

PMC-ND
(1.08.09.13)

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: Board of Regents, NSHE, obo University of Nevada, Reno

STATE: NV

PROJECT TITLE : QUANTIFYING EGS RESERVOIR COMPLEXITY WITH AN INTEGRATED GEOPHYSICAL APPROACH- IMPROVED RESOLUTION AMBIENT SEISMIC NOISE INTERFEROMETRY

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000842	DE-EE0006767	GFO-0006767-001	

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.)
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Rationale for determination:

Board of Regents, NSHE, obo University of Nevada, Reno (hereafter UNR) would utilize DOE and cost share funds to apply high resolution ambient seismic noise seismic interferometry to Enhanced Geothermal Systems (EGS) favorability characterization at the Dixie Valley Geothermal System in Nevada. UNR is developing a new exploration technology which includes application of seismic interferometry and seismic array signal processing techniques developed for nuclear monitoring to conventional geothermal seismic reflection surveys. This project would use this technique to evaluate the usefulness for EGS exploration of seismic parameter information in comparison with information from and at the same scale as other geophysical exploration methods deployed in the same project area. Project activities include (1) new data collection, (2) use of seismic event waveforms from AltaRock Energy Inc. (2014) seismic surveys to investigate the possibility of extracting supplementary seismic parameter information, and (3) generation of new EGS favorability maps by factoring the proposed higher seismic resolution data to compliment and improve the previous investigations.

All project activities other than Task 2 would occur within an office setting for activities such as data analyses, computer modeling, etc. There is one fieldwork component (Task 2) for the acquisition of new seismic data. Without additional site and survey specific data, DOE does not have enough information to complete a NEPA analysis of Task 2 of the project. Once additional information is available, another NEPA review will be required for Task 2 (Seismic Field Data Acquisition, Processing, and Interpretation) activities. Fieldwork would occur in the northern Dixie Valley area where subsurface geothermal resources are managed by the Bureau of Land Management. Once fieldwork is more defined, UNR would also need an approved Notice of Intent to Conduct Geothermal Resource Exploration Operations for the proposed project activities.

Based on review of the project information, DOE has determined that all project activities (except Task 2) would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that all proposed activities other than Task 2 are consistent with actions contained in DOE categorical exclusion A9 "Information gathering, analysis, and dissemination," and are 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:

Task 2 (Seismic Field Data Acquisition, Processing, and Interpretation)

This restriction does not preclude you from:

All tasks other than Task 2 (Seismic Field Data Acquisition, Processing, and Interpretation)

Task 1 — Project management

Task 3 — Dixie Valley EGS Conceptual Mode

Task 4 — Geostatistics

Task 5—EGS Favorability/Trust Mapping

Task 6- Project reporting

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 :

Geothermal Technologies Office

This NEPA Determination does require a tailored NEPA provision.

Casey Strickland 09/18/2014

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: 
NEPA Compliance Officer

Date: 9/23/2014

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: _____