

ASOS Test Review Board (ATRB) Meeting Minutes

Minutes: **ATRB Meeting**

Date: March 12, 2009

Attendees: Jerald Dinges - ATRB Chair, Joseph Fiore, Khien Nguyen, Harry Tran (NWS/OPS24)
Dave Mannarano - ATRB Member, Rick Parry, Chet Schmitt (NWS/OPS22)
Peggy Hoch (NWS/OPS23)
Joe Devost (NWS/OPS12))
Bing Huang - ATRB Member (ATO-T), Jerry Kranz (FAA contractor)
Gerald "Wayne" Knight - ATRB Member, Ron Heatherdale - Alternate (U.S. Navy SPAWARSYSCEN, Charleston, SC)
Roy Rasmussen – ATRB Member, Scott Landolt - Alternate (NCAR)
William "Mac" Lawrence – ATRB Member (USAF)

The seventh ASOS Test Review Board (ATRB) Meeting was held on March 12 at 10 AM EDT using "GOTOMEETING" web-based meeting software to display various documents and presentations that were discussed during the meeting. The audio part of the meeting was held by telephone conference. Representatives from all five groups comprising the ATRB were in attendance: The Department of Commerce (DOC) National Weather Service (NWS), the Department of Defense (DoD) U.S. Air Force and U.S. Navy, and the National Center for Atmospheric Research (NCAR) were present. The minutes, presentations, reports, and other important documents will be placed on the NWS/OPS24 website for access and review.

http://www.nws.noaa.gov/ops2/ops24/documents/atrb_docs.htm

The NWS National Weather Service Headquarters Office of Operational Systems (OOS), Field Systems Operations Center, Test and Evaluation Branch OPS24) convened and moderated the meeting. Highlights of the meeting were:

The first part of the meeting consisted of roll call and a review of the previous meeting's minutes (February 5, 2009) and associated Action Items.

Action Item 6 from the October 9th ATRB meeting was "closed."
Action Item 2 from the February 5th ATRB meeting was "closed."

Action Items 1-5 from the October 9th ATRB meeting remain "open."
Action Item 7 from the November 14th and Action Item 1 from the February 5th ATRB meeting remain "open."

The minutes from the February 5 ATRB meeting were ratified and will be placed in the above stated URL link to the NWS/OPS24 website. The current status of the “OPEN” action items through February 5 were as follows:

Action Item 1(10/9/08): (OPEN) John Monte (NWS/OST11) will perform a test of the bird abatement devices without the 4 short rod extensions at Sterling Field Support Center (SFSC), Sterling, VA before the ASOS CL31 Ceilometer Replacement OT&E and provide the test results to the ATRB.

STATUS: John Monte was absent for the ATRB meeting, but he previously reported testing of the bird abatement device without the 4 short-rod extensions continues (start date was November 17, 2008) at the SFSC, and will be complete in August 2009 to ensure the test will include the timeframe of expected highest bird activity at SFSC during early to mid-summer.

NOTE: This action item will remain OPEN but not reported until test is completed in August.

Action Item 2 (10/9/08) (OPEN): Assigned to John Monte (NWS/OST11). John will submit a Test RC for the AWPAG wind screen to the ASOS Configuration Control Board as a prerequisite for the operational testing of wind screens. UPDATE: There will be no OT&E conducted for the new AWPAG wind screen. There will be an ST to evaluate the Mod Note and installation of the new wind screen at SFSC and IAD. John Monte will update the RC to reflect this change and he will submit an RC for deployment if the ST is successful.

STATUS: No change.

Action Item 3 (10/9/08) (OPEN): Assigned to John Monte (NWS/OST11). John Monte will order the production units for the altered wind screens from OTT for placement in NLSC.

STATUS: Jerry Dinges provided the following update based on conversations he heard John Monte give at other recent meetings. Dave Mannarano collaborated he heard the same information. The NWS expects (321 units) to take delivery of these wind screens in July 2009, so the wind screens can be deployed for the winter of 2009-2010. The NWS is also looking for another vendor to produce these wind screens.

NOTE: This action item will remain open but will not be reported until July 2009 or until the production units are delivered, whichever comes first.

Action Item 4 (10/9/08) (OPEN): Assigned to Greg Dalyai (NWS/OPS12). Greg will coordinate with Jerry Dinges (OPS24) on the delivery dates of the draft NWS Mod Notes required for the IFW Firmware V4.54 (Mod Note 94) and the AWPAG alter wind screens (Mod Note 93). They will be needed for start of the System Tests.

