

March 15, 2006

**Operational Acceptance Test (OAT) Plan
for
Automated Surface Observing System (ASOS) Software Version (V) 2.90**

Introduction and Background

While most ASOSs consist of an Acquisition Control Unit (ACU) and one or more Data Collection Platforms (DCP), an ACU-only configuration (i.e., no DCP) is installed at a small number of sites. The ACU-only configuration only has three “local” sensor ports and the typical sensor configuration is temperature/dewpoint, wind, and precipitation accumulation. In order to add the replacement dewpoint sensor (the Vaisala Model DTS1) to an ACU-only ASOS, an additional local sensor port is required. The Engineering and Acquisition Branch (OPS11) has developed the required hardware and Prism Communications, at the direction of the Software Branch (OPS23), has developed the required software – V2.90 (02/14/06).

The five sites affected, all of which will participate in the OAT, are:

GNR	Greenville, ME	Greenville Municipal Airport	No FAA Service Level assigned
MQE	Milton, MA	Blue Hill Observatory	non-airport
2WX	Buffalo, SD		non-airport
9V9	Chamberlain, SD	Chamberlain Municipal Airport	FAA Service Level D
N60	Garrison, ND	Garrison Municipal Airport	No FAA Service Level assigned

The V2.90 ACU software retains all the capabilities of V2.79B and is intended for installation only at ACU-only sites. A V2.90 System Test (ST) using an ASOS at Weather Service Headquarters, configured as an ACU-only system was completed on March 3, 2006.

Although V2.90 includes changes to the Operator Interface Device (OID) displays and observer procedures, no Federal Aviation Administration (FAA) notification/training is required for these unstaffed sites.

OAT Objectives

During the OAT, the following must be verified:

Installation procedures and instructions – Hardware and software installation procedures and instructions must be judged satisfactory by the Electronics Technicians (ET) performing the installation.

Stable ASOS operation - The availability of ASOS observations/products and the frequency of warmstarts must be consistent with or improved over performance with previous software versions. There must be no spontaneous coldstarts.

Production, transmission, and archiving of observations/products - Observations must be representative of conditions (within the limitations of the ASOS sensors), correctly formatted, transmitted successfully, and archived by ASOS.

OAT Site Focal Points

The OAT Site Focal Points are:

<u>SID</u>	<u>Site</u>	<u>Site Focal Point</u>	<u>Telephone number</u>
GNR	Greenville, ME	Tom Raineri (at CAR)	207-492-0172
MQE	Milton, MA	Don MacKay (at TAN)	508-823-1900
2WX	Buffalo, SD	Paul Michael (at RAP)	605-341-9271 x372
9V9	Chamberlain, SD	Don Beck (at SUX)	605-330-4244 x372
N60	Garrison, ND	Karl Venneberg (at BIS)	701-250-4224 x372

Methodology

The Maintenance Branch (OPS12) will provide ASOS Electronics Technicians (ET) with the required hardware, draft Modification Note, and the V2.90 software on CD. The ET for Garrison (N60), SD, will install the hardware/software during the week of March 20, 2006. If no problems are encountered with the installation and during the first week of operation at N60, installation at the remaining sites will be approved.

No on-site test activities other than installation of hardware and software are required. For these unstaffed OAT sites, the NWS site Focal point will monitor ASOS performance and review observations remotely, reporting any problems to the OAT Coordinator:

Bryan Moore – Test and Evaluation Branch (OPS24)
301-713-0326 x176
Bryan.Moore@noaa.gov

The ASOS Operations and Monitoring Center will provide the OAT Coordinator with weekly reports listing cases when test site ASOS observations/products are not received at the NWS Telecommunication Gateway as expected.

At any time during the OAT, if the test site Focal Point judges ASOS performance to be unacceptable, he/she is authorized to have the ET re-install the previous software version to ensure continued satisfactory support of operations at the site.

For the duration of the evaluation period (expected to be approximately six weeks), the OAT Coordinator will provide weekly status reports to the Test Review Group (TRG), made up of NWS and FAA national, and regional representatives:

CIO12 Kevin Conaty
OS7 James Heil
OPS12 Greg Dalyai
OPS22 Dave Mannarano
ERH Hector Machado
CRH Bob Brashears

SRH	Martin Garcia
WRH	Gerald Deiotte
ARH	Jim Hunter
PRH	Alan Lowe
FAA	Cal Smith

At the conclusion of the evaluation period, the TRG will meet to assess performance of the hardware/software and make a recommendation whether to approve the changes for implementation. The OAT Coordinator will provide test results and the TRG recommendation to the to the ASOS Configuration Control Board Chair.

