

**“CL31 Replacement with ASOS ACU V2.79V and DCP V2.0 EPROM” OT&E Test  
Review Group Status Meeting**

**March 26, 2009**

**ATTENDEES:**

**NWS:**

**OT&E Site Electronics System Analyst (ESA)/ Electronic Technician (ET):**

WFO Amarillo, TX  
WFO Aberdeen, SD  
WFO Midland, TX  
WFO Dodge City, KS  
WFO Cheyenne, WY  
WFO Hilo, HI  
WFO Phoenix, AZ  
WFO Spokane, WA

**NWS Regional Headquarters:**

Ed Doerr, ARH  
John Bush PRH  
Lew Harrington, SRH RMS  
Dan Lester, CRH RMS  
Matt Ferrell, ERH RMS (ABSENT)  
Kevin Murray, ERH (ABSENT)  
Tim Rutkowski, ERH (ABSENT)  
Son Nguyen, WRH (ABSENT)

**National Weather Service Headquarters:**

John Monte – W/OST11  
Joel Williams – W/OST11 (ABSENT)  
Joseph Devost – W/OPS12  
David Mannarano – W/OPS22  
Richard Parry - W/OPS22  
Chet Schmitt – W/OPS22 (ABSENT)  
Peggy Hoch – W/OPS23  
Hak Kim – W/OPS23 (ABSENT)  
Kevin Conaty – AMOC (ABSENT)  
Beth McNutly – W/OS23  
Laura Cook – W/OS7 (ABSENT)  
Jennifer Dover – W/OPS22  
Khien Nguyen – W/OPS24  
Joseph Fiore – W/OPS24  
Harry Tran – W/OPS24  
Jerald Dinges – W/OPS24 (Moderator)

**National Weather Service Training Center**

Bob Retzlaff - Kansas City, MO

**NWS Employees Organization (NWSEO) Representative:**

Chris Kornkven –WFO Milwaukee, WI

**FAA:**

Bing Huang, ATO- T

Jerry Kranz, (contractor)

**DoD - U.S. Navy:**

Ronald Heatherdale – Space and Naval Warfare System Center (SPAWARSYSCEN), Charleston, SC

**DoD - U.S. Air Force:**

William (Mac) Lawrence

The third CL31 ceilometer replacement Operational Test and Evaluation (OT&E) Test Review Group (TRG) status meeting was held by audio conference call on Thursday, March 26, 2009. Jerald Dinges, moderator, convened the meeting with a “roll call” (See above list of attendees). Jerry stated he would be changing the order of the meeting by reviewing the status of OT&E site installations and site problems first and, then reviewing the status of the Action Items listed in the draft previous meeting minutes. The minutes would be ratified as a last topic. This change in the order of the agenda is to shorten the meeting and allow the OT&E sites to disengage from the conference call earlier during the meeting.

Joe Fiore presented a summary on the status of the installation of the CL31 ceilometer and V2.79V firmware at the OT&E sites. Joe also talked about problems encountered at some of the OT&E sites. John Monte provided an update on the SYSLOG analysis currently in progress at the OT&E sites that have installed and configured the CL31 ceilometer as a “test” sensor along with V2.79V firmware. Jerry reviewed the open action items from the March 19 TRG meeting. At the end of the meeting, the TRG ratified the minutes from the March 19 TRG meeting. The minutes from the March 19, TRG meeting will be put on the W/OPS24 website:

[http://www.nws.noaa.gov/ops2/ops24/documents/asos\\_ceilometer.htm](http://www.nws.noaa.gov/ops2/ops24/documents/asos_ceilometer.htm)

The noteworthy discussions and statements from the March 26 CL31 OT&E TRG meeting included:

- 1) Review of the ASOS CL31 ceilometer and ASOS firmware/EPROMs installation at the 22 OT&E sites - Joe Fiore reported the following new sites successfully installed ASOS V2.79V including the CL31:

DDC – Dodge City, KS – 3/19

FAI – Fairbanks, AK – 3/25.

