

**ARM Manus Research Station**

**Site Visit 0408M Report**

Visit Duration: 01 August to 12 August

Manus Island, Papua New Guinea

## SV0408M

<b>Site:</b> Manus	<b>Proposed Dates on Site:</b> Aug 02-13
<b>Team Members:</b> • Rex Pearson • Troy Culgan	<b>Ship or hand carry prior to SV:</b> Loggers and associated parts. Handcarry 1000 cable ties to Manus Handcarry spare DSP Card from MMCR OS2 computer
	<b>Safety:</b> 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
For each priority item insert new line(row) for each date/time entry				
1	LOGGERS			Install new Campbell Logger for SkyRAD/ Electrical- ASNZS 4836/2001
		1-Aug-04	4	Preparation for installation of the skyrad logger cabinet
		2-Aug-04	6	Skyrad taken off line at 2340z 1Aug04. New logger installed on stand and radiometer cabling completed. Skyrad connected to loggernet PC at 0200z. RTMC file updated to display local data.
2	LOGGERS			Install new Campbell Logger for GndRAD/ Electrical- ASNZS 4836/2001
		2-Aug-04	4	Preparation for installation of the gndrad logger cabinet.
		2-Aug-04	4	Gndrad taken off line at approx 0320z 2Aug04. Completed installation of the Gndrad logger at 0700z 2Aug04. RTMC file updated to display local data.
3	LOGGERS			Install new Campbell Logger for SMET/ Electrical- ASNZS 4836/2001
		3-Aug-04	12	Smet logger taken off line at 2243z 2Aug04 and restored to service at 0400z 3Aug04.
		9-Aug-04	1.5	Spare barometer removed from spare Smet logger and programmed for Campbell system. Details Viasala PTB201A Sno V0220002
4	LOGGERS			Install LoggerNet System/ Electrical- ASNZS 4836/2001
		1-Aug-04	3	Installed logger net PC hardware and ethernet/fiber converters into SDS rack. Texted connectivity of the loggernet PC
		2-Aug-04	3	Installed loggernet .csi & rtmc files and customised for ARCS1.
		3-Aug-04	2	Completed logger net PC setup and updated all .csi files
		9-Aug-04	1	Backup of hard drive completed

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5	UVB			Remove UVB, Pack and Ship/ Electrical- ASNZS 4836/2001
		2-Aug-04	1	UVB removed from the skyrad stand and readied for shipment.
				Spoke to Dick and was advised they hoped to have the UPS units cleared tomorrow. Breaking news (1545L) - UPS units will be cleared Thursday morning around 9AM, paper work came thru from Robert Thompson.
6	UPS			Install Liebert UPS/ Electrical- ASNZS 4836/2001
		2-Aug-04	1	follow up with Dick Pearse re whereabouts of the Liebert UPS units. Email sent to Monty re clearance etc.
		4-Aug-04	1	Spoke to Dick and was advised they hoped to have the UPS units cleared tomorrow. Breaking news (1545L) - UPS units will be cleared Thursday morning around 9AM, paper work came thru from Robert Thompson.
		5-Aug-04	5	Pick up UPS units from town (customs etc)
		5-Aug-04	8	Install UPS in I Van
		5-Aug-04	2	Install spare UPS in I Van
		6-Aug-04	10	Install UPS in D van. All D Van power isolated and fed from external source so van could be shut down without shutting down the SDS .
7	AWS			AWS Maintenance/ Electrical- ASNZS 4836/2001
		3-Aug-04	1	AWS taken off line and cables re-run as part of the Smet logger installation
		9-Aug-04	2	Maintenance checks completed
		10-Aug-04	2	Laptop database compacted
8	H2GEN			H2Gen Maintenance/ KOH,H2,Electrical- BOM Handbook, ASNZS 4836/2001, 2 man rule
		4-Aug-04	10	Commenced H2Gen maintenance
		5-Aug-04	5	Checking on lo rectifier current fault (only 150 amps)
		6-Aug-04	4	Replaced faulty rectifier diodes and current now at 250amps. An additional problem has surfaced - with the cutout circuitry - this is being investigated
		7-Aug-04	2	Completed electrolyser maintenance
9	HVAC			Check vans to ensure that no digital thermostats are in use./None
		9-Aug-04	0.5	Checked
10	BBSS			Repair RBL water spray assembly/None
		8-Aug-04	1	RBL tested ok
11	BBSS			Change out Digicora Battery/ None
		9-Aug-04	1	Battery changed
12	ES&H			Replace Emergency Light Batteries/ None
		7-Aug-04	0.5	Batteries replaced in E Van and light tested
		7-Aug-04	0.5	Batteries replaced in D Van and light tested
		7-Aug-04	0.5	Batteries replaced in I Van and light tested
		7-Aug-04	0.5	Batteries replaced in U Van and light tested

