

ARM Nauru Research Station

Site Visit 0401.5N (UPS) Report

Visit Duration: 21 January to 30 January 2004

Nauru Island, Republic of Nauru

SV 0401.5N (UPS)

Site: Nauru	Proposed Dates on Site: 21Jan-30Jan 2004
Team Members:	
Rex Pearson	

Priority	System	Date Completed (dd/Month)	Service Time in Hours	Tasks/Description of Work/Process	For
<small>each priority item insert new line(row) for each date/time entry</small>					
1	UPS			Install new Liebert UPS in D Van and I Van	
		22-Jan-04	3	Commenced preparation for installation of UPS into I Van	
				UPS running from Mains charging batteries	
		23-Jan-04	5	Completed changeover of Liebert UPS in I Van. Instruments connected from APC UPS	
				Network connection completed and web interface functioning.	
		24-Jan-04	5	Completed changeover of Liebert UPS in D Van. Web interface programmed and connected	
		24-Jan-04	4	Experienced problems overnite in the I Van. Whenever rain occurred the I van Liebert dropped out. This was eventually traced to the MWR heater and WSI A/C unit being connected to the UPS circuits. These were removed and system has functioned normally throught the day.	
		29-Jan-04		The D Van Liebert is serial number 0314000130AF091. The I van Liebert is serial number 0305100003AF091.	
2	MMCR			Repair MMCR	
		23-Jan-04	2	Commenced checks on MMCR	
				Darwin OS2 computer is different to Nauru unit. Keyboard uses different connectors and mouse has different connections. Reverted to Nauru OS2 computer.	
		25-Jan-04	2	Changed MUX controller and testing GBIP communications	
		26-Jan-04	2	Mux lockup still occurring. TWT amplifier will not turn on.	
		27-Jan-04	0.5	Additional checks done on twt - returning TWT amplifier for repair	
		29-Jan-04	2	Additional checks on TWT are not able to get it to turn on. Packed up for shipment to SGP	
3	TSI			Repair TSI	
		29-Jan-04	3	TSI checks do not look good. Am shipping back to the US.	
4	AERI			Repair Aeri	
		23-Jan-04	3	Replaced data cable and monitored. Fault reappeared.	
				Replaced DSP card and monitoring	
		25-Jan-04	1	Not seeing the comms error message since the DSP card change, occasional error from network card is being seen	
		26-Jan-04	1	Aeri appears to be functioning normally at this time.	
		28-Jan-04	2	Continued checks, Monitored 0000z reset - went smoothly - tried to complete a chkdsk but floppy drive is not functioning. Main blower moter removed and bearings aligned to stop blades hitting the side of the fan assembly.	
		29-Jan-04	2	Aeri appears to be functioning considerably better since new script was installed. Have not noticed any interruptions in the system. Aeri ethernet card details : Manufacturer 3Com, Model Etherlink 3, 3C509B-2, Assy 03-0021-001-RevA.	
		30-Jan-04	0.5	Removed Ethernet card and reseated.	
				checked Aeri again - all looks normal - is restarting without problems	
5	DS			Install new APC UPS	
		24-Jan-04	3	New APC installed in SDs and unit failed within 30 minutes. Reverted to APC that was in the I van (as original APC could not communicate thru the serial port. The replacement APC is having the same problem. Tried to talk to the UPS via my laptop and the APC software without success. Work stopped to enable the Liebert to be installed.	
		30-Jan-04	0.5	Performed additional tests on new UPS as per recommendations from APC. Unit did still not operate	
		30-Jan-04		The SDS UPS in now WS0109005402 and the one in the E Van is WS0109005407 both are APC SU3000 Smart UPS.	
6	DS			Install soft shutdown software	

