ASOS Product Improvement Implementation Plan
[addendum II]

For

Dew Point Sensor Upgrade

August 16, 2002

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Executive Summary

With the completion of the full deployment of the Automated Surface Observing System (ASOS) at over 900 locations nationwide, a new phase of Planned Product Improvement (PPI) has begun. These planned improvements will bring even greater observing capability, processing and communication capacity, and reporting accuracy and consistency to the ASOS. The planned improvements for the ASOS include:

> Processor Board Replacement,
> Dew Point Sensor Replacement,
> All-Weather Precipitation Accumulation Gauge,
> Ice Free Wind Sensor,
> Enhanced Precipitation Identification Sensor,
> Ceilometer Replacement, and
> Software Enhancements.

A series of implementation plans are needed for these improvements. This document describes the implementation plan for the Dew Point Sensor Replacement. Other documents in this series will describe the implementation process for the specific components. Each document completely describes what will be done to successfully bring the product improvement to an operational status.
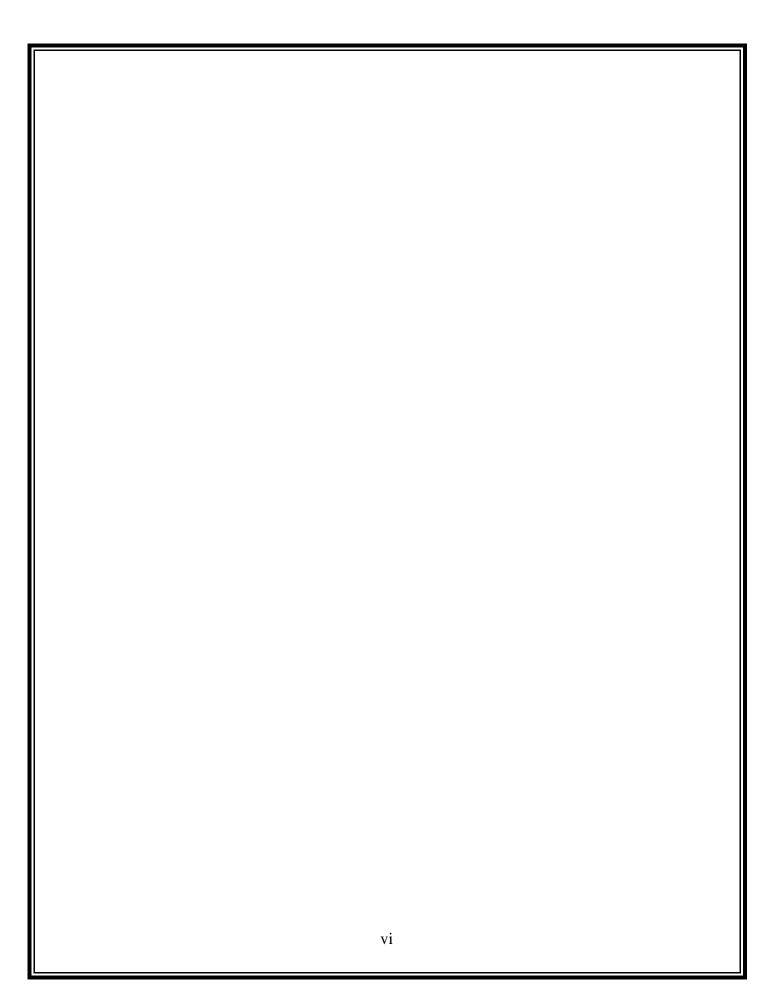
This document describes the overall process and the factors which impact on the operational implementation of the new ASOS Dew Point Sensor upgrade. The new Dew Point Sensor is planned to be installed at all 882 ASOS base program locations nationwide over a 3-year period. This includes 313 National Weather Service (NWS) sponsored locations and 569 Federal Aviation Administration (FAA) sponsored locations. The new Dew Point Sensor may also be installed at additional ASOS locations not identified in the base program. These additional locations will be designated by the sponsoring agency. Deployment for both NWS and FAA sponsored locations began in June 2002. Depending on availability of planned funding, deployment for NWS locations will be complete in May 2003 and deployment for FAA sponsored locations will be complete in September 2004. A major prerequisite for successful implementation of the new Dew Point Sensor is the prior or concurrent deployment and implementation of the new ASOS Processor Board with the supporting Dew Point Sensor software load at each site where the Dew Point Sensor is to be installed. This dependence requires close coordination and alignment between the implementation of the Processor Board (with a supporting Dew Point Sensor software load) and the Dew Point Sensor.

A check list is provided to aid in monitoring progress in completing the necessary activities for Operational Implementation (OI). The check list ensures that prerequisite System Test (ST) and Operational Acceptance Test (OAT) activities are successfully completed prior to start of the OI. It then covers pre-OI planning actions involved in site identification, deployment strategy, maintenance and logistics planning, training, and user notification. The check list identifies the executable functions and deliverables in the implementation of the new Dew Point Sensor. Finally, any necessary post-OI

activities are also covered.

This plan is written from the time perspective of imminent OI. It assumes all necessary activities prior to OI were, or *will have been*, completed and that OI activities are about to begin.

List of Organizational Codes

Code	NWS Organization
CCx2	National Logistics Support Center
OPS11	Engineering & Acquisition Branch
OPS12	Maintenance Branch
OPS13	Configuration Branch
OPS14	Logistics Branch
OPS22	Observing Systems Branch
OPS23	Software Branch
OPS24	Test & Evaluation Branch
OPS31	Operations Support & Performance Monitoring Branch
CIO12	Telecommunication Gateway Operations Branch (AOMC)
OS7	Observing Services Division
OST11	Program Management Branch

Code	FAA Organization
AUA-400	IPT* Lead for Weather/Flight Service Systems
AUA-430	Weather Sensors and Aviation Weather Research Product Team
ATP-300	Flight Service Operations Division
ATP-310	Meteorological Support
AOP-400	Telco Network Planning & Engineering Division
ARU-1	Air Traffic Systems Development Directorate
ARS-100	Aerospace Weather Policy Division
ARS-200	Aerospace Weather Standards Division
ARU-400	Aviation Weather Requirements Division

*IPT =	Integrated Product Team

ACRONYMS

ACCB   ASOS Configuration Control Board
ACU   Acquisition Control Unit
ADAS   AWOS/ASOS Data Acquisition System
AOMC   ASOS Operations and Monitoring Center
APMC   ASOS Program Management Committee
ASOS   Automated Surface Observing System
AWIPS   Advanced Weather Interactive Processing System
AWOS   Automated Weather Observing System
AWPAG   All-Weather Precipitation Accumulation Gauge
CMIS   Configuration Management Information System
CO   Contracting Officer
COTR   Contracting Officer Technical Representative
CPU   Central Processing Unit
DAPM   Data Acquisition Program Manager
DCP   Data Collection Package
DOD   Department Of Defense
DRR   Deployment Readiness Review
DTS1   Dew Point Temperature Sensor Replacement - Vaisala Model DTS1
ECP   Engineering Change Proposal
EMRS   Engineering Management Reporting System
ET   Electronics Technician
FAA   Federal Aviation Administration
FCA   Functional Configuration Audit
FY   Fiscal Year
IFW   Ice Free Wind
METAR   Aviation Routine Weather Report
MIC   Meteorologist-In-Charge
MIRS   Management Information Reporting System
MOD KIT Modification Kit
MOD NOTES Modification Notes
MTBF   Mean Time Between Failure
NDS   NWS Directives System
NLSC   National Logistics Support Center
NRC   National Reconditioning Center
NSN   National Stock Number
NWS   National Weather Service
OAT   Operational Acceptance Test
OI   Operational Implementation
OIP   Operational Implementation Plan
OPR   Office of Primary Responsibility
PCA   Physical Configuration Audit

PPI	Planned Product Improvement
RAM	Random Access Memory
REL NOTE	Release Note
RC	Request for Change
RFP	Regional Focal Point
SCA	Single Cabinet ASOS
SHEF	Standard Hydrometeorological Exchange Format
SPECI	Selected Special Weather Report
ST	System Test
TCP/IP	Transmission Control Protocol/Internet Protocol
TDWR	Terminal Doppler Weather Radar
TRG	Test Review Group
TSL	Technical Services Laboratory
TTR	Test Trouble Report
WSOM	Weather Service Operations Manual
WSP	Weather Systems Processor
WFO	Weather Forecast Office
WSP	Weather Systems Processor

1.   INTRODUCTION

1.1   Description of Technology Improvement Scheduled For Implementation

This section contains a full description of the Planned Product Improvement (PPI), including the capabilities and limitations.

The Automated Surface Observing Systems (ASOS) are equipped with a Technical Services Laboratory (TSL) hygrothermometer (either Model H083 or Model 1088) for the measurement of temperature and dew point.   For measurement of dew point, the TSL H083/1088 sensors use chilled mirror technology. To maintain satisfactory dew point measurement performance, an Electronics Technician (ET) must visit the site and clean the mirrors much more frequently than the normal 90-day maintenance interval prescribed for other ASOS components. For this reason, the National Weather Service (NWS) ASOS Planned Product Improvement (PPI) Program has identified an alternate technology replacement Dew Point Temperature Sensor, the Vaisala Model DTS1 (DTS1) which, in testing to date, has satisfied all ASOS DTS1 range/accuracy requirements and is expected to extend the periodic maintenance intervals to 90 days or more. Since the DTS1 only measures humidity and reports dew point temperature, the TSL H083/1088 will remain installed on ASOS to provide the site's operational temperature data while the DTS1 will provide the operational dew point data. The DTS1 can only be installed at sites equipped with the new ASOS Processor Board upgrade and the software load to accommodate the new Dew Point Sensor. The software load on the new Processor Board, version 2.6A, has been verified to successfully support the new Dew Point Sensor.

Under NWS contract, Vaisala developed the DTS1 dew point temperature sensor to meet the requirements of NWS Specification H300-SP100. The DTS1 is based on an existing Vaisala commercial sensor (the HMP243), modified to meet the requirements of H300-SP100. During the DTS1 development, Vaisala redesigned critical components in the probe and interface electronics as a result of anticipated obsolescence issues with the HMP243. Revisions included a stainless steel, hermetically sealed probe; incorporation of the latest Humicap 180 RH sensor; and redesign of the probe interface electronics from a hybrid to a printed circuit board design.

Prism Communications developed Acquisition Control Unit (ACU) software (V2.6A) for the upgraded ASOS processor to support the DTS1 interface.

The Operational Acceptance Test (OAT) for the processor upgrade began at Boothville, (BVE), LA, September 24, 2001, and was suspended at 30 test sites June 6, 2002, pending further software enhancements. The number of processor upgrade OAT sites may be modified to facilitate testing.

The OAT for the DTS1 began during the week of December 21, 2001, at Baltimore Science Center (DMH), MD, and continued through June 6, 2002 at 10 additional sites. Enough data were acquired to make a production decision on March 4, 2002, but the deployment decision was postponed pending resolution of minor problems on the new processor board. These problems were resolved prior to the delivery of the first full scale DTS1 production deliveries in June 2002.

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A climate data continuity study is required for all new ASOS sensors. To facilitate this study, 21 of the original planned 33 Processor board upgrade OAT sites have been selected as DTS1 OAT sites. These 21 sites constitute the DTS1 OAT ensemble. One or more of the Dew Point OAT sites is located in each of the 12 climatic regimes specified by the Observing Systems Branch (OPS22) to meet the continuity study requirements. The climate data continuity study will be managed by the Observing Services Division (OS7) and is expected to last approximately two years.

1.2   Purpose

The purpose of this document is to provide a clear strategy for the implementation of the new DTS1 into the ASOS and minimize field operational impacts resulting from this modification. Furthermore, this plan delineates major implementation activities and organizational responsibilities required for a smooth transition into operations.

1.3   Scope

This section describes the extent of implementation related activities starting with System Test (ST) preparation and ending with commencement of operations. These activities include: The pre-implementation testing and operational readiness evaluation activities (described in Chapter 2); the pre-operational implementation activities (described in Chapter 3); the operational implementation activities (described in Chapter 4); and the post-operational implementation activities (described in Chapter 5). It describes any unique additions, exceptions, or limitations.   For instance, unlike other improvements, the new DTS1 improvement does not require user/operator training, but does require completion of a follow-on Climate Data Continuity Study.