Joe reported there are now a total of 10 Sites with the CL31 and V2.79V installed and operational, with two sites that have installed the V2.79V firmware, but have not yet installed and/or configured the CL31 ceilometer due to issues with the connection of the ceilometer to the ASOS. The twelve sites that have installed V2.79V (two without the CL31 sensor configured) are:

BIS – Bismarck, ND – 3/12  
KNBC- Beaufort, SC (U.S. Navy) – 3/13  
ABR- Aberdeen, SD – 3/16  
CAR – Caribou, ME – 3/16  
ITO – Hilo, HI – 3/16  
ANJ – Sault Ste. Marie, MI – 3/18  
GDP – Guadalupe Pass, TX – 3/18  
GUY – Guymon, OK – 3/18 NOTE: CL31 not configured yet  
CYS- Cheyenne, WY – 3/18 NOTE: CL31 not configured yet  
HIO – Portland, OR – 3/19  
DDC – Dodge City, KS – 3/19  
FAI – Fairbanks, AK – 3/25

NOTE: Joe will provide an updated table of the status of all CL31 and V2.79V installations as an attachment to these minutes and subsequent minutes during the OT&E installations. [See below Action Item 11 (03/12/09)]

- 2) Joe reported on issues seen with the installation of the CL31 ceilometer at the ASOSs @ Guymon, OK (GUY), and Cheyenne, WY (CYS):
  - a. GUY - The Electronic Technician (ET) from Amarillo, TX traveled to Guymon, OK (a two-hour ride) on March 25 to reinstall the CL31 sensor on their SCA ASOS. The ET's cold booted the GUY ASOS and reinstalled V2.79V firmware and the CL31. They were unsuccessful with the installation of the CL31. They believe (and John Monte concurred) the CL31 ceilometer is working fine. The problem maybe with the fiber optic modem, the cabling that is used to connect the CL31 to the SCA cabinet, or cards/power in the SCA cabinet. GUY will continue trouble shoot this problem next week. Lew Harrington (NWS SRH) will also track these problems at GUY.
  - b. Dan Lester (CRH) noted the ASOS @ Sault Ste. Marie, MI (ANJ) is unique for and SCA because it has 10 sensors connected to it.
  - c. CYS- Cheyenne, WY. Bill Cronin reported they were still having problems with the CL31 installation. Last week John Monte had SFSC ship another pre-production CL31 [i.e., a CL31 from Sterling Field Support Center's (SFSC) ST0 ASOS] to CYS to see if the problem was with the CL31 ceilometer. Bill Cronin reported he received and installed the pre-production CL31 from SFSC on the CYS ASOS. However, the pre-production CL31 from SFSC also will not communicate with the

ASOS. The conclusion from Bill and John Monte was there is no problem with the CL31 ceilometer that Bill sent to SFSC, because the replacement pre-production CL31 from SFSC still did not solve the problem. SFSC will install the CL31 ceilometer from CYS on ASOS ST0 when they receive it from CYS. The problem at Cheyenne seems to be with the DCP and not the CL31. The DCP problem may be related to how the power is distributed in the DCP to connect the CL31 to an open port on the SIO card. CYS also reported they had received the new DCP V2.0 EPROMS from W/OPS12 and successfully installed them on the DCP on the CYS ASOS. CYS will continue to trouble shoot their power issues with the DCP and CL31 with the help of Bob Retzlaff (NWSTC) and John Monte. Bill still needs to ship the original CL31 ceilometer back to WSH.

