

**ARM Nauru Research Station**

**Site Visit 0402M Report**

Visit Duration: 16 February to 26 February

Manus Island, Papua New Guinea

## SV 0402M (H2 Gen)

<b>Site:</b> Manus	<b>Proposed Dates on Site:</b> 16Feb to 23Feb
<b>Team Members:</b> Troy Culgan Terry Stiles	<b>Ship or hand carry prior to SV:</b> <ul style="list-style-type: none"> <li>●H2-Gen: requires V2 de-mineralized water flow control gauge.</li> <li>●Air foot pump requires replacement</li> <li>●Spare fiber pair for Skyrad</li> <li>●2 MWR fans required as spares. Commair MX2B3</li> <li>●Spare fiber pair for Skyrad</li> <li>●WSI camera cards</li> <li>●TSI Encoder</li> </ul>

### Site Tasks

<i>Priority</i>	System	Date Completed (dd/Month)	Service Time in Hours	Tasks/Description of Work/Process
For each priority item insert new line(row) for each date/time entry				
1	H2 GEN			Routine Maintenance
		16/02	6	Commenced routine maintenance
		17/02	4	Electrolyser & RBL Maintenance complete
2	WSI			Install replacement camera boards if reseating existing ones does not work.
		17/02	6	Reseating boards had no effect; replacement of boards failed to rectify the fault, original boards re-installed. Yellow flag indicated shutter problem, proceeded to change shutter assembly. Shutter assembly changed, WSI restored to operation at approximately 0400 17 Feb UTC.
		22/02	2	The WSI had an N2 leak but have managed to repair that prior to departure. I am returning the dome pressure ring to Darwin for repair as a screw has broken off, the repair was completed by using a spare that I found on site.
3	TSI			Repair (Install new encoder cable)
		18/02	1	Installed new encoder and cable, advised Rex Pearson that the fault still remained. Rex requested TSI be shipped to Darwin for further investigation
4	MWR			Change azimuth value in the configuration file per mentors instructions.
		19/02	1	Azimuth value changed at 22:50 18 Feb 04 UTC
5	MWR			Install new model Heater Blower Assembly S/N -29
		18/02	1	Installed new model Blower assembly S/N - 29 after replacing fan. Moisture threshold set to 0.80 in MWR config
6	OTHER			Maintenance Checklist
		18/02	3	Progressing
7	LAPTOP			Install Observer PC
		16/02	4	Commenced install observers PC,UPS installed
		17/02	3	Progressing
		18/02	1	Informed observers that the new PC is ready for use
8	LAPTOP			Install SDL Upgrade

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		17/02	0.5	Installed SDL Upgrade
9	HVAC			Install Split Type Carrier AC Units (A.E. SMITH)
		16/02	4	AE Smith commenced install of split AC units in I-Van
		17/02	9	I-Van complete
		18/02	6	D-Van near complete
		19/02	6	Split system AC install I & D Vans complete, service of all other ac units complete
10	GENSET			Hastings Deering Genset Service
		19/02	8	Hasting Deering Genset tech performed service
11	BBSS			Check and for faulty sondes serial# Y432XXXX
		21/02	0.5	Observers have set aside sondes serial# Y432XXXX until further notice
12	DC-Power			Replace E-Van Batteries.
		18/02	2	E-Van batteries replaced
13	IRT			Change out Skyrad IRT gold mirror.
		19/02	0.5	IRT mirror Changed out at 00:30 19 Feb 04 UTC
14	MMCR			Take close up pictures and report condition of Radome mounting hardware
		19/02	1	Pictures taken, mounting hardware shows signs of a rust stain as one component is not stainless steel. Removed sample to find a replacement alternative in Darwin for installation next visit. Report sent to David Reass
15	MMCR			Change out antenna heater filters.
		19/02	1	Filters changed out. Noted heater pipe to antenna was split made repairs. Heater hose/pipe may need to be replaced
16	MMCR			Change out TWTA Desiccant.
		19/02	0.5	TWTA desiccant changed out
17	MMCR			Determine and report if spare antenna heater power supply is on site. This is on a 5 yr change out and is due for change out in June 2004.
		20/02	1	Unable to locate heater power supply on site
18	MMCR			Determine if spare fan for the Radian Receiver (12VDC) is on site. This is on a 2 yr change out and is due for change out in May 2004.
		19/02	1	Unable to locate spare Fan on site
19	VANS			Check Humidifier operation.
		18/02	0.5	Checked during routine maintenance check list
20	TRAINING			Conduct new observer training with new Observer (If applicable).
		20/02		No new observers on site
21	TRAINING			Train observers on shipping procedures
		20/02	4	Performed training session with Hymson Waffi
		22/02	2	Performed training session with Alex Gabbi /James Pepa(Balloon launch procedures)

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		23/02	1	This morning we did some more training with the observers on how to tie the string to the balloon as we noticed a few extra balloon launches while we were here and we found that it was mainly due to the way they tied the string, problem solved. Written instructions from the BOM observers handbook have been left for the observers.
<b>22</b>	<b>TRAINING</b>			<b>Review SDL procedures with all observers.</b>
		20/02	1	Reviewed SDL procedures with Hymson Waffi
		22/02	1	Reviewed SDL procedures with Alex Gabbi
<b>23</b>	<b>BBSS</b>			<b>Determine UPS batteries required. Battery change out in UPS is due May 2004. Believe UPS is an APC Back UPS PRO 420SC, uses Vision model 1270E batteries, fed by non UPS 120V via APC Power Controller.</b>
		20/02	1	Battery type Vision CP1270 12V 7.0 AH
<b>24</b>	<b>MWR</b>			<b>Remove locate and remove R29 located on analog board as per mentors instructions</b>
		20/02	1	Completed at 0010 20 Feb 04 UTC
<b>25</b>	<b>MPL</b>			<b>Reset shutter timer</b>
		18/02	0.5	Shutter timer reset
<b>26</b>	<b>Skyrad</b>			<b>Install spare fibre cable to skyrad stand (8 core)</b>
		21/02	4	Completed
<b>27</b>	<b>AWS</b>			<b>AWS BOM calibration check</b>
		21/02	2	Completed AWS BOM calibration check
<b>28</b>	<b>GENSET</b>			<b>Change out Racor filters in fuel transfer dolly.</b>
		20/02	1	Racor filter changed
<b>29</b>	<b>SHIPPING</b>			<b>List items to be shipped following visit</b>
		22/02	2	Packed 4 IBM 600 Laptops for Darwin
			1	Packed TSI for shipment to Darwin
				Ship WSI cards to SGP (for forwarding to MPL in San Diego)
				Spare set of shipping scales to Darwin
				Send spare WSI dome ring to Darwin for repair
				Send used IRT Gold Mirrors to SGP (for forwarding to Vic Morris)
				Send 21 sondes with s/n's beginning in Y432 to SGP
				MMCR Radome mounting hardware (spacer that fits in spring)
<b>30</b>	<b>OTHER</b>			<b>Misc Tasks</b>
		16/02	2	Assist Rex Pearson and Matt McDuff change over to DS2 due to DS 1 Failure
		16/02	2	Receive shipments from Dick Pearse
		17/02	0.1	reboot, power cycle DS1 as per instructions from Matt McDuff
		18/02	0.2	reboot termserver as requested by Rex Pearson
		18/02	0.5	Observer's reported MMCR was red on Dsview, investigations found that both PC's had locked up, rebooted PC's
		21/02	0.5	Air foot pump replaced
		22/02	1	Replaced corroded DB 9 connector K&Z

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30	OTHER	19/02	0.5	SAFETY: emergency lighting E-Van & U-Van workspace failure, corroded battery terminals. Replacement battery required for dual light 705
				Monty Apple to order replacement batteries
31	OTHER	19/02	0.5	SAFETY: rain shelter outside U-Van work space loose construction
		20/02	1	Repaired structure
32	OTHER			<b>Future Needs</b>
				Batteries for BBSS UPS
				Fan for MMCR Radian Receiver
				Power supply for MMCR Antenna Heater
				Hose for MMCR Antenna Heater
				MMCR radome mounting hardware (sample sent to Darwin for procurement)
				Spare MWR Heater Blower Assembly (new style with Mods)
				Batteries for Emergency Lights in all vans.