

PMC-EF2a

(2.04.02)

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



RECIPIENT: AltaRock Energy, Inc.

STATE: OR

PROJECT TITLE : Newberry Volcano EGS Demonstration

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-PS36-09GO99019	DE-EE0002777	GFO-10-366	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.
- B1.18** Siting, construction, and operation of additional water supply wells (or replacement wells) within an existing well field, or modification of an existing water supply well to restore production, if there would be no drawdown other than in the immediate vicinity of the pumping well, no resulting long-term decline of the water table, and no degradation of the aquifer from the new or replacement well.
- 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:
- C12** Siting, construction, and operation of energy system prototypes including, but not limited to, wind resource, hydropower, geothermal, fossil fuel, biomass, and solar energy pilot projects.

Rational for determination:

AltaRock Energy, Inc. (AltaRock) would develop an Enhanced Geothermal System (EGS) reservoir and quantitatively demonstrate stimulation techniques to successfully induce and sustain fluid flow and heat extraction from one injection well and up to two production wells on the northwest flank of the Newberry Volcano in Oregon. AltaRock, in partnership with Davenport Newberry Holdings LLC (Davenport), has geothermal rights to the assets of the project site including, but not limited to, the data collected and held by Davenport, the owner of the Bureau of Land Management (BLM) geothermal site leases and the legally designated operator of the leases. AltaRock would utilize existing well pads and sumps, geothermal well drilling permits, groundwater well permits, geothermal and groundwater wells completed, and road maintenance agreements that were previously analyzed, permitted, and/or completed under an Environmental Assessment (EA) and Decision Record/Finding Of No Significant Impact (DR/FONSI) completed by BLM's Prineville District in late 2007 for the Davenport Newberry Geothermal Exploration Project (OR-050-07-075). A limited license water use permit from Oregon Water Resource Department is in place. This permit is for up to four water wells (two have already been drilled) and to pump up to 58 acre feet a year. A Temporary Special-Use Permit was issued February 9, 2010 by the U.S. Department of Agriculture Forest Service (USFS) for conducting geophysical exploration activities utilizing 12 surface microseismic (MSA) array stations (Phase I). As part of the complete planned MSA (Phase II and III), AltaRock may use up to four temperature gradient holes for downhole monitoring stations that were permitted by BLM through a previous EA (DOI-BLM-OR-P000-2010-003-EA).

The project is divided into three phases with multiple tasks.

Task 1.0 Phase I – Pre-stimulation

- 1.1 Site and Wellbore Readiness – existing roads would be repaired and maintained as necessary, the well pad and sump of the target well would be repaired and maintained as necessary, and additional groundwater wells would be completed under the existing permit from the Oregon Water Resource Department.
- 1.2 Development of Stimulation Plan – installation of the initial surface MSA, characterization of target well for stimulation (includes a conventional injection test), development of a conceptual geologic model, and development of a stimulation plan.
- 1.3 Planning and Permitting – this includes public outreach for the dissemination of project development plans to affected parties, filing of a Sundry Notice to the BLM and a UIC permit to the Oregon DEQ for the conventional injection test, and permitting for Phase II operations.
- 1.4 Reporting and Publications – this includes quarterly and annual project updates, the completion of an Induced Seismicity and Seismic Hazards Report, and a complete Phase I Report.

Task 2.0 Phase II – Reservoir Creation and Characterization – major activities under this task include: stimulation and testing of the target injection well; drilling, stimulation, and testing of the first and second production wells; and conducting a system circulation test.

Task 3.0 Phase III – Long-Term Monitoring and Conceptual Modeling

Condition of Approval: Allowable – Phase I (all tasks); Prohibited – Phase II (all tasks), Phase III (all tasks).

Phase I (all tasks) of this project is comprised of information gathering, data analysis, document preparation; siting/construction/operation of additional/replacement water supply wells; and onsite site characterization activities; therefore the DOE has categorized Phase I tasks into Categorical Exclusions A9, B1.18 and B3.1.

Phase II includes well stimulation, drilling activities, and system circulation tests. These activities have the potential to impact surface and subsurface resources; therefore the DOE will require an EA to be completed (C12) prior to implementation of Phase II and Phase III. Project work would take place in the Bend-Fort Rock District of the Deschutes National Forest, Deschutes County, Oregon and within the Prineville District of the BLM. USFS has surface management authority and BLM has sub-surface management authority. Since this is a geothermal exploration project on geothermal leases administered by the BLM, BLM would be the lead agency for NEPA compliance and would ultimately decide the level of NEPA analysis necessary based upon the project proposal submitted to them by the recipient.

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 Phase III (all tasks)

This restriction does not preclude you from:

Phase I (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 an EA determination by the GO Manager (all tasks in Phase II and Phase III). 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: 6/29/10

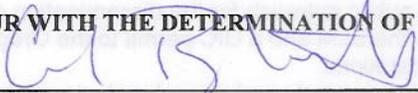
FIELD OFFICE MANAGER DETERMINATION

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: 6/29/10