This plan applies to all ASOS locations equipped with a new Dew Point Sensor. The implementation of the new DTS1 falls within the overall goal of improving the ASOS network. This DTS1 implementation is phase II of the ASOS product improvement program. Consequently, this implementation plan is labeled Addendum II.

1.4   Applicable Documents

As applicable, the following documents should be referenced for further guidance and serve as a part of this plan:

- •   Engineering Modification Note # 75
- •   Field Release Note
- •   Operational Acceptance Test Plan

2.0   TEST ACTIVITIES

The DTS1 must undergo successful government testing before operational implementation. This chapter provides a brief overview of the prerequisite test activities which lead to Operational Implementation (OI) activities. The pre-implementation test activities are the transition between development activities and OI activities. The sections in this chapter describe the test-related activities, are given in general serial order of completion, and identify the primary office(s) responsible for their accomplishment. For ASOS the government test activities are ST activities and OAT activities. These activities are necessary to determine if the product improvement is ready for full production and implementation. Two Key decision points result from these test activities. The first key decision point is a full, or series of partial production decisions, usually made as a result of successful completion of the ST for ASOS. This is a program office decision based on the formal test report and recommendation of a Test Review Group (TRG). The second key decision point is a full, or series of partial deployment decisions. This decision is made by the program manager and is based on successful completion of the OAT for ASOS. A TRG also provides technical review and advice for this decision.

2.1   Pre-System Test (ST) Activities

This section describes those activities which must be completed before the start of the ST. This description identifies the office responsible for completion of each activity. These pre-ST activities include:

1.   **Prepare Request For Change (RC):** Prior to successful completion of the factory System Integration / Qualification Tests, the Program Management Branch (OST11) will have submitted a Request For Change (RC), through the ASOS Change Management process, to begin the ST and OAT process. The ASOS Program Management Committee (APMC) is the approving management authority for this process.

2.   **Prepare ST Plan:** The Test & Evaluation Branch (OPS24) prepared and distributed the ST plan prior to start of the ST. This plan includes all activities and deliverables for successful completion of the ST and a draft outline of the ST report. A TRG was formed to adjudicate and classify all Test Trouble Reports (TTR) documented during the ST.

3.   **ST Locations and Dates:** ST locations, schedules, and test procedures are determined and managed by OPS24.

4.   **Acquisition of ST Units:** Upon successful completion of the factory System Integration / Qualification Tests, OST11 will initiate through OPS11 procurement of the DTS1 PPI components and delivery of these components to the designated ST locations. The Maintenance Branch (OPS12) will ensure delivery of the necessary test equipment to the designated ST locations.

5. **ST Logistic Support:** Necessary components, supplies, spare parts, and test equipment will be made available to the ST locations.

6. **Install PPI Test Units at ST Sites:** Installation and maintenance of ST equipment will be coordinated by OPS12.

2.2   System Test Activities

This section describes those activities which must be completed during or before the end of the ST.   This description should identify the office responsible for completion of each activity. These ST activities include:

1. **Verify Start of ST:** OPS24 will report the start of the ST.

2. **Data Collection and Analysis:** All necessary data will be collected, compiled and checked for quality and completeness in accordance with the ST plan. All TTRs will be reviewed and reconciled. This process is managed by OPS24.

3. **Verify Completion of the ST:** Where the test identified serious flaws, additional STs will have to be conducted. When the test is successfully completed, OPS24 will inform the TRG of the results of the test and the next phase of testing can commence.

4. **ST Report:** A preliminary test report will be prepared and issued for review by OPS24 as the ST nears completion. This includes an assessment of all outstanding TTRs and a recommendation whether to proceed with the follow-on OAT.

2.3   Pre-Operational Acceptance Test (OAT) Activities

This section describes the purpose of the OAT and those activities which must be completed before the start of the OAT. This description identifies the office responsible for completion of each activity. The purpose of the OAT is to verify operational performance of the DTS1 under field conditions, ensure there are no adverse systemic effects as a result of integration of the new DTS1 with the ASOS, and to verify the viability of the installation MOD NOTES and Release Notes. In effect, this is a "dry-run" for the full implementation for the remaining sites. The following activities must be completed prior to start of the OAT:
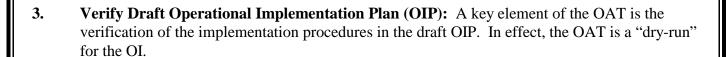
1. **RC for OAT:** Upon receipt of the preliminary ST report and a recommendation from OPS24 to proceed with the OAT, the Chair of the ACCB [i.e., ASOS PPI Manager (OST11)] will have initiated action to prepare and submit an RC for the OAT. This RC lists all locations included in the OAT.

2.   **OAT Management Decision:** Upon completion and delivery of the final ST report to the ACCB, by OPS24, the ACCB will have made a decision through the Change Management process whether to proceed with the OAT. Under special circumstances to meet critical deadlines, the decision to proceed with the OAT could be made based on the preliminary ST report provided no major changes are expected in the final ST report.

3.   **Prepare OAT plan:** OPS24 prepared and distributed the OAT plan prior to start of the OAT.

4.   **OAT Locations and Schedule:** The 21 OAT locations were determined by OPS24 in coordination with OPS22, the Observing Services Division (OS7), the NWS regions, and the FAA. The sites selected for the OAT were chosen to ensure a representative sample of operational locations are evaluated.

5.   **Acquisition of OAT Units:**   OST11 will have initiated action for acquisition of the OAT units.

6.   **OAT Logistic Support:** OPS12 ensured all necessary Modification Kits (MOD KIT), maintenance components, supplies, spare parts, and test equipment are delivered to the designated OAT locations and installed prior to the start of the OAT.

7.   **OAT Maintenance Coordination Support:** OPS12 coordinated plans for installation and maintenance of the OAT MOD KITs with the NWS regions, and the ET responsible for each OAT site prior to start of the OAT.

8.   **Prepare & Provide Modification Notes (MOD NOTES):** Draft NWS Engineering Modification Notes (MOD NOTES) will be produced by OPS12 and provided to installation technicians prior to start of installation at the OAT site(s).

9.   **OAT Documentation Support:** All necessary documentation was delivered to the NWS regions and the test sites prior to start of the OAT.

2.4   Operational Acceptance Test Activities

This section describes the activities which must be completed during and before the end of the OAT. This description identifies the office responsible for completion of each activity. These activities included:

1.   **Verify Start of OAT:**   OPS24 informed the test team of the times, places, and procedures for the OAT. This was done through ongoing coordination and formal issuance of the OAT plan.

2.   **Data Collection and Analysis:** All necessary data were collected, compiled and checked for quality and completeness in accordance with the OAT plan. This process is managed by OPS24.

3. **Verify Draft Operational Implementation Plan (OIP):** A key element of the OAT is the verification of the implementation procedures in the draft OIP. In effect, the OAT is a "dry-run" for the OI.

4. **Verify Completion of OAT:** If the OAT has a significant failure, a new successful ST and OAT are necessary after corrective action is completed. When the OAT is completed successfully, OPS24 will inform the test team that full implementation of the DTS1 can commence.

5. **OAT Report:** A preliminary OAT report will be prepared and issued for review by OPS24 as the OAT nears completion. The final OAT report will be prepared a month after OAT completion.

3.0   PRE-OPERATIONAL IMPLEMENTATION (OI) ACTIVITIES

This chapter gives a brief overview of the activities which immediately precede and lead to OI activities. These pre-implementation activities are the transition between the test activities and OI activities. They began during the OAT and are to be completed before the start of the OI. The DRR decision to begin the OI provides the requisite authority, guidance, and direction for their completion. The sections in this chapter describe the pre-implementation activities necessary to initiate the follow-on implementation activities and identify the office(s) responsible for their accomplishment. These activities are: planning, logistic support, and documentation. They are accomplished in parallel and are completed by the start of the OI which occurs when the new DTS1 is installed and operationally activated at the first site following completion of the OAT. The following activities should be accomplished before the start of the OI.

3.1   Planning/Decision Activities

This section describes those plans and associated decisions which must be completed before the start of the OI. These plans and decisions are essential for orderly and efficient execution of the operational implementation. This description identifies the office(s) responsible for completion of each plan or related decision. These planning/decision activities include:

1.   **Depot Spares Modeling:** A Mean Time Between Failure (MTBF) of 3.83 years, a system Expected Life Cycle (ELC) of 20 years, and a base number of 882 operational systems fielded (OSF) are among the variables used by OPS14 to run a depot spares model to determine how many spares are needed to operationally support the DTS1. This number will be provided to the ASOS PPI Manager (OST11) prior to full scale production and acquisition management decision.

2.   **RC for OI:** Concurrent with preparation of the preliminary OAT report and a recommendation from OPS24 to proceed with the OI, the Chair of the ACCB [i.e., the ASOS PPI Manager (OST11)] will initiate action to prepare and submit an RC for the OI. This RC contains an Engineering Change Notice with parts to be added and/or deleted to/from the base line and lists all locations included in the OI. The ACCB will consider the preliminary OAT report and recommendation in their deliberations and voting on the RC. The completion and provision of the final OAT report and favorable recommendation for implementation by OPS24 to the ACCB is a prerequisite for initiating the acquisition activities for the OI.

3.   **Full Scale Production and Acquisition Management Decision:** Upon ACCB approval of the RC for the OI, the ASOS PPI Manager (OST11) will endorse the RC and recommend to the APMC approval of the RC.   As the Chair of the APMC, OPS2 will coordinate the APMC management decision making process. Upon receiving the APMC management decision, OST11 will notify the ASOS PPI COTR, OPS11 to procure the planned quantity of equipment

components necessary for the OI. This notification will customarily be made upon receipt of the final OAT report and recommendation to proceed with the OI. If the final OAT report does *not* support proceeding with the OI, then OST11 will suspend procurement activity until the critical issue(s) cited in the report are satisfactorily resolved. The actual procurement may occur in batches with staggered delivery dates which coincide with the planned deployment schedule.

4.   **Prepare OI Plan:**   OPS22 will develop and coordinate the execution of the overarching OIP for all ASOS PPIs, and the specific OIP for each PPI component. This OIP addresses the OI for the new DTS1. It defines all activities for successful completion of the DTS1 OI and, as such, is an addendum to the master OIP for all ASOS product improvements.

5.   **Identify OI Installation Locations:** OPS22 will coordinate the selection of locations for each procurement batch with the appropriate NWS, FAA, and DOD (Navy and Air Force) offices and solicit their input to this decision.   This implementation plan only addresses the 882 ASOS locations in the combined NWS and FAA base program. These locations are identified in Appendix II, starting on page 9.

6.   **Develop OI Strategy:** A key element of the OI plan is the implementation strategy. Since not all DTS1 MOD KITs will be available initially to all technicians, some installation strategy is needed to ensure an equitable distribution during the production cycle. OPS22 will establish the draw rate strategy for the DTS1 MOD KITs and the installation sequence strategy. The basic elements of these strategies are described below.

A.   **Draw Rate Strategy:** Initially, OPS12 will issue the first DTS1 installation kit plus a spares kit to each Weather Forecast Office (WFO) as stock is received at the National Logistics Support Center (NLSC). The spares kit only includes those critical Field Replaceable Unit (FRU) components which are most likely to fail. Other components will be available from NLSC. Concurrent with this initial distribution, the receiving WFOs will be instructed on how to draw additional installation kits from NLSC (CCx2) in accordance with the MOD NOTE # 75 issued by OPS12. The NWS regions are responsible for establishing a regional draw rate strategy in consonance with the region's share of the national total, and for monitoring and modifying the WFO monthly draw requests as necessary. The NWS regions will provide guidance to their WFOs on the draw sequence within the region.   The NWS regions will inform OPS12 of the draw sequence within the region and will report the regional monthly draw rate status to OPS22.

WFOs are to draw only those additional kits they plan on installing within the next 30 days. No more than one draw request should be submitted by each WFO to NLSC in a calendar month. NLSC will strive to fill the draw requests in the order they are received.

B.   **Installation Sequence Strategy:** The initial kit acquired by each WFO must be set aside for use as a spare. The succeeding kits must be implemented with consideration of

the following criteria:

1. The first batch of sites to be implemented are those 20 sites included in the OAT for the DTS1. This group includes the 20 climate continuity sites needed for the DTS1 OAT. There are 17 NWS and 03 FAA sites in this group. These sites are identified in Appendix II. These sites are operationally implemented at the conclusion of the OAT process.

2. Subsequent operational deployment of the DTS1 will occur in batches over several years based on available funding. Consideration should be given to scheduling sites on the same day which are closely spaced wherever possible. The second batch based on FY '02 funding consists of all of the remaining 296 NWS locations and the next 91 FAA locations. The RFPs in coordination with OPS12 and the WFOs will determine the implementation sequence of the remaining NWS locations. The basis for selecting and prioritizing the implementation sequence for the FAA sites is based on maintenance cost effectiveness. The criterion used is maintenance outage hours for the current dew point sensor. Those locations with the highest outage hours during the survey month of February 2002 will be implemented first. A regionally stratified list of the 91 FAA sites in the second batch is contained in Appendix III.

3. The third batch consists of 190 FAA sites to be procured with FY '03 funds. The third batch of sites may include those with specialized software loads which must remain on the old processor board until these loads are rehosted on the new processor board. The sites with these specialized software loads include 34 Weather Systems Processor (WSP) sites and 42 Terminal Doppler Weather Report (TDWR) sites with software load 2.63 (total 76 sites), plus one additional site, CLE, converted from Ice Accretion testing to TDWR support in April 2002. This group also includes 8 ACU only sites which will be implemented after the WSP/TDWR and ice accretion sites. The criteria for selecting and prioritizing this group of 190 FAA sites is the same as the second batch, i.e., maintenance outage hours for the current dew point sensor. Those locations with the highest outage hours during the survey month of February 2002 will be implemented first. A regionally stratified list of the next 190 sites in the third batch is contained in Appendix III

4. The forth batch consists of 288 FAA sites to be procured with FY '04 funds. The criteria for selecting and prioritizing this batch of 288 FAA sites is the same as the other batches. This batch, by default, will contain those sites with relatively low outage hours during the survey month of February 2002. The list of remaining FAA sites is contained in Appendix III.

3.2   Logistic Support Activities

This section describes those logistic activities which must be completed before the start of the OI. This description identifies the office responsible for completion of each activity. These activities include:

1.   **Procurement:** Full production and procurement of the DTS1 and associated equipment and their delivery to NLSC will be managed by OPS11. This function includes serving as the COTR. Upon notification of approval of the full production contract award by the ACCB, OPS11 will coordinate the issuance of the production contract with the Contracting Officer (CO). A production rate and procurement schedule will be established by OPS11 at time of contract award.

2.   **Supply Support Strategy:** All procured full production Dew Point Sensors will be entered into the supply channel through the NLSC. OPS14 will establish a national stock number for the DTS1 kit. The MOD NOTE for this installation issued by OPS12 will inform field technicians how to order this kit. **Note:** Each WFO having an ASOS technician must have a spare kit on hand before installing their first site.

3.   **Installation and Maintenance Coordination:** OPS12 will coordinate all activities for installation and maintenance of operational Dew Point Sensors at designated locations in consonance with the planned OI installation sequence. These activities include scheduling for technician installation and check-out of the Dew Point Sensor, ensuring all DTS1 and support equipment are available for the technicians, ensuring all necessary maintenance documentation is provided to the technicians and ensuring all necessary maintenance training is conducted.

3.3   Configuration Management Activities

 This section describes the CM activities for the DTS1 during the pre- and post-OI period. The CM activities assure that the system performs as required and that future changes and modifications will be compatible with the implemented systems.

1.   **Audits:** Audits will be accomplished to assure that the fielded systems will comply with the approved requirements and configurations and that the documentation will properly reflect those details and represent the final tested and accepted configuration.

2.   **Functional Configuration Audit:** The Functional Configuration Audit (FCA) will be performed on the production unit and should be one of the units used during the OAT. The test results of the unit tested must conform to the requirements specifications and will represent the baseline of all units implemented. Any changes required during this implementation must be re-audited and baselined in order to assure total compatibility throughout the entire network.

3.   **Physical Configuration Audit:** The Physical Configuration Audit (PCA) will be performed after the FCA to assure that the DTS1 configuration baseline will comply to all required configurations and markings and that the documentation reflect the DTS1 individual components and that the engineering documentation represents the baselined system and interfaces.

3.4   Operational Support Activities

This section describes those documentation, training, user notification, and validation activities which must be completed before the start of the OI. This section identifies the office(s) responsible for completion of each activity. These activities include:

1.   **Documentation:** The following documentation will be provided to the implementation and operational personnel at the responsible WFO prior to OI of a given site:

   A.   Engineering MOD NOTES will be provided to WFO technicians by OPS12 for installation and follow-on maintenance activities. This will occur prior to the start of scheduled OI of the first full production DTS1 in the WFO's area of responsibility.

   B.   Operational Release Notes will be provided by OPS22 to WFOs prior to the start of the scheduled OI of the first DTS1 in their region. These release notes will also be distributed by OPS22 to designated FAA and DOD focal points for distribution to their affected facilities.

   C.   Any update to NWS Directive System (NDS) Chapters will be provided by the appropriate Weather Service Headquarters Office to the WFOs prior to Operational Implementation. OS7 will determine if any updates are required and will coordinate production and distribution of the updates.   OPS22 will monitor and ensure timely compliance.

   D.   Any update to the ASOS Users' Guide and other related ASOS documents will be provided by OPS22 to the WFOs and key focal points in other affected Federal agencies (FAA, DOD) prior to Operational Implementation. Note: This section can be deleted if no ASOS Users' Guide changes are planned for the product improvement. **In the case of the DTS1, no documentation updates are required.**

2.   **Training:** All training for responsible operators and maintenance personnel will be completed prior to OI. This will include production and delivery of all training materials, completion of training sessions, and documentation/certification of completion of training. All maintenance training materials will be provided to the responsible WFO and the appropriate agency office responsible for providing formal maintenance training.   All observer training materials will be provided by the appropriate agency office responsible for providing formal observer training.

A.   Maintenance training materials are provided by OPS12.

B.   Observer training materials are provided by FAA.

C.   The NWS Training Center is responsible for providing formal maintenance training to NWS staff. The FAA Academy is responsible for training FAA observing staff. Other agencies are responsible for training their maintenance and observing staff. NWS WFO staff will provide assistance to FAA in training their local observing staff when requested to do so. Maintenance procedures are covered in the MOD NOTES.

3.   **Pre-Implementation User Notification:** Any planned change in operations or disruption in service must be documented and distributed to the affected user community prior to actual execution of the change. This notification is intended to give users ample time to make any necessary adjustments to automated equipment and procedures prior to the implementation. This notification should take many forms including, Public Notification Statement via AWIPS, notification via Family of Services, NOTAMS, notification of local airport authority, and notification of national and international user community through NWS Telecommunication Gateway. OPS22 will ensure these notifications are disseminated. Note: In the case of the Dew Point Sensor, there is no functional change and therefore no notification is required.

4.   **Verify completion of all Pre-OI Activities:** The preceding activities must be completed before commencement of the OI activities. The OPS22 Implementation Manager will ensure all prerequisite activities are verified as completed. Furthermore, OPS22 will have informed the implementation team of the schedules, responsibilities, and procedures for the OI. This was done through ongoing coordination and formal issuance of the OIP.

4.0 OPERATIONAL IMPLEMENTATION (OI) ACTIVITIES

This chapter gives a comprehensive description of the OI activities. The sections in this chapter describe the implementation activities necessary to initiate operational activation of the DTS1 and identify the office(s) responsible. These activities include: Implementation Management Activities, Acquisition Activities, Installation Activities, and Implementation Activities. They are accomplished in parallel during the OI activity phase.

4.1 Implementation Management Activities

This section describes those activities to initiate, monitor, coordinate, and manage change during the implementation process. The main aspects of implementation management are initiation, oversight, and monitoring. Initiation responsibilities are described in subsection 1. Oversight responsibilities and the office(s) responsible for carrying out the oversight are described in subsection 2, and check list monitoring and documentation responsibilities are described in subsection 3.

1. **Implementation Management Decision:** Example of description: Upon successful completion of the OAT, a report will be written and sent to the designated TRG for consideration whether to proceed with a full, or a series of partial implementations. This recommendation will be provided to the program manager who will make the management decision to proceed with operational deployment and implementation. Specific sites for deployment and implementation will be identified and coordinated with OPS22.

2. **Oversight Responsibilities:** OPS22 has overall responsibility for managing and coordinating the OI activities. These responsibilities include ensuring the implementation is executed according to plan and coordinating any necessary adjustments with other key participants. This includes coordination with: OPS24 for managing the successful completion of all prerequisite testing prior to OI; OPS11 for monitoring acquisition and delivery of MOD KITS and other material necessary for implementation to NLSC; OPS14 for managing the logistics supply, repair; OPS12 for managing the distribution of OI MOD KITS and other materials, and the installation and maintenance activities; and the NWS Regional Focal Point (RFP) for managing and coordinating all implementation activities within their respective regions.

The RFPs have a unique responsibility to fine tune and manage the implementation sequence within the region, and coordinate with the local WFO to resolve implementation issues and ensure a successful implementation. The RFPs will compile and forward 30-day implementation status reports to OPS22 via e-mail. These status reports will include the newly completed Checklist, Part B and the 30-day Evaluation Reports from the WFO. The status reports will only be forwarded to OPS22 when the problems noted by the WFO either cannot be resolved at the regional level or have national impact.

3.   **Check List:**   A key component of the oversight responsibilities is monitoring the status and progress of the implementation. A two part check list tool has been developed to assist in this activity. The purpose of the check list is to ensure that all essential activities described in this document are completed as scheduled. The check list follows the general organization of this plan. The Check List is found in Appendix I.

Part A: This part is completed once by OPS22. It applies to all locations subject to OI. It is completed prior to the beginning of the OI process for the first full production DTS1.

Part B: This part is initially completed by the responsible WFO for each site which is implemented.   The Meteorologist-In-Charge (MIC) at each WFO is responsible for ensuring this check list is completed and sent forward in a timely manner. This includes annotating the check list with the completion dates (mm/dd/yy) of those items for which the WFO is designated as the Office of Primary Responsibility (OPR), and attaching a brief narrative which describes any problems encountered and any solutions found or recommended. Both the check list and narrative will be retained on site for 6 months. A copy will be forwarded via E-Mail to the RFP upon completion only when the problems either cannot be resolved at the local level or have regional or national implications. The RFP will compile these check lists and narratives into a monthly E-Mail status report to OPS22 only when the problems noted by the WFO either cannot be resolved regionally or have national implications. OPS22 will coordinate with the designated OPRs to ensure the remaining items are completed.

4.2   Acquisition Activities

This section describes those activities involved in acquisition, stocking, and distribution of the operational DTS1 MOD KITS.

1.   **Verify Start of OI:** OPS22 will verify the start date of the OI.

2.   **Monitor & Validate Delivery:** As the COTR, OPS11 will monitor and ensure timely delivery of all planned production units to the NLSC. Any discrepancies or delays in scheduled delivery of the DTS1 to NLSC will be reported by NLSC to OPS11 in a timely manner.   Throughout the production cycle OPS11 will perform a quality assurance function on units being delivered to the NLSC, report any discrepancies and provide remediation recommendations to the CO.

3.   **Stock Kits at NLSC:** The new DTS1 and associated parts needed for installation will be stocked as a kit at NLSC. A National Stock Number (NSN) will be established by the Logistics Branch (OPS14) for this kit. Procedures for requisitioning this kit will be disseminated to field installation technicians by OPS12 at the start of the OI. OPS14 will manage all logistic support for the implementation of the new ASOS DTS1. NLSC will manage inventory of all necessary supplies, spares, and modification kits, and filling orders from field technicians for dissemination of DTS1 kits.

4. **Requisition Kits from NLSC:** The first two kits will be issued to each WFO by OPS12 from the stock at NLSC. This includes one spares kit and one initial kit for installation. The spares kit only includes those critical Field Replaceable Unit (FRU) components which are most likely to fail. Other components will be available from NLSC. For all subsequent installation kits, the WFO ET will requisition the DTS1 Mod kit from NLSC when they are ready to install the DTS1 in accordance with the Draw Rate Strategy described in Section 3.1, paragraph 5A.

4.3   Installation Activities

This section describes the appropriate documentation source which governs downloading of archive, installation, and checkout of the operational DTS1.

