ASOS Product Improvement Implementation Plan

(Addendum III)

For

Ice Free Wind

May 15, 2003

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Office of Operational Systems
Field Systems Operations Center/Observing Systems Branch

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Executive Summary

With the completion of the full deployment of the Automated Surface Observing System (ASOS) at almost 1,000 National Weather Service (NWS), Federal Aviation Administration (FAA), and Department Of Defense (DOD) locations nationwide, a new phase of Planned Product Improvement (PPI) has begun. These planned improvements will bring even greater observing capability, processing and communications capacity, and reporting accuracy and consistency to the ASOS. The planned improvements for the ASOS include:

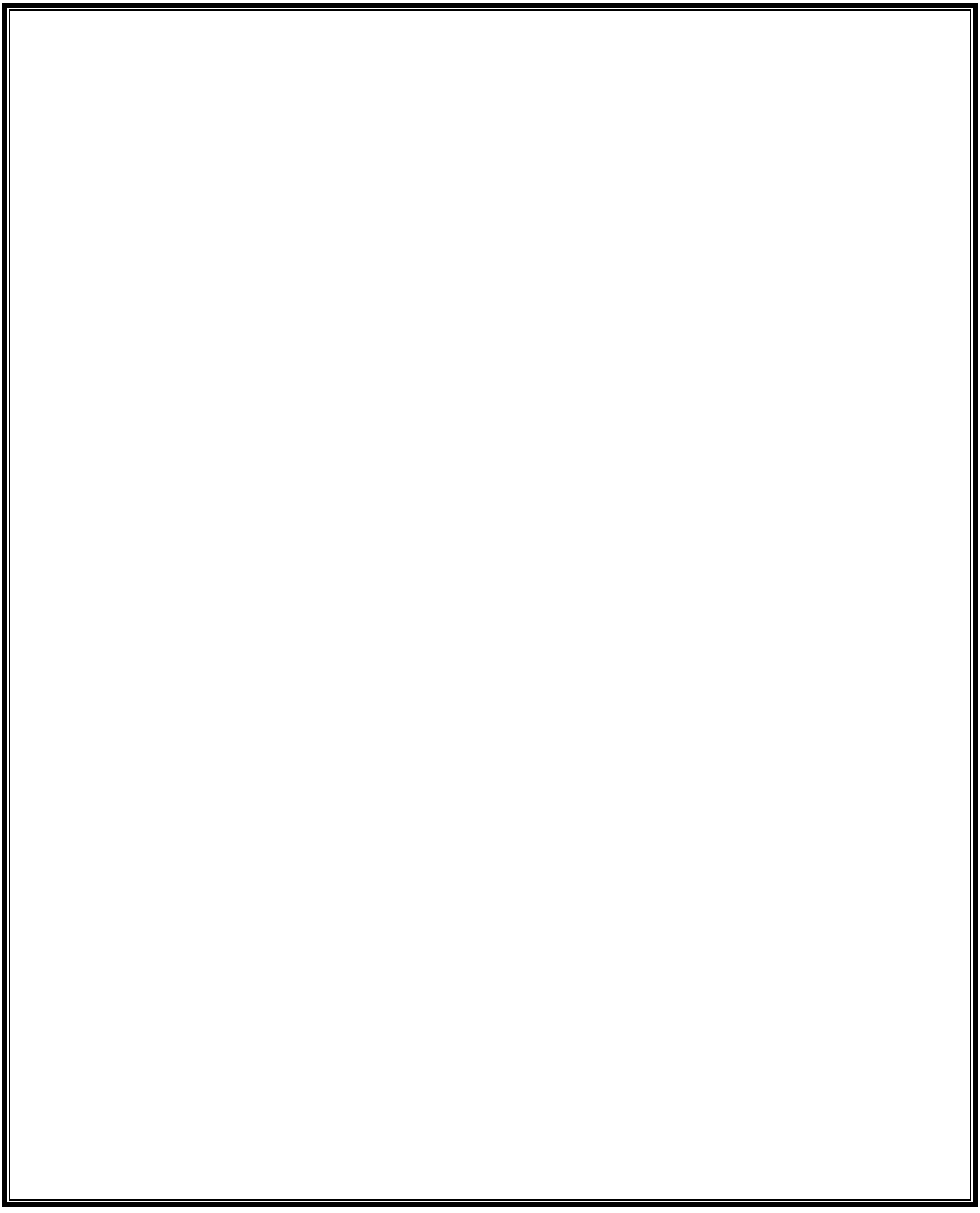
Processor Board Replacement,
Dew Point Sensor Replacement*,
All-Weather Precipitation Accumulation Gauge*,
Ice Free Wind Sensor*,
Enhanced Precipitation Identification Sensor*,
Ceilometer Replacement*, and
Software Enhancements

