

PMC-EF2a

(2/04/02)

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

**RECIPIENT:**Pueblo of Jemez**STATE:** NM

PROJECT TITLE : Recovery Act: Innovative Exploration Techniques for Geothermal Assessment at Jemez Pueblo, New Mexico

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000109	DE-EE0002841	GFO-10-598	GO0

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:**

B3.1 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:

Pueblo of Jemez (Jemez) proposes to use DOE and cost share funding to develop and demonstrate geothermal resource on the Pueblo of Jemez Reservation. In Phase I (Exploration), Jemez would characterize the initial state of the reservoir, obtain the baseline data required to develop, and characterize the geothermal resource using geologic mapping (that was analyzed under GFO-10-163 February 9, 2010) and geophysical surveys. At this time, the DOE is now evaluating Task 2 (Geophysical Surveys) in this NEPA determination. This review is specific to Task 2 only.

Phase 1: Exploration (Authorized GFO-10-163 February 9, 2010)**Task 1.0 Geologic Mapping**

A detailed geologic map and cross sections will be prepared to estimate the depth to the Madera Formation limestone that is thought to be the host of geothermal water.

Task 2 Geophysical Surveys

Using the detailed geologic map, complete geophysical surveys, one N-S and two E-W seismic lines and run a seismic survey of 4 miles squared; reduce and analyze seismic data using innovative high-resolution seismic migration imaging techniques developed by LANL, and integrate with 3-D audio-frequency MT data acquired at the same area for fault and subsurface structure imaging and resource assessment.

A Class III Cultural Resource Survey (completed June 28, 2010) and a Biological Assessment (completed June 17, 2010) for the Seismic and Magneto-Telluric Survey Sites (Task 2) indicates no effect to threatened or endangered species or significant cultural resources. Cultural resources are marked and identified which would be avoided by routing the lines around the cultural sites.

Tasks 3 through 4 are not Categorical Excludable since the geothermal exploration wells have not been identified and therefore cannot be analyzed at this time.

Phase 2: Exploratory Drilling**Task 3 Well Drilling**

With the results of the tasks above, locate and drill two exploration wells up to 3000 feet deep to penetrate the deeper geothermal reservoir. At least three hundred feet of core would be collected from the target interval for each well.

Phase 3: Well and Reservoir Testing**Task 4 Well and Reservoir Testing**

Conduct detailed well testing, including an innovative tracer test and a test of flowing electrical conductivity (FEC), to determine the fracture surface area, heat content and heat transfer, flow rates, and chemistry of the geothermal fluids

encountered by the exploration wells.

Task 5 Project Management and Reporting

Reports and other deliverables will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

At this time, the locations of geothermal wells have not been identified, therefore cannot be analyzed. As a result, Tasks 3, and 4 are not authorized. Tasks 3 and 4 would be analyzed once the locations of geothermal wells are identified and submitted to the DOE.

Condition of Approval: Allowable: Tasks 2; Prohibited: Tasks 3 and 4. Task 2 comprises site characterization; therefore Task 1 is categorized into Categorical Exclusion B3.1.

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:

Tasks 3 and 4

This restriction does not preclude you from:

Task 2

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 :

EF2A written by Christopher Carusona II

NEPA recommends that this project be placed on ASAP approval.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:


NEPA Compliance Officer

Date:

8/17/10

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:

Date