STATUS: Joe Devost (NWS/OPS12) reported for Greg that both NWS Engineering Modification Notes (Mod Note) are almost complete. Mod Note #93 (AWPAG Wind Screens) is in the final stages of modification, and will be complete soon.(Note: Not required until July

2009 or when production units are delivered) - OPEN. Mod Note #94 for Ice-Free Wind (IFW) firmware Version (V) 4.54 is currently being used for IFW 4.54 ST which commenced this week at SFSC (**COMPLETED**). The ST team will provide any changes to Mod Note 94 to OPS12 for final revision after IFW 4.54 ST is completed (**OPEN**).

Action Item 5 (10/9/08) (OPEN): Assigned to David Mannarano (NWS/OPS22) will take the lead to ensure a policy decision is formally agreed on for threshold temperatures values for the AWPAG orifice heater turn-on and cut-off based on LogoSense V3.61 and the orifice heater controller firmware V2.1.

STATUS: Dave Mannarano reported there was a meeting scheduled with NWS/OPS22, SFSC, and NWS/OST11 to discuss this temperature threshold on 3/12/09 at National Weather Service Headquarters (WSH). Dave reported OPS22 will write a plan for this effort and then coordinate with NWS/OST11, NWS/OS7 and the NWS Office of Climate, Water, Weather Service. Dave said that there were two main questions to be answered.

- 1.) How low should the temperature cut-off (it is currently 18F) be before ice capping would not occur?
- 2.) In a perfect world (from a climate perspective), what is the lowest temperature at which the snowfall rate will decrease enough to make ice capping insignificant?

Roy Rasmussen reported that he has seen significant snowfall rates in the mountains of Colorado (at NCAR test sites) which cause ice capping occur to 0F because snowflakes become dendritic (and stick together) at low temperatures, increasing snowfall rates and causing ice capping on rain gauges.

Action Item 6 (10/9/08) (CLOSED): Assigned to Jerry Dinges (NWS/OPS24). Jerry Dinges will develop operational test strategies, resources, and schedules for the AWPAG LogoSense V3.61 and the AWPAG orifice heater controller V2.1 subsequent to the completion of Action Items 11 and 12. COMPLETE.

STATUS: OPS24 presented ST objectives, evaluation criteria, methodology, etc at the March 12, 2009 ATRB meeting for the ATRB approval (See Item E of these minutes).

Action Item 7 (11/14/08) (OPEN): Assigned to John Monte (W/OST11). John will update the test RC for the new AWPAG Wind Screen to reflect that there will be an ST but no OT&E, and he will submit an RC for deployment of the new AWPAG Wind Screen if the ST is successful.

STATUS: No Change.

The following is list of new action items agreed upon during the February 5, 2009 ATRB meeting:

Action Item 1 (02/05/09) (OPEN): Assigned to John Monte (OST11); At the request of ATRB member Roy Rasmussen (NCAR), John will contact Cold Bay, AK to inquire about the status of the AWPAG 8 Foot Alter Wind Screens performance during high winds at Cold Bay this winter and reported back to the ATRB.

STATUS: Jerry Dinges will ask John Monte for an update on the wind screen performance at Cold Bay, Alaska during the winter of 2008-2009.

UPDATE: John Monte reported 12/18/09 – “During the Observing Services Program Managers Meeting held here at HQ on February 26, 2009, the Alaskan Region representative indicated that the new screens installed at Cold Bay and Bethel are holding up very well with no problems to date.”

Action Item 2 (02/05/09) (CLOSED): Assigned to Jennifer Dover (OPS22). Jennifer will provide the ATRB with an update on the status of the parts, cost, and schedule required to get SFSC ASOS ST0 DCP 3 operational as soon as possible. COMPLETE.

STATUS: 8 radios and associated parts were ordered from NLSC, and are in stock at SFSC. These radios will be installed on ST0 DCP 3 this week by SFSC staff, and DCP 3 will be powered up and tested by the SFSC staff.

The following Microsoft PowerPoint presentations were given by W/OPS24 staff on the status of ongoing ST and OT&E activities related to ASOS. The list of presentations given by OPS24 follows:

A. Update on ASOS OID/ VDU Replacement Using Thin Client OT&E

Joe Fiore gave a brief status report. The “first article” thin client unit was scheduled for delivery to OPS12 on March 12. ST will follow successful check out of the first article unit by OPS12. The ST test will include an FTI communication test between the SFSC and the FAA Tech Center, Atlantic City, NJ to test multiple thin client configurations. OT&E will commence upon successful completion of ST.