Note: * These sensors are dependent on successful implementation of the new processor board

A series of implementation plans are needed for these improvements. This document describes the implementation plan for the ASOS Ice Free Wind (IFW) Sensor at only NWS and FAA sponsored sites (Current total: 884 sites); DOD sponsored ASOS sites are not included in this plan. The plan describes the overall process and the factors which impact on the Operational Implementation (OI) of this new ASOS planned product improvement.

A check list is provided to aid in monitoring progress in completing the necessary activities for the OI. The check list ensures that prerequisite government conducted testing (System Test (ST) and Operational Acceptance Test (OAT) activities are 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 planned product improvement. Finally, any necessary post-OI activities are also covered.

Although the activities described in this plan are written well in advance, 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.

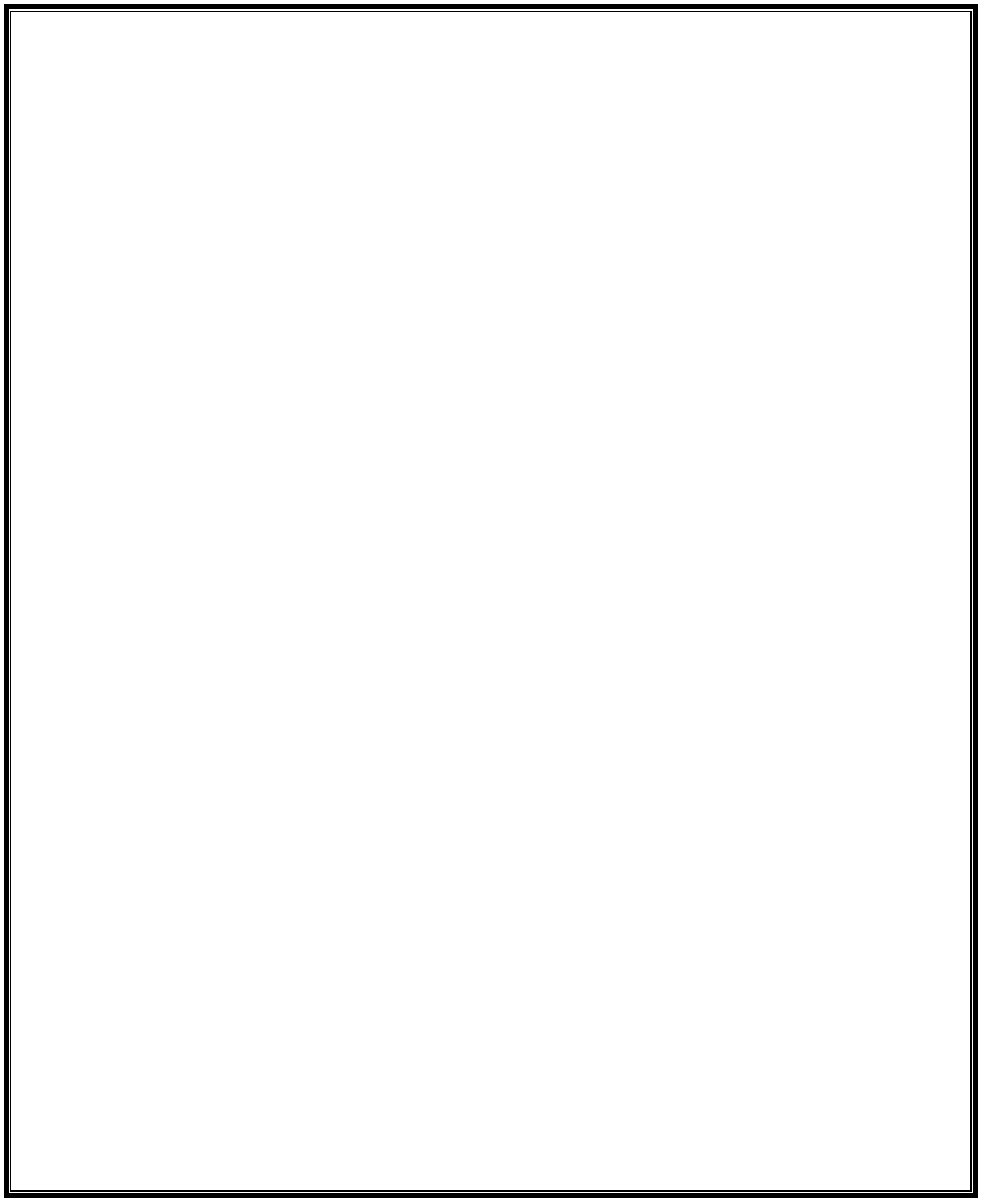


List of Organizational Codes

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)
OS12	Requirements and Change Management Branch
OS7	Observing Services Division
OST11	Program Management Branch
OST32	SEC Development Branch

Code	FAA Organization
AUA-400	IPT* 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
AOS-700	Network Engineering Management Division
ARU-1	Air Traffic Systems Development Directorate
ARS-100	Aerospace Weather Policy Division
ARS-200	Aerospace Weather Standards Division
ATB-400	Surveillance IPT

*IPT = Integrated Product Team



ACRONYMS

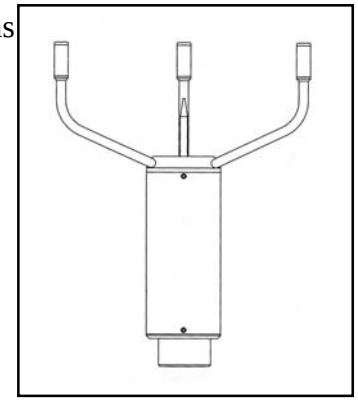
ACCB	ASOS Configuration Control Board
ACU	Acquisition Control Unit
ADAS	AWOS/ASOS Data Acquisition System
AOMC	ASOS Operations and Monitoring Center
APMC	ASOS Program Management Committee
ASOS	Automated Surface Observing System
AWIPS	Advanced Weather Interactive Processing System
AWOS	Automated Weather 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
CSA	Configuration Status Accounting
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
ELC	Expected Life Cycle
EMRS	Engineering Management Reporting System
ET	Electronics Technician
FAA	Federal Aviation Administration
FCA	Functional Configuration Audit
