

PMC-EF2a

(20402)

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

**RECIPIENT:**Hi-Q Geophysical, Inc.**STATE:** NV**PROJECT  
TITLE :**

Seismic Fracture Characterization Methodologies for Enhanced Geothermal Systems

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-PS36-08GO98008	DE-FG36-08GO18191	GFO-09-040-001	GO18191

**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:**

Hi-Q is proposing to develop surface seismic and vertical seismic profile (VSP) methods and adapt them to the unique conditions encountered in Enhanced Geothermal Systems (EGS).

Phase I (all tasks) and Task 11 of this project was previously approved by GFO-09-040 on January 8, 2009 with a CX A9. Phase I consisted of collection and assessment of existing data provided for the target EGS. This was followed by a large modeling effort to design an acquisition plan.

In Phase II (tasks 4 through 6), extensive field testing of the model based acquisition plan would take place with seismic surveys, gravity surveys, and a near offset VSP. Phase III (tasks 7 through 9) of the program would be the acquisition, processing, and interpretation of extensive multi offset VSP, surface multi-component reflection surveys with large areal coverage, and final interpretation of results.

A Notice of Intent (NOI) for the seismic survey and gravity survey (task 4) were submitted independently to the Bureau of Land Management (BLM) on April 2, 2010. The NOI for the gravity survey was approved as casual use on April 13, 2010 and the NOI for the seismic survey was approved on August 12, 2010. A Sundry Notice for the near offset VSP (task 5) was submitted to the BLM on June 14, 2010 and was approved June 15, 2010.

This NEPA determination applies to Phase II (tasks 4 through 6) and Task 10 activities only. There will be a Go-No Go decision for the project at the end of Phase II. If Phase III is funded a revised EF-1 would need to be submitted for tasks 7 through 9 along with the required approvals from the BLM.

Condition of Approval: Allowable – Phase II (all tasks) and Task 10; Prohibited – Phase III (tasks 7 through 9).

Based upon the information provided, Phase II (all tasks) and Task 10 are categorically excluded under CX A9 "Information gathering/data analysis/document preparation/dissemination" and CX B3.1 "Site characterization/environmental monitoring."

**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 III (tasks 7 through 9)

This restriction does not preclude you from:

Phase I (all tasks)

Phase II (all tasks)

Tasks 10 and 11

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 :

This project involves tasks which are unallowable under NEPA prior to further environmental analysis of Phase III (tasks 7 through 9). NEPA requests that this project be placed on ASAP Approval.

EF2a prepared by Casey Strickland

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:

  
NEPA Compliance Officer

Date:

8/18/10

**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:

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