PMC-EF2a

(2.04.02)

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

**RECIPIENT:** Ocean Engineering and Energy Systems International, Inc. (OCEES) **STATE:** HI

**PROJECT TITLE:** The Potential Impacts of OTEC Intakes on Aquatic Organisms at an OTEC Site under Development on Kauai, HI

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000069 | DE-EE0002653 | GFO-0002653-003 | EE2653 |

**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, analysis, and dissemination**

Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

**B3.3 Research related to conservation of fish, wildlife, and cultural resources**

Field and laboratory research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources or to the protection of cultural resources, provided that such activities would not have the potential to cause significant impacts on fish and wildlife habitat or populations or to cultural resources.

**B3.6 Small-scale research and development, laboratory operations, and pilot projects**

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rational for determination:

Ocean Engineering and Energy Systems International, Inc. (OCEES) is proposing to use DOE funding to evaluate the potential impact of an ocean thermal energy conversion (OTEC) facility on aquatic organisms. The purpose of this project is to determine the effectiveness of two pilot scale mesh screens in protecting larvae and eggs from entrainment in the intake system.

This is a third NEPA review for the OCEES project. Previous determination control numbers are GFO-10-151 and GFO-0002653-002. OCEES was unable to complete their original surveys due to delays in their schedule. They have rescoped their project and changed tasks 3.0 and 5.0 and removed task 1.0 from the project. This NEPA determination will review the two new tasks in addition to task 6.0 as a connection action.

Total project tasks include:

- Task 1.0 - Preliminary Baseline Biological Sampling (task canceled – removed from project scope)
- Task 2.0 - Site-Specific Intake Assessment (No change in scope, CX A9 determination GFO-10-151)
- Task 3.0 - Design of Biological Field Sampling Program (rescoped task)
- Task 4.0 - Procurement and Construction of Field Sampling Equipment (No change in scope, previous determination CX B3.6 GFO-10-151)
- Task 5.0 - Biological Field Sampling Program (rescoped task)
- Task 6.0 - Sample Processing (No scope change)
- Task 7.0 - Data Analysis of Biological Sampling Data (No scope change, previous determination CX A9 GFO-10-151)

• Task 8.0 - Project Management and Reporting (No scope change, previous determination CX A9 GFO-10-151)

Background:

Task 1 has been completely removed from this project. A previous NEPA determination (GFO-10-151) had been made on May 13, 2010 for tasks 2, 4, 7 and 8. These tasks comprised desktop research and literature review of different intake technologies, the purchase and assembly of plankton sampling equipment, and a floating laboratory to test in an indoor facility, sampling processing in a designated plankton lab, and project management activities. These tasks were determined to qualify for DOE categorical exclusions A9 and B3.6. The scope of the work did not change for these tasks and the original determinations still apply.

Tasks 5 and 6 were originally prohibited pending further information for the first two NEPA reviews. These activities required the coordination and permitting by the National Marine Fisheries Service (NMFS), the US Army Corps of Engineers, and the Hawaii Division of Aquatic Resources. All necessary permits, included section 7 consultations under the ESA, had been acquired for the project. In the rescoped SOPO, task 6 involved processing the plankton species collected in task 5, and although there is no change in scope it is connected with activities in task 5; therefore it will be reevaluated in this review.

NEPA Review:

OCEES' project scope change affects Tasks 3.0, 5.0 and 6.0 as outlines in their revised SOPO, dated 10-6-2011.

Task 3.0 involves designing a new field monitoring plan based on research and data collected from work done previously done during this project's original planning phase. Activities taking place under this task would involve desktop studies and paper research activities only.

Task 5.0 would involve the implementation of the field ichthyoplankton sampling program. OCEES is proposing to develop baseline characterization of ichthyoplankton populations by taking samples via bongo nets by boats in three sample areas about a mile off Port Allen on the coast of Kauai, Hawaii. Samples would be collected one day per month over a 9-month period, then studied in a lab in Task 6.