- 3) John Monte reported on the status of the SYSLOG analysis at the OT&E sites that is being performed by SFSC. John referred to the spreadsheet (that was sent out to the TRG by email prior to the meeting) that summarized any issues seen to date at the OT&E sites. Overall, most sites have not had any SYLOG issues since installing V2.79. John reported BIS and ITO had experienced some unexplained AWPAG sensor response timeouts. Joe Fiore stated he had talked with Steve Butler (ET Hilo, HI) about these random AWPAG sensor response timeouts at ITO. Joe reported Steve confirmed that these random AWPAG sensor response timeouts also occurred in firmware versions prior to the V2.79V load, and that the issue was not isolated to the V2.79V load. BIS AWPAG sensor response timeouts also occur randomly, and they (along with SFSC) will continue to track these issues. So far, the V2.79V load has not significantly increased sensor response timeouts.
- 4) Next, Lew Harrington (SRH) brought up the issue of warm boots occurring every minute at GUY when the ET configured more than one synchronous or asynchronous sensor or communication device on ASOS. Walt Jamison (ET PHX) asked how serious this problem would be for ET's. After a lot of discussion, the TRG decided a "Tech Tip" should be generated to inform ET's of this potential problem. W/OPS24 (with help from W/OST11) will generate the text of this "Tech Tip," and provide the text to Joe Devost (W/OPS12) so he can generate the Tech Tip for distribution to the ET's.
- 5) Joe Fiore reported the ET from ASOS @Fairbanks, AK (FAI) had some trouble getting their laptop to work with the new solar winds program. Joe stated in the interest of time the FAI site technician used the previous version of the solar winds program on their laptop to install V2.79V. The ET's laptops need to have the very latest patches from Microsoft (MS) in order for the new solar winds program to work. Ed Doerr (ARH) stated perhaps more information on this subject could be included in Mod Note 80. Ed said there was a general note of the potential problem in the Mod Note, but he wondered if a more specific note could be added to Mod Note 80. Joe Devost replied there are so many variations on the patches needed to update each laptop, they could not be included in Mod Note 80. Joe suggested that each site contact their ESA in the future to make sure that their

laptops get all the latest patches from MS before installing the new solar winds program on their laptops.

- 6) Ron Heatherdale (U.S. Navy) reported there were occasional blank CL31 data (ASOS Sky algorithm output in brackets “[ ]”) in the raw CL31 data on the 12-Hour TEST page. Ron forwarded a sample of these data to WSH for review after the meeting (March 26). Ron also reported an occasional drop out of data on the Navy ATC display (CVD), which reports wind and pressure data, on one of the test ASOS’s running V2.79V in Charleston. Ron was not sure if this was a problem with V2.79V or if it was a local problem with the CVD at Charleston. SFSC reported their ATC Display was functioning properly. U.S. Navy will investigate this issue with the V2.79D and get back to WSH if there is a problem with V2.79V.
- 7) Jerry Dinges asked the TRG and OT&E sites if there were any comments on the Mod Notes or other information provided to support OT&E. The ET for ASOS @ Dodge City, KS (DDC) reported the only suggestion they would have would be to clarify the statement about mixing and matching of sensors (in the dual installation instructions). W/OPS24 will ask DDC for specific suggestions on how this section might be re-worded.
- 8) Jerry Dinges reviewed the action items with “OPEN” status from the March 19 TRG meeting.

The following is the accounting for each action item:

- a. Action Item 2 (11/17/08) was CLOSED.
- b. Action Items 3, 6, 7 (11/17/08), and 12 (03/19/09) remain OPEN (No change until Phase II OT&E).
- c. Action Item 8 (03/09/09) and 11 (03/12/09) remain OPEN. (No change until OT&E is completed).
- d. Action Items 13, 17, 21 (03/19/09) remain OPEN.
- e. Action Items 14, 15,16,18,19 (03/19/09) were CLOSED.

The specifics for each action item follow:

**Action Item 2 (11/17/08) - CLOSED:** Assigned to W/OPS12 regarding any SIO/ATD boards sent to Electronic Technicians. W/OPS12 will provide W/OPS24 with a list of OT&E sites that require an extra “ATD” board if they have more than eight sensors on one ATD board. This list and explanation for the extra ATD board will be e-mailed to the site requiring the extra board by W/OPS24. COMPLETE

STATUS: Note the requirement for the above Action Item is unique for the OT&E with the requirement for 2 ceilometers connected to a single ASOS. Once the C12K is removed and the CL31 becomes the primary and only ceilometer on the ASOS, this issue will no longer exist.

