

Engineering Change Request Form

Change Request No.: 1303-01025	Date: 4/4/2013	WBS: 1.3.2.4
Control Account Name: 1.3.2.4 - Project Year 4 (PY4) System Engineering	Configuration Manager: Wickman, Diana	Control Account Manager: White, Sheri
SECTION TO BE COMPLETED BY PERSON REQUESTING CHANGE:		
Requestor: Sheri White	Telephone Number: (508) 289-3740	
Request Name (Include document number and revision level): Pioneer Fuel Cell Deployment Waiver		
Description of Change (Include all related systems): This ECR requests a waiver on the deployment of Fuel Cells on Coastal Surface Moorings for 2013 and 2014. Fuel Cells are planned for deployment on the Coastal Pioneer Surface Moorings, and Coastal Endurance WA Shelf and Offshore Surface Moorings. They are required for successful deployment of the AUV Docks on the Coastal Pioneer Inshore and Offshore Surface Moorings. The first planned deployment of the Fuel Cell is one unit at Pioneer Inshore in May 2014. A waiver is required for all Pioneer Surface Moorings for the October 2013 deployment (Pioneer I) and for the Pioneer Central and Offshore Surface Moorings for the May 2014 deployment (Pioneer II). The requirement being temporarily waived is: L3-CG-RQ-1019 CGSN Surface Buoys at Global Southern Ocean, Coastal Pioneer, and Coastal Endurance WA Shelf and Offshore sites shall generate an average (over the length of the deployment) power of no less than 250 Watts. NOTE: the Global Southern Ocean Surface Mooring can meet this requirement without fuel cells due to the environmental (i.e., wind and solar) conditions at that site. The path forward with Contingency and Schedule updates was approved by ECR 1303-01005 (Coastal Surface Mooring Fuel Cell Procurement, Development, and Construction Contingency Funds Request).		
Reason for Change: The procurement and deployment strategy for the Fuel Cell was updated ECR 1303-01005 which was approved by CG, System and NSF Boards. The waiver is required for the deployment of High Power Surface Moorings without fuel cells during the Fall 2013 and Spring 2014 deployments.		
Benefit to OOI: This temporary waiver is needed to allow the initial Pioneer High Power Surface Moorings to be deployed on schedule. The primary driver for the fuel cell is the AUV Dock. The AUV Dock will not be ready for deployment until Fall 2014, when 2 units will be deployed.		
<i>Requestor Assessment of Impact to Control Account:</i>		
Scope: There is no change in scope. The deployment of the Fuel Cell on the Coastal Pioneer Surface Moorings will be delayed, but all Fuel Cells will be deployed before the end of the MREFC period.		
Schedule: The deployment of the first fuel cell will be delayed until May 2014, and the remain fuel cells until Fall 2014 as per ECR 1303-01005.		
Cost: There is no change in cost associated with this waiver. Cost aspects of the Fuel Cell deployments were covered in ECR 1303-01005.		
SECTION TO BE COMPLETED BY IO/SL CCB CHAIRPERSON:		
<i>Assessment of Impact to IO Project:</i>		
Master Schedule: CG CCB: Concur with requestor's assessment. SL CCB: Concur with requestor's assessment.		
Project Cost: CG CCB: Concur with requestor's assessment. SL CCB: Concur with requestor's assessment.		
Deliverables:		

CG CCB: The Fuel Cells will be deployed as planned prior to the end of MREFC.
SL CCB: Concur

Potential Impact to Science and Design / As-built Capability: CG CCB: This should have no impact on the science capabilities. Fuel Cells are need to support the AUV Docks, but these will not be deployed until Fall 2014.
SL CCB: Concur

Percent Impact on WBS elements(s) selected: 0%	Percent Impact on OOI: 0%	
Contingency \$0	Contingency Schedule (weeks): 0	
Signature of CG CCB Chairperson: Sheri White (swhite@whoi.edu)	Date: 4/24/2013 1:30:00 PM	Board Determination: Approved
Signature of System CCB Chairperson: Ed Chapman (echapman@oceanleadership.org)	Date: 5/7/2013 2:00:00 PM	Board Determination: Approved with Liens
<i>CERTIFICATION OF TECHNICAL DATA PACKAGE AND CONTROL SYSTEM UPDATE</i>		
Signature of Configuration Manager: Diana Wickman (dwickman@whoi.edu)	Date: 6/14/2013 12:16:41 PM	Systems and Documentation Updated: Confirmed Complete

Attach supporting technical documentation and or additional comments as needed.

