

PMC-EF2a

(200402)

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



RECIPIENT: Energent Corporation

STATE: CA

PROJECT TITLE : Scale Resistant Heat Exchangers for Low Temperature Geothermal Binary Cycle Power Plant

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000318	DE-EE0004423	GFO-0004423-001	GO4423

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.
- B3.6** 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:

Energent Corporation (EC) would use U.S. Department of Energy (DOE) grant funds to demonstrate a geothermal power plant (the Geo-SRX) using a scale-resistant heat exchanger design to allow increased utilization of low temperature resources. Numerous heat exchanger configurations would be tested on a small scale in Task 1 prior to selection of the full-scale heat exchanger. This project would also demonstrate a hermetic turbine-generator assembly to be submerged in the working fluid at the existing Coso geothermal field in California.

The project is divided into two phases with multiple tasks and sub-tasks. This NEPA determination is specific to Phase I activities. As part of the requirements of the Funding Opportunity Announcement that this project was selected under (DE-FOA-0000318), a down select process will determine which projects will move forward to Phase II. If this award is selected to move forward, more specific project data would be submitted for Phase II/Phase III activities and another NEPA determination would be needed at that time.

Phase I

1. Develop and Design Scale Resistant Heat Exchanger – including characterization of the chemical content of the Coso geothermal resource for use in the design and development of the heat exchanger.
2. Design Hermetic Variable Phase Turbine-Generator Assembly
3. Design Balance of Plant

Phase II

4. Construction and Startup of Plant – location of the plant would be at Coso Operating Company's BLM East facility, which is located on the China Lake Naval Air Weapons Station approximately 35 miles north and 11 miles east of Ridgecrest, California.

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

Based upon the information provided, Phase I (all tasks) is categorically excluded under CX A9 "Information gathering/data analysis/document preparation/dissemination", 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 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)

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.

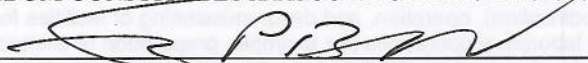
Note to Specialist :

This project involves tasks which are unallowable prior to further environmental analysis of Phase II (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:

11/16/10

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:
