Verification Procedure & Results

Test Procedure Document No.:	Test Procedure Rev.:
3166-90102	A

Test Case Name:	Test Plan Document #	Test Plan Rev.:	Test End Date:
Coastal Surface Piercing Profiler L3 Inspection and Analysis VER-CG-275	3161-90000	A	

Test Conductor (Print Name)	Signature	Design Engineer (Print Name)	Approval Signature	Date
		John Koegler	John Koegler	01/06/2014
Test Director (Print Name)	Signature	**System Engineer** (Print Name)	Approval Signature	Date
		Jonathan Fram	Jonathan Fram	
Witnessed by (Print name)	Signature	**QA/QC Engineer** (Print Name)	Approval Signature	Date
DOORS Verification Procedure ID	**DOORS Verification Event ID**	**Test Results Reviewed**	**QA:**	Date
Ver-CG-275	CG-VE-3091		**Test Dir.**	Date

Test Description

The Coastal Surface Piercing Profiler (CSPP) is an instrument platform to be deployed at selected Endurance Array and Pioneer locations. The CSPP, less the anchoring system, is purchased as a fully-integrated platform. Instruments are attached to instrument frames within the the CSPP with vendor-fabricated brackets. The uncabled implementation is internally powered and communicates either by LOS radio or satellite phone. Nominal deployment method is to use a ship's winch to deploy the anchor and mooring. The cabled embodiment derives power and communications from the Regional Scale Nodes (RSN) 48V/100 BaseT cabled infrastructure through the RSN Medium Power Junction Box (MPJBox) at CESH02. Nominal deployment method is to use an ROV to 'fly' it to the desired location and then use a wet-mateable connector for cable connection. The test article is This test case verifies that the physical and software characteristics of the CSPP satisfy the cited L4 requirements as captured in the OOI DOORS system. This document is for (remove strikethrough of appropriate series) ~~P/N 3310-00004-00001 Uncabled Configuration (Series A) P/N 3310-00004-00002 cabled Configuration (Series B)~~

Requirements Addressed

L3-CG-RQ-489,L3-CG-RQ-490,L3-CG-RQ-445,L3-CG-RQ-273,L3-CG-RQ-585,L3-CG-RQ-586,L3-CG-RQ-1032,L3-CG-RQ-589,L3-CG-RQ-590,L3-CG-RQ-887
L3-CG-RQ-777,L3-CG-RQ-277,L3-CG-RQ-278,L3-CG-RQ-279,L3-CG-RQ-280,L3-CG-RQ-282,L3-CG-RQ-283,L3-CG-RQ-284,L3-CG-RQ-285,L3-CG-RQ-584,L3-CG-RQ-999,
L3-CG-RQ-1001,L3-CG-RQ-859

Test Setup

The CSPP will be fully assembled and integrated, including all electronics, pressure housings, and cables. Pre-delivery operational testing has been performed by the vendor.

Test Artifacts

This document (all required measurements will be incorporated in the Observed Results section)
Vendor supplied test reports

Test Procedure 3166-90102 Rev A				Test Results		
Step#	Instructions	Expected Results	Requirement ID	Observed Results	Pass/Fail	Notes
1	Check verification status of requirements L4-CG-PR-RQ-108, 145	A recovery beacon is present.	L3-CG-RQ-489			
2	Check verification status of requirements L4-CG-PR-RQ-106, 143	A GPS receiver system is present.	L3-CG-RQ-490			
3	Check verification status of requirements L4-CG-PR-RQ-??	Components of the CGSN shall be shared between the regional, coastal and global infrastructure.	L3-CG-RQ-445			
4	Check verification status of requirements L4-CG-PR-RQ-69, 94	The profiler can profile between the surface and 200m at 25cm resolution	L3-CG-RQ-273			
5	Check verification status of requirements L4-CG-PR-RQ-69, 355	The profiler can reach within 1m of the surface in the presence of winds up to 10m/s and maximum wave height of 3m.	L3-CG-RQ-585			
6	Check verification status of requirements L4-CG-PR-RQ-74	The profiler will perform 4 profiles within the space of 24 hours.	L3-CG-RQ-586			