B. Update on the OT&E for CL31 Ceilometer Replacement for the ASOS ACU V2.79V

Joe Fiore reported on the status of the CL31 Replacement for ASOS V2.79V OT&E using a presentation that was presented at the Test Readiness Review (TRR) meeting for the OT&E held on March 9. Joe reported that on March 11, NWS/OPS24 sent out (by Fedex) 18 CD’s containing V2.79V to 18 OT&E sites that will participate in the first part of the OT&E. Joe also reported that a decision to switch the CL31 to the operational ceilometer would need to be made by the ATRB before the switch could occur. This decision to make the CL31 the test ceilometer and the CT12K the test ceilometer will be based on the results of the MCE and on the results of the SYSLOG analysis of error message types #1015 and #1515. Joe reported that there was a CL31 TRG meeting scheduled for 2 PM on March 12 at WSH.

C. Update on CL31/CT12K Meteorological Comparison Evaluation

Joe Fiore presented the results of the MCE through February 28, 2009. Joe also stated that the ATRB would receive a copy of the MCE status report after MCE data Analysis team review.

D. Update on IFW V4.54 System Test Plan and Schedule.

Joe Fiore gave a brief status report. Joe reported that ST had started, and was briefly suspended because the ST team could not download the IFW firmware 4.54 to the failed IFW sensor. Harry Tran then reported the problem is fixed, and he would be at SFSC on Friday, March 13 to continue ST. The official plan is posted to the W/OPS24 webpage on Wednesday, January 28, 2009.

http://www.nws.noaa.gov/ops2/ops24/documents/asos_ifw_docs.htm

E. ST strategy for AWPAG LogoSense V3.61 and Orifice Heater Controller V2.1

Harry Tran briefed the ATRB on the ST purpose, test objectives, evaluation criteria, and test methodology.

ACTION TAKEN: The ATRB unanimously approved the ST concept presented to them.

F. ST strategy for ATRB approval - ASOS ACU V3.01

Khien Nguyen briefed the ATRB on the ST purpose, test objectives, evaluation criteria, test methodology, and schedule. Khien stated this ST would be very extensive (with over 100 regression tests, 50 tests specific for the new functionalities, and meteorological events using data states created for real weather events) and would run for 3 to 4 months. Khien stated V2.79V firmware (if OT&E is successful) would be included in the baseline for V3.01. Bing Huang (FAA) noted there is a risk of concurrently doing these OT&Es. If the V2.79V OT&E requires fixes to critical problems, then the V3.01 would need the same fix, thus extending both OT&Es. Jerry noted a “baseline” procedure (to validate each test system in the ST is functioning properly and is current with all operational firmware and hardware modifications before V3.01 is installed) must be included in the ST plan. A “baseline” procedure was developed for the CL31 ST and it should be used for this ST. Also, Bing Huang (FAA) agreed to contact Jim Brand of the FAA Tech Center to see if the Mt. Holly ASOS was still needed for FAA Tech Center testing. Bing Huang also agreed to ask the FAA Test Center in Oklahoma City if they would be interested in participating in V3.01 ST. Mac Lawrence (USAF) will contact a USAF ASOS site in Florida to see if they would like to participate in V3.01 ST. The USAF is

in the process of putting together an ASOS test system (nonoperational) there. Finally, Dave Mannarano (NWS) reported that Norfolk, NE would be a good candidate for V3.01 OT&E.

ACTION TAKEN: The ATRB unanimously approved the ST concept presented to them.

NWS/OPS24 will develop ST plans using the briefed strategies for coordination with the agencies for NWS/OPS24 approval signature.

The following new Action Items were assigned during the March 12 ATRB meeting:

Action Item 1 (OPEN) (3/12/09): Assigned to OPS24. Joe Fiore will provide the ATRB with the latest MCE report after review by the MCE Data Analysis team.

Action Item 2 (OPEN) (3/12/09): Assigned to OPS24. Khien will include a baseline procedure in the V3.01 ST Test Plan.

Action Item 3 (OPEN) (3/12/09): Assigned to FAA/ATO-T. Bing Huang will contact Jim Brand of the FAA Tech Center to see if the Mt. Holly ASOS was still needed for FAA Tech Center testing.

Action Item 4 (OPEN) (3/12/09): Assigned to the FAA/ATO-T. Bing Huang will ask the FAA Test Center in Oklahoma City if they would be interested in participating in V3.01 ST.

Action Item 5 (OPEN) (3/12/09): Assigned to USAF. Mac Lawrence will contact a USAF ASOS site in Florida to see if they would like to participate in V3.01 ST.

Jerry Dinges, Chair, ATRB will schedule the next ATRB meeting when a decision on when to switch the CL31 to the operational sensor is to be made for OT&E, most likely sometime in May 2009.

Please direct all questions/concerns to Joseph Fiore (Phone (301)-713-0326 x 119, email joseph.fiore@noaa.gov).