1. **Downloading of Archive:** Not applicable.

2. **Installation & Checkout:** Field technicians will perform installation and checkout of the DTS1 in accordance with the Engineering MOD NOTE # 75. Generally this process will take about two hours or less.

4.4   OI Monitoring & Coordination Activities

This section describes the monitoring and coordination activities associated with the operational implementation which follow installation and checkout. These activities are executed in consonance with the oversight and check list activities described in section 4.1.1. They include installation notification, initiate maintenance monitoring and confirm operations, installation status reporting, and any necessary post implementation notification to users.

1. **Installation Notification:** Upon successful completion of installation and checkout, the ET will update the Engineering Management Reporting System (EMRS) in accordance with MOD NOTE # 75 and notify, via e-mail, the responsible WFO, the RFP, and the ASOS Operations and Monitoring Center (AOMC) of this occurrence. A sample A-26 is included as part of Appendix IV.

2. **Initiate Maintenance Monitoring & Confirm Operations:**

    a. The WFO, in conjunction with the AOMC will begin routine maintenance monitoring.

    b. **30-Day Evaluation Report:** The WFO will also conduct a detailed 30 consecutive day meteorological monitoring and evaluation of the data from the newly implemented site to ensure the data are complete, consistent with expected local conditions or independently confirmed as representative of unique meso-scale phenomena, and the system is operating normally. All

discrepancies will be noted and reported to the RFP in a timely manner. Upon the conclusion of the 30-day monitoring period, the WFO will complete and forward to the RFP a narrative report on the results of the monitoring and evaluation, along with any recommendations. The report shall include the identification of the location evaluated, the dates of the evaluation, the office and person conducting the evaluation, and the narrative. The narrative shall include a description of any discrepancies found which relate in any way to the implemented change, and any solutions which act on the discrepancy. Both the check list and evaluation report will be retained on site for 6 months. A copy will be forwarded via e-mail to the RFP upon completion *only* when the problems either cannot be resolved at the local level or have regional or national implications.

c. The RFP will closely monitor the status of the installation, checkout, and OI. The RFP will conduct periodic teleconferences with the field to assess installation, maintenance, and meteorological performance. When necessary, they will initiate timely corrective actions which are beyond the capability of the local WFO. They will also collect and compile the 30-day implementation reports from the WFOs and forward them in monthly status reports to the OPS22 Implementation Manager via e-mail *only* when the problems either cannot be resolved at the regional level or have national implications. OPS22 will coordinate with the designated OPRs to ensure the remaining items are completed.

d. The AOMC will monitor the operational status of the newly implemented ASOS site for 30 days to ensure proper functioning and availability of data from that site. The AOMC will monitor and report on the status of the implementation and appraise the OPS22 Implementation Manager of any unusual ASOS performance related to the implemented improvement during the 30-day close monitoring period.

3.   **Installation Status Reporting & Coordination:**

a. The AOMC will monitor the installation and implementation status of every site and provide daily reports. These reports will be provided through the ASOS Implementation List Server (**ASOS_Implementation@infolist.nws.noaa.gov**).

b. OPS22 will monitor the status and track the progress of the implementation from daily AOMC reports, periodic reports from the EMRS, Configuration Management Information System (CMIS), and Management Information Reporting System (MIRS), and monthly reports provided by the RFP. OPS22 will use these reports to provide weekly staff note updates for mid- and upper-level management on the status of the implementation, and initiate remedial coordination actions to resolve any difficulties and keep the implementation on schedule. The OST11 ASOS Product Improvement Manager will use these reports to update monthly/quarterly management Quad Chart reports for senior management briefings. OPS22 will also ensure that drafts, updates, data bases, and other documents related to the formal Implementation Plan which are too large for the list server will be announced on the list server and posted on the Surface Observing Program Web Site: **http://www.nws.noaa.gov/ops2/Surface/index.htm**
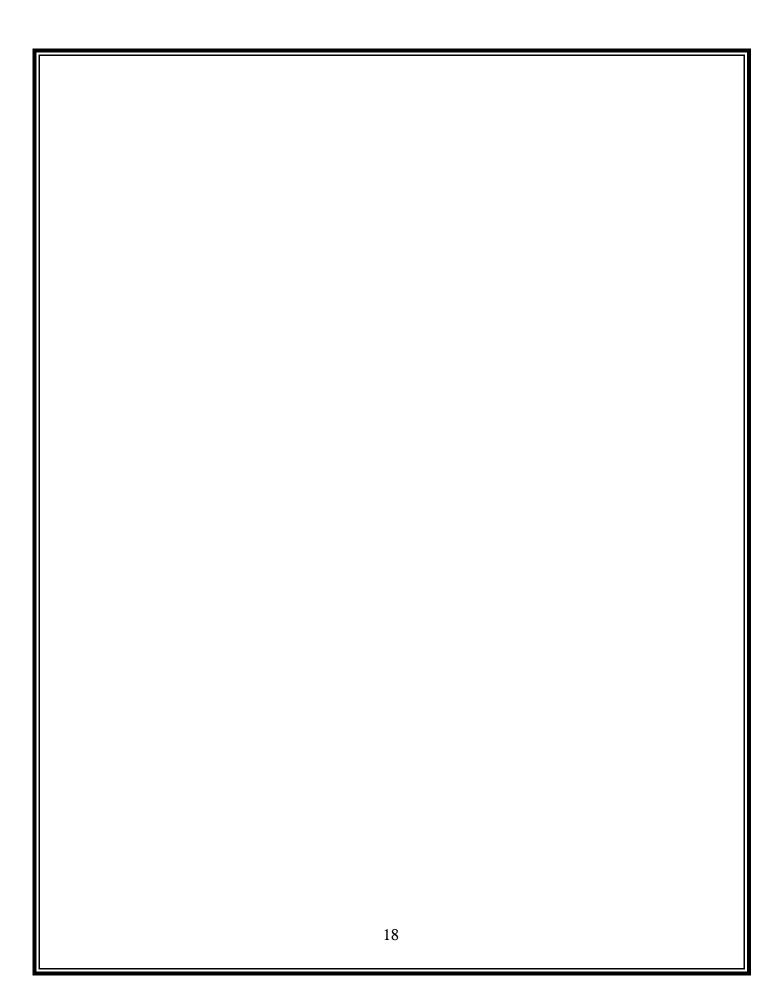
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5.0   POST OI ACTIVITIES

  The completion of the OI at each location marks the transition to post implementation activities. This chapter gives a comprehensive description of the post-OI activities. The sections in this chapter describe the post-implementation activities necessary to integrate the new DTS1 into routine ongoing operations, and identify the office(s) responsible. These activities include: Post-Implementation User Notification, Operational Quality Control, Documentation, Disposition of Old Equipment, and Climate Continuity Study. They begin immediately upon operational activation and are accomplished in parallel.

1.   **Post-Implementation User Notification:** Upon notification of successful initiation of service by the AOMC, OPS22 will issue notification of the change and its impact to all affected users on a monthly basis until all scheduled sites have been implemented.

2.   **Operational Quality Control:** The responsible WFO will continue with normal monitoring of the operation of the newly installed DTS1 beyond the initial 30-day detailed monitoring period. This will ensure proper ongoing operation of both the installed unit and the entire system. The WFO will perform maintenance on system components for which they are responsible. Any PPI parts returned to National Reconditioning Center (NRC) which are still under warranty will be reported by NRC (OPS16) to the PPI COTR, OPS11.

3.   **Documentation:** Four operations are necessary to ensure proper documentation of changes to ASOS. They are:

        A) Data entry into the EMRS;
        B) Data entry into the CMIS;
        C) Data entry into the MIRS; and
        D) Data entry into ASOS SYSLOG.

        The EMRS Form A-26 update is accomplished by the ET as part of the OI.   A sample Form A-26 is included as part of Appendix IV. OPS12 will ensure the EMRS update is accomplished. The CMIS will be updated from new information in the EMRS.   OPS13 will ensure this action is accomplished. The MIRS will be updated through the EMRS input to the CMIS. OPS22 will ensure that the MIRS staff makes timely updates to the MIRS. Upon completion of the installation, the ET will enter appropriate remarks into the ASOS SYSLOG to document this change in accordance with MOD NOTE # 75.

4.   **Disposal of Old Equipment:** Not applicable to the DTS1.

5.   **Climate Continuity Study:** At a sub-set of implemented sites, a climate continuity study will be conducted to ensure no biases or meteorological discontinuities are introduced into the climate record which are not documented. This study will last a minimum of 2 years. Sites will be selected based on climatic considerations. OS7 will manage this activity.
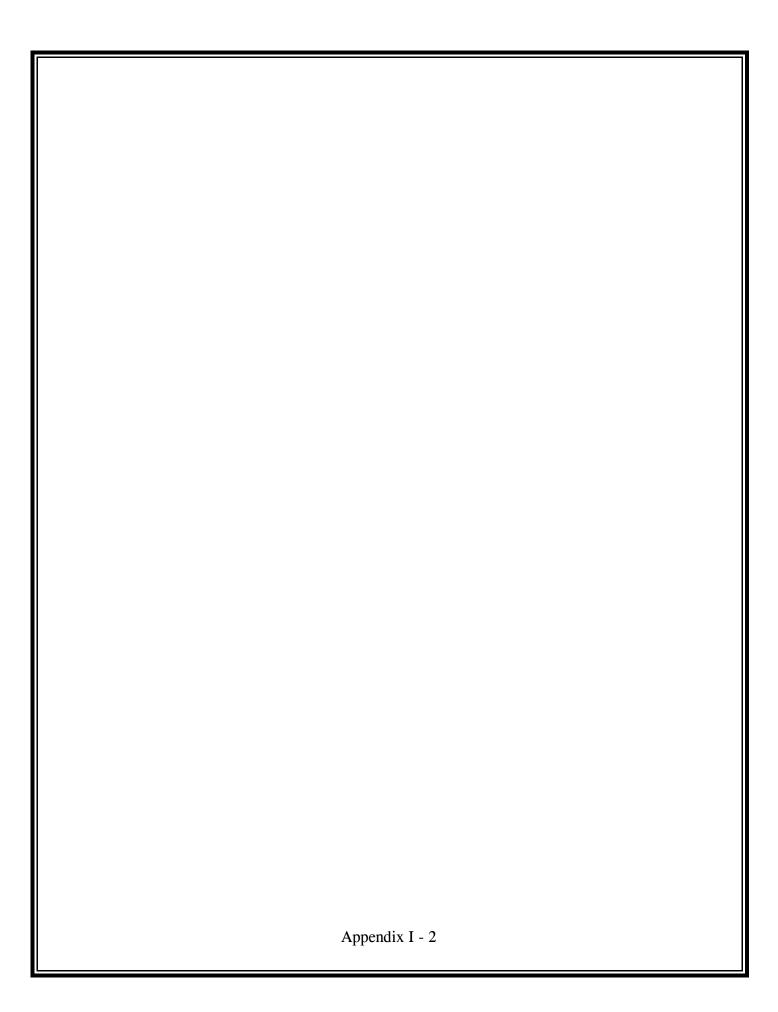
APPENDIX I

ASOS Operational Implementation Check List

For

New Dew Point Sensor Upgrade

ASOS Planned Product Improvement
OI Check List - Part A

Planned Product Improvement: __Dew Point Sensor (DTS1)__

Office completing this check list:_____ Date:_____

Item #	Item Description	OPR	Validation Date
2.1	**Pre- System Test (ST) Activities**		
1.	Submit RC for ST & obtain APMC approval to proceed	OST11	8/8/02
2.	Prepare ST plan & draft outline for ST report	OPS24	4/01
3.	Identify ST locations & dates	OPS24	8/8/02
4.	Initiate procurement/delivery of PPI test units to ST sites	OST11	8/8/02
5.	Deliver logistic supplies & test equipment to ST sites	OPS12	1/02
6.	Provide draft MOD NOTES to ST sites	OPS12	12/01
7.	Install PPI test units at ST sites	OPS12	12/01
2.2	**ST Activities**		
1.	**Verify start date for ST**	**OPS22**	8/8/02
2.	Complete ST data collection & analysis	OPS24	9/01
3.	**Verify completion date for ST**	**OPS22**	8/8/02
4.	Provide ST report to ACCB	OPS24	4/02
2.3	**Pre-Operational Acceptance Test (OAT) Activities**		
1.	Submit RC to ACCB for OAT	OST11	8/8/02
2.	OAT management decision by ACCB	OST11	8/8/02
3.	Prepare OAT plan	OPS24	9/02
4.	Determine OAT locations and schedule	OPS24	9/02
5.	Initiate procurement/delivery of OAT units	OST11	8/8/02
6.	Coordinate OAT logistics support	OPS12	12/01