**Action Item 3 (11/17/09) - OPEN:** Assigned to W/OPS12 and W/OPS24 regarding when Phase II OT&E sites will get their additional CL31. An e-mail will be sent to ROA,

CMH, OKC, and PHX to inform them when to except the second ceilometers. ROA, CMH, OKC, and PHX will receive their second CL31 ceilometer after the decision is made to make the CL31 the operational ceilometer.

STATUS: Report on this action item until just prior to PHASE II OT&E commencement

**Action Item 6 (11/17/09) – OPEN:** Assigned to ESA's to inventory all items they receive from NLSC and WSH. The ESA's will inventory all items received (CL31 ceilometer) CL31 hardware kits, V2.0 DCP EPROMS, V2.79V software (and documents obtained from the OPS12 website), and let the OT&E Test Director (Joe Fiore) know by e-mail (or phone) if the inventory list is complete.

STATUS: This action will remain OPEN until all 22 OT&E sites have the CL31 ceilometer installed along with the ASOS ACU V2.79V firmware and DCP V2.0 EPROMS.

**Action Item 7 (11/17/09) - OPEN:** Assigned to ESA's. The ESA's (NOTE: exception is Dan Lester for NWS Central Region) will notify the OT&E Test Director (Joe Fiore) by e-mail when they are ready to install the CL31 ceilometer, V2.0 DCP EPROMS (for sites that use EPROMS), and ASOS V2.79V ACU Software. They will also notify the OT&E test director when installation of all required material is complete.

STATUS: This action will remain OPEN until all 22 OT&E sites have the CL31 ceilometer installed along with the ASOS ACU V2.79V firmware and DCP V2.0 EPROMS.

**Action Item 8 (03/09/09) - OPEN:** WSH will download the SYSLOG error messages (1015, 1515, and 1537) from all 22 OT&E sites daily and will analyze the data to determine how many random sensor time out SYSLOG error messages are generated with a \$. SAIC contract personnel at Sterling Field Support Center, Sterling VA will perform the work. Jennifer Dover (W/OPS22) will report the statistics to the OT&E TRG at the weekly meetings during the OT&E. In preparation for this activity SAIC personnel at SFSC will also analyze the same SYSLOG error messages for each 15 OT&E site (22 minus the 7 Meteorological Comparison Evaluation Beta sites) for 30 days PRIOR to the OT&E. This analysis will "baseline" the number of random sensor time out errors occurrences before V2.79 V is installed.

STATUS: This action will remain open until the completion of the OT&E.

**Action Item 11 (03/12/09) – OPEN:** Assigned to W/OPS24. Joe Fiore will provide the TRG a status update at each status meeting on the CL31 ceilometer and ASOS ACU V2.79V and DCP V2.0 EPROM installation until all 22 sites have completed this activity.

**STATUS:** This action will remain OPEN until all 22 OT&E sites have completed their installations.

**Action Item 12 (03/19/09) – OPEN:** Assigned to W/OST11. John Monte will query EMRS to obtain the serial numbers for the CL31 installed at the 22 OT&E sites. He will e-mail the appropriate contact if the information is not found in EMRS.

**STATUS:** This activity is ongoing, and will be complete once all 22 OT&E sites have provided the CL31 Serial number in EMRS or by email to John Monte.

**Action Item 13 (03/19/09) – OPEN:** Assigned to the WFO CYS. Bill Cronin will repack and ship the CL31 to John Monte W/OST11.

**Action Item 14 (03/19/09) – CLOSED:** Assigned to W/OST11. John Monte will ensure Bill Cronin is shipped a replacement CL31. John will also coordinate with SFSC to obtaining and replacing one of the CL31 on the ASOS test system ST0. **COMPLETE**

**Action Item 15 (03/19/09) – CLOSED:** Assigned to W/OPS12. Joe Devost will send Bill Cronin new ASOS DCP V2.0 EPROMS **COMPLETE**.

