

ARM Nauru Research Station

Site Visit 0407N Report

Visit Duration: 5 July to 12 July

Nauru Island, Republic of Nauru

SV0407N

Site: Nauru	Proposed Dates on Site: July 05-16
Team Members: • Rex Pearson • Troy Culgan David Kratzman	Ship or hand carry prior to SV: Loggers and associated parts.
	Safety: Major Hazards: AC electricity. Hazard Controls: BOM Electrolyser Handbook, BM Electrolyzer Operations/Maintenance Training, ASNZS 4836/2001-Safe Working on LV Electrical Installations, 2 man rule.

Site Tasks

Priority	System	Date Completed (dd/Month)	Service Time in Hours	Tasks/Assoc Hazards-Controls <small>For each priority item insert new line(row) for each date/time entry</small>
1	LOGGERS			Install new Campbell Logger for SkyRAD/ Electrical- ASNZS 4836/2001
		6 Jul 04	12	Skyrad ingest turned off at 2230z 5July. Skyrad old logger removed and installation of campbell logger commenced. Campbell logger installation completed at 0500z 6July and data collection turned on on logger net PC. Problems experienced with the NL100 serial/ethernet converter. We used the unit from the Smet system and reprogrammed the IP via telnet to the correct IP address for the skyrad. Will investigate the NL100 problem tomorrow.
2	LOGGERS			Install new Campbell Logger for GndRAD/ Electrical- ASNZS 4836/2001
		5 Jul 04	4	Removed old gndrad logger at ~1020z. Commenced installation of new campbell logger on to gndrad stand.
		5 Jul 04	2	Gndrad logger connected to the Loggernet PC and cal coefficients loaded into .csi program and downloaded to the logger
		6 Jul 04	2	Completed loggernet view screen and initialised data collection on loggernet at 2202Z 5 July
3	LOGGERS			Install new Campbell Logger for SMET/ Electrical- ASNZS 4836/2001
		7 Jul 04	20	Smet ingest and collection system turned off at 2030z 6July. Zeno logger system removed from service. Replacement mounting system constructed to take Hoffman Smet logger case on the Smet stand. Commenced installation of the Smet logger system. NL100 communications problems sorted out - forced the NL100 back to factory defaults and reprogrammed. Campbell logger installed and communications tested. TRH probe and wind heads installed and tested.
		8 Jul 04	7	Replaced ORG cable to allow sufficient length to connect to new logger. Completed installation of Smet logger. Water was sprayed across the org to confirm it was functioning.
		10 Jul 04	2	Rewired ORG connection to include the carrier signal so it can be remotely monitored for fault analysis. New smet.csi file loaded into logger.
4	LOGGERS			Install LoggerNet System/ Electrical- ASNZS 4836/2001
		5 Jul 04	2	Continued installation of logger net PC in D Van.
		6 Jul 04	3	Replicated loggernet monitoring screen to match Darwin overview screen for all 3 systems
		7 Jul 04	1	Added Smet data to loggernet PC
		8 Jul 04	2	Added additional screen monitoring facilities
		10 Jul 04	1	Added new smet.csi file to allow monitoring of the ORG carrier signal.
		11 Jul 04	1	Made a disk image of the Nauru loggernet PC for backup purposes