7.	Coordinate OAT maintenance Support	OPS12	12/01
8a.	OAT Documentation: Deliver MOD NOTES to OAT sites	OPS12	9/01
8b.	OAT Documentation: Deliver OAT procedures to OAT sites	OPS24	9/01
8c.	OAT Documentation: Deliver draft Release Notes to OAT sites	OPS22	9/01
2.4	**OAT Activities**		
1.	**Verify start date for OAT**	**OPS22**	8/8/02
2.	Complete OAT data collection and analysis	OPS24	5/02
3.	Verify efficacy of draft OI plan	OPS24	5/02
4.	**Verify completion date for OAT**	**OPS22**	8/8/02
5.	Provide OAT report to ACCB	OPS24	8/8/02
3.1	**Pre- Operational Implementation (OI) Planning Activities**		
1.	Prepare RC for OI	OST11	
2.	Production and acquisition management decision by APMC	OPS2	
3.	Prepare OI plan	OPS22	
4.	Identify OI locations	OPS22	
5.	Develop OI draw rate/installation sequence strategy	OPS22	
3.2	**Pre-OI Logistic Support Activities**		
1.	Initiate procurement/delivery of OI production units to NLSC	OPS11	8/8/02
2.	Initiate logistic support process for OI production units	OPS12	6/02
3.	Coordinate installation & maintenance of OI production units	OPS12	6/02
3.3	**Pre-OI Configuration Management Activities**		
2.	Perform Functional Configuration Audit (Pending 9/02 OAT schedule)	OPS13	TBD
3.	Perform Physical Configuration Audit (Pending 9/02 OAT schedule)	OPS13	TBD
3.4	**Pre-OI Operational Support Activities**		
1a.	Provide MOD NOTES to WFOs	OPS12	6/02
1b.	Provide Release Notes to WFOs	OPS22	

1c.	Provide updates of appropriate NDS chapters to WFOs	OS7	NA
1d.	Provide updates of ASOS Users' Guide and other appropriate user information materials to WFOs, FAA, DOD	OPS22	NA
2a.	Provide maintenance training materials to WFOs	OPS22	NA
2b.	Provide observer training materials	FAA ATP-310	NA
2c.	Conduct local operator/maintenance training	WFOs	
3.	Provide pre-implementation user notification	OPS22	NA
4.	**Verify completion of all pre-OI activities**	OPS22	
4.1	**Implementation Management Activities**		
1.	Implementation Management Decision	OST11	8/8/02
4.2	**Acquisition Activities**		
1 .	**Verify start date for Operational Implementation (OI)**	**OPS22**	8/8/02
2.	Monitor & validate delivery of all production units to NLSC	OPS11	
3.	Stock production units and spare kits at NLSC	OPS14	
4.4	**OI Monitoring & Coordination Activities**		
2.a	Begin routine maintenance monitoring	AOMC	
3.a	Begin monitoring and reporting implementation status for all sites	AOMC	
3.b	Begin monitoring implementation status reports and initiate coordination	OPS22	
4.	Issue post-implementation notification to affected users	OPS22	NA

ASOS Planned Product Improvement
Operational Implementation (OI) Check List - Part B

Planned Product Improvement: ___Dew Point Sensor (DTS1)___

Location (SID, Name, State):_____

Office completing this check list:_____ Date:_____

Item #	Item Description	OPR	Validation Date
4.2	**Acquisition Activities**		
4.	Requisition PPI production units and kits from NLSC as needed	WFO	
4.3	**OI Installation Activities**		
1.	Download files for NCDC archive	WFO	NA
2.	Perform installation & checkout in accordance with MOD NOTE	WFO	
4.4	**OI Monitoring & Coordination Activities**		
1.	Installation notification	WFO	
2.b	Begin 30-day monitoring & coordination	WFO	
2.c	Begin 30-day monitoring & coordination	RFP	
2.d	Begin 30-day monitoring & coordination	AOMC	
5.0	**Post OI Activities**		
1.	Operational quality control: Monitor ongoing meteorological performance	WFO	
2a.	Ensure system changes are documented through EMRS	OPS12	
2b.	Ensure new EMRS data are documented in the CMIS	OPS13	
2c.	Ensure CMIS documentation changes are entered into MIRS	OPS22	
3.	Dispose of old equipment in accordance with Mod Note	WFO	
4.	Conduct climate continuity study at selected locations (Begin 1-2 year study)	OS7	

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APPENDIX II

DTS1 Climate Continuity Sites

Dew Point Sensor OAT/ Climate Continuity Sites and Responsible WFO

OAT/Climate Continuity Site		Responsible WFO	Sponsor Agency
DMH	Baltimore, MD	Sterling, VA	NWS
GFL	Glens Falls, NY	Albany, NY	FAA
PWM	Portland, ME	Gray, ME	NWS
BIS	Bismarck, ND	Bismarck, ND	NWS
CNK	Concordia, KS	Topeka, KS	NWS
MDW	Chicago, IL	Romeoville, IL	FAA
ATT	Austin City, TX	New Braunfels, TX	NWS
GUY	Guymon, OK	Amarillo, TX	NWS
MIA	Miami, FL	Miami, FL	NWS
MOB	Mobile, AL	Mobile, AL	NWS
BOI	Boise, ID	Boise, ID	NWS
CZZ	Campo, CA	San Diego, CA	NWS
PHX	Phoenix, AZ	Phoenix, AZ	NWS
SFO	San Francisco, CA	Monterey, CA	NWS
SLC	Salt Lake City, UT	Salt Lake City, UT	NWS
SNT	Stanley, ID	Pocatello, ID	NWS
UAO	Aurora, OR	Portland, OR	FAA
BRW	Barrow, AK	Barrow, AK	NWS
FAI	Fairbanks, AK	Fairbanks, AK	NWS
ITO	Hilo, HI	Hilo, HI	NWS

APPENDIX III

Prioritized Installation Sequence For FAA Sites

Second Batch Of FAA Sites - 91 Sites

Site ID	Location	State	OWN	NWS Region	FAA Region	ARPT Type	SvrLvl
AQT	Nuiqsut	AK	EXP	Alaskan	AAL	S	D
AWI	Wainwright	AK	EXP	Alaskan	AAL	S	D
DEE	Deering	AK	EXP	Alaskan	AAL	S	D
EAA	Eagle	AK	EXP	Alaskan	AAL	S	D
ORT	Northway	AK	FAA	Alaskan	AAL	S	D
POR	Portage Glacier	AK	EXP	Alaskan	AAL	S	D
SCC	Deadhorse	AK	FAA	Alaskan	AAL	S	B
SWD	Seward	AK	EXP	Alaskan	AAL	S	D
TAL	Tanana	AK	FAA	Alaskan	AAL	S	D
ADG	Adrian	MI	EXP	Central	AGL	S	D
AOH	Lima	OH	EXP	Central	AGL	T	
AUW	Wausau Downtown	WI	FAA	Central	AGL	S	D
BEH	Benton Harbor	MI	EXP	Central	AGL	S	D
DET	Detroit	MI	FAA	Central	AGL	T	C
EMP	Emporia	KS	FAA	Central	ACE	S	D
EST	Estherville	IA	EXP	Central	ACE	S	D
EYE	Indianapolis (Eagle Creek)	IN	EXP	Central	AGL	S	D
ISW	Wisconsin Rapids	WI	EXP	Central	AGL	S	D
IXD	Olathe	KS	EXP	Central	ACE	T	C
LWV	Lawerenceville	IL	EXP	Central	AGL	S	D
MCK	McCook	NE	EXP	Central	ACE	S	D
MFI	Marshfield	WI	EXP	Central	AGL	S	D
OSH	Oshkosh	WI	FAA	Central	AGL	T	C
RHI	Rhinelander	WI	EXP	Central	AGL	S	D
SFD	Winner	SD	EXP	Central	AGL	S	D
SLN	Salina	KS	FAA	Central	ACE	T	C
STP	St. Paul	MN	FAA	Central	AGL	T	B
TQE	Tekamah	NE	EXP	Central	ACE	S	D
AKH	Gastonia	NC	EXP	Eastern	ASO	S	D
BFD	Bradford	PA	EXP	Eastern	AEA	S	D
BJJ	Wooster	OH	EXP	Eastern	AGL	S	D
BVY	Beverly	MA	FAA	Eastern	ANE	T	C
CKB	Clarksburg	WV	FAA	Eastern	AEA	T	C
CXY	Harrisburg	PA	FAA	Eastern	AEA	T	C

DAW	Rochester	NH	EXP	Eastern	ANE	S	D
DDH	Bennington	VT	EXP	Eastern	ANE	S	D
DKK	Dunkirk	NY	EXP	Eastern	AEA	S	D
DXR	Danbury	CT	FAA	Eastern	ANE	T	C
ECG	Elizabeth City	NC	FAA	Eastern	ASO	T	D
EWB	New Bedford	MA	FAA	Eastern	ANE	T	C
FIG	Clearfield	PA	EXP	Eastern	AEA	S	D
FRG	Farmingdale	NY	FAA	Eastern	AEA	T	C
GON	Groton/New London	CT	FAA	Eastern	ANE	T	C
HKY	Hickory	NC	FAA	Eastern	ASO	S	D
INT	Winston Salem	NC	FAA	Eastern	ASO	T	C
LEB	Lebanon	NH	FAA	Eastern	ANE	T	C
MEB	Maxton	NC	EXP	Eastern	ASO	S	D
MGW	Morgantown	WV	FAA	Eastern	AEA	T	C
MHT	Manchester	NH	FAA	Eastern	ANE	T	C
MPV	Barre/Montpelier	VT	FAA	Eastern	ANE	S	D
OXB	Ocean City	MD	EXP	Eastern	AEA	S	D
PHD	New Philadelphia	OH	EXP	Eastern	AGL	S	D
PKB	Parkersburg	WV	FAA	Eastern	AEA	T	
RZZ	Roanoke Rapids	NC	EXP	Eastern	ASO	S	D
SMQ	Somerville	NJ	EXP	Eastern	AEA	S	D
THV	York	PA	EXP	Eastern	AEA	S	D
ABY	Albany	GA	FAA	Southern	ASO	T	C
ASD	Slidell	LA	EXP	Southern	ASW	S	D
BKV	Brooksville	FL	EXP	Southern	ASO	S	D
CDS	Childress	TX	FAA	Southern	ASW	S	D
CSM	Clinton	OK	FAA	Southern	ASW	T	C
DHN	Dothan	AL	FAA	Southern	ASO	T	C
DTS	Destin	FL	EXP	Southern	ASO	S	D
EET	Alabaster	AL	EXP	Southern	ASO	S	D
GKY	Arlington	TX	EXP	Southern	ASW	S	D
GVL	Gainesville	GA	EXP	Southern	ASO	S	D
HKS	Jackson	MS	FAA	Southern	ASO	T	C
HRL	Harlingen	TX	FAA	Southern	ASW	T	C
HWO	Hollywood	FL	FAA	Southern	ASO	T	C
MTH	Marathon	FL	EXP	Southern	ASO	S	D
PDK	Atlanta	GA	FAA	Southern	ASO	T	C
PGD	Punta Gorda	FL	EXP	Southern	ASO	S	D
PIL	Port Isabel	TX	EXP	Southern	ASW	S	D

