

EMR-0301N

Proposed dates at Nauru: 07Jan to 13Jan, 2002

Team:

- Kevin Widener, PNNL

Nauru Tasks (NIES)

1. NIES TSI
 - a. Assemble
 - b. Adjust heater for 115F – 120F operation
 - c. Set IP address and time sync address
 - d. Set username and password
 - e. Install Data Storage Module
 - f. Install TSI on stand
 - g. Align and test

08 Jan 03- The TSI is assembled in the room with the "spare" camera since the original didn't work. An email from Chuck explained that Yankee set the TSI to work with the new "spare" camera instead of the old one on the rusty arm. I powered down the TSI in my room last night and it didn't want to work this morning. Left for the ARCS site so will explore this problem when I return.

10 Jan 03-Tried both cameras and the TSI does not accept an IP address for either camera. The consensus from Chuck Long and Yankee is to ship the TSI back to Yankee. I will box it up before I leave.

11 Jan 03-NIES TSI - Boxed up and ready to ship to Yankee via SGP. This unit should leave on Tuesday's flight to Brisbane.

2. Thorough check of NIES Instruments
 - a. Corrosion
 - b. MFRSR alignment
 - c. Tracker alignment
 - d. Radiometer leveling
 - e. Clean Ceilometer window
 - f. Anemometer alignment

08 Jan 03-No sun since I've been here to check alignment but level looks ok. Corrosion continues. IRT mirror looks good.

10 Jan 03- the sun is out today! I will check on the instruments when I return to the NIES site.

11 Jan 03- Checked alignment of solar tracker and adjusted it yesterday. Like the ARCS-2 tracker, the adjustment bolts are too corroded to allow alignment. I was able to move the base plate to get proper alignment. The MFRSR banding looks good. Donna Powell requested that I check the connections because a few channels are bad. Connection looks good.

3. Thorough check of NIES computers
 - a. Get TSI scripts working again
 - b. Check disk space
 - c. Replace Lacie drive

08 Jan 03- Computers look ok. Have copied all of the files from the Lacie drive to bring home. Disk space on Lacie drive is now 30GB and 25GB on the computer's internal hard disk.

4. Check NIES UPS/generator operation

08 Jan 03- Generator is working fine. So far there have been 4-hour power outages from 1400-1800 each day I've been here.

10 Jan 03- Working fine. In addition to power outages from 1400 - 1800 there are now power outages from 0200 to 0600.

11 Jan 03- Power outages are expanding slightly to 4.5 hours each. This requires daily refueling of the generator. There was some concern about the UPS audible alarm bothering the next-door neighbor during power outages. I looked but there is no easy way of disabling it without taking the whole UPS apart. The maximum amount of time that it is one is approx 30 seconds if the generator kicks in.

5. Misc

08 Jan 03- saw a rat scurry across the floor in Room 201 at 5am this morning while working on the TSI. Although the room is clean we need to try and get rid of him so he/she doesn't chew up the cables.

Nauru Tasks (ARCS-2)

1. Fix MMCR Solaris computer
 - a. Replace network card
 - b. Check configuration

08 Jan 03- the computer's floppy drive doesn't work and there is now a cache memory problem. I'll try and cannibalize from the bad OS/2 computer that is here to see if I can get it working but I'm not hopeful. It will probably have to be shipped back to the US for repair.

10 Jan 03- the computer is ready to be packed up and shipped back to the States for repair. I will make sure the data on the OS/2 computer are backed on R1 before I leave.

11 Jan 03- The Solaris computer is ready to be boxed and shipped back to the States. There was a failed OS/2 computer here that I was going to try and cannibalize to get the Solaris computer working but it has a CPU problem and this didn't work. I am going to check with NOAA/ETL and see if there is a way we can get the raw OS/2 data processed back home in the interim. Stay tuned!

2. Remove data system #2

08 Jan 03- completed.

3. ARCS-2 TSI

- a. Install Data Storage Module
- b. Check heater setting

08 Jan 03- when I arrived on site the TSI wasn't working. There was no data link to the stand. I found that the F/O media converters were bad so I replaced them. The TSI still didn't work on the network. I brought in into the I-Van and hooked it directly to the network switch and it still doesn't work. Took pictures of startup screen and sent to Chuck for forwarding to Yankee.

10 Jan 03-Awaiting Chuck's directions as to what to do with this failed unit. He is leaning towards sending it to Darwin to await the spare power supply and computer

11 Jan 03- TSI is boxed up and ready to ship to Darwin. This unit will leave on Tuesday's flight to Brisbane.

4. Troubleshoot K&Z Tracker Shading Problem

08 Jan 03 - I checked the lat/long and it was ok. Time was off by 3 minutes so I corrected it. There appears to be corrosion near the aperture of the sun sensor. Picture sent to Chuck and Jim.

10 Jan 03- since we have sun today I was able to ascertain that the tracker was significantly off alignment. The sun dot didn't hit the target

and just barely hit the edge of the metal ring on the NIP. The adjusting bolts are all the way over to the side that we need to move and corroded in place. We have made the adjustment by moving the base plate that attaches to the SKYRAD stand. These bolts were also corroded beyond adjustment and Franklin drilled them out for me. New bolts are being put in on the base plate.

11 Jan 03- made another fine adjustment to the solar trackers position. At some point I would recommend that the adjustment bolts be removed and replaced. Once replaced, liberal use of anti-seize/anti-corrosion compound should be used. I would then recommend a yearly preventative maintenance schedule on these adjustment bolts.

6. Misc

10 Jan 03- WSI - I replaced a relay in the Occultor controller/arc control board, scavenged from the trolley board, which is unused in the tropics. I sent the part number to David Reass so that a replacement can be made.