

PMC-EF2a

(2.04.02)

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

**RECIPIENT:**University of Texas as Austin**STATE:** NV

PROJECT TITLE : Recovery Act: Detachment faulting and Geothermal Resources - An Innovative Integrated Geological and Geophysical Investigation of Pearl Hot Spring, Nevada

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000109	DE-EE0002960	GFO-0002960-002	GO2960

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, analysis, and dissemination** Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
- B3.1 Site characterization and environmental monitoring** Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) 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). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.
- B3.6 Small-scale research and development, laboratory operations, and pilot projects** Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rational for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the University of Texas (UT) to create a 3-D Earth Model for the Pearl Hot Spring and Clayton Valley region of Esmeralda County, Nevada, using structural geology, thermochronometry, active source reflection/refraction seismology and gravity/magnetic measurements. DOE funding would be used to explore a deep-seated, structurally controlled geothermal resource by siting and drilling two core holes at Pearl Hot Springs, in partnership with RAM.

A previous NEPA determination was made for this project when it was housed at the University of Kansas, GFO-10-371 (CX A9, B3.1, B3.6 9/17/2010). The project was moved to UT necessitating a new NEPA determination. The project is divided into three phases, this NEPA determination applies to Phase 1 only.

Phase 1 – Geological and Geophysical Exploration

- Task 1.0 Geological and Thermochronometric Investigation – subtasks include geologic and structural mapping, surface sample collection, laboratory equipment acquisition and installation, and thermochronometric analyses.
- Task 2.0 Permitting for Geophysical Reflection and Refraction Seismic Survey
- Task 3.0 Geophysical Reflection and Refraction Seismic Survey – A Notice of Intent (NOI) for seismic survey activities was approved with a CX by the Bureau of Land Management (BLM) on September 16, 2010.
- Task 4.0 Construction of 3-D Earth Model
- Task 5.0 Identification of Geothermal Exploration Drill Sites

This NEPA determination does not apply to Phase 2 (all tasks) and Phase 3 (Task 8.0) of this project, as the location of the exploration wells has yet to be determined. The tasks under these phases are as follows:

Phase 2 – Drilling and Resource Characterization

- *Task 6.0 Drilling of Exploration Wells
- *Task 7.0 Geological and Geochemical Analysis of Exploration Wells

Phase 3 – Resource Testing and Assessment

- *Task 8.0 Resource Testing
- Task 9.0 Project Management and Reporting

Work would be completed at UT Austin, located at 10100 Burnet Road, Austin, Texas 78758. UT has completed an R&D questionnaire addressing the protocols for laboratory safety, risk management and waste disposal. The University complies with standard safety procedures and all processes and procedures are monitored by the UT Environmental Health and Safety Department (EHS). The University has all applicable permits in place to conduct research on campus. All handling and disposal of gases, chemicals and liquid effluents would be executed by EHS personnel who comply with appropriate regulations of OSHA.

Based on review of the project information and the above analysis, DOE has determined the research and development under Phase 1 (all tasks) and Phase 3(Task 9.0) would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusion A9 "information gathering, analysis and dissemination," B3.1 "site characterization and environmental monitoring," and B3.6 "small-scale research and development, laboratory operations and pilot projects," and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:

Phase 2 (all tasks) and Phase 3 (Task 8.0).

This restriction does not preclude you from:

Phase 1 (all tasks) and Phase 3 (Task 9.0)

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Kelly Daigle 1/8/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

Kamini Ke
NEPA Compliance Officer

Date: _____

1/8/13

FIELD OFFICE MANAGER DETERMINATION