Quick Look Test Report

Document No.: 3167-17000

Test Event Name:	Test Plan Document No.:	Test Plan Rev.:	Report Date:
Coastal Glider PVT CG-VE-3098	**3167-10000**	**2-00**	**2012-01-04**

Test Report Reviewed & Approved By

Quality Engineer (Print Name)	Signature	Date	Test Director (Print Name)	Signature	Date
			Edward Dever	**Edward Dever (in lieu of electronic signature)**	2012-03-09

Test Event Description

This document refers to Coastal Glider Product Verification Test activities occurring prior to deployment of the glider for sea trials. These activities include inspections and demonstrations at the TWR site and Ashumet Pond.
Details of verification of individual requirements are found in DCN 3167-10101 (Ver-CG-45), 3167-10102 (Ver-CG-56), and 3167-10103 (Ver-CG-55).

Test Results

Test Case ID	Test Name / Description	Test Results / Data	Test Conclusions	Corrective Action	Requirement ID
TC-001 Ver-CG-45	VE-CG-3098 Inspections (Glider)	Inspections showed the cited requirements were met for the glider. Requirement numbers with (*) require further verifications (**) indicates multiple methods satisfied in this test case.	The relevant requirements are verified or partially verified (pending subsequent methods).	None To correctly address L4-CG-GD-RQ-110, the setting for variable u_max_lag_before_syncing_time must be set in autoexec.mi to 1 second.	L4-CG-GD-RQ: 167(**), 168(**), 213, 169(*), 104, 107, 109, 72, 73, 120, 141, 140 (see TC-003), 131(**), 77, 103, 110(*), 84, 85, 89, 180, 181,185, 187, 188, 189, 74, 217, 80(*), 195,L3-CG-RQ-445 (this platform only)
TC-001 Ver-CG-45	VE-CG-3098 Inspections (Glider Instruments)	Inspections showed the cited requirements were met for the glider instruments.	The relevant requirements are verified.	None	L4-CG-IP-RQ:159, 163, 593, 167, 171, 176, 177, 180, 342, 343, 344, 346, 348, 183, 186, 187, 213, 214, 216, 215, 218, 390, 397, 395, 223, 551, 659, 387, 388, 389, 391, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 479, 480, 481, 482, 483, 294, 446
TC-001 Ver-CG-45	VE-CG-3098 Inspections (Glider Instruments)	Inspections showed the cited requirements were not met for the glider instruments.	Documented specifications/capabilities for the selected sensors do not match the requirements. See table at end for requirement details.	Pending.	L4-CG-IP-RQ: 162, 440, 594, 182, 559, 217, 219, 393
TC-002 Ver-CG-56	Communications and Dry Tests	The glider powered up on a bench supply and communicated via Freewave with a Dockserver. Iridium speed results taken from archive data from a TWR glider and at-sea results from OOI glider. GPS contact made en route to Pioneer test deployment.	The relevant requirements are verified. (**) denotes requirements with multiple VMs that are completed by this step.	None	L4-CG-GD-RQ: 169 (demonstration)**, 106, 192, 193, 140, 123 L4-CG-GD-RQ-173 is verified in TC-004 (Ver-CG-54)

