



**STATE PROCUREMENT OFFICE**  
**NOTICE OF REQUEST TO AMEND AN EXEMPTION**  
**FROM HRS CHAPTER 103D CONTRACT**

13 JAN 25 A9:15

STATE PROCUREMENT OFFICE  
STATE OF HAWAII

TO: Chief Procurement Officer

FROM: Natural Energy Laboratory of Hawaii Authority (NELHA)  
*Name of Requesting Department*

Pursuant to HRS §103D-102(b)(4) and HAR section 3-120-5(d), the Department requests to amend an exempt contract as follows:

1. SPO-007, Exemption Reference (PE) Number: P.E. No. 10-039-K
2. Vendor/Contractor/Service Provider Name: Makai Ocean Engineering, Inc.

3. Describe the goods, services, or construction:  
 Engineering services to plan, design, and provide construction management services to oversee the repair work to fix NELHA's 40" deep seawater pipeline at 450 feet depth.

4. Explain in detail what is being amended:  
 The Time of Performance of this contract is being amended to extend the expiration date for an additional eight (8) months. In addition to the time extension, funds totaling \$25,048.00 will need to be added to the contract to cover the cost of a Change Order. The Change Order is necessary in order to obtain additional engineering and modeling work from Makai Ocean Engineering to determine how much additional buoyancy will need to be added to the 40" pipeline to raise it higher to compensate for heavy marine growth that has accumulated on the pipeline outer surface since 1987.

5. Amended contract price for this request: \$ ~~312,195.00~~ \$ 25,048.00 *KT per conversation w/ Greg Barbour 2/25/13 3:30pm*

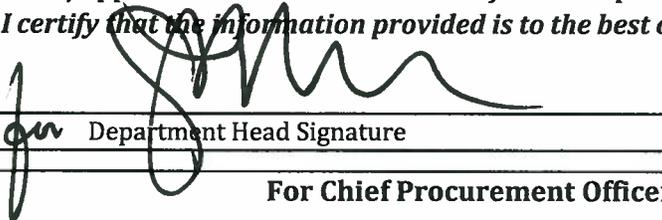
6. Explain in detail why the amendment(s) are necessary:  
 The 40" pipeline repair work is currently scheduled to take place some time between May - June 2013. Makai Ocean Engineering's contract (#59235) will expire on February 28, 2013. Although Makai Ocean Engineering has completed all of the planning and design work, the construction management aspect of their contract cannot be completed until the contractor hired to perform the repair work to the 40" pipeline mobilizes to perform that work. The pipeline repair work is very complex and may experience difficulties beyond NELHA's expertise due to the depth at which the work will take place. Please see attached timeline from the main contractor for this work. It is important to note that this project has been delayed due to recent video from June which indicates another nearby pipe had broken loose and was lying on top of the 40" pipeline. As a result of the June 2012 inspection dive, it was determined that the 40" pipeline is presently at a lower depth due to heavy marine growth on the pipeline. A Change Order with Makai will need to be implemented in order for them to determine how much additional buoyancy will need to be added to the pipeline to bring it back up to the desired depth. The cost of the Change Order is \$25,048.00. Please see enclosed Change Order request from Makai Ocean Engineering.

7. Identify the primary responsible staff person(s) conducting and managing this procurement. Appropriate delegated procurement authority and completion of mandatory training required.)

\*Point of contact (Place asterisk after name of person to contact for additional information.)

Name	Division/Agency	Phone Number	Email address
Greg Barbour	NELHA / DBEDT	808-327-9585	gb@nelha.org

*All requirements/approvals and internal controls for this expenditure is the responsibility of the department. I certify that the information provided is to the best of my knowledge, true and correct.*

  
Department Head Signature

1/24/13  
Date

**For Chief Procurement Officer Use Only**

Date Notice Posted: 1/25/13

Submit written objection to this notice to issue a sole source contract within seven calendar days or as otherwise allowed from date notice posted to:

[state.procurement.office@hawaii.gov](mailto:state.procurement.office@hawaii.gov)

Chief Procurement Officer (CPO) Comments:

Approval is granted for the period 03/01/13 to 09/30/13 and is for the solicitation process only, HRS section 103D-310(c) and HAR section 3-122-112, shall apply (i.e. vendor is required to be compliant on the Hawaii Compliance Express) and award is required to be posted on the Awards Reporting System.

If there are any questions, please contact Kevin Takaesu at 586-0568, or [kevin.s.takaesu@hawaii.gov](mailto:kevin.s.takaesu@hawaii.gov).

