

PMC-EF2a

(200602)

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



RECIPIENT: Board of Regents, NSHE obo Univ. Nevada, Reno

STATE: NV

PROJECT TITLE : Advanced Heat/Mass Exchanger Technology for Geothermal and Solar Renewable Energy Systems

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE EE0003231	GFO-10-557	3231

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:

Board of Regents, NSHE on behalf of the University of Nevada in Reno proposes to use federal funds to design, develop, and characterize unique coating materials, surface materials and membranes capable of a 10 fold increase in heat/mass exchanger performance in phase change processes.

This project will include 5 subproject that will take place within a laboratory using conventional research methods. These subprojects include efficient boiling surfaces for geothermal power cycles, heat and mass transfer in membrane contactor processes, enhanced single phase heat transfer in intermittently-grooved channels, re-enforced super hydrophobic surfaces for high performance condensers, nano-coating structured porous surfaces for evaporation/boiling heat transfer enhancement, and project management and reporting.

This project comprises of conventional methods of indoor research and development as well as information gathering, analysis, and dissemination in subtasks 3.1, 3.2, and 6.0; therefore a CX A9 and B3.6

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Eugene Brown 7/27/2010

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:


NEPA Compliance Officer

Date:

8/4/10

FIELD OFFICE MANAGER DETERMINATION