Priority	System	Date Completed (dd/Month)	Service Time in Hours	Tasks/Assoc Hazards-Controls For each priority item insert new line(row) for each date/time entry
13	ES&H			Replace Smoke Alarms/ None
		7-Aug-04	0.5	Smoke alarm replaced in D Van and tested
		7-Aug-04	0.5	Smoke alarm replaced in I Van and tested
		7-Aug-04	0.5	Smoke alarm replaced in E Van and tested
		7-Aug-04	0.5	Smoke alarm replaced in U Van and tested
		7-Aug-04	0.5	Smoke alarm installed in Y Van and tested
		7-Aug-04	0.5	Smoke alarm installed in Y Van and tested
14	ES&H			Train Observers on Lock Out/Tag Out/ None
		5-Aug-04	2	As part of the UPS changeout James was trained on basic tag/lockout procedures. We were unable to locate the tag/lockout tags - they were in the Y but not there now. These will need to be replaced.
15	H2 GEN			Change out Velcro Strap Sonde Retainer/ None
		9-Aug-04	1	Velcro strap changed - tested on daily flight
16	IRT			Change out Skryad IRT Gold Mirror/ None
		4-Aug-04	0.5	Mirror changed and old unit packed for shipment to SGP
17	MFRSR			Assess/Inspect Head and Board/ None
		6-Aug-04	1	Head and PCBchecked for damage and alignment
18	COMM			Train on use of Sat Phone/ None
		10-Aug-04	1	Checked observers on use of sat phone
19	WSI			Replace corrosion prevention in ARC Drive and Desiccant in Camera Housing/ None
		7-Aug-04	1	Corrosion inhibitor replaced in ARC drive. Light showers have prevented the opening of the camera assembly
		9-Aug-04	0.2	Weather conditions have prevented opening the camera assembly.
20	GOES			Repair GOES platform per Egans Request(verify that GOES messages are being sent via GOES satellite /None
		8-Aug-04		SAM laptop not functioning - therefore the GOES system will not function. Checked time on GOES transmitter - was out by 8 minutes. UPS voltages and currents in both the D & I vans can be monitored via the Liebert WEB interfaces so the only major function missing are the van temperatures and humidity.
21	H2GEN			The water sprinklers in the RBL are leaking water. A new tap valve is needed where the RBL's release lever is to replace the old one./None
		3-Aug-04	0.5	Initial checks on tap system
		7-Aug-04	2	Continue repairs on water leak
		9-Aug-04	2	Replacment tap assembly purchased in town and fitted, additional water leaks found and sealed.
22	HOGEN			HOGEN site preliminary assessments as directed by Nitsche./None
		7-Aug-04	6	Checkout gas line - how it is run, etc, switchboard wiring
23	LAPTOPS			Install AboutTime on W98 computers./None
		3-Aug-04	2	About time installed and comfigured on Vceil, MWR, MPL and BBSS laptops
24	MMCR			Install DSP Card

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		4-Aug-04	2	Removed DSP card in radar computer and installed replacement unit.
25	MPL			Please remove silver NASA tag # 1335460 and send to the following address: Lisa A. Harold/SSAI NASA/Goddard Space Flight Center Sr. Admin. Assistant Mesoscale Atmospheric Processes Branch Code 912 Building 33, Room D415 Greenbelt, MD 20771NASA
		2-Aug-04	0.5	Checked MPL - no NASA tag located on the unit.
25	OTHER			Complete Maintenance Tasks/None
		4-Aug-04		Commenced maintenance checks
		8-Aug-04		Continued maintenance checks - unpacked spares from ISS van and stored in correct locations
		10-Aug-04		Continued maintenance tasks
26	SDS			Re-arrange SDS switch to match Nauru setup and to allow for Campbell logger upgrade./None
		1-Aug	2	SDS switch rearranged and recabled
27	EH&S			Install eyewash station in H2 shed
		8-Aug	1	Eyewash station installed and filled with water and solution
28	WSI			GPS failing
		8-Aug	2	GPS unit on the WSI will not run continually, keeps shutting off. Checked power supply voltage - ok. There is no obvious setup for auto power off. Cannot locate Garmin GPS45XL handbook on site
		9-Aug	2	Located Garmin handbook, battery save function settings are correct - it appears the GPS is faulty. Is there a GPS available from a WSI that has been removed from service ?. This could be shipped to site and the observers can change out (no safety hazards involved)
29	COMMS			Check Iridium phone
		9-Aug	0.3	Iridium phone checked and on charge
30	MPL			Check shutter controller and clock
		9-Aug	0.5	Shutter controller batteries replaced and time adjusted (7 minutes out). Serial numbers collected for Conner Flynn
28	SHIPPING			List items to be shipped following visit/ None
				2 x UVB
				2 x Spare (old) MWR heater units
				1 x Zeno Smet logger assy
				1 x Zeno Skyrad logger assy
				1 x Zeno Gndrad logger assy
				1 x spare Zeno logger assy
29	FUTURE NEEDS			List items needed for future visits (spares, etc)/ None
				Heat shrink tubing
				MMCR TWT air filters (4 left on site (2 changes))
				Rust converter paint

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				Tag/lockout tags and locks
				Long tek bit drivers both philips head and flat blade
				RBL blower fan
				6 x Fluro tubes type TFX 48 inches long single pin connection each end (for electrolyser & balloon shed)
				4-40 nuts and flat & spring washers
				2 x 40 watt battern fluro lamp holder (to be shipped with HoGen)
				1 x step ladder - (to be shipped with HoGen)