PMC-EF2a

(2.04.02)

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

RECIPIENT: US Geothermal, Inc. **STATE:** NV

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

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000109	DE-EE0002847	GFO-0002847-003	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:

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.

Rational for determination:

DOE and recipient cost share funds would be used by US Geothermal Incorporated (USG) to demonstrate an exploration strategy that could lead to the commercial development of the San Emidio geothermal resource area located on public and private lands in Washoe County, Nevada.

The USG San Emidio Statement of Project Objectives (SOPO) originally consisted of preliminary fieldwork and the drilling and testing of two production-sized exploration wells on BLM managed lands for which the BLM required an EA. The DOE NEPA determination for the award on April 27, 2010 (GFO-10-254) allowed preliminary field work but required an EA for drilling activities. DOE was a cooperating agency with the BLM in the development of the EA. The EA (DOE/EA-1810; DOI-BLM-NV-W030-2010-0006-EA) was completed in late October 2010. Subsequent to the EA, USG determined that the drilling of temperature gradient (TG) wells would benefit the project and added a TG well drilling program to the SOPO which initiated an additional NEPA review of those TG wells. USG proposed 10 TG drill locations, OW-1 through OW-10. In the NEPA determination from November 9, 2011 (GFO-0002847-002), DOE CX'ed OW 6, 7, 8, 9 (located on private lands) but conditioned OW 1 through 5 and OW 10 pending BLM review of permit applications for those wells because they were located on BLM managed lands. Subsequent to that NEPA determination, USG moved the proposed location of OW 10 from public to private lands and added the deepening of Well 45-21 and two additional TG wells (OW 11 and OW 12) on BLM managed lands to the TG well drilling program.

This NEPA determination is for the work not covered by the previous NEPA determination (OW 1 through 5 on BLM

lands) and the additional work proposed by USG (OW 10 on private land, OW 11 and 12 and the deepening of Well 45-21 on BLM managed lands).

USG submitted to the BLM Geothermal Drilling Permits (GDP) for all TG wells (OW 1 through 5, 11, and 12) and the re-entry, deepening, and recompletion of Well 45-21 located on BLM managed lands. All GDPs have been approved by the BLM with standard drilling Conditions of Approval for resource protection, human safety, and drilling best management practices. No extraordinary circumstances were found during the BLM review of the proposed project work.

The drilling of OW 10 was originally proposed on BLM managed lands but was relocated onto private lands. USG submitted a Sundry Notice to the Nevada Division of Minerals (NDOM). NDOM approved the Sundry Notice with standard Conditions of Approval for drilling. The drilling location of OW 10 is in a heavily disturbed area utilized for equipment storage. Cultural surveys were previously completed for the location. No cultural materials were found at the site. Biological resources for the area are known and were studied as part of the EA completed less than two years ago for the original project. No Threatened and Endangered Species, Special Status Species, or Species of Concern would be affected by project activities.

Proposed project activities (OW 1 through 5 on BLM lands as well as OW 10 on private land, OW 11 and 12 and the deepening of Well 45-21 on BLM managed lands) are composed of information gathering, analysis, and dissemination; and site characterization and environmental monitoring; 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:

Insert the following language in the award:

You are required to:
USG must comply with all Conditions of Approval as outlined in the approved permits from the Bureau of Land Management and Nevada Division of Minerals.

Note to Specialist :

EF2a prepared by Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin Date: 6/19/2012
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