

Engineering Change Request Form

Change Request No.: 1300-00233	Date: 3/6/2012	WBS: 1.3.3.7.4 1.3.4.3.6
Control Account Name: 1.3.3.7 - Vehicle Development	Configuration Manager: Griffin, Emily	Control Account Manager: Dever, Ed

SECTION TO BE COMPLETED BY PERSON REQUESTING CHANGE:

Requestor: Ed Dever

Telephone Number: (541) 737-2749

Request Name (Include document number and revision level):

Coastal Glider CTDGV waiver

Description of Change (Include all related systems):

This ECR requests a waiver of the specification statements and requirements noted below for the CGSN Coastal Glider procured from Teledyne Webb Research. The specification statements and applicable requirements are contained with the Specifications For Conductivity Temperature Depth (CTD) Instruments On Mobile Assets And Profilers (DCN# 1331-00001) for the reasons noted below. The report of noncompliance with specifications was initiated by 3167-17000 Quick Look Report for Coastal Glider PVT CG-VE-3098.

"COND-008 For CTD instruments on mobile assets and profilers, conductivity shall be sampled at a frequency of 1 Hz." <L4-CG-IP-RQ-440>

-- Per TWR Purchase Specification, sampling frequency=0.5Hz

"TEMP-005 For CTD instruments on mobile assets and profilers, temperature measurements shall be sampled at a frequency of 1 Hz."

-- Per TWR Purchase Specification, sampling frequency=0.5Hz

"PRES-006 For CTD instruments on mobile assets and profilers, pressure measurements shall be sampled at a frequency of 1 Hz."

-- Per TWR Purchase Specification, sampling frequency=0.5Hz

This ECR is a Waiver Request submitted in accordance with the Procedure for Obtaining Waivers which resides in the Systems Engineering Process Library in Alfresco. A waiver is a specific written authorization to accept a product which departs from specified requirements, but nevertheless is considered suitable for use "as is" or after modification by an approved method. A waiver states that a requirement does not need to be satisfied in order to pass a test of the related product. Waivers are associated with particular products and do not modify the requirement(s) in question. The procurement Source Selection and Evaluation Boards (SSEB) are authorized to procure products which deviate from the approved requirements in order to achieve the best value for the program. This scope of this ECR is whether the item is acceptable and the Waiver should be granted; it does not include the SSEB process.

The specific requirements being waived for the CGSN Coastal Glider procured from Teledyne Webb Research are as follows:

L2-SR-RQ-3858

L2-SR-RQ-3861

L4-CG-IP-RQ-162

L4-CG-IP-RQ-440

L4-CG-IP-RQ-594

Reason for Change:

1. The RFP for the coastal glider was let prior to the development of instrument specifications. Instead vendors were instructed to price gliders according to an exemplar sensor list. To reduce development costs and time, the exemplar sensors were chosen based on instruments already integrated into commercial off the shelf (COTS) gliders. Exemplars were also chosen with the advice and concurrence of OOI project scientists. The CTD instrument integrated into the coastal glider is the exemplar.

2. As specified in the RFP, specific makes and models of glider sensors were chosen by the vendor in consultation with OOI engineers and scientists during CLIN-0001 (development) of the coastal glider contract. CGSN engineers and scientists selected and approved the CTD instrument in the coastal glider.

3. All instruments selected for the glider, including the CTD instrument, were reviewed and approved at the critical design review (CDR) held 29 June 2011.

4. Gliders have very strict power and size requirements on their payload. The sampling rate of the CTD integrated on the glider based on available power and packaging requirements of the Slocum G2 glider.

5. The typical glider descent speed is ~0.18 m/s, so the CTD sampling rate is sufficient to meet vertical resolution noted in coastal glider specification 3304-00003, SENS-002: Sensors shall be sampled such that the vertical resolution of their measurement parameter is not less than 1 m. <L4-CG-GD-RQ-119>

Benefit to OOI:

This waiver allows the procurement and fielding of coastal gliders to proceed and allows the use of the OOI test article coastal glider for operation in the Endurance and/or Pioneer arrays.

Requestor Assessment of Impact to Control Account:

Scope:

none

Schedule:

none

Cost:

none

SECTION TO BE COMPLETED BY IO/SL CCB CHAIRPERSON:

Assessment of Impact to IO Project:

Master Schedule:

No change.

Project Cost:

No change.

Deliverables:

No change.

Potential Impact to Science and Design / As-built Capability: No impact. From the text above, "The typical glider descent speed is ~0.18 m/s, so the CTD sampling rate is sufficient to meet vertical resolution noted in coastal glider specification 3304-00003, SENS-002: 'Sensors shall be sampled such that the vertical resolution of their measurement parameter is not less than 1 m'. <L4-CG-GD-RQ-119>"

Percent Impact on WBS elements(s) selected: 0%

Percent Impact on OOI: 0%

Contingency \$0

Contingency Schedule (weeks): 0

Signature of System CCB Chairperson:

Ed Chapman (echapman@oceanleadership.org)

Date:

3/15/2012 11:00:00 AM

Board Determination:

Approved with Liens

CERTIFICATION OF TECHNICAL DATA PACKAGE AND CONTROL SYSTEM UPDATE

Signature of Configuration Manager:

Emily Griffin (egriffin@oceanleadership.org)

Date:

4/17/2012 12:36:16 PM

Systems and Documentation Updated:

Confirmed Complete

Attach supporting technical documentation and or additional comments as needed.

