

**ARM Nauru Research Station
RESET Visit 14N (NIES) Report**

Visit Duration: 31 October to 07 November 2001

Menon Hotel, Denig District, Republic of Nauru

CONTENTS

A. Introduction

B. TWP Operations Management and Reset Visits

C. Task Performed

1. Prepare NIES Site
2. Prepare NIES Hotel Room
3. Install instrument stands
4. Install K & Z Tracker
5. Install Radiometers
6. Install MFRSR
7. Install Met Stand and instruments
8. Install TSI
9. Install Ceilometer
10. Install IRT
11. Install computers, data collection system in Hotel room
12. Set up phone/communication system
13. Let site run unattended for two days minimum
14. Train new BOM technicians on NIES operations, rounds, data collection
15. Train Observers on NIES operations, rounds, data collection
16. Mark up rounds documents for revision
17. Audit out
18. Ship back equipment

D. Future RESET

A. Introduction

The main goals of the TWP RESET-14N (NIES) Visit to Nauru at the Menon Hotel was to install a small “comparison” suite of instruments on the Westside of the island. This site is designed to evaluate the “Island Effect” on the ARCS-2 site at Denig on the west side of Nauru.

This report is organized according to the planned tasks or work units performed during the visit. Within these work units the activities accomplished are arranged chronologically. Most of the information was out together by the RESET 14N (NIES) members based on the actual visit, daily reports.

B. TWP Operations Management and RESET Visits

Once an NIES Site is established, TWP Operations, in coordination with PNNL’s IOP program will maintain the site to deliver data for at least one year.

Reset Members

- Chuck Long (PNNL)
- Kevin Widener (PNNL)
- Nicholas Duburiya and the Observers (Nauru IED)

C. Tasks Performed

1) Prepare NIES site.

30Oct

- Long and Widener arrived safely on site. They collected the NIES gear and hauled it to the NIES site.

01Nov

- The trenching, laying of conduit is complete.
- Presently putting data and power cables to the stands.

02Nov

- Long and Kevin Widener had a BAD DAY. The NIES UPS failed to come back up after a power failure at the hotel last night. Attempted UPS repair. An electrician was called to check the mains supply and found that only one of the power points in the room had a ground. Widener has been trying to initialize the UPS but the communications appear not to be working correctly. He will call Clary tonight.

03Nov

- Widener managed to get the UPS working to the point that at least we have 120V, 50 Hz power until the replacement parts get here in a few weeks. But that power is good enough.

05Nov

- Site is now complete. All trenches were filled today, all wiring tidied up. Wooden TSI stand installed. Ceilometer mounted on lower deck of radiometer stand with no interference to radiometers.

2) Prepare NIES Hotel room.

02Nov

- No telephones at the Menen Hotel today.

05Nov

- All data system computers installed, tested up and running. Had previous troubles with UPS. It is now acting as a 240V to 120V converter, but no conversion of 50 Hz to 60 Hz or battery backup. The manufacturer is sending repair parts that can be installed during the next RESET trip. We did find out that the hotel is on the same power lines as the hospital, so does not suffer from the "standard" island power shutdowns. We still do not have a dedicated phone line installed, they just haven't shown up.
- Task completed

3) Install instrument stands.

31Oct

- Unbolted the ARCS-2 calibration stand, loaded on the truck and transported it to the NIES site.

01Nov

- The equipment stand as been set into position and leveled.

05Nov

- Built and installed a wooden stand for the TSI. Shipped stands haven't shown up. We had previously installed the Ceilometer on the lower deck of the Rad stand, since no

cement available on island. This is working just fine. No need to install new stand when it arrives.

- Task Completed

4) Install K&Z Tracker.

01Nov

- The Kipp-Zonen tracker has been assembled and tested, hope to install it on the stand tomorrow.

04Nov

- Checked the NIES Kipp-Zonen tracker alignment.

05Nov

- Tracker has been set for active tracking with the sun sensor. Alignment continues to be spot on. Sun sensor set for 10-second sampling and detector level of 300 W/m².
- Task Completed.

5) Install Radiometers.

02Nov

- PSP, PIR, NIP, and B&W installed on tracker and leveled. Cables run to logger and connected.
- Task completed.

6) Install MFRSR.

01Nov

- Long needs an MFRSR detector mount. The one supplied is too high; this has been referred to the mentor.

02Nov

- The MFRSR sensor mounting post that was at the ARCS-2 site is correct and the wrong one was sent from the states. The mentor is going to send another correct one to the ARC2 site.

03Nov

- We have all but the MFRSR up and collecting data. More news later...

04Nov

- Kevin Widener worked on the mounting and leveling of the MFRSR for the NIES site.
- Task Completed.

7) Install Met Stand and instruments.

01Nov

- Surface met tower and equipment set up.

03Nov

- Met tower leveled, anchored, and all instruments aligned and leveled.
- Task completed

8) Install TSI.

01Nov

- The TSI has been assembled and will be tested tomorrow.

02Nov

- TSI is sitting on a box and the Kipp-Zonen tracker is mounted on the stand.

05Nov

- TSI installed on stand we built - aligned and leveled.
- Task completed.

05Nov

- Ceilometer mounted on lower deck of radiometer stand with no interference to radiometers.
- Task Completed.

9) Install IRT.

03Nov

- IRT set up and connected to logger.
- Task Completed.

10) Install computers, data collection system in Hotel room.

01Nov

- Data systems setup and tested.
- Task Completed.

11) Set up phone/communication system.

05Nov

- Direct line still not installed. They have not shown up to do it.
- Task completed.

12) Let site run unattended for two days minimum.

03Nov

- "Hands off" testing started.

13) Train new BOM technicians on NIES operations, rounds, and data collection.

04Nov

- Rex Pearson inadvertently experienced some training on TSI by helping set up and installs the ARCS2 TSI system.
- Task Completed.

14) Mark up rounds documents for revision.

05Nov

- Long worked on documenting all procedures.
- Task completed.

15) Audit out -

- a) Instrument/equipment inventory.
- b) Config files from loggers, instruments.
- c) Label all equipment.

06Nov

- Task completion uncertain

16) Ship back equipment –

- a) NIES drawings with red marks.
- b) Data disk

06Nov

- Task completion uncertain

D. Future RESET

- Get dedicated phone installed to Hotel Room.