PMC-EF2a
(2.04.02)

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

RECIPIENT: Makai Ocean Engineering Inc. **STATE:** HI

PROJECT TITLE : Modeling the Physical and Biochemical Influence of Ocean Thermal Energy Conversion Plant Discharges into their Adjacent Waters

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000293	DE-EE0003638	GFO-0003638-001	EE3638

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.

A11 Technical advice and planning assistance to international, national, state, and local organizations.

Rational for determination:

Makai Ocean Engineering Inc proposes to use federal funds to study and model Ocean Thermal Energy Conversion design to minimize the environmental impacts and optimize costs associated with operation. They will use a numerical model to measure continuous ocean current profiles, temperatures, and conductivity. Models will also be used to analyze discharge plumes and provide predictions of algal blooms as so the OTEC plants may be designed for minimal impacts.

This project will include processing on-site data to validate boundary conditions into the OTEC hydrodynamic model, analyze parameters of the OTEC model discharge plumes, implement eutrophication modeling for insitu Hawaii waters, calculate the extent of biological impact from the OTEC plume, disseminate data and prepare reports, implement eutrophication modeling for in-situ Hawaii waters, and project management and reporting.

All work regarding the implementation of this project will be done using computer models. There will be no sampling and no laboratory work required for this project. All work will be performed at the Makai Ocean Engineering Inc Offices. Data will be collected from Makai/Lockheed Martin initial OTEC site in West Oahu.

This project is comprised of information gathering and dissemination using computer modeling; therefore a CX A9 & A11 will apply

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

Eugene Brown 1/11/2011

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 1/13/11

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