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5	UVB			Remove UVB, Pack and Ship/ Electrical- ASNZS 4836/2001
		6 Jul 04	0.5	UVB removed at 2230z 5July.
6	H2GEN			H2Gen maintenance/ KOH,H2,Electrical- BOM Handbook, ASNZS 4836/2001, 2 man rule
		9 Jul 04	10	H2 gen maintenance commencec
		10 Jul 04	8	H2 gen maintenance completec
		11 Jul 04	4	Spares inventory checked spare compressor cleanet
7	AERI			Change out Fine Particle Filters/None
		11 Jul 04	0.5	Filter changed
8	AWS			Change out fan in Sat Phone/None
		10 Jul 04	1	Fan changed out
9	CEIL			Change out internal battery/None
		10 Jul 04	1	Internal battery changed out. Status screen indicates the battery is low, will monitor or charge it externally then refit.
		11 Jul 04	1	Ceil battery has come up ok after charging.
10	ES&H			Change out Smoke Alarms/None
		10 Jul 04	2	Change out smoke alarms in D& E Vans
		10 Jul 04	1	Smoke alarm in U & I van changed out
11	ES&H			Lock Out/Tag Out Procedure Training/None
		8/9/10 Jul04	2	Proceedure reinforcedwith observers during A/C installation
12	IRT			Change out Skyrad IRT Gold Mirror/None
		5 Jul 04	0.5	Mirror changed out
13	HVAC			AE Smith replace Bard units with split units in E & U vans.
		8 Jul 04	6	Equipment arrived from Brisbane and Dave has commenced installation of the split A/C unit in the U Van.
		9 Jul 04	10	U Van A/C installation completed. Commenced installation of units in the E Van.
		10 Jul 04	10	Continued installation of E Van units
		11 Jul 04	8	Completed installation of A/C units and inventory of equipment on site
14	HVAC			AE Smith perform general maintenance on all ac units
		5 Jul 04	3	Baird unit in E Van is now working in a temp fashion. Awaiting for the equipment to arrive from Brisbane to install the split units.
		6 Jul 04	10	Continued maintenance of existing A/C units. Drains connected to existing A/C units to prevent water flowing under the vans.
		7 Jul 04	6	Completed general maintenance. Robroy (using his old Air Nauru contacts) has tried to ensure Air Nauru will ship tools and 1 A/C tomorrow as a minimum.
15	GENSET			Hastings Deering to perform normal genset maintenance
		9 Jul 04		Had confirmation HD will not be on site with us
16	VANS			Change out the white van door locks
		5 Jul 04	1.5	Locks changed out on white vans – observers given keys.
17	BBSS			Work on possible balloon proceedures to allow use of 40mm balloons
		8 Jul 04	3	Initial tests of possible proceedure to attach bungs to 40mm balloons. 1 test flight to be done to see if system works
		8 Jul 04	2	Test flight completed balloon went for 89 minutes and got to 24370ft.
		9 Jul 04	2	Additional tests on night time launch and lunchtime launch indicate the proceedure is repeatable. 2 launches today were successful - proceedure appears to be repeatable.
18	I Van UPS			Prevent accidental use of UPS power in I Var
		8 Jul 04	1	UPS in I van was tripped because the ups power was used to run a power saw. The UPS locked its self out due to the high overload. A proceedure will be written on how to reset the unit if this happens again, and we will investigate means of preventing this happening again.
		9 Jul 04	2	Commenced documentation for UPS reset procedure
		10 Jul 04	2	Completed UPS documentation
		12 Jul 04	1	Require piece of perspex 19% x 16 inches. This will prevent access to the 110v UPS protected outlets. Will purchase in Darwin and ship to Nauru.
19	SAM			Check I Van monitoring - Monty Apple reported TRH readings high
		8 Jul 04	1	Checked and replaced TRH sensor in I Var

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20	SDS			Impliment BCR796
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		9 Jul 04	2	Confirm installation and operation of Aboutime on Win98 machines and that both time sources are installed
21	EH&S	10 Jul 04	2	Install eyewash station
				Eyewash station installed and filled
				Note: Solution has to be changed every 6 months - this needs to be put on the maintenance schedule
22	Skyrad			Check and replace sun sensor if necessary - check settings as per email from C. Long
		11 Jul 04	3	Checked sun sensor on skyrad tracker. Moisture was evident on the inside of the lens. The sun sensor was dismantled and a reasonable quantity of water darined from the unit. There was evidence of corrosion on the printed circuit board terminals. We decided to change the unit as it's reliability would be questionable. The replacement unit also appeared to have a droplet of moisture on the lens assembly (we are not sure if this was moisture or glue). The new unit was installed and alignment values updated, time checked and sunsensor tracking value adjusted. As a precaution we put vulcanising tape on the upper and lower joints of the sensor to help prevent water getting in.
23	Housekeeping			General cleanup
		11 Jul 04	5	Removed old cables etc in storage van, general cleanup of shelves stored spare satellite equipment on lower shelf of storage van
		12 Jul 04	8	Redied equipment for shipping
24	Emwin			Check and repair Emwin system
		11 Jul 04	4	Emwin computer was not booting. It appears the file system has become corrupted. A repair was done on the hard disk which allowed the computer to boot to Windows, but the Emwin software would not load. Found missing dll and vbx files. Was able to find most of them on the net and have most of the system now running except for what appears to be one file.
		12 Jul 04	1	Additional checks unsuccessful, may need a reload of the software
25	Observer PC's etc			Update software as required (windows updates etc
		12 Jul 04	3	Software updated
26	SHIPPING			List items to be shipped following visit/ None
				IRT gold mirror
				UVB serial number 2866
				Zeno loggers, cans,cables and spare part:
				K&Z sun sensor
27	FUTURE NEEDS			List items needed for future visits (spares, etc)/ None
				DB9 female plugs and sockets - solder type
				100mm shifting spanner
				150mm shifting spanner
				1/4 inch ss full nuts
				Metric drill set
				Imperial allen key set
				12 volt 17AH battery for UPS - 140mm x 48mm x 48mm size
				Metric tape measure

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