Engineering Change Request Form

Change Request No.:	**Date:**	**WBS:**
1304-00257	11/6/2012	1.4.3.9
Control Account Name: 1.4.3.9 - Core Instrument Packages Development	**Configuration Manager:** McGuire, Chuck	**Control Account Manager:** Denny, Gerald

SECTION TO BE COMPLETED BY PERSON REQUESTING CHANGE:

Requestor: Dana Manalang	**Telephone Number:** (206) 685-9910

Request Name (Include document number and revision level):
TMPSF Instrument Waiver

Description of Change (Include all related systems):
This ECR requests a waiver for the XR-420 Custom Thermistor Chain (24 thermistors) component of the TMPSF instrument for the following requirements:

L4-RSN-IP-RQ-430: The diffuse fluid 3-D temperature array shall make temperature measurements over a range of 2 to 150°C.
L2-SR-RQ-3346: Diffuse fluid temperature shall be measured over a range of 2.0 to 150°C.

The XR-420 thermistor chain is a component in the TMPSF Instrument. RSN selected the component through a competitive Request for Quote (RFQ) process, in accordance with institutional procurement obligations. However, it does not meet the above requirements. According to the vendor, the thermistor chain material is rated (conservatively) to a maximum temperature of 50°C. Therefore, it will not meet the upper end of the required temperature range.

This limitation will be managed by placing the instrument in a diffuse flow area known to have fluid temperatures consistently below the rating of the thermistor chain. This will not prevent the TMPSF instrument from meeting its scientific objective, which is to observe the 3-D temperature change over a ~1m³ volume near the water/seafloor interface located in a diffuse flow area.

Reason for Change:
While the selected instrument does not meet the requirements noted above, it provides the best value to OOI at this time.

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 selection process.

Benefit to OOI:
This waiver will enable the OOI program to use the selected TMPSF instrument component and meet the science goals at its Axial diffuse flow deployment location.

Requestor Assessment of Impact to Control Account:

Scope:
No Change - the instrument will be deployed at the Axial Ashes subsite, according to plan.

Schedule:
No Impact

Cost:
No Impact

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: While the component in question does not meet the stated requirement, the plan has been and continues to be to deploy the instrument in diffuse flow area known to have fluid temperatures consistently below the rating of the thermistor chain. Thus the temperature limit will not impact the ability of the instrument to gather the data that it is intended to gather.

Percent Impact on WBS elements(s) selected: 0%	**Percent Impact on OOI:** 0%	
Contingency $0	**Contingency Schedule (weeks):** 0	
Signature of RSN CCB Chairperson: Chuck McGuire (mcguire@apl.washington.edu)	**Date:** 11/9/2012 1:45:00 PM	**Board Determination:** Approved
Signature of System CCB Chairperson: Ed Chapman (echapman@oceanleadership.org)	**Date:** 11/20/2012 2:00:00 PM	**Board Determination:** Approved
CERTIFICATION OF TECHNICAL DATA PACKAGE AND CONTROL SYSTEM UPDATE		
Signature of Configuration Manager: Chuck McGuire (mcguire@apl.washington.edu)	**Date:** 12/3/2012 3:56:43 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	Sheri White	11/15/2012	Recommend approval.			
2	Ed Chapman	11/20/2012	I recommend approval.			
3	Michael Zernick	11/20/2012	No comments.			
4	Susan Banahan	11/20/2012	Recommend approval (assuming RSN project scientists reviewed and agreed with this solution).			

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ECR Vote (Highest Level Board: System)				
Title	**Member Name**	**Delegate Name**	**Vote**	**Comment**
Project Manager	Matthew Arrott		Approve	
O&M Manager	Shahpour Ashaari		Approve	
Associate Program Director	Susan Banahan		Approve	
Systems Engineer	Bill Bergen		Approve	
Field Operations Coordinator	Liz Caporelli		Approve	
Chief Systems Engineer	Ed Chapman		Approve	
Former teammate	Alan Chave		Approve	
OOI Program Director/PI	Tim Cowles		Approve	
Project Manager	Mike Crowley		Approve	
Program Director/PI	John Delaney		Approve	
Senior Project Manager, Advisor	Anthony Ferlaino		Approve	
Principal Investigator	Scott Glenn		Approve	
COTR - Associate Project Manager RSN	Paul Hagstrom		Approve	
Project Management	Brian Ittig		Approve	
Project Scientist	Deb Kelley		Approve	
Business Operations Manager	Ben Korin		Approve	
Program Manager and Chief Engineer	Paul Matthias		Approve	
COTR - Associate Project Manager EPE	Andrea McCurdy	Susan Banahan	Approve	
Senior Systems Engineer	Chuck McGuire		Approve	
Associate Director	Michael Mulvihill		Approve	
Principal Investigator for CI	John Orcutt		Approve	
Project Scientist	Al Plueddemann		Approve	
COTR - Associate Project Manager CI	Bill Pritchett		Approve	
CGSN and EA COTR	Greg Settle		Approve	
Observatory Director	Julie Thomas		Approve	
Co-Principal Investigator	John Trowbridge		Approve	

Deputy Principal Investigator	Frank Vernon		Approve	
Program Director/PI	Bob Weller		Approve	
Lead System Engineer	Sheri White		Approve	
System Engineer	Joe Wieclawek		Approve	
Quality & Safety Manager	Michael Zernick		Approve	

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ECR Liens/Action Items

Lien	Due Date	Complete	Completion Date

Action Item	Due Date	Complete	Cancel	Completion Date
Baseline L2 Science Requirements module	12/17/2012	Yes	No	12/3/2012
Baseline L4 RSN Instrument Package module	12/17/2012	Yes	No	12/3/2012
Export updated L2 Science Requirements spreadsheet and post in Alfresco	12/17/2012	Yes	No	12/3/2012
Export updated L4 RSN Instrument Package spreadsheet and post in Alfresco	12/17/2012	Yes	No	12/3/2012
Update L2 Science Requirements module	12/17/2012	Yes	No	12/3/2012
Update L4 RSN Instrument Package module	12/17/2012	Yes	No	12/3/2012

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ECR Meeting Results and Notes

Board Level	Meeting Date	Meeting Name	Meeting Result	Meeting Notes
RSN	11/9/2012	RSN IO CCB	Approved	
System	11/20/2012	2012-11-20 System Level CCB	Approved	