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RSW	Ft. Myers	FL	FAA	Southern	ASO	T	C
SPG	St. Petersburg	FL	FAA	Southern	ASO	T	C
STX	Christiansted	VI	FAA	Southern	ASO	T	C
SWO	Stillwater	OK	EXP	Southern	ASW	S	D
TCC	Tucumcari	NM	FAA	Southern	ASW	S	D
BZN	Bozeman	MT	FAA	Western	ANM	S	D
CRQ	Carlsbad	CA	FAA	Western	AWP	T	C
EPH	Ephrata	WA	FAA	Western	ANM	S	D
IPL	Imperial	CA	FAA	Western	AWP	S	
LOL	Lovelock Derby Field	CA	FAA	Western	AWP	S	D
MAE	Madera	CA	EXP	Western	AWP	S	D
MCE	Merced	CA	FAA	Western	AWP	S	D
MMV	McMinnville	OR	EXP	Western	ANM	S	D
OGD	Ogden	UT	FAA	Western	ANM	T	C
SDL	Scottsdale	AZ	FAA	Western	AWP	T	C
SMO	Santa Monica	CA	FAA	Western	AWP	T	C
SNA	Santa Ana	CA	FAA	Western	AWP	H	A
TIW	Tacoma	WA	FAA	Western	ANM	T	C

Third Batch Of FAA Sites - 190 Sites

Site ID	Location	State	OWN	NWS Region	FAA Region	ARPT Type	SvrLvl
BIG	Big Delta	AK	FAA	Alaskan	AAL	S	D
HNS	Haines	AK	EXP	Alaskan	AAL	S	D
PBV	St. George Island	AK	EXP	Alaskan	AAL	S	D
SGY	Skagway	AK	EXP	Alaskan	AAL	S	D
SIT	Sitka	AK	FAA	Alaskan	AAL	S	D
SOV	Seldovia	AK	EXP	Alaskan	AAL	S	D
AAO	Wichita	KS	EXP	Central	ACE	S	D
AKO	Akron	CO	FAA	Central	ANM	S	D
APA	Denver/Eagle	CO	FAA	Central	ANM	T	A
ASE	Aspen	CO	FAA	Central	ANM	T	C
ASX	Ashland	WI	EXP	Central	AGL	S	D
ATY	Watertown	SD	FAA	Central	AGL	S	D
BBW	Broken Bow	NE	FAA	Central	ACE	S	
BDE	Baudette	MN	EXP	Central	AGL	S	D
BMG	Bloomington	IN	FAA	Central	AGL	T	C
BPI	Big Piney	WY	EXP	Central	ANM	S	D
BRL	Burlington	IA	FAA	Central	ACE	S	D
BTL	Battle Creek	MI	FAA	Central	AGL	T	C
BWG	Bowling Green	KY	FAA	Central	ASO	S	D
DMO	Sedalia	MO	EXP	Central	ACE	S	D
GCK	Garden City	KS	FAA	Central	ACE	S	D
GLR	Gaylord	MI	EXP	Central	AGL	S	D
HEI	Hettinger	ND	EXP	Central	AGL	S	D
HIB	Hibbing	MN	EXP	Central	AGL	S	D
HLC	Hill City	KS	FAA	Central	ACE	S	D
HSI	Hasting	NE	EXP	Central	ACE	S	D
HUF	Terre Haute	IN	FAA	Central	AGL	T	C
HYR	Hayward	WI	EXP	Central	AGL	S	D
IEN	Pine Ridge	SD	EXP	Central	AGL	S	D
IMT	Iron Mountain	MI	EXP	Central	AGL	S	D
IOW	Iowa City	IA	EXP	Central	ACE	S	D
ITR	Burlington	CO	EXP	Central	ANM	S	D
LOU	Louisville	KY	FAA	Central	ASO	T	C
MDH	Carbondale	IL	FAA	Central	AGL	T	C
MKC	Kansas City	MO	FAA	Central	ACE	T	C

MTJ	Montrose	CO	EXP	Central	ANM	S	D
PKD	Park Rapids	MN	EXP	Central	AGL	S	D
PPF	Parsons	KS	EXP	Central	ACE	S	D
PWK	Pal-Waukee (Wheeling)	IL	FAA	Central	AGL	T	C
RAC	Battan International	WI	EXP	Central	AGL	S	D
RIL	Rifle	CO	EXP	Central	ANM	S	D
RKS	Rocksprings	WY	FAA	Central	ANM	S	
SBM	Sheboygan	WI	EXP	Central	AGL	S	D
SPW	Spencer	IA	EXP	Central	ACE	S	D
TOR	Torrington	WY	EXP	Central	ANM	S	D
UIN	Quincy	IL	FAA	Central	AGL	S	
UNO	West plains	MO	EXP	Central	ACE	S	D
VEL	Vernal	UT	EXP	Central	ANM	S	D
VPZ	Valparaiso	IN	FAA	Central	AGL	S	D
WLD	Winfield	KS	EXP	Central	ACE	S	D
YIP	Ypsilanti	MI	FAA	Central	AGL	T	C
ACK	Nantucket	MA	FAA	Eastern	ANE	T	C
AGC	Pittsburgh	PA	FAA	Eastern	AEA	T	B
AKR	Akron	OH	FAA	Eastern	AGL	S	D
AQW	North Adams	MA	EXP	Eastern	ANE	S	D
ART	Watertown	NY	FAA	Eastern	AEA	S	D
AUG	$ in Remarks	ME	FAA	Eastern	ANE	S	D
BAF	Westfield	MA	FAA	Eastern	ANE	T	C
BED	Bedford	MA	FAA	Eastern	ANE	T	C
BGR	Bangor	ME	FAA	Eastern	ANE	T	A
BKL	Cleveland	OH	FAA	Eastern	AGL	T	C
BLF	Bluefield	WV	FAA	Eastern	AEA	S	D
CHO	Charlottesville	VA	FAA	Eastern	AEA	T	C
EQY	Monroe	NC	EXP	Eastern	ASO	S	D
FIT	Fitchburg	MA	EXP	Eastern	ANE	S	D
FOK	Westhampton Beach	NY	EXP	Eastern	AEA	T	D
FVE	Frenchville	ME	EXP	Eastern	ANE	S	D
FZY	Fulton	NY	EXP	Eastern	AEA	S	D
GMU	Greenville	SC	FAA	Eastern	ASO	T	C
GRD	Greenwood	SC	EXP	Eastern	ASO	S	D
HAO	Hamilton	OH	EXP	Eastern	AGL	S	D
HIE	Whitefield	NH	EXP	Eastern	ANE	S	D
HWV	Shirley	NY	EXP	Eastern	AEA	S	D
IAG	Niagara Falls	NY	EXP	Eastern	AEA	T	C

IGX	Chapel Hill	NC	EXP	Eastern	ASO	S	D
IJD	Willimantic	CT	EXP	Eastern	ANE	S	D
IWI	Wiscasset	ME	EXP	Eastern	ANE	S	D
LHQ	Lancaster	OH	EXP	Eastern	AGL	S	D
MGY	Dayton	OH	EXP	Eastern	AGL	S	D
MIV	Millville	NJ	FAA	Eastern	AEA	S	D
MNN	Marion	OH	EXP	Eastern	AGL	S	D
MPO	Mt. Pocono	PA	EXP	Eastern	AEA	S	D
MRB	Martinsburg	WV	FAA	Eastern	AEA	T	D
MRH	Beaufort	NC	EXP	Eastern	ASO	S	D
MVL	Morrisville	VT	EXP	Eastern	ANE	S	D
OFP	Ashland/Hanover	VA	EXP	Eastern	AEA	S	D
OGB	Orangeburg	SC	EXP	Eastern	ASO	S	D
ORE	Orange	MA	EXP	Eastern	ANE	S	D
PHF	Newport News	VA	FAA	Eastern	AEA	T	C
PLB	Plattsburgh	NY	EXP	Eastern	AEA	S	D
PSF	Pittsfield	MA	EXP	Eastern	ANE	S	D
PTW	Pottstown	PA	EXP	Eastern	AEA	S	D
PYM	Plymouth	MA	EXP	Eastern	ANE	S	D
RDG	Reading	PA	FAA	Eastern	AEA	T	C
RWI	Rocky Mount	NC	FAA	Eastern	ASO	S	D
SEG	Selinsgrove	PA	EXP	Eastern	AEA	S	D
SLK	Saranac Lake	NY	EXP	Eastern	AEA	S	D
TAN	Taunton	MA	EXP	Eastern	ANE	S	D
TDZ	Toledo	OH	EXP	Eastern	AGL	S	D
TTN	Trenton	NJ	FAA	Eastern	AEA	T	C
UUU	Newport	RI	EXP	Eastern	ANE	S	D
UZA	Rock Hill	SC	EXP	Eastern	ASO	S	D
VAY	Mt. Holly	NJ	EXP	Eastern	AEA	S	D
VSF	$ in Remarks	VT	EXP	Eastern	ANE	S	D
VTA	Newark	OH	EXP	Eastern	AGL	S	D
WST	Westerly	RI	EXP	Eastern	ANE	S	D
AEX	Alexandria International	LA	FAA	Southern	ASW	T	C
AFW	Ft. Worth	TX	FAA	Southern	ASW	S	C
ALI	Alice	TX	FAA	Southern	ASW	S	D
AMG	Alma	GA	FAA	Southern	ASO	S	D
ANB	Anniston	AL	FAA	Southern	ASO	S	D
BHM	Birmingham	AL	FAA	Southern	ASO	T	B
DCU	Decatur	AL	EXP	Southern	ASO	S	D

DWH	Houston	TX	FAA	Southern	ASW	T	C
ESF	Alexandria	LA	FAA	Southern	ASW	T	C
FMY	Ft. Myers	FL	FAA	Southern	ASO	T	C
FPR	Fort Pierce	FL	FAA	Southern	ASO	T	C
FTY	Atlanta	GA	FAA	Southern	ASO	T	C
FYV	Fayetteville	OK	FAA	Southern	ASW	T	C
GLH	Greenville	MS	FAA	Southern	ASO	T	C
GNV	Gainsville	FL	FAA	Southern	ASO	T	C
GOK	Guthrie	OK	EXP	Southern	ASW	S	D
GWO	Greenwood	MS	EXP	Southern	ASO	S	D
GZH	Evergreen	AL	EXP	Southern	ASO	S	D
HBG	Hattiesburg	MS	EXP	Southern	ASO	S	D
HDO	Hondo	TX	EXP	Southern	ASW	S	D
HKA	Blytheville	AR	EXP	Southern	ASW	S	D
INK	Wink	TX	FAA	Southern	ASW	S	D
LAW	Lawton/Fort Sill	OK	FAA	Southern	ASW	T	C
LVS	Las Vegas	NM	FAA	Southern	ASW	S	D
MAI	Marianna	FL	EXP	Southern	ASO	S	D
MCB	McComb	MS	FAA	Southern	ASO	S	D
MKO	Muskogee	OK	EXP	Southern	ASW	S	D
MLC	McAlester	OK	FAA	Southern	ASW	S	D
ODO	Odessa	TX	EXP	Southern	ASW	S	D
PNC	Ponca City	OK	EXP	Southern	ASW	S	D
PQL	Pascagoula	MS	EXP	Southern	ASO	S	D
RKP	Rockport	TX	EXP	Southern	ASW	S	D
RUE	Russelville	AR	EXP	Southern	ASW	S	D
SFB	Orlando	FL	FAA	Southern	ASO	T	
STT	Charlotte Amalie	VI	FAA	Southern	ASO	T	C
TKI	McKinney	TX	EXP	Southern	ASW	S	D
TOI	Troy	AL	EXP	Southern	ASO	S	D
TRL	Terrell	TX	EXP	Southern	ASW	S	D
TVR	Tallulah (Mound)	LA	EXP	Southern	ASW	S	D
UTS	$ in Remarks	TX	EXP	Southern	ASW	S	D
VPC	Cartersville	GA	EXP	Southern	ASO	S	D
VRB	Vero Beach	FL	FAA	Southern	ASO	T	C
XNA	Faytetteville	AR	EXP	Southern	ASW	S	
ACV	Arcata/Eureka	CA	FAA	Western	AWP	S	D
ALW	Walla Walla	WA	FAA	Western	ANM	T	C
APC	Napa	CA	FAA	Western	AWP	T	C

