

PMC-EF2a

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



(2.04.02)

RECIPIENT: Flathead Electric Cooperative

STATE: MT

PROJECT TITLE : Geothermal Development in Hot Springs Valley

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-EE0003220	GFO-10-476	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:

- B5.12** Workover (operations to restore production, such as deepening, plugging back, pulling and resetting lines, and squeeze cementing) of an existing oil, gas, or geothermal well to restore production when workover operations will be restricted to the existing wellpad and not involve any new site preparation or earth work that would adversely affect adjacent habitat.
- 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.
- B3.1** 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:

Flathead Electric Co-op (FEC) would re-work an existing geothermal well to explore greater depths for 165° F waters adequate to generate up to 10 MWe of power through low-temperature binary cycle generation. The existing well was drilled in 1982 to a depth of 261 feet encountering temperatures as high as 135° F. The only laboratory work anticipated is water sampling analysis that would be done at local laboratories.

The project is divided into three phases with multiple tasks and sub-tasks.

Phase I – Resource Evaluation

- 1.0 Acquire Permits and Rights
- 2.0 Re-Analysis of Previous Work/Resource Evaluation
- 3.0 Data Gathering and Assessment
 - 3.1 Data Gathering – water temperatures and chemical sampling for geo-indicators on the existing well and other wells in the area.
 - 3.2 Evaluation of Data to Develop Resource Model and Report

Phase II – Well Drilling

- 5.0 Site Access Development – Access to the site is by county roads with an existing gravel road providing direct access to the target private property. The owner of the property is in support of the exploration efforts.
- 6.0 Well Drilling – the existing well would be developed from the present depth in 500 foot increments. Once the goal of 165° F water is achieved, no further drilling would be required.

Phase III – Well Testing

- 7.0 Well Testing
 - 7.1 Install Well Test Pump and Associated Equipment
 - 7.2 Perform Data Acquisition – temperature logging, flow tests, and hydrochemical analysis.
 - 7.3 Data Assessment and Comparison
 - 7.4 Final Site Capacity (MW) Determination
 - 7.5 Project Management and Reporting – reports and other deliverables would be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

A cultural resource file search was performed by Damon Murdo at the Montana SHPO. The Montana SHPO determined that:

"As long as there will be no disturbance or alteration to structures over fifty years of age we feel that there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time."

FEC agreed (e-mail from Cheryl Talley) that no structures over 50 years of age would be disturbed or altered.

Phone conversations between the DOE NEPA Specialist and Lowell Whitney (USFWS – Kalispell Suboffice) indicated that with avoidance of grasslands, impacts to threatened or endangered species from the project would not be expected to occur. Project work would not occur within grasslands.

The stilling basin used for discharge during the initial drilling of the well in 1982 is designated as Palustrine emergent seasonally flooded (PEMC) wetland. If Task 7.2 "Perform Data Acquisition" requires discharge into that stilling basin, a NPDES permit must be obtained to comply with Section 402 of the Clean Water Act.

This project is comprised of information gathering, data analysis, document preparation; onsite and offsite site characterization activities; and workover of an existing geothermal well; therefore the DOE has categorized this proposal into Categorical Exclusions A9, B3.1, and B5.12.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

If a NPDES permit is required (see above), FEC must provide DOE with a copy of the approved permit before any discharge into the stilling basin.

EF2a prepared by Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Date: 8/4/10
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