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		24-Jan-04	0.1	Software will not function until APC UPS can communicate thru the serial port.	
		30-Jan-04	2	Found communications problem with the APC UPS units. For some reason when the SNMP card is plugged into the unit it stops the serial port from working. This was checked on both of the SU3000APC units on site. It was decided to remove the card and test the graceful shutdown software. This was done and worked as anticipated. The loss of the SNMP card will prevent the DSview page updates for the SDS UPS indications	
7	AC-Power			Install protective Power Track module perspex covers.	
		22-Jan-04	0.5	Protective cover installed in U Van	
		25-Jan-04	1	Protective covers installed in D and U Vans	
8	DC-Power			Change out E-van batteries for DC Power to field instruments.	
		22-Jan-04	2	E Van battery change out completed	
9	BBSS			Clean Digicora Tape Reader	
		25-Jan-04	0.5	Cleaned tape reader unit	
10	H2 Gen			Change out Gas Tester sensor cell	
		23-Jan-04	0.5	Cell changed. Last cell in stock require replacements	
11	SMET			Change out TRH aspirator fan	
		25-Jan-04	0.5	Fan assembly changed	
12	UPS			Install new batteries in EMWIN, AERI Hatch controller, MMCR, Laptops (for SAM, MWR, CEIL).	
		29-Jan-04	2	Batteries installed in Aeri hatch controller	
		30-Jan-04	2	Installed second APC into E Van to replace the Emwin UPS.	
		30-Jan-04		The SDS UPS in now WS0109005402 and the one in the E Van is WS0109005407 both are APC SU3000 Smart UPS.	
13	Other			Maintenance Checklist (see attached)	
		23-Jan-04		Proceeding	
		25-Jan-04		Proceeding	
		26-Jan-04		Proceeding	
		28-Jan-04		Proceeding	
		29-Jan-04		Proceeding	
14	GENSET			Fill fuel tank using gravity feed truck and fuel transfer dolly.	
		29-Jan-04		Still waiting on fuel to arrive	
15	GENSET			Maintenance by Hastings Deering.	
		29-Jan-04	8	Genset maintenance commenced	
		30-Jan-04	4	Genset maintenance completed	
16	HVAC			Service all AC units on site (A.E. Smith).	
		26-Jan-04	4	A/C service commenced	
		27-Jan-04	8	A/C service continuing	
		28-Jan-04	8	I van shut down for AE Smith to run power cables. (outage approx 12:45 - 13:45)	
		29-Jan-04	8	Maintenace completed	
		30-Jan-04	3	A/C maintenance completed	
17	WSI			Install WSI Acrylic Dome & Shutter Assembly	
		27-Jan-04	7	Replacement dome and shutter installed	
		30-Jan-04	2	Leak detected in WSI dome - removed dome and resealed assembly. Pressure holding at 7.25 PSI	
18	LAPTOPS			Install new Observer PC	
		22-Jan-04	1.5	Observer PC installation commenced. Only e-mail still to be setup New SDLver2.1.4 downloaded and installed.	
		23-Jan-04	1	Completed installation of observer PC	
19	LAPTOPS			Install new version of SDL	
		23-Jan-04	1	SDL 2.1.4 installed	
20	MWR			Locate and remove resistor R29 located on heater blower assembly per mentors procedure.	
		24-Jan-04	2	Checked why MWR was giving a v/f fault error message. On inspection of the MWR there was a "burning smell" from the heater assembly area. Removed the heater to find the power plug had melted both on the mains connector and the heater assembly socket. There is also smoke damage through the unit.	
		25-Jan-04	1	Temporary power connector made to replace burnt out unit. Connected power to unit but still getting an error message on laptop. E-mail sent to Vic Morris for assistance.	
		26-Jan-04	0.1	Information from Jim indicates the instrument may have to be returned to the manufacturer for maintenance. Will await Vic Morris directions.	

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		27-Jan-04	0.1	MWR to be returned for maintenance	
		28-Jan-04	2	Reseated all boards, measured power supply voltages and MWR is partially functioning - passed current info to Vic Morris	
		29-Jan-04		DB022 is the unit currently installed on the MWR. 4AN is the smoked unit. There are no other spares I have so far found	
21	H2Gen			Observers advise H2Gen taking a long time to generate gas - current only at 140A max	
		25-Jan-04	2	Checked out rectifier assembly and power supply. Found 1 x 250Amp fuse o/c. Replaced and tested unit at 240 amps.	
			0.2	Unit checked after 4 hours operation at 200 amps - all ok.	
		26-Jan-04	0.2	Rechecked unit for normal operations - all ok.	
22	H2 Gen	28-Jan-04	3	Observers reported unable to run the compressor.	
				Fault traced to reed switch on supply valve. Replaced magnet assembly and tested ok. Cleaned out the water drain for the H2 storage vessel.	
23	Power				
		29-Jan-04	3	Sensor lights installed near toilet area. Two pole power outlet replaced due to damage	
24	Radiometers			Check cables for damage	
		25-Jan-04		Fan not functioning on 1 ventilator, fault traced to o/c fuse - replaced and tested ok.	
		29-Jan-04	2	Checked radiometer cabling, replaced siezed screws in NIP mounting. NIP was not functioning from 0230 to 0330z	
25	OTHER			Future Needs	
				Gas Sensor Cell for H2GEN	
				20A power plugs and sockets (6 off each)	
				Spare 250 Amp fuses (Shawmut A13Z250 type 4)and rectifier diodes for H2Gen	
				Spare MMCR blower fan - Model - Dayton 4C940	
				3 pin power socket/lead for MWR heater/blower	
				Spare WSI shutter	
				Spare dome "O" ring for WSI	
				Replacement Nitrogen cylinder for WSI (cylinder empty)	
26	OTHER			SHIPPING	
				Ship TWT Amplifier to SGP	
				Ship 175 Sondes Serial # Y43 to SGP	
				Ship TSI to SGP	
				BARD A/C Units to Topside and send Serial Numbers	
				Rex: hand carry MWR fan to Darwin	
				Rex: hand carry WSI camera cards	
				Rex: hand carry x2 TSI encoders to Darwin	
				Ship damaged APC UPS to SGP	
				Ship additional MMCR damaged parts to SGP	
				Ship AERI DSP card to SGP.	
				Ship burnt out MWR blower heater ass'y to SGP.	