

## **ASOS CL31 Replacement Ceilometer System Test (ST)**

### **MINUTES: CL31 Test Review Group (TRG) Meeting**

**DATE:** October 16, 2008

#### **ATTENDEES:**

##### **TRG MEMBERS:**

Jerald Dinges (NWS OPS24 – Chair/Moderator)  
Khien Nguyen (NWS OPS24 - ST Director),  
Joseph Fiore (NWS OPS24 - Secretariat),  
Joe Devost for Greg Dalyai (W/OPS12)  
Richard Parry (NWS OPS22)  
John Monte (NWS OST11) CL31 Project Manager  
“ABSENT” Laura Cook (NWS OS7)  
Bing Huang (FAA ATO-T)  
Gerald “Wayne” Knight, Ron Heatherdale (U.S. Navy, SPAWARSYSCEN, Charleston, SC)  
“ABSENT” Dan Lester (NWS Central Region Headquarters)  
Bob Born (USAF HQ AFWA/A8PA)  
“ABSENT” [NWS OICO12 - ASOS Operations Monitoring Center (AOMC)]

##### **TEST SUPPORT PERSONNEL:**

Bob Retzlaff [NWS Training Center NWS Training Center (NWSTC), Kansas City, MO]  
Jennifer Dover [NWS OPS22 @ Sterling Field Support Center (SFSC), Sterling, VA]  
Beth McNulty (NWS OS23) - NWS Office of Climate, Water, and Weather  
“ABSENT” (FAA Technical Center, Atlantic City, NJ)  
Ray Bahavar, Dennis Kamin (FAA National Airway System Engineering Office (NASEO),  
Weather Sensors and Processors Team, AJW-14A Oklahoma City, OK)  
Pete Dashnaw (U.S. Navy, SPAWARSYSCEN, Charleston, SC)  
Brian Rice (SFSC Contractor – SAIC)  
Jerry Kranz (FAA contractor)  
Chet Schmitt (NWS OPS22)

##### **GUESTS:**

John Bush (NWS Pacific Region Headquarters)  
Steve Butler (NWS ET, Data Collection Office Hilo, HI)  
Lewis Harrington (NWS Southern Region Headquarters)  
Son Nguyen (NWS Western Region Headquarters)  
Tom Townsend (NWS Central Region Headquarters)  
Peggy Hoch (NWS OPS23)  
Fred Hauschildt (NWS OPS14)

## **SUMMARY and ACTION ITEMS:**

The third CL31 Replacement Ceilometer ST Test Review Group (TRG) meeting was held by teleconference at National Weather Service Headquarters (WSH), Silver Spring, MD on October 16, 2008. Most TRG representatives (or alternates) were present at the meeting. There was no representation from the FAA Technical Center in Atlantic City, NJ or the AOMC. The NWS Office of Operational Systems (OOS), Field Systems Support Center (FSOC), Test and Evaluation Branch (NWS/OPS24) convened and moderated the meeting. This meeting was conducted to provide status reports on the ST and adjudicate any problems found during the ST.

Jerry Dinges reported on the status of the temporary mounting instructions, parts list, accounting codes, and NWS Modification Notes (Mod Notes) #80 and #92 that were originally sent to the ST sites on October 10. Jerry stated a major objective from the last TRG meeting was for each ST site to inventory all the materials they were to receive from WSH and NLSC and report to Khien Nguyen, ST Director, before starting installation of the CL31 using the draft Mod Notes 80 and 92. Also, they were to wait for the latest page changes for the Mod Notes before starting the installation. Both the NWSTC and SPAWARSYSCEN, Charleston, SC reported they received all materials and documentation required for ST. As an action item from the previous TRG meeting, several modifications were incorporated into the Mod Note 80 and 92, as result of OPS24 installation of the CL31 on ASOS test system ST0 at SFSC. Sterling, VA. The “change pages” were sent by e-mail to the ST sites by Joe Devost of OPS12 on Wednesday October 15

Ray Bahavar (NASEO) reported he received most of the required materials for ST. However, Ray noted the FedEx shipment of the fiber optic modems, the fiber optic cable, the power control module, and the V2.0 DCP EPROMS were sent to the wrong location (FAA logistics warehouse instead of his building) at NASEO, and could not be located. After some discussion, a tentative decision was made to re-ship these items to NASEO on Friday, October 17 if Ray Bahavar had not located the lost items by noon that day. Joe Devost said he had to confirm resending the lost items with Greg Dalyai before shipping could take place on October 17.

