to this NEPA determination, DOE obligated DOE funds in the amount shown on Block 13 of the Assistance Agreement cover page to conduct the project authorized by this award. However, only $139,717 of DOE funds, along with any associated ratio of recipient cost share, if applicable, was authorized for expenditure by the Recipient. The following tasks were covered in the blanket CX for the Limited release of Funds modification:

Tasks 1 through 4 - relating to data collection, analysis, modeling, and report writing.

All remaining tasks of this project (Tasks 5 through 11) are comprised of information gathering, data analysis, document preparation; and onsite site characterization activities; therefore the DOE has categorized this proposal into Categorical Exclusions A9 and B3.1.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Since Task 5 may involve shot hole explosives, the Recipient may be required to obtain a groundwater protection recommendation letter from the Texas Commission on Environmental Quality (TCEQ). The Recipient should contact the TCEQ to verify what permits may be required if any.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 5/5/10

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