Test Results					
Test Case ID	**Test Name / Description**	**Test Results / Data**	**Test Conclusions**	**Corrective Action**	**Requirement ID**
TC-002 Ver-CG-56	Communications and Dry Tests	Required artifact files are pending. Verifying the requirements require these artifacts.	The requirements were not verified.		L4-CG-GD-RQ-172, (Freewave control of trajectory) Deferred to TC-010
TC-003 Ver-CG-55	Pre-deployment sheltered-water testing	The glider successfully passed the Ashumet Pond in-water Factory Acceptance Tests specified by TWR. Comms requirements (112, 114) are verified here for freewave, will be verified for Iridium in TC-004	The relevant requirements are verified. (**) denotes requirements with multiple VMs that are completed by this step. (*) denotes requirement verification will continue in other steps.	None	L4-CG-GD-216(*), 108, 105,112(*), 114(*),174 (L3-CG-RQ-315, 404), 175 (L3-CG-RQ-316, 405), 215 (L3-CG-RQ-735, 892) , 177 (L3-CG-RQ-317, 403), 178 (L3-CG-RQ-318, 406), 102, 110 (demonstration)** , 111, 179, 191, 192, 130, Moved from TC-004: L4-CG-GD-RQ-132, 133
TC-003 Ver-CG-55	Pre-deployment sheltered-water testing	Artifacts necessary to verify the requirements were not generated.	The requirements were not verified	The requirement states “shore station”. Per Ed Dever, this will be interpreted as “via Iridium”, and verification of this requirement will be deleted from this test case.	L4-CG-GD-79 (freewave)

Note on requirements with multiple verification methods: L4-CG-GD-RQ-169, 110 had inspection/demonstration VMs, and were both completed during this phase in different steps. L4-CG-GD-RQ-131 included an in-water demonstration, but the demonstration artifact is presented in the TC-001 procedure (DCN 3167-10101). L4-CG-GD-RQ-132 and 133 were originally scheduled for TC-004, but were moved to TC-003. Verification of requirement L4-CG-GD-RQ-80 will be demonstrated in TC-008 and TC-012 (Post-recovery evaluations).

Requirements pending resolution						
CTD2	Review the TWR Purchase Specification for Part No. G-1451 Rev A. Review instrument vendor documentation.	The instrument is capable of sampling at a frequency of 1 Hz.	L4-CG-IP-RQ-162 L4-CG-IP-RQ-440 L4-CG-IP-RQ-594	Per TWR Purchase Specification, sampling frequency=0.5Hz	Fail 11/4/2011 DN	Typical glider descent speed is ~0.18m/s, so sampling rate is sufficient to meet >1reading/meter (L4-CG-GD-RQ-119)
DO1	Review the TWR Purchase Specification for Part. No G-1410. Review instrument vendor documentation.	The instrument has an accuracy of ± 2% (with the value defined as that provided by a Winkler titration of a corresponding water sample).	L4-CG-IP-RQ-182	Instruments are calibrated against manufacturer secondary standards. Reported accuracy: <8µM or ±5 %, whichever is greater	Fail 11/10/2011 DN	Calibration method may not meet requirement, minimum ±5% accuracy is above requirement.
DO6	Review the TWR Purchase Specification for Part. No G-1410 and instrument vendor documentation.	The DO instrument has a response time of 60 seconds or less for the measured DO to be ±95% of the change in value.	L4-CG-IP-RQ-559	Vendor spec is for <25s to 63% “settling time”. Indicates 75 seconds to ±95% of the change in value.	Fail 11/10/2011 DN	
FLOR 5	Review the TWR Purchase Specification for Part. No. G-1815 and instrument vendor documentation.	Chlorophyll-a fluorescence is measured over a range of 0.03 to 50 µg/L.	L4-CG-IP-RQ-217	Per TWR Purchase Specification, sensitivity is 0.015-30 µg/L.	Fail 11/9/2011 DN	High end of range less than requirement.
FLOR 7	Review the TWR Purchase Specification for Part. No. G-1815 and instrument vendor documentation.	CDOM fluorescence has a range of 0.09 – 500 ppb relative to a quinine sulfate standard.	L4-CG-IP-RQ-219	Per TWR Purchase Specification, range is .28ppb minimum, 375 max.	Fail 11/9/2011 DN	for both extremes

FLOR 10	Review the TWR Purchase Specification for Part. No. G-1815 and instrument vendor documentation.	Optical backscatter instruments have a range of 0.001 bb(λ) /m to 0.2 bb(λ) /m.	L4-CG-IP-RQ-393	Per TWR Purchase Specification, range is 0.0015 bb(λ) /m to 3 bb(λ) /m.	Fail 11/9/2011 DN	Does not meet requirement for low end of range