PMC-EF2a

(2.04.02)

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

RECIPIENT: Colorado School of Mines **STATE:** CO

PROJECT TITLE : Advances in Hydrogeochemical Indicators for the Discovery of New Geothermal Resources in the Great Basin

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000522	DE-EE0005522	GFO-0005522-001	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, 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.)

B3.6 Small-scale research and development, laboratory operations, and pilot projects

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rational for determination:

The Colorado School of Mines (CSM) would utilize DOE and cost share funds to develop and calibrate new hydrogeochemical indicators and geothermometers for cost effective discovery and management of geothermal resources specific to the Great Basin. Laboratory work would occur at the Department of Geology and Geological Engineering at CSM in Golden, CO.

This project includes two phases but this NEPA review is for Phase I only. Prior to initiating Phase II activities, there would be a go/no-go decision point after which DOE would determine whether or not to fund Phase II activities. Additional NEPA review will be required if this project is selected to continue with Phase II activities.

Phase I – Proof of Concept
1. Fluid-mineral equilibria in Great Basin geothermal systems – subtasks would include data acquisition and compilation, computation analysis, thin section analysis, X-ray Diffraction analysis, and Scanning Electron Microscope studies.
2. Reaction-transport model for Desert Peak geothermal system – subtasks would include computation model set up, simulation, and analysis.

Phase II – Prototyping
Phase II will require additional NEPA review if the project is selected to continue with Phase II activities.

According to the R&D laboratory questionnaire, no additional permits are needed for Phase I activities. No air pollutants or toxic wastes would be produced and the only liquid effluent would be tap water. The lab undergoes monthly safety inspections, annual inspection by the Environmental Health and Safety Department, as well as regular inspection by the Colorado Department of Public Health and Environment. The lab complies with all University and Colorado State regulations for testing and safety protocols.

Phase I Budget: $372,760 (DOE) $0 (cost share)

Phase I of this project is composed of information gathering, analysis, and dissemination; and laboratory operations; therefore the DOE has categorized this into Categorical Exclusions A9 and B3.6.

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:
Phase II (all tasks and subtasks)
This restriction does not preclude you from:
Phase I (all tasks and subtasks)
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 prepared by Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 12/21/2011
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