

PMC-EF2a

(20402)

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



RECIPIENT: US Geothermal

STATE: NV

**PROJECT TITLE :** Recovery Act: Finding Large Aperture Fractures in Geothermal Resource Areas using a 3-Component Long-Offset Surface Seismic Survey, PSInSAR & Kinematic Structural Analysis

|  |                                      |                            |                   |
|--|--------------------------------------|----------------------------|-------------------|
| <b>Funding Opportunity Announcement Number</b> | <b>Procurement Instrument Number</b> | <b>NEPA Control Number</b> | <b>CID Number</b> |
| DE-FOA-0000109                                 | DE-EE0002847                         | GFO-0002847-002            | GO2847            |

**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:

**B3.7**

Siting, construction, and operation of new infill exploratory and experimental (test) oil, gas, and geothermal wells, which are to be drilled in a geological formation that has existing operating wells.

**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:

**B5.12**

Workover (operations to restore production, such as deepening, plugging back, pulling and resetting lines, and squeeze cementing) of an existing oil, gas, or geothermal well to restore production when workover operations will be restricted to the existing wellpad and not involve any new site preparation or earth work that would adversely affect adjacent habitat.

## Rational for determination:

DOE and recipient cost share funds would be used by US Geothermal Incorporated (US Geothermal) to demonstrate an exploration strategy that may lead to the commercial development of the San Emidio geothermal resource area on Bureau of Land Management (BLM), Winnemucca District, Black Rock Field Office in Washoe County, Nevada. US Geothermal plans to drill up to two geothermal wells to develop the San Emidio geothermal resource with DOE funds. In Phase I (exploration), US Geothermal would complete a series of geophysical surveys and geologic mapping to target two future geothermal well locations (Phase II). Once the two wells are drilled, flow tests would occur (Phase III). Bureau of Land Management (BLM) as the lead agency completed an Environmental Analysis (DOE/EA-1810; DOI-BLM-NV-W030-2010-0006-EA) with DOE as cooperating agency for this project.

The original SOPO has been modified to add a temperature gradient (TG) well drilling program (8 TG wells and deepening of 2 existing TG wells) SOPO for this project. Two of the TG wells are on private land as are two existing TG wells to be deepened, and the remaining six TG wells would be on BLM lands. The project SOPO would remain unchanged outside of the addition of the TG well program. Even though the temperature gradient wells were analyzed in the Cumulative Impacts section of DOE/EA-1810; DOI-BLM-NV-W030-2010-0006-EA, no site specific analysis was completed for these eight TG wells. This analysis is specific to drilling TG Wells OW-7, OW-9 and deepening existing OW-6 and OW-8 on private property. TG wells OW-1, OW-2, OW-3, OW-4, OW-5, OW-10 are on BLM, who are conducting an environmental review. DOE will conduct another environmental review of OW-1, OW-2, OW-3, OW-4, OW-5, and OW-10 after the BLM review is complete.

According to US Geothermal, safety protocols are in place for the proposed work by a Health and Safety officer that meet or exceed state and federal requirements.

Additionally, no habitat for any Threatened or Endangered (T&E) species would be removed, and no disturbance would occur to T&E species due to the existing previously disturbed conditions and lack of habitat at the proposed OW-7, and OW-9 wells and deepening existing OW-6 and OW-8 (all are near a 23 year old geothermal power plant). No cultural resources or historic properties would be affected due to the existing previously disturbed conditions at the proposed OW-7, and OW-9 wells and deepening the existing OW-6 and OW-8 (both near a 23 year old geothermal power plant). Furthermore, DOE has determined that there are no surface, wetlands, and floodplains onsite.

Condition of Approval: This authorizes drilling temperature gradient wells OW-7 and OW-9 and deepening OW-6 and OW-8 ONLY. This does NOT authorize temperature gradient wells OW-1, OW-2, OW-3, OW-4, OW-5, and OW-10.

Based on the information above, this project's impacts to the human and natural environment can be deemed less than significant and this project would qualify for Categorical Exclusions B3.1, B3.7, and B5.12.

**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:

Temperature gradient wells OW-1, OW-2, OW-3, OW-4, OW-5, and OW-10.

This restriction does not preclude you from:

Drilling temperature gradient wells OW-7 and OW-9 and deepening OW-6, and OW-8

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 EF2A was written by Christopher Carusona II

The total award amount is \$9,507,318

DOE Share = \$3,772,560

Cost Share = \$5,734,758

Amount to be released in this determination

DOE: \$650,000

US Geothermal cost share: \$650,000

Total: \$1,300,000

Previously released (GFO-10-254) \$7,007,318

DOE Share = \$2,522,560

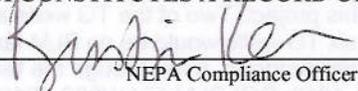
US Geothermal Cost Share = \$4,484,758

Remaining Restricted Funding amount is \$1,200,000

DOE Share = \$600,000

US Geothermal Cost Share = \$600,000

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

NEPA Compliance Officer Signature:  Date: 11/9/2011  
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