FRU	Field Replaceable Unit
FY	Fiscal Year
IFW	Ice Free Wind Sensor
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
NOTAM	Notice To Airmen
NRC	National Reconditioning Center
NSN	National Stock Number
NWS	National Weather Service

NWSI	National Weather Service Instruction
OAT	Operational Acceptance Test
OI	Operational Implementation
OIP	Operational Implementation Plan
OPR	Office of Primary Responsibility
OSF	Operational Systems Fielded
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
SEC	Systems Engineering Center
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
TRB	Test Review Board
TRG	Test Review Group
TTR	Test Trouble Report
WFO	Weather Forecast Office
WSOM	Weather Service Operations Manual
WSP	Weather Systems Processor

1. INTRODUCTION

1.1 Description of Technology Improvement Scheduled For Implementation

The program objective is to acquire a commercial off-the shelf (COTS) sensor that could be modified to meet National Weather Service (NWS) and Federal Aviation Administration (FAA) requirements. This instrument is to be "Ice-Free" and have no moving parts. After evaluating different technologies the ultrasonic wind sensors were chosen as the most promising technology. Evaluation of different COTS ultrasonic wind sensors resulted in the selection of the Handar Inc. Ice Free ultrasonic wind sensor. This COTS sensor was then modified in a development program to make it meet NWS requirements. During this time period, Handar Inc. was purchased by Vaisala Inc. The sensor is now referred to as the Vaisala 425NWS Ice Free Wind Sensor.



The Vaisala 425NWS Ice Free ultrasonic wind sensor is an array of three equally spaced transducers which radiate and receive ultrasonic pulses in a horizontal plane. The sensor measures transit times in both directions for each of the three transducer pairs. The wind speed and direction are then derived from these six transit time measurements.

The 425 NWS Ice Free Wind Sensor is capable of providing the WMO standard 3 second average gust, whereas the existing cup anemometer provided a 5 second average gust. This capability will improve responsiveness and more accurately reflect the gusts. For the remainder of this document the Vaisala 425NWS Ice Free ultrasonic wind sensor will be referred to as Ice Free Wind (IFW).

