

TWP ARCS-2 Site
RESET VISIT-9N Report

Nauru: 16 January – 21 January 2000
Nauru IDI
Denig District, Republic of Nauru

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1.0 INTRODUCTION:

The main goals of the TWP Operations RESET-9N Visit (routine) to ARCS-2 at Nauru were the following: 1) MMCR Y2K upgrades, 2) MPL Y2K upgrade, and 3) AERI Y2K upgrade. Details of the RESET visit planning are found in Attachment 3.

This Report is organized according to the planned tasks or work units performed during the RESET Visit. Within these work units the activities accomplished is arranged chronologically. The RESET-9N members based on the daily reports put most of the information together.

2.0 TWP OPERATIONS / RESET MANAGEMENT:

Once an ARCS Site is established the Operations part of TWP is responsible for keeping the site running and reporting data. Operations also coordinate equipment retrofits at these established sites. The local NWS personnel at the site, routine RESET visits, and nonroutine RESET visits accomplish this.

Routine RESET visits are scheduled on approximately six-month intervals and are focused mainly on routine maintenance, instrument calibration, instrument replacement, and training. A formal audit-in is performed upon arrival and audit -out before departure.

Nonroutine RESET visits are intended for technical nonroutine tasks such as emergency repairs, retrofits, or the addition of new instruments.

The work on a RESET visit is performed by the RESET Team, but many times in close coordination with the local on-site observers. The Team holds a daily tasking meeting each morning at the site using the proposed RESET visit-tasking schedule. After each day's work, the team meets to summarize what was done and an assigned Team member writes a "Daily Report" to be e-mailed back to TWP personnel in the US. Because of the time-zone differences, necessary calls to instrument mentors in the US are done in the morning.

RESET-9 Nauru Members:

- Fred Helsel, Lead/Daily Reporting, 16 – 21 January 2000
- Kevin Widener, 16 – 21 January 2000

Nauru IDI On-Site Observers:

- Nicholas Duburiya, OIC
- Megan Aliklik
- Henry Harris
- Franklin Teimitsi

3.0 RESET PREPARATION:

Preparation for RESET visits requires a long lead-time to line up reservations, visas, shots, medication, documentation, procedures, and training plans. Close coordination with AIS/ATSS, instrument mentors, and shipping personnel is critical well before the departure date. Prioritization and task rejection is a difficult and important part of RESET visit preparation.

4.0 Tasks Performed:

A. Perform Audit-In/Site Condition Report: (Helsel)

B. Upgrade MMCR Y2K:

18Jan:

- MMCR upgrades done; waiting for GOES to see if it's working (GOES looks like it has a Wallops problem).

C. Upgrade MPL Y2K Ingest:

18Jan:

- MPL Y2K and Laser Diode upgrade done.

D. Replace MPL Diode:

18Jan:

- MPL Y2K and Laser Diode upgrade done. MPL has a bad laser detector. Flynn wants the MPL sent back.

20Jan:

- Located shipping box to ship back MPL.

E. Run PIR Comparison:

18Jan:

- Spare Rad Zeno Logger was set up next to SKYRAD Stand and spare PIR was set up for comparison with other unshaded PIRs (two on Skyrad stand and up facing PIR on Gnrاد stand).
- Spare logger up and running with ventilator and correct calibration factor. (First day of data sent).

19Jan:

- Test complete and systems returned to normal configuration. Data files sent for 1/20/00 for normal configuration. Calibration Logger (spare Rad Logger) remains set up with PIR (spare).
- Hooked up the spare logger to spare fiber; you can talk to it at **>telnet termsvr 2006<** from Adam or Eve. This will be left in the field with the inputs capped off

and the Skyrad configuration.

F. Add UPS in E-Van for EMWIN:

18Jan:

- UPS for EMWIN doesn't work on 50 HZ even though label on UPS states 50/60 HZ.

19Jan:

- Problem with EMWIN. Found a bad power supply fuse. Widener replaced it.

G. Check MFRSR Level:

18Jan:

- MFRSR head was level (noted band is running during the night).

19Jan:

- Helsel verified that it does move, but it does not stop, therefore OK.

H. Install AERI Y2K Software Patch:

19Jan:

- Completed; Y2K fixed with no problems.

21Jan:

- AERI detector cooling now at 92 Kelvin; will turn yellow at 85.

I. Research AERI Hatch Problem:

20Jan:

- AERI hatch not hatching. (Widener worked on it and found the screw drive turned but the part that rides in the screw is stripped. The hatch is now in the manual mode; this means it is operated by the observer's arm.)
- The hatch cover hasn't been working and Nicholas has been using a piece of wood to cover the hatch when it rains. Nicholas said it has been making a grinding sound when it tries to close.
- Several bolts have worked free and were lying loose under the garage door opener. There are significant filings underneath the garage door opener. The hatch cover itself was very hard to move manually. Sprayed some WD40 on the pivot points, and it moves more freely now. Removed the garage door opener so that I can work on it more easily. In the future, it would be nice if all wires had either connectors or terminal strips so this could be more easily done. You'll find some butt splices when you look at this again. One of the pins on the shaft coupler was about halfway out. I pushed it back in and will reinstall when it cools down a little. This appears to be where the filings were being generated.
- A new garage door opener may be required before too much longer. The motor is starting to show rust on the back end of the shaft.

