

FMC-EF2a

(20402)

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



RECIPIENT: GeoGlobal Energy LLC

STATE: NV

PROJECT TITLE : Away from the Range Front: Intra-basin Geothermal Exploration

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000109	DE-EE0002829	GFO-10-229	0

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:
- B3.6** Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

Rational for determination:

GeoGlobal Energy LLC (GGE) would use an innovative combination of existing technologies from other industries to locate upflow along faults oriented to be highly permeable at the Gabbs Valley geothermal prospect in Nevada.

Laboratory work would take place at Thermochem in Santa Rosa, California.

The project is divided into three phases with multiple tasks and subtasks.

Phase 1: Resource Evaluation

1.0 LiDAR Survey, Interpretation and Field Verification

2.0 Contracting and Permitting

3.0 Over-Coring Stress Measurement – utilized to release the stress on a rock to help locate portions of the fault system that are oriented to fail and therefore be permeable.

4.0 Direct-Push Drilling Program

4.1 Direct-Push Drilling – 2 to 4 inch diameter with 1 inch PVC liner to 100 feet depth that would only remain open from 1 day to 2 weeks for temperature monitoring.

4.2 Water Sampling, Analysis and Interpretation

4.3 Temperature Logging and Interpretation

4.4 Core Logging

4.5 Surveying – well locations and elevations

5.0 Fault Zone Strain Mapping – active deformation would be quantified by the use of a high-precision GPS network.

6.0 Conceptual Model Development

7.0 Well Targeting – results from previous tasks would be used to site one slim-hole to discover the upflow zone.

8.0 Additional Contracting and Permitting

9.0 Phase 1 Reporting

Since the locations of the trenching and the slim-hole wells have not been determined, Phase 2 (all tasks) and Phase 3 (all tasks) cannot be analyzed at this time. A NEPA determination for these tasks in Phase 2 and Phase 3 of the project would be too early to determine but would need to be made prior to GGE beginning any trenching or drilling activities.

Phase 2: Deep Exploration Drilling

Tasks 1 through 8 of Phase 2 consists of trenching, drilling and well pad construction of two slim-holes, updating of the conceptual model, and reporting.

Phase 3: Well Testing

Tasks 1 through 5 of Phase 3 consists of well flow testing, resource and project assessment, independent expert evaluation of the resource, well site restoration, and reporting.

According to the R&D laboratory questionnaire, no additional permits are needed and there would be no air emissions or liquid effluents produced from this work. Gases, chemicals, and heavy metals are all handled, stored, and disposed of in accordance with Local, State, and Federal Laws. Safety equipment at the facility includes: 4 fume hoods, multiple First Aid Kits, 2 safety showers, venting for all exhausted equipment, fire alarm, internal fire warning system, sprinklers, 15 fire extinguishers, fire blanket, 13 staff members certified in CPR, and air filtering masks.

Note: Prior to this NEPA determination, a Limited Release of Funds was authorized via STRIPES req 10EE003493 to authorize DOE funds in the amount of \$186,000 for expenditure by GGE. The following tasks were covered in the blanket CX for the Limited release of Funds modification:

Task 1.0 LiDAR Survey, Interpretation and Field Verification

Task 2.0 Contracting and Permitting

A Notice of Intent (NOI) for Phase 1 activities was received by the BLM on July 13, 2010 and subsequently approved by the BLM on July 15, 2010.

Condition of Approval: Allowable – Phase 1 (all tasks); Prohibited – Phase 2 (all tasks) and Phase 3 (all tasks).

Based upon the information provided, Phase 1 (all tasks) is categorically excluded under CX A9 "Information gathering/data analysis/document preparation/dissemination", CX B3.1 "Site characterization/environmental monitoring", and CX B3.6 "conventional laboratory operations."

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 effect 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 (all tasks)

This restriction does not preclude you from:

Phase 1 (all tasks)

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 2 (all tasks) and Phase 3 (all tasks). 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: _____

8/27/10

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: _____