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TWP ARCS Daily Operations

I. Purpose:

The purpose of this procedure is to provide TWPO personnel with the information needed for the daily operations of the three TWP ARCS sites: Manus, Nauru, and Darwin.

II. Cautions and Hazards:

- None.

III. Requirements:

This procedure is to be followed by the TWP Daily Operations Coordinator each weekday.

IV. Procedure:

A. Steps:

1. Check Site Daily Logs (SDLs) submitted by Observers at Manus and Nauru sites (see attached QA checklists).
2. Check Health and Status (H&S) for each site on the Web:
 - a) Use *Manus H&S Summary Checklist, FM(OPS)-025*, and *Nauru H&S Summary Checklist, FM(OPS)-026*.
 - b) Use attached Troubleshooting Scenarios Worksheet (Attachment 1).
3. Check relevant e-mail, contact sheets, and any other correspondence for Ops issues.
4. Prepare a weekly report using *TWP Weekly Site Status Summary Report Template, FM(OPS)-027*.
5. Report on site operations status at morning TWPO Ops Briefing.
6. Troubleshoot system problems as necessary.
 - a) Use attached Troubleshooting Scenarios Worksheet as applicable (Attachment 1).
 - b) Contact on-site Observers to clarify the problem.
 - c) Consult other technicians and system mentors to help diagnose and solve the identified problems.
 - d) Use the TWP Web-based Contact Sheet tool to report communications with each site.

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7. Log event of previous day using the TWP Web-based System Event Log tool.

V. References:

1. TWP Weekly Site Status Summary Report Template, FM(OPS)-027.
2. Manus H&S Summary Checklist, FM(OPS)-025.
3. Nauru H&S Summary Checklist, FM(OPS)-026.
4. ARCS Systems Troubleshooting/Status-Check Worksheet, FM(OPS)-028.

VI. Attachments

1. ARCS Systems Troubleshooting/Status-Check Worksheet, FM(OPS)-028.

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Attachment 1: ARCS Systems Troubleshooting/Status-Check Worksheet, FM(OPS)-028

H&S Summary Color Key:

1. "Reported Value OK" (Green) means that data are reported and they are within prescribed ranges.
2. "No Data for Instrument" (Red) means that the instrument is not reporting data.
3. "Outside Min/Max Range" (Yellow) means that data reported but are out of prescribed ranges.
4. "Empty Status Message" (Dark Blue) means that transmitted information contains no data.
5. "No Status Report" (Gray) means that not only no data are reported but also H&S report software problems may exist.
6. "No Data for Value" (Light Blue) means???
"Missing Bytes" (Black) means that no data are reported because of H&S report software problems.
7. "Transmission Problem" (Lavender) means that there are transmission problems.

Scenarios:

1) Scenario: All instruments are Green on H&S.

- a) Probable cause: Everything generally reporting properly.
- b) Action: A closer look at the plots may indicate problems undetected by the H&S limits.

2) Scenario: Some instruments are not green on H&S but not to worry.

- a) Probable cause:
 - i) MFRSR is yellow at local night.
 - ii) Sonde row is red between green 2 hours for twice daily flights.
 - iii) MPL is red when it is being repaired – currently at Manus.
 - iv) MMCR one row is red.
- b) Action: None, this is normal.

3) Scenario: All instruments on H&S are gray.

- a) Probable cause: Satellite, Wallups Island relay, or PNNL computer receiver is malfunctioning.
- b) Action: Call PNNL to investigate (Guy Wilcox, Karen Creel, or Annette Koontz)

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- 4) Scenario: All rows on H&S above the SAM Van diagnostics line are Dark Blue.**
- Probable cause: ADaM is hung up.
 - Action: Contact Kornke, BOM, McDaniel or Koontz for possible ADaM reboot.
- 5) Scenario: All rows of Van diagnostics on bottom of H&S are Gray.**
- Probable cause: SAM is malfunctioning.
 - Action: Contact Kornke, BOM or Wilcox for advice.
- 6) Scenario: MWR and/or Ceilometer are Red on H&S.**
- Probable cause: ADaM pdmgr for these instruments is hung up.
 - Action: Contact Kornke, BOM, or McDaniel to remove hung files.
- 7) Scenario: MWR, MPL, or Ceilometer are Red on H&S.**
- Probable cause: MWR, MPL, or Ceilometer laptop, respectively may be malfunctioning or powered off due to power drop out.
 - Action: Contact Kornke to ask Observers to check Laptops.
- 8) Scenario: Skyrad (including the MFRSR), Grnrad, and SMET instruments are Red on H&S.**
- Probable cause: Terminal Server malfunction.
 - Action: Contact Kornke or BOM to ask Observers to manually recycle power to the Terminal Server or contact Eagan to dial in and remotely reboot terminal server.
- 9) Scenario: Skyrad (excluding the MFRSR), Grnrad, or SMET (Serial) instruments are Red on H&S.**
- Probable cause: Skyrad, Grnrad, or SMET respective Zeno Logger malfunction OR ADaM ingest of data malfunction.
 - Action: Contact Kornke or Eagan for advice.
- 10) Scenario: MFRSR rows are Red on H&S.**
- Probable cause: MFRSR Logger on Skyrad Stand may be hung up.
 - Action: Contact Kornke to have Observer power cycle the MFRSR Logger.
- 11) Scenario: The Observers report on the SDLs that the D, I, and E Vans are shutdown, but the X, and Y Vans still have power.**
- Probable cause: the Diesel Generator transfer switch may not have detected a power phase outage.
 - Action: Contact Kornke for advice.
- 12) Scenario: ADaM HD disk % does not change for several days.**
- Probable cause: HDs are not properly mounted.

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b) Action: Dial-in to the site and remount the HD.

13) System Status Check: Verifying AC unit operation.

a) Each ARCS van has two AC units that turn on and off at various times throughout the day. For this reason, it is best to examine the actual plot (link provided on GOES H&S page) of the AC current phases for each van, rather than checking the minimum and maximum values.