

LANL Climate Safety Inspection Visit SV0404MND

Visit Duration:

At Port Moresby (POM), PNG: 22 to 23Apr2004

At Manus, PNG: 23 to 26Apr

At POM: 26 to 27Apr

At Nauru: 29 to 30Apr

At Darwin, Australia: 01 to 04May

Papua New Guinea National Weather Service Momote Station, Manus Province

And

Papua New Guinea National Weather Service Headquarters, Port Moresby

And

Denig District, Republic of Nauru

And

Darwin, Australia

SV-0404MND Report

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Visit Team:

- Larry Jones, LANL
- Chuck Long, PNNL
- Jim Bossert, LANL
- Jeff Hansen, LANL
- Tony Baldwin, BOM
- Monte Brandner, ANL(POM/Manus only)
- Tau Gabi, PNG NWS at Manus
- Robert Thompson, PNG NWS at Manus

Schedule:

19Apr (Mon) to 22Apr (Wed)

- Travel from New Mexico to Port Moresby, PNG via Cairns, Australia.

Port Moresby, PNG

22Apr (Thu)

- Larry Jones (LANL), Chuck Long (PNNL), Jim Bossert (LANL), Tony Baldwin (Aust BOM), Jeff Hansen (LANL) and Monte Brandner (ANL), met with Kevin Luana and Tau Gabi of the **PNG National Weather service**.
- Jones reviewed the Director's **Training** Plan with Luana and Gabi
- Jones discussed possible locations for the **TWP kiosk**. Luana favors the Manus Provincial Government office over the POM International Airport departure lounge.
- Baldwin reviewed the Manus **AWS GTS data** reception at the PNG NWS Headquarters. The AWS system is delivering the data (AWS to InmarSAT to Darwin to Melbourne to the GTS and back to POM).
- Luana told Jones that he will keep track of the Manus ARCS-1 **VSAT license** to ensure that it will not expire.
- Brandner and Hansen observed the **POM PNG NWS balloon launching** process using Hydrogen gas and tracking with a theodolite.

23Apr (Fri)

- Jones inspected the POM domestic air terminal departure lounge for possible location of **TWP kiosk**. It has power along the walls, security to enter, air conditioning, and a captive audience of LOCAL people with nothing to do waiting on delayed flights. Jones likes it!
- Traveled to Manus.

Manus, PNG

23Apr (Fri)

- Arrived Manus after 4 hour flight delay and **met observers** Hymson Waffi, James Pepa, Alex Gabi, outgoing OIC, Francis Anuma, and PNG POM project manager Robert Thompson.
- Long, Jones, Baldwin, Bossert, and Thompson visited the **Lombrum Naval base** to scout possible sites for deployment of a **small set of instruments**. Met with Commander Clement Tele of the PNG Navy (ph.675-470-1058). He was very willing to help and we all decided the best location was a large paved (coral) area next to the commander's office and the parade grounds. Security would be good and power and data feed could be provided from the commander's office building. The only downside was that the coral pavement would have to be trenched for the utility line.
- The Commander also showed us the site of the **Tidal Facility GPS station** that already has an air-conditioned block house installed that could be used for the new instrument facility proposed by Long. The site had a poorer field of view than the one near the Commander's building.

24Apr (Sat)

- Long, Bossert, and Jones met with Tjamei Lawrence, the Manus Provincial Administration Environment/Scientific Officer (fax: 675-470-9038). He is involved with the ARM Education office in developing and installing the new **ARM/TWP kiosk in PNG**. We delivered the letters, educational materials, and photos (we had just received from Dick Pearse) to Lawrence so that he could deliver them to the involved teachers.

Address (Lawrence thinks we have an incorrect address for him):

Provincial Administration

Tjamei Lawrence

Env-Scientific Officer

PO Box, 326

Lorengau, Manus Province 641

PNG

- Long, Bossert, Jones, and Lawrence traveled to the home of the Manus Provincial Administrator, Web Kanawi, at his home north of Momote. We set up the **Manus Kiosk draft** on Jones' laptop and did a demo. It looked good and Kanawi and Lawrence were pleased. We discussed possible locations to set it up. Kanawi thought it should be in Manus and at a location that the local people could have access to it. It would be good for the locals to see their neighbors talking about climate change. Kanawi did not want it to be set up at the Provincial Administration building – they did not want that kind of traffic there. They suggested the local Bank of the South Pacific in Lorengau (We later inspected the proposed location at the bank ATM machines – open 7 days per week, 7 to 7 with a security guard. Bossert, Long, and I did not feel this location was good. A meeting with the bank manager was attempted, but she did not show up when expected Sunday morning). Jones would like it to be in Manus so that there is more awareness and acceptance to the ARCS site in the community but could not find an appropriate location. The CD of the Kiosk

worked fine for the demo, but froze my computer when I tried to exit it so I did NOT leave it with Web or Tjamei.

