Verification Procedure & Results

Test Procedure Document No.:	Test Procedure Rev.:
3102-00054	1-00

Test Case Name:	Test Plan Document #	Test Plan Rev.:	Test End Date:
Buoy Well Purging Test Procedure	3102-00050	1-00	

Test Conductor (Print Name)	Signature	**Design Engineer** (Print Name) Matthew Palanza	Approval Signature	Date 21-May-2014
Test Director (Print Name)	Signature	**System Engineer** (Print Name) Sheri White	Approval Signature	Date 22-May-2014
Witnessed by (Print name)	Signature	**QA/QC Engineer** (Print Name) Gary Cook	Approval Signature	Date 22-May-2014
DOORS Verification Procedure ID N/A	**DOORS Verification Event ID** N/A	**Test Results Reviewed**	**QA:**	Date
			Test Dir.	Date

Test Description

A full-scale mock up of the snorkel vent system is to be mounted to a representative instrument well. The exhaust vent of the ventilation system will be monitored with a portable gas detector. Helium will be introduced to the sealed instrument well. A stopwatch/timer will be used to determine the flow rate of Helium through the ventilation system due to the purging procedure using Nitrogen gas.

Requirements Addressed

L4-CG-SB-RQ-363 Instrument wells shall enable a mechanism to purge gases within the well without opening the hatch.

Test Setup

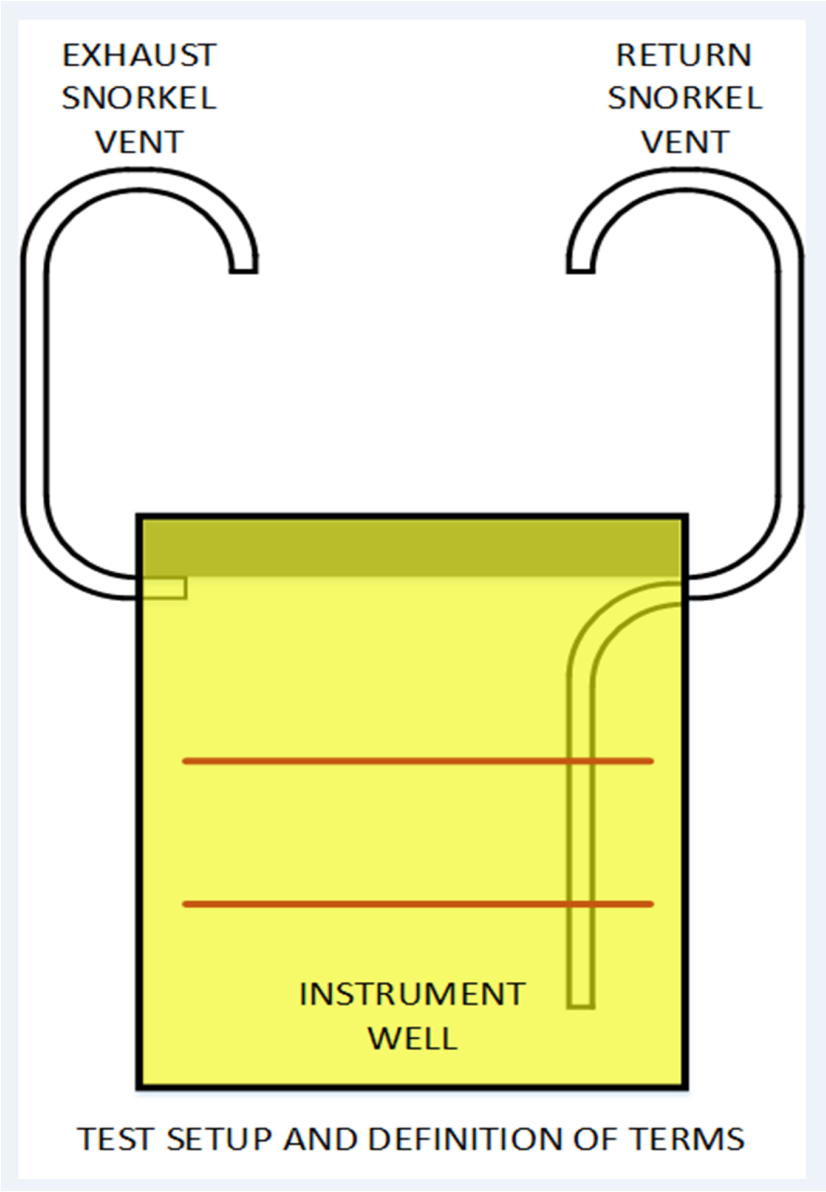
Full scale mock up of the return and exhaust snorkel vents mounted to an instrument well. Helium gas canister with valve connected to instrument well. Timing device or stopwatch. Determine the volume of the exhaust snorkel vent. Helium sensor must be capable of 1%, 10,000ppm resolution.

Test Artifacts

3102-00050

Test Procedure 3102-00054 Rev 1-00				Test Results		
Step#	**Instructions**	**Expected Results**	**Requirement ID**	**Observed Results**	**Pass/Fail**	**Notes**
1	Remove the flexible hose and partially obstruct the outlet of the exhaust snorkel at the instrument well coaming with a rubber stopper. Apply Helium sensor to exhaust valve opening.	This will slow Helium from venting out of the instrument well.				
2	Remove the flexible hose from the return vent and insert the helium tank fitting into the vent hole. Flood instrument well with Helium through the return snorkel vent until gas analyzer detects 4%, 40,000ppm Helium at the outlet vent.	Well will partially fill with Helium.				
3	Apply the outlet of the Nitrogen tank regulator to the return snorkel valve.					
4	Remove the cover from the exhaust valve.	Gas Analyzer will detect the presence of Helium				

Test Procedure 3102-00054 Rev 1-00				Test Results		
Step#	Instructions	Expected Results	Requirement ID	Observed Results	Pass/Fail	Notes
5	Open the Nitrogen tank valve allowing gas to enter the instrument well return vent: Begin Timing					
6	Helium should vent down to 1%, 10,000ppm out of the exhaust snorkel vent, stop timing: record time elapsed	Verify <1%, 10,000ppm Helium with gas detector				
7	Remove the flexible hose and partially obstruct the outlet of the exhaust snorkel at the instrument well coaming with a rubber stopper. Apply Helium sensor to exhaust valve opening.	This will slow Helium from venting out of the instrument well.				
8	Remove the flexible hose from the return vent and insert the helium tank fitting into the vent hole. Flood instrument well with Helium through the return snorkel vent until gas analyzer detects 4%, 40,000ppm Helium at the outlet vent.	Well will partially fill with Helium.				
9	Apply the outlet of the Nitrogen tank regulator to the return snorkel valve.					
10	Remove the cover from the exhaust valve.	Gas Analyzer will detect the presence of Helium				
11	Open the Nitrogen tank valve allowing gas to enter the instrument well return vent: Begin Timing					
12	Helium should vent down to 1%, 10,000ppm out of the exhaust snorkel vent, stop timing: record time elapsed	Verify <1%, 10,000ppm Helium with gas detector	L4-CG-SB-RQ-363			
13	Open well hatch with gas analyser in the opening	Verfy Helium dissipates to less than 1%, 10,000ppm Helium				Validate final ventilation of volitale gas.



TEST SETUP AND DEFINITION OF TERMS