Approved     Disapproved     No Action Required

  
Chief Procurement Officer

2/28/2013  
Date



## **MAKAI OCEAN ENGINEERING, INC.**

**P.O. Box 1206, Kailua, Oahu, Hawaii 96734**

MOE – 4209-dj  
July 16, 2012

Jan War  
Operations Manager  
Natural Energy Laboratory of Hawaii Authority  
73-4460 Queen Kaahumanu Hwy., #101  
Kailua-Kona, HI 96740

Subject: Change Order Request on Contract 59235

Dear Jan:

The submarine inspection dive on the NELHA 40" intake pipeline conducted on 23 June 2012 uncovered significant changes in the pipeline's floating configuration when compared to its configuration observed during the previous December 2007 dive inspection. The most important change is that the pipeline is now floating much lower in the water column - the high point in the catenary is now between 127m (Makai depth sensor) and 130m depth (HURL depth sensor) versus the 121m depth measured by HURL in 2007. Makai believes this increase in depth is principally a result of the weight of the added growth that has accumulated on the pipe in the last 5 years.

As a result of the change in the depth of the floating portion of the 40" pipe, the modeling Makai completed over the past year as part of our Contract 59235 work for NELHA is no longer valid. If the contractor were to complete the planned repairs to the 40" pipeline bridles with the dimension shown in our submitted design drawings, Makai does not believe that these repairs would be effective in providing the intended long term restraint for the 40" catenary pipeline.

While it is not specifically stated in the scope of work for the remaining Task 6 of our contract (Engineering Services during Construction), Makai had planned to obtain a set of depth measurements from the 40" repair contractor to validate and make minor corrections to the bridle lengths suggested on our submitted drawings. The modeling now needed to evaluate the design modifications that will take into account the more radical changes observed in the pipe goes well beyond any modeling Makai had intended. Therefore, with this letter we are requesting a change order be added to Contract 59235. I have included a below a suggested statement of work for this change order work. Makai requests an additional \$25,000 be added to the Contract 59235 total to cover engineering time for recalibration of the model to account for the new conditions and to determine modifications to the repair design that address the new conditions.

**Suggested Change Order Scope of Work**

1. Evaluate video and other recorded data from the recently completed HURL inspection dive on the 40" pipe and extract needed data for input to Makai's Orcaflex model of the 40" catenary pipe.
2. Run, check and modify the Orcaflex model to determine if the observed pipe conditions can be duplicated in the computer model.
3. Once step 2 has been satisfactorily completed, evaluate the addition of various amounts of buoyancy on the pipe at one or more locations to help alleviate the long term changes in the floating pipeline's depth.
4. Determine the optimal configuration of added buoyancy together with any required changes to the pipeline's bridle restraints (Bridles B, C and D, specifically) and revise the contract documents (drawings and specifications) accordingly. Provide brief report of modeling results and
5. Submit the modified contract documents to NELHA for transmission to the installation contractor. Discuss changes as needed with repair contractor in oral and written communication.

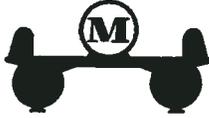
Please let me know if you need more data to complete this change order request.

Sincerely,



Dale Jensen  
Sr. Ocean Engineer

~~4223-dj~~



## MAKAI OCEAN ENGINEERING, INC.

P.O. Box 1206, Kailua, Oahu, Hawaii 96734

MOE – 4223-dj  
January 10, 2013

Jan War  
Operations Manager  
Natural Energy Laboratory of Hawaii Authority  
73-4460 Queen Kaahumanu Hwy., #101  
Kailua-Kona, HI 96740

Subject: Change Order Request on Contract 59235

Dear Jan:

Please consider the following cost breakdown information related to Makai's original change order request submitted on 16 July 2012. I hope this provides the information you need to process this request. The total cost for the 5 tasks is \$25,048.00.

1. Evaluate video and other recorded data from the recently completed HURL inspection dive on the 40" pipe and extract needed data for input to Makai's Orcaflex model of the 40" catenary pipe. **Cost= \$2836.00**
2. Run, check and modify the Orcaflex model to determine if the observed pipe conditions can be duplicated in the computer model. **Cost \$4451.00**
3. Once step 2 has been satisfactorily completed, evaluate the addition of various amounts of buoyancy on the pipe at one or more locations to help alleviate the long term changes in the floating pipeline's depth. **Cost = \$7009.00**
4. Determine the optimal configuration of added buoyancy together with any required changes to the pipeline's bridle restraints (Bridles B, C and D, specifically) and revise the contract documents (drawings and specifications) accordingly. Provide brief report of modeling results. **Cost = \$7503.00**
5. Submit the modified contract documents to NELHA for transmission to the installation contractor. Discuss changes as needed with repair contractor in oral and written communication. **Cost = \$3249.00**

Sincerely,

Dale Jensen  
Sr. Ocean Engineer