Consultation by OCEES and Alden labs (OCEES partner) with various State and Federal agencies has been ongoing since January of 2011. Consultation was reinitiated for the changed in scope and no issues have been identified:

• The Hawaii Department of Aquatic Resources issued Alden Research Laboratory a Special Activity Permit that authorizes the use of fine mesh plankton nets for the collection of live marine life offshore of Port Allen Harbor and inside Hanapepe Bay, Kauai.

• NOAA/NMFS was consulted regarding the Marine Mammal Protection Act (MMPA). In an email dated February 1, 2011, Michelle Magliocca from NOAA/NMFS stated that based on her review of the SOPO they do not have any concerns regarding marine mammals. This response still applies to the rescoped project.

• In an email correspondence dated March 4, 2011, the State of Hawaii Coastal Zone Management Program stated that a federal consistency review in accordance with Section 307(d) of the Coastal Zone Management Act is not necessary or required for this project. This response still applies to the rescoped project.

• The US Army Corps of Engineers was consulted and during a conference call on Jan. 24, 2010 their representative stated that the sampling and the additional project activities are not subject to permits or consultations required under the Clean Water Act (section 404) or Rivers & Harbors Act (section 10). • This response still applies to the rescoped project.

• On March 28, 2011, DOE initiated informal consultation under Section 7 of the Endangered Species Act (ESA) and submitted a consultation letter to NMFS. A NMFS letter dated April 25 concurred with DOE's determination that funding OCEES (and their partners, Alden Labs) to conduct ichthyoplankton sampling off Kauai is not likely to adversely affect ESA listed marine species or their designated critical habitat and that DOE's consultation responsibilities under the ESA for species under NMFS's jurisdiction was complete (NMFS ESA Letter of Concurrence, NMFS File No. (PCTS): I/PIR/2011/01526 PIRO Reference No.: I-PI-11-899-LVA, signed on April 25, 2011)

** A revised Biological Evaluation (BE) was submitted to the NMFS by DOE on December 8, 2011 for reevaluation. DOE made the determination that OCEES change in project scope would have "No Affect" to ESA listed species" based on findings in the BE.
** In an informal email response By Don Hubner on December 12, 2011, the HA NMFS office concurred with DOE's findings of "No affect" determination for new scope of project activities.

Task 6.0 activities involve studying the ichthyoplankton samples at a 3rd party vendor lab in San Luis Obispo, CA. An

R&D questionnaire has been filled out specific to this facility. It is OSHA compliant and all waste is disposed through the San Luis Obispo County Integrated Waste Management Authority program for disposal of hazardous waste for small business.

Based on the above discussion, acquisition of all necessary permits and approvals from additional governmental agencies, and the small size of the sampling specimens collected, DOE has determined that the impacts related to tasks 3.0, 5.0, 6.0 are anticipated to have negligible or no affects on the human and natural environment. These tasks are consistent with actions outlined in DOE's CXA9 (Information gathering) for task 3.0, CXB3.3 (Research related to conservation of fish and wildlife) for task 5.0 and CXB3.6 (indoor bench-scale research projects and conventional laboratory operations) for task 6.0 and are, therefore, categorically excluded from further NEPA review.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Insert the following language in the award:

You are required to:
Adhere to the General Conditions A – M and the Special Conditions A- G of the Special Activity Permit No.211-49 as issued by the Hawaii Department of Land and Natural Resources on April 25, 2011.

Apply the comprehensive best management practices (BMP), as recommended by the Protected Resources Division of the National Marine Fisheries Service's Pacific Islands Regional Office, as stated in the applicant prepared Biological Evaluation supplied to NOAA as part of DOE's Section 7 consultation required under the Endangered Species Act and additional committed measures as discussed in the supplemental BE discussion.

Note to Specialist :

Completed by Laura Margason December 19, 2011

Total Project Funding: $594,961
No cost share

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: _____ Date: 12/21/2011
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