PMC-EF2a
(2.04.02)

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

RECIPIENT: Bell Geospace, Inc **STATE:** TX

PROJECT TITLE : Geothermal Technology Advancement for Rapid Development of Resources in the U.S.

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000522	DE-EE0005515	GFO-0005515-002	GO5515

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.)
B3.2 Aviation activities	Aviation activities for survey, monitoring, or security purposes that comply with Federal Aviation Administration regulations.
B3.11 Outdoor tests and experiments on materials and equipment components	Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components) under controlled conditions. Covered actions include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests. Covered actions would not involve source, special nuclear, or byproduct materials, except encapsulated sources manufactured to applicable standards that contain source, special nuclear, or byproduct materials may be used for nondestructive actions such as detector/sensor development and testing and first responder field training.

Rational for determination:

Bell Geospace, Inc. (BGI) would utilize DOE and cost share funds to (1) combine airborne full tensor gravity (FTG) and the z-axis tipper electromagnetic (ZTEM) deep penetrating, low frequency, passive electromagnetic exploration system onto one platform for simultaneous acquisition; (2) test the applicability of each of these technologies for geothermal exploration over a known geothermal deposit; (3) if the initial tests successfully show the usefulness of these combined technologies, test surveys would be acquired over a more "greenfield" area; and (4) use the ZTEM, FTG and Magnetic data that would also be acquired simultaneously to perform an integrated interpretation that can be used to determine whether or not a combined interpretation produces a higher confident geophysical model than any one of the technologies by itself.

This project includes two phases. Phase 1 was approved by GFO-0005515-001 on November 30, 2011. This NEPA determination is for Phase 2 activities.

Phase 2: Commercial Testing

4. "Greenfield" Test – survey flights would be performed over an area with minimal pre-existing data to test the system. Once the data has been acquired it would be processed and interpreted. The tests would occur at Ormat's Tungsten Mountains Geothermal Exploration area. Project fieldwork consists entirely of aerial surveys. The number of passes and altitudes will be determined based on the results of phase 1. The initial survey plan has 81 lines (passes) and BGI may have several repeat lines and cross tie lines. The altitude of each pass will be between 80 - 250m depending on the amount of tow rope needed for the ZTEM that is determined in phase 1. No special permits are required.
5. Final Report

Phase 2 Budget: $557,709 (DOE) $511,912 (cost share)

Phase 2 of this project is composed of information gathering, analysis, and dissemination; aviation activities; and outdoor tests and experiments on materials and equipment components; therefore the DOE has categorized this into Categorical Exclusions A9, B3.2, and B3.11.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

EF2a prepared by Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 7/19/2012

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