**Action Item 16 (03/19/09) – CLOSED:** Assigned to SRH and CRH ASOS focal points. Lew Harrington (SRH) and Dan Lester (CRH) will report to the TRG the status on the GUY and ANJ SCA communication problems between the V2.79V and the CT12K until resolved. **COMPLETE**

**Action Item 17 (03/19/09) – OPEN:** Assigned to W/OPS12 and W/OPS14. Joe Devost and Fred Hauschildt will provide the disposal plan for the CT12K.

**STATUS:** This is a logistics issue, and will be tracked by logistics (W/OPS14). The main question revolves around who will pay for local disposal of the CT12K sensors and who will pay for the return of the old CT12K to NLSC. Another question that arose from this discussion is whether the entire CT12Kunit will be return or just components of the ceilometer? These scenarios will occur when the CL31 replaces the CT12K during national deployment of the CL31 ceilometer if V2.79V CL31 OT&E is successful.

**Action Item 18 (03/19/09) – CLOSED:** Assigned to the TRG/ATRB/NWS field sites. Send any comments regarding known risks or problem related to the CL31 performance by e-mail NLT Friday, March 20. John requested comments as input to the Production Readiness Review meeting with Vaisala on the CL31 at 1 pm EDT. **COMPLETE**

**Action Item 19 (03/19/09) – CLOSED:** Assigned to W/OPS23. Peggy Hoch will request a proposal from PRISM, Inc. to fix a problem in ASOS ACU V2.79V firmware related to TTR#210 as documented during the ST for IFW V4.54 sensor firmware. **COMPLETE**

**Action Item 21 (03/19/09) – OPEN:** Assigned to ASOS ACCB. The ASOS ACCB will determine the course of action once Prism’s proposal to fix ASOS ACU V2.79V related to the IFW V4.54 sensor firmware.

**STATUS:** Jerry Dinges reported there will be a meeting at WSH next week to discuss this issue to get a consensus on what is/are the problem(s) so a clear concise statement of the problem can be presented with resolution options to the TRG and ATRB.

The following new action items were assigned during the March 26 TRG meeting:

**Action Item 22 (3/26/09) - OPEN:** Assigned to W/OPS12 and W/OPS24 (with help from W/OSTS11). Joe Fiore (W/OPS24) will generate the text for a “Tech Tip” on potential warm boot problems when more than one synchronous port (i.e. ADAS and CL31) is assigned in ASOS, and provide the text to Joe Devost (W/OPS12) so he can generate the “Tech Tip” for distribution to the ET’s.

**Action Item 23 (3/26/09) – OPEN:** Assigned to W/OPS24 and DDC. Joe Fiore (W/OPS24) will ask ESA/ET @ WFO Dodge City, KS and Dan Lester (CRH) for comments and suggestions for improving the dual installation instructions for the CL31 OT&E.

**Action Item 24 (3/26/09)- OPEN: Assigned to U.S. Navy.** The U.S. Navy will investigate whether the drop out in the Navy ATC display is a local problem or a problem with V2.79V firmware. SFSC reported that their Navy ATC Display was functioning properly.

The last topic discussed (after the main part of the meeting) was if Malmstrom AFB, MT ( KGFA) should continue to participate in OT&E. KGFA reported they had a change in staffing that has effected their ability to support OT&E. Mac Lawrence agreed to ask Malmstrom if they would like to participate in OT&E or drop out of OT&E.

**UPDATE:** On March 26, Mac Lawrence formally reported in an e-mail to WSH KGFA will drop out of OT&E. Currently, the USAF is investigating to see if Ft. Rucker, AL is a viable replacement as a test site.

The next OT&E TRG meeting will be scheduled for **Thursday, April 2, at 2 pm EDT** to provide a status report on OT&E activities. There will only be an audio conference call. Please use the following information to dial into the meeting:

Telephone: 1-866-685-1879

Password: 8259362#