Next, a discuss about the Interplex Multiplexer and GDC modems for the FTI link between SFSC and the FAATC was initiated between OPS24, Bing Huang (FAA), and Jerry Kranz (FAA). The SFSC and the FAATC do not have GDC modems at their sites. Bing Huang asked Jerry Kranz how many sites had Interplex Multiplexers and how many sites had GDC modems. Jerry Kranz reported that half the sites have the Interplex Multiplexers (sites with more than 2 lines), and half the sites have GDC Modems (sites with up to 2 lines). The FAA stated Harris Corp. would install the GDC modems at SFSC and the FAA Tech Center next week (October 20-24). OPS24 will meet with Jim Brand, FAATC, to confirm dates for testing the FTI interface first using the Interplex

multiplexers and then, when installed, using the GDC modems. The test will be between ASOS ST0 and the ADAS/ALDARS test bed.

Jerry asked the NWS regions participating in the conference call if they received the temporary mount installation instructions, parts list, and new accounting codes for building the temporary mounts at the OT&E sites in their respected regions. All regions (i.e., CRH, WRH, SRH, and PRH) reported they had received all the required material and documentation to proceed with the building and installation of the temporary mount for CL31 OT&E. Jerry noted he had received several telephone calls from Weather Forecast Offices Electronic Technicians (ET) who reported the accounting code for ordering parts for the temporary mount was incorrect. John Monte corrected the accounting code number, and the correct accounting code number was sent to the ST sites and NWS regions on Wednesday, October 15. Tom Townsend also mentioned a major concern about the NWS regions incurring extra cost for “due-ins” to NLSC for parts that would need to be returned to stock when the ETs ordered the required parts for the CL31 temporary mount from NLSC. John Monte reported Greg Dalyai would cancel these “due-ins.” A third problem noted from reports from ETs trying to get parts from NLSC was that only 19 beaker modules (i.e., power modules) are in stock. John Monte reported 20 CL31 power control modules would be needed OT&E (i.e., 3 of the 23 OT&E sites are Single Cabinet Assembly and do not require the CL31 Power modules). John stated that NRC should be instructed to make two more power control modules for OT&E.

Next, Jerry reported the CL31 ceilometer replacement ST will slip one-week into the first week of November, due to the major re-location of the WFO at Sterling, VA as well as moves of test beds around SFSC. These relocations were being funded by the Metropolitan Washington Airport Authority due to a major expansion of a runway at Dulles International Airport. The dedication ceremony is slated for Saturday, October 18. This should free up SAIC contract resources who have been supporting this relocation of test beds to now support the ST full-time. ASOS test system ST0 is affected by the relocation of two of its 3 DCPs, DCP 2 and DCP 3. The remote DCP 2 near “Building 16” was moved to its new location, but power has not been connected to DCP 2. Jennifer Dover reported power should be restored to DCP 2 sometime next week (October 20-24). Peggy Hoch reported V3.01 Factory Acceptance Test (FAT), which had been scheduled for the first week in November at SFSC, would most likely slip into the first week of December due to staff commitments to other projects and the upcoming Thanksgiving Holiday. Jennifer Dover then reported that DCP 3 for ASOS ST0 (located by the west gate at SFSC) is scheduled to move inside the new fence in about one month. However, DCP3’s present location will not affect the ST schedule since its radio communication to ST0 is still operating.

Bryan Rice, SAIC, reported completion of 8 of the 30 test procedures on ST0 with no problems.

Jerry reported he had sent out the draft CL31 Ceilometer Replacement OT&E Plan to the NWS regions for review at the same time the ATRB was sent the plan for review. Jerry

said he received comments from the western region headquarters (Joe Lachacz) and the southern region headquarters (Lew Harrington). Joe had no changes to offer. Lew's comments focused on the maintenance aspect of the OT&E. Jerry agreed OPS24 would meet with OPS12 (Greg Dalyai) to discuss how to incorporate the maintenance aspect of the CL31 into OT&E.

The final discussion was on the availability of a draft CL31 Technical/Maintenance Manual for the ST sites and eventually for the OT&E sites to evaluate. Jerry stated that OPS12 will not have an NWS Maintenance Manual for the CL31 until after the OT&E when Vaisala produces the final CL31 Technical Manual based on the production unit for the CL31. OPS12 will use the Vaisala document to produce the NWS maintenance manual. Both Joe Devost and John Monte reported the "draft" Vaisala CL31 Technical Manual is good enough for use at the ST sites and OT&E sites.

The following Action Items (and status) from the October 2 TRG meeting were discussed:

**Action Item 6: (CLOSED)** – OPS24 (Khien Nguyen) will update ST regression test procedures and send them on a CD to the ST sites. Khien reported he made the changes to the test procedures and provided those changes on CD to Joe DeVost to send to the ST sites on Friday, October 17. **COMPLETED**

**Action Item 7: (OPEN)** - OPS24 (Khien Nguyen, Jerry Dinges) will contact James Brand at the FAATC to test dates using the FTI line for the FAATC's test beds (ADAS/ALDARS and WSP) for ST. Preliminary testing between SFSC and FAATC indicated that the FTI connections were working. (NOTE: See below new Action Item 2 – 10/16/08).