1.2 Purpose

The purpose of this document is to provide a clear strategy for the implementation of the IFW 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 plan describes the extent of implementation related activities: 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). This plan includes provision for a "Phased Implementation" approach as opposed to a single master schedule for all sites.

The phased implementation approach breaks the entire population of sites into discrete implementation batches. Each batch consists of sites with similar characteristics and implementation risks. In the case of the IFW the number of sites for each implementation batch is driven by available agency funds for a given year, and as a result, the number of batches may accumulate until all projected sites are implemented over a multi-year period. Factors which may impact the composition of each batch include, sites designated as politically sensitive or high profile, climate/seasonal considerations, service/safety considerations, and those sites with defined implementation risks. Furthermore, within each batch the implementation sequence is based on existing sensor failure rates and on maintenance/ operations cost-benefit considerations; i.e., those sites with the higher failure and maintenance/operations costs are given higher priority. Implementation risks are changes to the existing suite which are more likely to result in failure. This includes complex modifications, complex configurations, and critical external components such as network communications which are beyond the control of ASOS. Those sites with the least operational risk are in the earlier batches, while those sites with the greater operational risk are in the latter batches. Batches are implemented sequentially as confidence is gained. The batches may be implemented with some overlap. Furthermore, this plan describes any unique additions, exceptions, or limitations. For example, unlike other improvements , the IFW may require completion of a follow-on Climate Data Continuity Study.

This plan applies to all **884** NWS and Federal Aviation Administration (FAA) ASOS locations equipped with a wind sensor. The implementation of the IFW falls within the overall goal of modernizing the ASOS network. This implementation is phase III of this modernization. Consequently, this implementation plan is labeled Addendum III.

1.4 Applicable Documents

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

- Approved Request For Change (RC) for IFW deployment
- Engineering Modification Note # 77
- Field Release Note
- Operational Acceptance Test Plan

2.0 TEST ACTIVITIES

The IFW must undergo successful government testing before operational implementation. This chapter provides a brief overview of the prerequisite test activities leading to Operational Implementation (OI) activities. Pre-implementation test activities are the transition between development activities and OI activities. The sections in this chapter describe 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 System Test (ST) activities and Operational Acceptance Test (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. 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 the Test Review Board (TRB) consisting of other managers as part of a Deployment Readiness Review (DRR). The decision to deploy is based on successful completion of the OAT. The TRG also provides technical support and advice for this decision.

2.1 Pre-System Test (ST) Activities

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

A. **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) for testing activities, through the appropriate Change Management process prior to the ST. The ASOS Program Management Committee (APMC) is the approving management authority for this process.

B. **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.

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

D. **Acquisition of ST Units:** Upon successful completion of factory System Integration / Qualification Tests, OST11 will initiate through OST32 procurement of the IFW PPI components. OST11 with OPS11's support will verify IFW PPI components perform correctly

prior to delivery of these components to the designated ST locations. OST11 will ensure delivery of the necessary PPI components to the designated ST locations.

E. **ST Logistic Support:** Necessary components, supplies, spare parts, and test equipment will be made available to ST locations by OST11.

F. **Install PPI Test Units at ST Sites:** Installation and maintenance of ST equipment will be coordinated by OST1.

2.2 System Test Activities

This section describes those activities which must be completed during or before the end of the ST and identifies the office(s) responsible for completion of each activity. These ST activities include:

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

H. **Data Collection and Analysis:** All necessary data will be collected, compiled and checked for quality and completeness in accordance with the ST plan. The TRG will review and reconcile all TTRs. This process is managed by OPS24.

I. **Verify Completion of the ST:** Where testing identifies serious flaws, additional STs will have to be conducted. During testing, OPS24 will inform the TRG of the results of the test. The TRG will recommend whether or not to proceed to the next phase of testing (i.e., OAT).

J. **ST Report:** A preliminary ST 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 a follow-on OAT. The program manager reviewed the recommendation and made the decision weather to proceed to 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, and identifies the office(s) responsible for completion of each activity. The purpose of the OAT is to verify operational performance of the IFW under field conditions, ensure there are no adverse systemic effects as a result of integration of the new IFW with the ASOS, and 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:

A. **RC for OAT:** Upon receipt of the preliminary ST report and a recommendation from OPS24 to proceed with the OAT, the Chair of the ASOS Configuration Control Board (ACCB), i.e., OST11, initiated action to prepare and submit an RC for the OAT. This RC lists all locations included in the OAT. The ACCB adjudicates an RC if the incremental cost for the RC is less than $1 million; the APMC adjudicates the RC if the incremental cost for the RC is $1 million or more. In the case of the IFW, the incremental cost for the OAT is less than $1M and therefore the ACCB will adjudicate this RC.