AVX	Avalon	CA	EXP	Western	AWP	S	D
BFI	Seattle	WA	FAA	Western	ANM	T	B
BKE	Baker	OR	FAA	Western	ANM	S	D
BLH	Blythe	CA	FAA	Western	AWP	S	D
BTM	Butte	MT	FAA	Western	ANM	S	D
BUR	Burbank	CA	FAA	Western	AWP	T	C
BYI	Burley	ID	FAA	Western	ANM	S	D
CDC	Cedar City	UT	FAA	Western	ANM	S	D
CEC	Crescent City	CA	FAA	Western	AWP	S	
CNO	Chino	CA	FAA	Western	AWP	T	C
DLS	The Dalles	OR	FAA	Western	ANM	S	D
EAT	Wenatchee	WA	EXP	Western	ANM	S	D
HJO	Hanford	CA	EXP	Western	AWP	S	
HRI	Hermiston	OR	EXP	Western	ANM	S	D
MRY	Monterrey	CA	FAA	Western	AWP	T	C
MYF	San Diego	CA	FAA	Western	AWP	T	C
OKB	Oceanside	CA	EXP	Western	AWP	S	
OLF	Wolf Point	MT	EXP	Western	ANM	S	D
OLS	Nogales	AZ	EXP	Western	AWP	S	D
OMK	Omak	WA	EXP	Western	ANM	S	D
ONO	Ontario	OR	EXP	Western	ANM	S	D
OXR	Oxnard	CA	FAA	Western	AWP	T	C
PMD	Palmdale	CA	FAA	Western	AWP	T	C
PUC	Price	UT	EXP	Western	ANM	S	D
PUW	Pullman/Moscow	WA	EXP	Western	ANM	S	D
RBG	Roseburg	OR	EXP	Western	ANM	S	D
RXE	Rexburg	ID	EXP	Western	ANM	S	D
SBP	San Luis Obispo	CA	FAA	Western	AWP	T	C
SFF	Spokane	WA	FAA	Western	ANM	T	C
SIY	Montague	CA	FAA	Western	AWP	S	
SJN	St. Johns	AZ	EXP	Western	AWP	S	D
SPB	Scappoose	OR	EXP	Western	ANM	S	
TRM	Thermal	CA	EXP	Western	AWP	S	D
TWF	Joslin Field	ID	FAA	Western	ANM	T	C
VCB	Vacaville	CA	EXP	Western	AWP	S	D
VGT	Las Vegas	NV	FAA	Western	AWP	T	
VUO	Vancouver	WA	EXP	Western	ANM	S	D
WVI	Watsonville	CA	EXP	Western	AWP	S	D

Remaining Batch Of FAA Sites - 288 Sites

Site ID	Location	State	OWN	NWS Region	FAA Region	ARPT Type	SvrLvl
AKW	Klawock	AK	EXP	Alaskan	AAL	S	D
BTT	Bettles	AK	FAA	Alaskan	AAL	S	D
CDV	Cordova	AK	FAA	Alaskan	AAL	S	D
ENA	Kenai	AK	FAA	Alaskan	AAL	T	C
GKN	Gulkana	AK	FAA	Alaskan	AAL	S	D
ILI	Iliamna	AK	FAA	Alaskan	AAL	S	D
JNU	Juneau	AK	FAA	Alaskan	AAL	T	A
KAL	Kaltag	AK	EXP	Alaskan	AAL	S	D
KTN	Ketchikan	AK	FAA	Alaskan	AAL	S	D
KVL	Kivalina	AK	EXP	Alaskan	AAL	S	D
LHD	Lake Hood	AK	FAA	Alaskan	AAL	S	D
MRI	Merrill	AK	FAA	Alaskan	AAL	T	C
PAQ	Palmer	AK	FAA	Alaskan	AAL	S	D
AIA	Alliance	NE	EXP	Central	ACE	S	D
AMW	Ames	IA	EXP	Central	ACE	S	D
ARB	Ann Arbor	MI	FAA	Central	AGL	T	C
ARR	Chicago/Aurora	IL	FAA	Central	AGL	T	C
AXN	Alexandria	MN	FAA	Central	AGL	S	D
AZO	Kalamazoo	MI	FAA	Central	AGL	T	B
BIV	Holland	MI	EXP	Central	AGL	S	D
BRD	Brainerd	MN	EXP	Central	AGL	S	D
BYG	$ in Remarks	WY	EXP	Central	ANM	S	D
CAG	Craig	CO	EXP	Central	ANM	S	D
CDR	Chadron	NE	FAA	Central	ACE	S	D
CEZ	Cortez	CO	EXP	Central	ANM	S	D
CFV	Coffeyville	KS	EXP	Central	ACE	S	D
CGI	Cape Giradeau	MO	FAA	Central	ACE	T	D
CID	Cedar Rapids	IA	FAA	Central	ACE	T	C
CMI	Champaign/Urbana	IL	FAA	Central	AGL	T	C
CMX	Hancock	MI	FAA	Central	AGL	S	D
CNU	Chanute	KS	FAA	Central	ACE	S	D
CNY	Moab	UT	EXP	Central	ANM	S	D
CPS	Cahokia/St. Louis	IL	FAA	Central	AGL	T	C
DEC	Decatur	IL	FAA	Central	AGL	T	C
DGW	Douglas	WY	EXP	Central	ANM	S	D

DIK	Dickenson	ND	FAA	Central	AGL	S	D
DPA	Chicago/West Chicago	IL	FAA	Central	AGL	T	C
DRO	Durango	CO	EXP	Central	ANM	S	D
DVN	Davenport	IA	EXP	Central	ACE	S	D
EAU	Eau Claire	WI	FAA	Central	AGL	S	
EEO	Meeker	CO	EXP	Central	ANM	S	D
ENW	Kenosha	WI	EXP	Central	AGL	S	C
EVW	Evanston	WY	EXP	Central	ANM	S	D
FCM	Minneapolis	MN	FAA	Central	AGL	T	B
FFT	Frankfort	KY	EXP	Central	ASO	S	D
FLD	Fond du Lac	WI	EXP	Central	AGL	S	D
FNB	Falls City	NE	FAA	Central	ACE	S	
FOE	$ in Remarks	KS	FAA	Central	ACE	T	C
GEY	Greybull	WY	EXP	Central	ANM	S	D
GEZ	Shelbyville	IN	EXP	Central	AGL	S	D
GFK	Grand Forks	ND	FAA	Central	AGL	T	B
GSH	Goshen	IN	EXP	Central	AGL	S	D
HUT	Hutchinson	KS	FAA	Central	ACE	T	C
IML	Imperial	NE	FAA	Central	ACE	S	
JEF	Jefferson City	MO	EXP	Central	ACE	T	C
JLN	Joplin	MO	FAA	Central	ACE	T	C
JMS	Jamestown	ND	FAA	Central	AGL	S	D
JXN	Jackson	MI	FAA	Central	AGL	T	
LAA	Lamar	CO	EXP	Central	ANM	S	D
LAF	Lafayette	IN	FAA	Central	AGL	T	B
LAR	Laramie	WY	FAA	Central	ANM	S	D
LHX	LaJunta	CO	FAA	Central	ANM	S	D
LNR	Lone Rock	WI	FAA	Central	AGL	S	D
LOZ	London	KY	FAA	Central	ASO	S	D
LSE	La Crosse	WI	FAA	Central	AGL	T	C
LWC	Lawrence	KS	EXP	Central	ACE	S	D
MBS	Saginaw	MI	FAA	Central	AGL	T	B
MCW	Mason City	IA	FAA	Central	ACE	S	D
MHK	Manhatten	KS	FAA	Central	ACE	T	D
MIC	Minneapolis/Crystal	MN	FAA	Central	AGL	T	B
MIE	Muncie	IN	FAA	Central	AGL	T	C
MIW	Marshalltown	IA	EXP	Central	ACE	S	D
MOT	Minot	ND	FAA	Central	AGL	T	C
MTO	Mattoon/Charleston	IL	EXP	Central	AGL	S	D
ODX	$ in Remarks	NE	FAA	Central	ACE	S	

OJC	Olathe (Johnson)	KS	FAA	Central	ACE	T	C
OMA	Omaha (Eppley)	NE	FAA	Central	ACE	T	B
OTM	Ottumwa	IA	FAA	Central	ACE	S	D
OVS	Boscobel	WI	EXP	Central	AGL	S	D
PIR	Pierre	SD	FAA	Central	AGL	S	D
PLN	Pellston	MI	FAA	Central	AGL	S	D
PTK	Pontiac	MI	FAA	Central	AGL	T	A
RSL	Russell	KS	FAA	Central	ACE	S	D
RWF	Redwood Falls	MN	FAA	Central	AGL	S	D
RWL	Rawlins	WY	FAA	Central	ANM	S	D
SET	St.Charles	MO	FAA	Central	ACE	T	D
SNY	Sidney	NE	FAA	Central	ACE	S	D
STJ	St.Joseph	MO	FAA	Central	ACE	T	C
SUS	St.Louis	MO	FAA	Central	ACE	T	C
TAD	Trinidad	CO	FAA	Central	ANM	S	
TVC	Traverse City	MI	FAA	Central	AGL	T	B
UGN	Chicago/Waukegan	IL	ZOPT	Central	AGL	T	
VIH	Rolla/Vichy	MO	FAA	Central	ACE	S	D
WRL	Worland	WY	FAA	Central	ANM	S	D
AFN	Jaffrey	NH	EXP	Eastern	ANE	S	D
AND	Anderson	SC	FAA	Eastern	ASO	S	D
AOO	Altoona	PA	FAA	Eastern	AEA	S	D
BML	Berlin	NH	EXP	Eastern	ANE	S	D
BUY	Burlington	NC	EXP	Eastern	ASO	S	D
CDW	Caldwell/Fairfield	NJ	FAA	Eastern	AEA	T	C
CEU	Clemson	SC	EXP	Eastern	ASO	S	D
CQX	Chatham	MA	EXP	Eastern	ANE	S	D
CRE	Myrtle Beach	SC	FAA	Eastern	ASO	T	C
CUB	$ in Remarks	SC	EXP	Eastern	ASO	S	D
DAN	Danville	VA	FAA	Eastern	AEA	S	D
DNL	Augusta Daniel Field	GA	EXP	Eastern	ASO	S	D
DSV	Dansville	NY	EXP	Eastern	AEA	S	D
DUJ	DuBois	PA	FAA	Eastern	AEA	S	
DYL	Doylestown	PA	EXP	Eastern	AEA	S	
ELM	Elmira	NY	FAA	Eastern	AEA	T	B
ELZ	Wellsville	NY	EXP	Eastern	AEA	S	D
EWN	New Bern	NC	FAA	Eastern	ASO	S	D
FAY	Fayetteville	NC	FAA	Eastern	ASO	T	C
FDY	Findlay	OH	FAA	Eastern	AGL	S	

FLO	Florence	SC	FAA	Eastern	ASO	T	C
FWN	Sussex	NJ	EXP	Eastern	AEA	S	D
GED	Georgetown	DE	EXP	Eastern	AEA	S	D
GKJ	Meadville	PA	EXP	Eastern	AEA	S	D
HFD	Hartford	CT	FAA	Eastern	ANE	T	C
HGR	Hagerstown	MD	FAA	Eastern	AEA	T	C
HLG	Wheeling	WV	FAA	Eastern	AEA	T	C
HPN	White Plains	NY	FAA	Eastern	AEA	T	B
HUL	Houlton	ME	FAA	Eastern	ANE	S	D
HVN	New Haven	CT	FAA	Eastern	ANE	T	C
HYA	Hyannis	MA	FAA	Eastern	ANE	T	C
HZY	Ashtabula	OH		Eastern	AGL	S	D
ISP	Islip	NY	FAA	Eastern	AEA	T	A
IZG	Fryeburg	ME	EXP	Eastern	ANE	S	D
JST	Johnstown	PA	FAA	Eastern	AEA	S	D
LBT	Lumberton	NC	EXP	Eastern	ASO	S	D
LNS	Lancaster	PA	FAA	Eastern	AEA	T	C
LPR	Lorain/Elyria	OH	EXP	Eastern	AGL	S	D
LUK	Cincinnati	OH	FAA	Eastern	AGL	T	C
LWM	Lawrence	MA	FAA	Eastern	ANE	T	C
MDT	Harrisburg	PA	FAA	Eastern	AEA	T	C
MGJ	$ in Remarks	NY	EXP	Eastern	AEA	S	D
MLT	Millinocket	ME	EXP	Eastern	ANE	S	D
MMK	Meriden	CT	EXP	Eastern	ANE	S	D
MSS	Massena	NY	FAA	Eastern	AEA	S	D
MVY	Vineyard Haven	MA	FAA	Eastern	ANE	T	C
OSU	$ in Remarks	OH	FAA	Eastern	AGL	T	C
OWD	Norwood	MA	FAA	Eastern	ANE	T	C
PEO	Penn Yan	NY	EXP	Eastern	AEA	S	D
POU	Poughkeepsie	NY	FAA	Eastern	AEA	T	C
SBY	Salisbury	MD	FAA	Eastern	AEA	S	D
UCA	Utica	NY	FAA	Eastern	AEA	T	C
KOA	Kailua/Kona	HI	EXP	Pacific	AWP	T	C
ARA	New Iberia	LA	EXP	Southern	ASW	T	C
BAZ	New Braunfels	TX	EXP	Southern	ASW	S	D
BFM	Mobile	AL	EXP	Southern	ASO	T	C
BGD	Borger	TX	EXP	Southern	ASW	S	D
BMQ	Burnet	TX	EXP	Southern	ASW	S	D