Change Request No.: 1303-01025**Request Name:** Pioneer Fuel Cell Deployment Waiver**ECR Comments**

#	Reviewer	Date Added	General Comment	Requestor Response	CCB Decision	Lien
1	Steve Holford	4/19/2013	The Benefit to OOI statement should say that two AUV/Dock systems are to be deployed at Pioneer in Fall 2014. The current text says one system.	Accept		
2	Ed Dever	4/24/2013	no comments			
3	Ed Chapman	4/30/2013	I recommend approval.			
4	Al Plueddemann	4/30/2013	Recommend approval.			
5	Steve Holford	5/6/2013	As the Fuel Cell contract has not yet been awarded, the delivery schedule is uncertain and is unlikely to support the deployment at Pioneer II in May 2014. In that case, full integration testing will be conducted on shore, and the first deployment will be Pioneer III in Fall 2014. Recommend that text be amended to waive the May 2014 deployment of single fuel cell.	Accept	Accept	Yes
6	Michael Zernick	5/6/2013	I recommend approval pending the resolution of all comments.			

Change Request No.: 1303-01025**Request Name:** Pioneer Fuel Cell Deployment Waiver**ECR Vote (Highest Level Board: System)**

Title	Member Name	Delegate Name	Vote	Comment
Cyberinfrastructure (CI) COTR	Phil Ardunay		Approve w. Liens	
Project Scientist	Jack Barth		Approve w. Liens	
Field Operations Coordinator	Liz Caporelli		Approve w. Liens	
Chief Systems Engineer	Ed Chapman		Approve w. Liens	
Former teammate	Alan Chave		Approve w. Liens	
Deputy PM	Bob Collier		Approve w. Liens	
OOI Program Director/PI	Tim Cowles		Approve w. Liens	
Project Manager	Mike Crowley		Approve w. Liens	
Program Director/PI	John Delaney		Approve w. Liens	
Systems Engineer (PNW)	Ed Dever		Approve w. Liens	
Principal Investigator	Scott Glenn		Approve w. Liens	
COTR - Associate Project Manager RSN	Paul Hagstrom		Approve w. Liens	
Project Management	Brian Ittig		Approve w. Liens	
OOI Endurance Operations Manager	Tom Kearney		Approve w. Liens	
Project Scientist	Deb Kelley		Approve w. Liens	
Sr Project Manager	Mike Kelly		Approve w. Liens	
Business Operations Manager	Ben Korin		Approve w. Liens	
Program Manager and Chief Engineer	Paul Matthias		Approve w. Liens	
COTR - Associate Project Manager EPE	Andrea McCurdy		Approve w. Liens	
Senior Systems Engineer	Chuck McGuire		Approve w. Liens	
Associate Director	Michael Mulvihill		Approve w. Liens	
Principal Investigator for CI	John Orcutt		Approve w. Liens	
Project Scientist	Al Plueddemann		Approve w. Liens	

CGSN and EA COTR	Greg Settle		Approve w. Liens	
Observatory Director	Julie Thomas		Approve w. Liens	
Co-Principal Investigator	John Trowbridge		Approve w. Liens	
Deputy Principal Investigator	Frank Vernon		Approve w. Liens	
Program Director/PI	Bob Weller		Approve w. Liens	
Lead System Engineer	Sheri White		Approve w. Liens	
System Engineer	Joe Wieclawek		Approve w. Liens	
Quality & Safety Manager	Michael Zernick		Approve w. Liens	

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ECR Liens/Action Items

Lien	Due Date	Complete	Completion Date
As the Fuel Cell contract has not yet been awarded, the delivery schedule is uncertain and is unlikely to support the deployment at Pioneer II in May 2014. In that case, full integration testing will be conducted on shore, and the first deployment will be Pioneer III in Fall 2014. Recommend that text be amended to waive the May 2014 deployment of single fuel cell.	5/14/2013	Yes	6/14/2013

Action Item	Due Date	Complete	Cancel	Completion Date
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ECR Meeting Results and Notes

Board Level	Meeting Date	Meeting Name	Meeting Result	Meeting Notes
CG	4/24/2013	CG CCB 20130424	Approved	
System	5/7/2013	2013-05-07 System Level CCB	Approved with Liens	Jun 14, 2013: Due to NSF directed changes to the commissioning process, deployment waivers are no longer applicable. This ECR has been closed without being implemented. --ECC