- Brandner and Hansen watched the Manus ARCS Observers perform daily rounds and launch a balloon to **asses the safety of the daily operations**. Baldwin re-emphasized the need to use the “Velcro strap” to help prevent the sonde from hitting the side of the Balloon Launcher.
- The “failed” sonde reporting forms were delivered and explained to OIC Hymson Waffi.
- **Brandner and Hansen led a thorough safety inspection of the site** - see separate inspection report.
- The Observers watched a **safety video** on workplace neatness and teamwork.
- Jones and Long looked for a good **location to install a GPS for water vapor** measurements and decided atop the old dismantled NOAA antenna looked pretty good. It is about 8 feet tall and solid. Power could be obtained from the nearby old ISS Van.
- Hansen photographed the D-Van DS rack as well as the I-Van MMCR.
- Jones **labeled all phones** and phone/internet lines to correspond with the new “Phone Use at TWP Facilities” procedure. Jones also tested the new “Internet Access from ARCS Sites” procedure and it worked great.
- Jones tried to find the Outfitter IME# and failed. Copied every number on the phone though – but none that referred to “IME.”
- Jones met with Thompson and Tau Gabi of the PNG NWS on **Observer concerns**. The following issues were discussed:
 - a) Observers would like rain suits – I approve.
 - B) Alex Gabi need work boots – I approved this long ago.
 - C) The PNG NWS needs a new lawn mower – I approved reimbursing the NWS for this purchase.
 - d) The Observers want a car – I disapproved this.
 - e) The Observer bicycles are falling apart. They wanted new ones – I approved.
 - f) The OIC, Waffi, requested two locks with different keys to lock the storage Vans as the security personnel have the keys to the old locks for site access. Hymson is concerned about theft.
 - g) To prevent phone abuse, Hymson asked if the phone (land line) could be locked so that only those who have pin numbers can use it.
 - H) OIC Hymson said the local neighbors asked if TWP could install a TV antenna because they have no reception, unlike Lorengau – I said we would not do this.

25Apr (Sun)

- Long, Gabi, and Thompson traveled to **Papitalai** Secondary School to scout for possible sites for deployment of a **small set of instruments**. They met with school principal, Charles _____. The principal was very interested in having the instruments there if the Lombrum site does not work out. Night time security is a big issue. The principal was interested in material from the ARM Education Outreach Program.
- Jones **met with Dick Pearse**. Pearse delivered receipts for delivery to Cheryl Straub back at LANL. Pearse related numerous computer problems that finally

appear to be worked out thanks to a local technician named Jimmy Toro. He has also hired a helper by the name of Vincent Karawa who seems to be working out well. He also has a driver's license.

- Held **Observer's technical meeting** dinner at the Harbourside Hotel. Francis Anuma was recognized for his longstanding association with the TWP site as he is departing this week for a new assignment. Pepa was recognized for safety action that was exemplary. Long emphasized the importance of the data from the ARCS Facility and how key the Observers are to ensuring this data is credible.

26Apr (Mon)

- Jones, Bossert, Gabi, and Brandner visited **Naringale Primary School**. The books donated by Wood Gormeley Elementary in Santa Fe, NM were in a storage room, but available for the students. The staff asked that if a PC were available they could use one. We were saddened to hear that former Naringale Librarian, Mrs. Komet, died of malaria late last year.
- Attached a LANL barcode to the new Observer's PC, but could not find a serial number to record for it – very strange – so we just stuck on the sticker and copied down a bunch of misc. numbers.
- Traveled to Port Moresby.

Port Moresby, PNG

26Apr (Mon)

- Jones, Baldwin visited Kevin Luana at the PNG NWS office to determine why the **AWS data for the GTS** doesn't show up at POM. Baldwin also indicated that the BOM intend to repair and upgrade the PNG NWS Digicora in June.