BPK	Mountain Home	AR	EXP	Southern	ASW	S	D
CEW	Crestview	FL	FAA	Southern	ASO	S	D
CKV	Clarksville	TN	EXP	Southern	ASO	S	D
CLL	College Station	TX	FAA	Southern	ASW	T	C
CNM	Carlsbad	NM	FAA	Southern	ASW	S	D
COT	Cotulla	TX	FAA	Southern	ASW	S	D
CRG	$ in Remarks	FL	FAA	Southern	ASO	T	C
CRS	Corsicana	TX	EXP	Southern	ASW	S	D
CXO	Conroe	TX	EXP	Southern	ASW	S	D
DAL	Dallas	TX	FAA	Southern	ASW	H	A
DEQ	DeQueen	AR	EXP	Southern	ASW	S	D
DHT	Dalhart	TX	FAA	Southern	ASW	S	D
DMN	Deming	NM	FAA	Southern	ASW	S	D
DTN	Shreveport	LA	FAA	Southern	ASW	S	C
DTO	Denton	TX	EXP	Southern	ASW	S	D
ELD	El Dorado	AR	FAA	Southern	ASW	S	D
FDR	Frederick	OK	EXP	Southern	ASW	S	D
FFC	Atlanta	GA	EXP	Southern	ASO	S	D
FLL	Fort Lauderdale	FL	FAA	Southern	ASO	T	B
FST	Ft. Stockton	TX	EXP	Southern	ASW	S	D
FTW	Ft. Worth	TX	FAA	Southern	ASW	T	C
FXE	Fort Lauderdale	FL	FAA	Southern	ASO	T	C
GAG	Gage	OK	FAA	Southern	ASW	S	D
GGG	Longview	TX	FAA	Southern	ASW	T	C
GIF	Winter Haven	FL	EXP	Southern	ASO	S	D
GLS	Galveston	TX	FAA	Southern	ASW	S	D
GPT	Gulfport	MS	FAA	Southern	ASO	T	C
GUP	Gallup	NM	FAA	Southern	ASW	S	D
HBR	Hobart	OK	FAA	Southern	ASW	S	D
HOT	Hot Springs	AR	FAA	Southern	ASW	S	D
HOU	Houston	TX	FAA	Southern	ASW	T	A
HRO	Harrison	AR	FAA	Southern	ASW	S	D
JBR	Jonesboro	AR	FAA	Southern	ASW	S	D
LBX	Angleton/Lake Jackson	TX	EXP	Southern	ASW	S	D
LEE	Leesburg	FL	EXP	Southern	ASO	S	D
LFK	Lufkin	TX	FAA	Southern	ASW	S	D
LFT	Lafayette	LA	FAA	Southern	ASW	T	C
LIT	Little Rock	AR	FAA	Southern	ASW	T	B
LLQ	Monticello	AR	EXP	Southern	ASW	S	D
LVJ	Houston	TX	EXP	Southern	ASW	S	D

MEM	Memphis	TN	FAA	Southern	ASO	H	A
MFE	McAllen	TX	FAA	Southern	ASW	T	C
MKL	Jackson	TN	FAA	Southern	ASO	S	C
MLB	Melbourne	FL	FAA	Southern	ASO	T	C
MLU	Monroe	LA	FAA	Southern	ASW	T	C
MSL	Northwest Alabama	AL	FAA	Southern	ASO	S	D
MWL	Mineral Wells	TX	FAA	Southern	ASW	S	D
NEW	$ in Remarks	LA	FAA	Southern	ASW	T	C
OPF	$ in Remarks	FL	FAA	Southern	ASO	T	C
ORL	Orlando	FL	FAA	Southern	ASO	T	C
PBF	Pine Bluff	AR	FAA	Southern	ASW	S	D
PFN	Panama City	FL	FAA	Southern	ASO	T	C
PIE	St.	FL	FAA	Southern	ASO	T	C
PMP	Pompano Beach	FL	FAA	Southern	ASO	T	C
PNS	Pensacola	FL	FAA	Southern	ASO	T	C
PSX	Palacios	TX	FAA	Southern	ASW	S	
PWA	Oklahoma City(Willey)	OK	FAA	Southern	ASW	T	C
RBD	Dallas	TX	FAA	Southern	ASW	T	C
RVS	Tulsa	OK	FAA	Southern	ASW	T	C
SAF	Santa Fe	NM	FAA	Southern	ASW	T	C
SGR	Houston	TX	OPT	Southern	ASW	S	
SRQ	Sarasota/Bradenton	FL	FAA	Southern	ASO	T	C
SSF	$ in Remarks	TX	FAA	Southern	ASW	T	C
SSI	Brunswick	GA	FAA	Southern	ASO	S	D
TCL	Tuscaloosa	AL	FAA	Southern	ASO	T	C
TMB	$ in Remarks	FL	FAA	Southern	ASO	T	C
TXK	Texarkana	AR	FAA	Southern	ASW	T	C
TYR	Tyler	TX	FAA	Southern	ASW	T	C
VLD	Valdosta	GA	FAA	Southern	ASO	T	
BCE	Bryce Canyon	UT	FAA	Western	ANM	S	D
BHK	Baker	MT	EXP	Western	ANM	S	D
BLI	Bellingham	WA	FAA	Western	ANM	T	C
CCR	$ in Remarks	CA	FAA	Western	AWP	T	C
CLM	Port Angeles	WA	EXP	Western	ANM	S	D
CMA	Camarillo	CA	FAA	Western	AWP	T	
CTB	Cut Bank	MT	FAA	Western	ANM	S	
DAG	Daggett	CA	FAA	Western	AWP	S	D
DEW	Deer Park	WA	EXP	Western	ANM	S	D
DLN	Dillon	MT	EXP	Western	ANM	S	D

DUG	Douglas Bisbe	AZ	FAA	Western	AWP	S	
DVT	Phoenix	AZ	FAA	Western	AWP	T	C
EED	Needles	CA	FAA	Western	AWP	S	
EKO	Elko	NV	EXP	Western	AWP	S	C
ELN	Ellensburg	WA	EXP	Western	ANM	S	D
FHR	Friday Harbor	WA	EXP	Western	ANM	S	D
FUL	Fullerton	CA	FAA	Western	AWP	T	C
GCN	Grand Canyon	AZ	FAA	Western	AWP	T	B
HHR	Hawthorne	CA	FAA	Western	AWP	T	C
HIO	Portland/Hillsboro	OR	FAA	Western	ANM	T	C
HQM	Hoquiam	WA	FAA	Western	ANM	S	D
HWD	Hayward	CA	FAA	Western	AWP	T	C
IDA	Idaho Falls	ID	FAA	Western	ANM	T	C
JER	Jerome	ID	EXP	Western	ANM	S	D
LGU	Logan	UT	EXP	Western	ANM	S	D
LMT	Klamath Falls	OR	FAA	Western	ANM	T	C
LVK	Livermore	CA	FAA	Western	AWP	T	C
LVM	Livingston	MT	FAA	Western	ANM	S	D
LWT	Lewistown	MT	FAA	Western	ANM	S	
MLP	Mullan Pass	ID	EXP	Western	ANM	S	D
MLS	Miles City	MT	FAA	Western	ANM	S	D
MOD	Modesto	CA	FAA	Western	AWP	T	C
MWH	Moses Lake	WA	FAA	Western	ANM	T	C
MYV	Marysville	CA	FAA	Western	AWP	S	D
OAK	Oakland	CA	FAA	Western	AWP	H	A
ONT	Ontario	CA	FAA	Western	AWP	T	A
OVE	Oroville	CA	EXP	Western	AWP	S	D
PAE	Everett	WA	FAA	Western	ANM	T	C
PRB	Paso Robles	CA	FAA	Western	AWP	S	D
PRC	Prescott	AZ	FAA	Western	AWP	T	C
PSC	Pasco	WA	FAA	Western	ANM	T	C
PSP	Palm Springs	CA	FAA	Western	AWP	T	C
RAL	Riverside	CA	FAA	Western	AWP	T	C
RDM	Redmond	OR	FAA	Western	ANM	T	
RNT	Renton	WA	FAA	Western	ANM	T	C
SAC	Sacramento	CA	FAA	Western	AWP	T	C
SBA	Santa Barbara	CA	FAA	Western	AWP	T	B
SJC	San Jose	CA	FAA	Western	AWP	H	B
SMF	Sacramento	CA	FAA	Western	AWP	T	A

SNS	Salinas	CA	FAA	Western	AWP	T	C
STS	Santa Rosa	CA	FAA	Western	AWP	T	C
TPH	Tonopah	NV	FAA	Western	AWP	S	D
TTD	Portland/Troutdale	OR	FAA	Western	ANM	T	C
TVL	South Lake Tahoe	CA	FAA	Western	AWP	T	C
UKI	Ukiah	CA	FAA	Western	AWP	S	
VNY	Van Nuys	CA	FAA	Western	AWP	T	A
WJF	Lancaster	CA	FAA	Western	AWP	T	

APPENDIX IV

ASOS Site Configuration And Implementation Status Data Base

ASOS Product Improvement Implementation Status Database   Currrent As Of: Month, day, year

Implementation Status

Component

SAMPLE

SID	Location	ST	Agency	NWS Region	Climate Regime	LCD Site	30-Yr Normals	C2	V2	C3	V3	TS	FR	ACU	DCP 1	DCP 2	DCP 3	WSP	TDWR	Ice Rmk	New Proc	DTS1
										Sensors (X - Installed)				Application Software				P=Product Support Loc.; D=Demo mpler				
1V4	St. Johnsbury	VT	NWS	E	Dbf									2.60							O	
ABQ	Albuquerque	NM	NWS	S	Bsh					X	X			2.60	X			P				
ALB	Albany	NY	NWS	E	Dbf								X	2.60	X			IP	D			
AST	Astoria	OR	NWS	W	Cbf			X	X			X	X	2.60	X	X					O	C
ATL	Atlanta	GA	NWS	S	Caf					X	X		X	2.60	X	X			P	D		
BDL	Windsor Locks	CT	NWS	E	Daf				X	X	X		X	2.60	X	X		P				
BHM	Birmingham	AL	FAA	S	Caf									2.60	X			P				
BNA	Nashville	TN	NWS	S	Caf					X	X		X	2.60	X	X			IP			
BOS	Boston	MA	NWS	E	Daf			X	X	X	X		X	2.60	X	X	X		P	D		
AUS	Austin-Bergstrom	TX	FAA	S	Caf			X	X					2.60	X	X		P				
BTV	Burlington	VT	NWS	E	Dbf								X	2.60	X							
BUF	Buffalo	NY	NWS	E	Dbf								X	2.60	X			P		D		
BWI	Balitmore	MD	NWS	E	Caf			X	X				X	2.60	X				P	D		
CLE	Cleveland	OH	NWS	E	Daf			X	X	X	X		X	2.60	X	X			P	D	O	
DCA	Washington	DC	NWS	E	Caf					X	X		X	2.60	X				IP	IO		C
MDW	Chicago	IL	FAA	C	Daf					X	X		X	2.60	X	X			P		O	C
OKC	Oklahoma City	OK	NWS	S	Caf					X	X		X	2.60	X				P			
PWM	Portland	ME	NWS	E	Dbf			X	X				X	2.60	X	X				IO		
SFO	San Francisco	CA	NWS	W	Cs			X		X	X			2.60	X	X	X				O	C
SNT	Stanley	ID	NWS	W	H									2.60								
IAD	Dulles	VA	NWS	E	Caf			X	X	X	X		X	2.50	X	X	X					

SAMPLE

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