21Jan:

- Found the piece we were looking for. AERI hatch is now working and will do some minor adjustments to the limit switches and force settings. Widener replaced bad part on garage door opener for AERI hatch. Hatch is now working.
- AERI detector cooling now at 92 Kelvin will turn yellow at 85.
- For the record, Dec 8, 1999, at 16:00 local time, the AERI hatch started grinding while trying to close. Observer installed temporary wooden hatch.

J. *Acquire Current Configuration and SYSGEN Listings for the DigiCORAs for Lesht:*

18Jan:

- Current SYSGEN for BBSS will be E-mailed today to TWP-OPS.

K. *Check PIR-G and PIR-D Cables to Loggers:*

20Jan:

- PIR cabling was checked and is fine.

L. *Install Z-Modem Software on ADaM:*

18Jan:

- Z-modem tape in Adam at `/dev/rmt/0`.

19Jan:

- Annette did "her thing" with the Z-modem installation.

M. *Repair H2GEN Tubing:*

19Jan:

- Nicho going to replace tubing on H2 generator.

N. *Hook Up ISS Van Power:*

19Jan:

- Started ISS-van power work.

20Jan:

- Finished Power to ISS-van. (Power is cable-tied and tagged-out at the power panel and at the ISS-Van.)
- Ran grounding wire from H-Van to ISS-Van so that ISS-Van would be bonded to grounding grid.
- Completed and the trench cover up is in process.

O. *Replace I-Van T/RH (SAM) Sensor:*

19Jan:

- I-Van R/TH sensor (not?) replaced.

21Jan:

- Placed shield on T R/H sensor in I-van. (I didn't do this; instead I looked at the aircons and flipped the damper switches a couple of times and found that one of the dampers is bent. So I taped up the gaps in the damper, hoping this would fix the R/H problem in the I-van. I believe when the aircons aren't running, air is flowing directly from outside to the inside, making the R/H rise. Then the aircons kick on and the R/H is reduced by condensing the moisture out of the air on the cold coils. If I am right the R/H in the I-van should now be constant and below the SAM alarm point.)

P. *Check MMCR Raydome Antenna Fabric Latch for any Needed Repair:*

18Jan:

- MMCR raydome looks good.

Q. *Check Completion of D-Van Phone Jacks of ADaM:*

18Jan:

- ADaM phone jack complete from last RESET.

R. *Check INMARSAT-B Penetration Leak in D-Van:*

18Jan:

- Leak looks to fixed in D-van around INMARSAT-B penetration.

S. *Check MWR Heater Sensitivity:*

19Jan:

- MWR heater sensitivity reset as per Vic Morris. Widener cleaned rain sensor. (Cleaning of rain sensor needs to be put on the weekly task list as per Vic.)

T. *Check all Existing I-Van UPS Loads:*

21Jan:

- I-Van UPS is currently 40% loaded.

U. *Perform UFS Dump:*

19Jan:

- Artecon backup done. (One tape for site and one tape to bring home.)

V. *Ensure Old BBSS Launch Record Sheets Returned to TWP:*

19Jan:

- Told Nicho to fax old BBSS records to TWP.

W. *Other:*

21Jan:

- Did site cleanup and some reorganization of supplies.
- Reattached smoke detector in D-van.

X. *Perform Audit-Out: (Helsel)*

21Jan:

- Completed Audit Out.

5.0 *FUTURE RESET VISITS:*

The following items should be considered for inclusion in the task planning for the next RESET visit:

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6.0 *FOLLOW-UP ACTIONS:*

- A new AERI hatch garage door opener may be required before too much longer. The motor is starting to show rust on the back end of the shaft.
- Cleaning of rain sensor needs to be put on the weekly task list as per Vic Morris.
- In the future, it would be nice if all wires had either connectors or terminal strips so this could be more easily done.

7.0 *LESSONS LEARNED:*

RESET members made the following observations that should be considered for future TWP installations and operations:

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8.0 *ATTACHMENTS:*

- Attachment 1—Audit-In/Site Conditions Report
- Attachment 2—Audit-Out Report
- Attachment 3—RESET-9N Tasking Plan

Attachment 1—Audit-In/Site Conditions Report (On-Line)

Attachment 2—Audit-Out Report (On-Line)

Attachment 3—RESET-9N Tasking Plan

RESET-9N

Nauru Team:

- Fred Helsel (Lead/Daily Reporting)
- Kevin Widener

Tasks:

NAURU

Priority tasks:

1. Perform Audit-In
2. Upgrade MMCR Y2K
3. Upgrade MPL Y2K Ingest
4. Replace MPL Diode
5. Run PIR Comparison (Possibly Replace SKYRAD PIR with Spare)
6. Add UPS in E-Van for EMWIN
7. Check MFRSR Level
8. Install AERI Y2K Software Patch
9. Research AERI Hatch Problem
10. Acquire Current configuration and SYSGEN Listings for the Digicoras for Lesht
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12. Install Z-Modem software on ADaM
13. Repair H2GEN Tubing
14. Hook Up ISS Van Power
15. Replace I-Van T/RH (SAM) Sensor
16. Check MMCR Raydome Antenna Fabric Latch for Repair Needs
17. Check Completion of D-Van Phone Jacks of ADaM
18. Check INMARSAT-B Penetration Leak in D-Van
19. Check MWR Heater Sensitivity
20. Check all Existing I-Van UPS Loads
21. Perform UFS Dump
22. Ensure Old BBSS Launch Record Sheets Returned to TWP
23. Other
24. Perform Audit-Out