27Apr (Tue)

- Traveled to Brisbane.

Brisbane, Australia

28Apr (Wed)

- Caught up on email and reports.
- Traveled to Nauru

Nauru, Republic of Nauru

29Apr (Thu)

- Arrived Nauru and **met IDI Project Manager**, Andrew Kaierua, Observers Franklin Teitmitsi, Henry Harris, and Equina Penani.
- Signed in at site, did a quick site walk through.
- Hansen and Jones led Bossert, Baldwin, Kaierua, Teitmitsi, Penani, and Harris in a formal **site safety inspection** - see separate inspection report.
- Hansen watched the Manus ARCS Observer (Penani) perform daily rounds and launch a balloon (Teitmitsi, Harris) to **assess the safety of the daily operations**.
- Hansen and Bossert performed a formal LANL "walk around" of the site.

- Baldwin re-emphasized the need to use the “Velcro strap” to help prevent the sonde from hitting the side of the Balloon Launcher, but the Observers appeared to be using it routinely now.
- The “failed” sonde reporting forms were delivered and explained to Kaierua and the Observers.
- The Observers watched a **safety video** on workplace neatness and teamwork. Hansen held a discussion with the observers afterwards.
- Jones and Long looked for a good **location to install a GPS for water vapor** measurements and thought two locations looked promising – a) atop the old NOAA antenna immediately behind the old ISS Van, or b) on the northwest corner of the E-Van. Both locations were photographed.
- Kaierua has initiated filling the diesel tank with the older fuel drums.
- Hansen photographed the D-Van DS rack as well as the I-Van MMCR.
- Jones inspected the ARCS-2 **site vehicle** and determined that applying an undercoating the truck is unnecessary because the rust is already too advanced. The car body is in bad shape and we need to consider obtaining a new vehicle.
- Jones **labeled most of the phones**. Jones also tested the “Phone Use at TWP Facilities” procedure specifically for using it to call local emergency numbers in Nauru.
- Jones tried to find the Outfitter IME# and failed at Nauru too. Copied every number on the phone though – but none that referred to “IME.”
- Deiyee met with Jones on a fortnight payment that was left out of the current payments. He provided the details for Jones to take to Straub at TWPO.
- Jones **met with Tyrone Deiyee** and Andrew Kaierua at the IDI offices to discuss management and financial concerns. Joseph Cain was not available to meet. The following issues were discussed:
 - a) The process to pay Observer salaries appears to be working well.
 - b) The Nauru government hasn’t been paying the landowners where the Nauru site is installed as stated in the contract and the landowners are now asking for those payments.
 - c) Janah Tom is on maternity leave again.
 - d) Kaierua was instructed that since his office is on site, we only need one Observer on site in the afternoons.
 - e) Kaierua delivered to Jones all the recent petty cash receipts.
 - f) Kaierua delivered to Jones invoices from NPC for diesel fuel and electricity.
 - g) Kaierua still needs the Van locks to be changed. He is nervous after the disappearance of the site’s camera.
- Joe Cain was unavailable while we were there, so Jones and Bossert met with the **Secretary of Education**, Jarden Kephass, concerning the **TWP kiosk**. He was not only unaware of the kiosk; he did not know there was an ARM Education Outreach program. After a short kiosk demonstration, he thought if it were to be deployed it would have to be in the airport departure lounge. He made a very good suggestion for the kiosk content.

- Jones and Bossert went to the Bank of Nauru to scout for a kiosk location as well as attempt to get TWP funds out. There were over a hundred people waiting in the teller line – and the line was not moving - so they gave up.
- Held **Observer's technical meeting** dinner at the Od-N-Aiwo Hotel Restaurant.

30Apr(Fri)

- Jones, Long, Bossert, and Kaierua met with the head of **Fisheries**, Anton Jimwereiy(CEO) and Cyril Buramen(Chairman) to discuss possible location for a small Met station. They were helpful and accommodating.
- Jones and Long inspected the Fisheries eastside dock area and the NTF GPS installation (put in by Kaierua with Chalapan Kalewin of AMSAT) at the northwest end of the runway for possible sites for a **small MET station**. The NTF site(owned by the Catholic Church) appears best with power, open horizons and a small air conditioned building for a computer. It also has a phone line and the data is collected weekly by the Nauru IDI department of surveying.
- Jones brought petty cash funds for the site to Kaierua.
- Jones and Kaierua met with the **Nauru Secretary of Finance**, Rustin Kun, to clarify the NPC redirection of funds from their account to the IDI account. Even though the transfer is official, the Finance Minister(who was off island) needs to make the cash transaction happen so that the Observers can be paid for that period.
- Traveled to Brisbane.