**Action Item 8: (CLOSED)** - NWSTC (Bob Retzlaff), U.S. Navy SPAWARSYSCEN (Wayne Knight), and FAA NASEO (Ron Bahavar) will contact OPS24 (Khien Nguyen) ST Director to confirm they received all Fed Ex packages and inventoried their content before installing the CL31 unit. **COMPLETED.**

(NOTE: New Action Item1: Joe Devost (after confirming with Greg Dalyai) will re-ship the lost items [Fiber Optic (FO) Modem, FO cable, Power Module, and V2.0 DCP EPROMS] to NASEO on October 17 if they were not found by noon on October 17. On Friday, October 17, Ray Bahavar reported he found the lost FedEx package.

The following action items from the October 9 TRG were discussed:

**Action Item 1 (CLOSED):** Assigned to Joe Devost (OPS12). Joe will provide the U.S. Navy SPAWARSYSCEN with a copy of Mode Note 80 and 92. **STATUS:** Sent Wednesday, October 15. **COMPLETED**

**Action Item 2 (CLOSED):** Assigned to Joe Devost (OPS12). Joe will incorporate changes to NWS Mod Note 80: ACU/DCP Configuration provided by OPS24. These changes will be distributed to the ST sites by OPS24. **COMPLETED.**

**Action Item 3 (OPEN):** Assigned to the FAA and OPS24. The FAA will have Harris Corporation check to make sure that the FAA Tech Center and SFSC have a GDC and Interplex Modem for FTI. OPS24 will coordinate with the FAA Tech Center (Jim Brand) on the status of this request and status of testing the new FTI link during ST. (NOTE: See new Action Item 2)

**Action Item 4 (CLOSED):** Assigned to OPS24 (Khien Nguyen). Khien will call Ray Bahavar (FAA, NASEO) to make sure that he received all the required CL31 hardware, materials, parts, installation instructions, parts list, and accounting codes to complete pre ST activities. **COMPLETED** (NOTE: See below Action Item 1- 10/16/08)

**Action Item 5 (CLOSED):** Assigned to Jennifer Dover (OPS22) to check on the status of the moving of the ST0 remote DCP 2 at SFSC and report back to OPS24 by e-mail. **COMPLETED.**

UPDATE: As of Thursday, October 16, Jennifer reported the remote ST0 DCP 2 still did not have power. Power should be restored to DCP 2 sometime next week. ST completion has slipped one week due to the power status of DCP2.

**Action Item 6 (CLOSED):** Assigned to Jerry Dinges (OPS24). Jerry will verify whether the GDC modem at SFSC was installed. It was not. Harris Corp. will install it the week of October 20-24. **COMPLETED.**

**Action Item 7 (CLOSED):** Assigned to Jerry Dinges (OPS24). Jerry will contact OPS12 to find out the status of the draft CL31 maintenance manual (i.e., Vaisla CL31 Technical User Manual). Will it be available for ST and OT&E. Joe Devost and John Monte reported a "draft" of the Vaisala CL31 Users Manual would be provided to all ST sites and OT&E sites. **COMPLETED**

The following new action items were assigned during the TRG:

**Action Item 1 (OPEN):** Assigned to Joe Devost (OPS12). Joe will re-ship (pending confirmation from Greg Dalyai) lost items (FO Modem, FO cable, power converter, V2.0 EPROMS) to NASEO on October 17 if NASEO has not found the missing FEDEX package by noon on October 17. These items will be shipped to NLSC and be ready for pick up at NASEO on October 20.

**Action Item 2 (OPEN):** Assigned to OPS24 and FAA. OPS24 will meet with Jim Brand of FAA Tech Center to make sure that the GDC modems are installed at the FAA Tech Center and SFSC next week. OPS24 and the FAA will also discuss the plans for testing the FTI interface between the FAA Tech Center and SFSC during ST.

**Action Item 3 (OPEN):** Assigned to John Monte (OST11). John will ask the NRC to make two more power control modules for CL31 OT&E, and have NRC shipped to NLSC.

**Action Item 4 (OPEN):** Assigned to Greg Dalyai (OPS12) John will cancel any “due-ins” to NLSC for items received by Regions/ET related to the CL31 materials for the temporary mounts. A refund will be provided by OPS12 to the NWS regions for “due- ins” missed.

**Action Item 5: (OPEN):** Assigned to Jerry Dinges (OPS24). Jerry will meet with Greg Dalyai (OPS12) to discuss Lew Harrington’s comments to the draft CL31 Ceilometer Replacement OT&E plan related to maintenance aspects evaluated during the OT&E. They will determine the best way to demonstrate the maintenance aspect of CL31 during OT&E. OPS24 will incorporate this into the OT&E plan once a final strategy is completed.

Please direct all questions/concerns to Khien Nguyen (Phone (301)-713-0326 x 177, email [khien.nguyen@noaa.gov](mailto:khien.nguyen@noaa.gov)).