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ECR Comments

#	Reviewer	Date Added	General Comment	Requestor Response	CCB Decision	Lien
1	David Ayers	3/7/2012	document reviewed - no comments			
2	Al Plueddemann	3/8/2012	Recommend approval.			
3	Ed Chapman	3/9/2012	I recommend approval.			
4	Alan Chave	3/13/2012	Reviewed--recommend approval			
5	Michael Zernick	3/13/2012	I recommend approval.			
6	Susan Banahan	3/13/2012	Recommend approval. I didn't see it - what is the sampling rate of the glider CTD?			
7	Susan Banahan	3/13/2012	Please ignore my previous question - error from a long day.			
8	Paul Hagstrom	3/14/2012	Recommend Approval			
9	Sheri White	3/14/2012	The text of the ECR should explicitly state the Requirement numbers affected (L4-CG-IP-RQ-440 and L2-SR-RQ-3858; L4-CG-IP-RQ-162 and L2-SR-RQ-3460; L4-CG-IP-RQ-594 and L2-SR-RQ-3861).	Accept	Accept	Yes
10	Bill Pritchett	3/14/2012	Recommend approval			

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ECR Vote (Highest Level Board: System)

Title	Member Name	Delegate Name	Vote	Comment
Senior Project Scientist	Steve Ackleson		Approve w. Liens	
Project Manager	Matthew Arrott		Approve w. Liens	
EHS Manager	David Ayers		Approve w. Liens	
Associate Program Director	Susan Banahan		Approve w. Liens	
Project Manager	Pete Barletto		Approve w. Liens	
COTR - Associate Project Manager CG	Mark Bittenbender		Approve w. Liens	
Chief Systems Engineer	Ed Chapman		Approve w. Liens	
Former teammate	Alan Chave		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	
Senior Project Manager, Advisor	Anthony Ferlaino		(Did Not Vote)	
Principal Investigator	Scott Glenn	Mike Crowley	Approve w. Liens	
COTR - Associate Project Manager RSN	Paul Hagstrom		Approve w. Liens	
Project Scientist	Deb Kelley	Pete Barletto	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	
Principal Investigator for CI	John Orcutt		Approve w. Liens	
Project Scientist	Al Plueddemann		Approve w. Liens	
COTR - Associate Project Manager CI	Bill Pritchett	Mark Bittenbender	Approve w. Liens	
CGSN and EA COTR	Greg Settle		Approve w. Liens	
EV Consultant	Steve Stratton		Approve w. Liens	
Co-Principal Investigator	John Trowbridge		Approve w. Liens	

Deputy Principal Investigator	Frank Vernon		Approve w. Liens	
Program Director/PI	Bob Weller	John Trowbridge	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
The text of the ECR should explicitly state the Requirement numbers affected (L4-CG-IP-RQ-440 and L2-SR-RQ-3858; L4-CG-IP-RQ-162 and L2-SR-RQ-3460; L4-CG-IP-RQ-594 and L2-SR-RQ-3861).	3/22/2012	Yes	3/15/2012

Action Item	Due Date	Complete	Cancel	Completion Date
Mark the Verification Status for the L2 requirements as "Waived" in DOORS.	4/2/2012	No	Yes	
Mark the Verification Status for the L3 requirements as "Waived" in DOORS.	4/2/2012	No	Yes	
Mark the Verification Status for the L4 requirements as "Waived" in DOORS.	4/2/2012	Yes	No	4/17/2012
Update "Approved Waiver-CM" attribute for affected L2 requirement (s) in DOORS with the ECR number of the approved Waiver and a description of the affected product.	4/2/2012	Yes	No	4/2/2012
Update "Approved Waiver-CM" attribute for affected L3 requirement (s) in DOORS with the ECR number of the approved Waiver and a description of the affected product.	4/2/2012	No	Yes	
Update "Approved Waiver-CM" attribute for affected L4 requirement (s) in DOORS with the ECR number of the approved Waiver and a description of the affected product.	4/2/2012	Yes	No	4/2/2012
Baseline L2 Science Requirements module	4/25/2012	Yes	No	4/17/2012
Baseline L4 CG Instrument Package module	4/25/2012	No	Yes	
Export updated L2 Science Requirements spreadsheet and post in Alfresco	4/25/2012	Yes	No	4/17/2012
Export updated L4 CG Instrument Package spreadsheet and post in Alfresco	4/25/2012	No	Yes	
Update L2 Science Requirements module	4/25/2012	Yes	No	4/11/2012
Update L4 CG Instrument Package module	4/25/2012	Yes	No	4/11/2012

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ECR Meeting Results and Notes

Board Level	Meeting Date	Meeting Name	Meeting Result	Meeting Notes
System	3/15/2012	2012-03-15 System Level CCB	Approved with Liens	