Darwin

01May(Sat)

- Traveled to Darwin.
- Jones visited the Discovery Center at the Darwin Museum and Art Gallery(08 8999-8201) to scout for a possible location for a Darwin kiosk.
- Presented Rex Pearson with **TWP Outstanding Service Award** for 2004.

02May(Sun)

- Caught up on email and reports.

03May(Mon)

- Visited ARCS-3 site, signed in.
- Jones, Baldwin, Pearson, Hansen, and Bossert met to discuss **TWP safety issues**, responsibilities, jurisdictions, actions needed.
- Jones, Hansen led a formal **site safety inspection**.
- Inspected and photographed the **GPS water vapor** instrument already installed at the ARCS-3 site by Dr. Nigel Penna of Curtin University. Data is retrieved by Nigel and can be delivered via the ARCS-3 external data procedure.
- Inspected the **CIMEL** as installed by Ross Mitchell of CSIRO. The data goes to the same system as that of the Nauru CIMEL.

- Photograph D-Van DS rack and MMCR setup.
- Did not label phones and internet hookups as they are all in the BOM operations building.
- Jones, Baldwin, Pearson went over the BOM technician site tasking list. The MMCR install, the Campbell logger install, MPL install, Genset replacement, and **CPCC work** were all discussed. Pearson asked for permission to set up all instruments in the field without CPCC.
- Long met with Brad Atkinson (b.atkinson@bom.gov.au) and Nigel Mules (n.mules@bom.gov.au), both of the Australian BOM Darwin Research Station. They drove to Port Stewart and visited an outlying site that is proposed as an ancillary sonde launch site for the Darwin **TWP ICE IOP**. This is also a possible site for surface radiometry for the IOP.
- Jones, Baldwin, Pearson, Hansen went over the Darwin **Cyclone Response Plan** procedure.
- Kate Smith of the Darwin “Discovery Centre” (08 8999 8263/8274) visited the ARCS-3 site. She is very interested in hosting the kiosk. She was given a site tour and invited to come back with others.

04May(Tue)

- Long met with Dr. Lindsay Hutley of Charles Darwin University (Lindsay.hutley@cdu.edu.au). They then picked up Atkinson and Mules, and drove to Howard Springs. Dr. Hutley is a colleague of Dr. Nigel Tapper of Monash University, who run some surface eddy correlation flux sites in various locations. They visited the Howard Springs site as an example. These flux sites will be instrumental for the Darwin TWP ICE IOP, and are also possible sites for surface radiometry for the IOP.
- Jones traveled to New Mexico.

Follow up items:

- Finish labeling Nauru and Darwin phones, phone and internet lines.(SV task list)
- Pearson delivers to Nauru the Ops Manual CD, camera, and Observer PC bar code.(SV task list).
- Fax “for business only” posting for Manus phone.
- Long send photographs of GPS water vapor possible sites(M,N,and D).
- Long send photographs of two small instrument sites in Manus.
- Long send photographs of small SMET sites at Fisheries and NTF GPS at Nauru (but he may have lost them).
- Modify Nauru portion of the “Phone Use at TWP Facilities” procedure for Nauru.
- Purchase vehicle at Nauru.
- Nauru land owner payment problem.
- NPC utilities payments.
- Shipping procedure on web is old – needs updating.
- Nauru fuel gage does not work – they still have to use the stick.

- Nauru needs recent posters.
- Emergency numbers fax to Nauru site.
- Emergency numbers fax to Darwin site.
- New instrument computers for sites to replace current CPCC configured laptops.
- Revise Darwin Cyclone Response Plan as red marked.
- On SV-0406N, task Pearson to deliver the Ops CD, attach the phone line labels, and put the bar code on the Observer computer.
- Nauru Kiosk change in spelling needed.
- Od-N-Aiwo Hotel info to Susan(29Apr).
- Scan Nauru Fisheries eastside dock plan and email to Chuck.
- Outline items for the Darwin Safety discussion.