Test Procedure 3166-90102 Rev A				Test Results		
Step#	Instructions	Expected Results	Requirement ID	Observed Results	Pass/Fail	Notes
7	Check verification status of requirements L4-CG-PR-RQ-79, 229	Uncabled Coastal Surface-Piercing Profiers shall operate from primary batteries.	L3-CG-RQ-1032			
8	Check verification status of requirements L4-CG-PR-RQ-335	Examine engineering data from a sample profile.	L3-CG-RQ-589			
9	Check verification status of requirements L4-CG-PR-RQ-335	Uncabled Coastal Surface-Piercing Profiler Moorings shall measure the heading of the profiling body.	L3-CG-RQ-590			
10	Check verification status of requirements L4-CG-PR-RQ-98	Coastal Surface-Piercing profilers shall include a long-range bi-directional communications capability.	L3-CG-RQ-887			
11	Check verification status of requirements L4-CG-PR-RQ-264, 379, L4-CG-PC-RQ-900	Uncabled Coastal Surface Piercing Profiler Moorings shall be capable of communication with the adjacent surface mooring.	L3-CG-RQ-777			
12	Check verification status of requirements L4-CG-PR-RQ-81 and relevant L4s for the SBE49 CTD	Coastal Surface-Piercing Profilers shall measure Conductivity, Temperature, and Depth (CTD).	L3-CG-RQ-277			
13	Check verification status of requirements L4-CG-PR-RQ-82 and relevant L4s for the Aanderaa 4831 DOSTA	Coastal Surface-Piercing Profilers shall measure Dissolved Oxygen (DO).	L3-CG-RQ-278			
14	Check verification status of requirements L4-CG-PR-RQ-91 and relevant L4s for Nortek Aquadopp	Coastal Surface-Piercing Profilers shall measure three axis point water velocity.	L3-CG-RQ-279			
15	Check verification status of requirements L4-CG-PR-RQ-84 and relevant L4s for the WETLabs ECO Triplet FLORT	Coastal Surface-Piercing Profilers shall measure Chlorophyll a Fluorescence, CDOM Fluorescence, and Optical Backscatter.	L3-CG-RQ-280			
16	Check verification status of requirements L4-CG-PR-RQ-87 and relevant L4s for the WETLabs AC-S OPTAA	Coastal Surface-Piercing Profilers shall measure Optical attenuation and absorption.	L3-CG-RQ-282			
17	Check verification status of requirements L4-CG-PR-RQ-88 and relevant L4s for the SATLANTIC OCR-507	Coastal Surface-Piercing Profilers shall measure Spectral Irradiance.	L3-CG-RQ-283			
18	Check verification status of requirements L4-CG-PR-RQ-90 and relevant L4s for the SATLANTIC SUNA with biowiper	Coastal Surface-Piercing Profilers shall measure Nitrate.	L3-CG-RQ-284			
19	Check verification status of requirements L4-CG-PR-RQ-89 and relevant L4s for the WETLabs ECO PAR	Coastal Surface-Piercing Profilers shall measure Photosynthetically Active Radiation (PAR).	L3-CG-RQ-285			
20	Check verification status of requirements L4-CG-PR-RQ-69 (waived)	Uncabled Coastal Surface-Piercing Profiler Moorings shall operate in depths up to 200 meters.	L3-CG-RQ-584			
21	Check verification status of requirements L4-CG-PR-RQ-74 (waived)	When deployed at a depth of 70 meters or more, uncabled Coastal Surface Piercing Profilers shall be able to complete 300 roundtrip profile cycles without service.	L3-CG-RQ-999			
22	Check verification status of requirements L4-CG-PR-RQ-74 (waived)	When deployed at a depth of less than 70 meters, uncabled Coastal Surface Piercing Profilers shall be able to complete 700 roundtrip profile cycles without service.	L3-CG-RQ-1001			