B. **OAT Management Decision:** Upon formal approval of the RC, and TRG concurrence with the final ST report and recommendation, the ASOS PPI Manager will authorize OPS24 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.

C. **Prepare OAT plan:** OPS24 prepared and distributed the OAT plan prior to start of the OAT. This plan identifies OAT locations, dates, schedules, responsibilities, procedures, metrics, evaluation criteria and deliverables (data reports, evaluations, and recommendations) for completion of the OAT. A TRG is formed (same as in ST) to adjudicate and classify all TTRs documented during the OAT.

D. **OAT Locations and Schedule:** The 20 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.

E. **Acquisition of OAT Units** Upon notification by OST11 to initiated acquisition of the OAT PPI components, OPS11 (acting as the COTR) will have acquired the OAT PPI components and coordinated with OPS24 and the NWS regions the locations where the PPI components will be delivered prior to the start of the OAT.

F. **OAT Logistic Support:** OST11 ensured all necessary Modification Kits (MOD KIT), maintenance components, supplies, spare parts, and test equipment were delivered to the designated OAT locations and installed prior to the start of the OAT.

G. **OAT Maintenance Coordination Support:** OST11 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.

H. **Prepare & Provide Modification Notes (MOD NOTES):** Draft NWS Engineering Modification Notes (MOD NOTES) will be produced by OST11 and provided to installation technicians prior to start of installation at the OAT site(s).

I. **OAT Documentation Support:** All necessary documentation was delivered to the NWS regions and the test sites prior to start of the OAT. OAT Documentation includes: MOD NOTES produced by OPS12, OAT procedures produced by OPS24, and draft Release Notes (REL NOTE) and draft IFW implementation plan produced by OPS22.

2.4 Operational Acceptance Test Activities

The IFW OAT is a 2-phase process. Phase 1 consists of a dual sensor test. The IFW sensor is configured in test mode while the Belfort wind sensor is configured in operational mode. Phase 2 consists of a single sensor OAT. The IFW is configured in operational mode and the Belfort Sensor is deconfigured. The threshold criteria for transitioning from phase 1 to phase 2 are contained in the IFW OAT plan issued by OPS24. 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:

A. **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.

B. **Data Collection and Analysis:** All necessary data were collected, compiled and checked for quality and completeness in accordance with the OAT plan. Whenever possible maintenance data shall be collected via the NWS Engineering Management Reporting System (EMRS). The TRG will review and reconcile all TTRs. This process is managed by OPS24.

C. **Verify Draft Operational Implementation Plan (OIP):** A key element of the OAT is the verification of the implementation procedures in the draft OIP. To the extent possible, the OAT is a "dry-run" for the OI. All noted procedural discrepancies will be rectified by the responsible office(s) and reflected in the final OIP as appropriate.

D. **Verify Completion of OAT:** If the OAT results identify a significant failure, a new ST and OAT are necessary after corrective action is completed. During the OAT, OPS24 will inform the TRG of the results. The TRG will determine whether the OAT was successful and whether to recommend the full or next step in the phased implementation of the IFW sensor.

E. **OAT Report:** Upon successful completion of either the full, or partial phased group OAT an OAT report will be provided by OPS24 to the ASOS PPI Manager.

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 Deployment Readiness Review (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/decision, logistic support, and operational support. They are accomplished in parallel and are completed by the start of the OI which occurs when the IFW 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:

A. **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 ASOS IFW sensor. It defines all activities for successful completion of the IFW OI and, as such, is labeled as Addendum III to the overall OIP.

B. **Depot Spares Modeling:** The Mean Time Between Failure (MTBF) of years, a system Expected Life Cycle (ELC) of years, and a base number of 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 IFW. These variables will be provided to OPS14 by the IFW COTR, OST 32. The number of required spares will be provided to the ASOS PPI Manager (OST11) prior to full scale production and acquisition management decision.

C. **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 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 baseline 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.

D. **Full Scale Production and Acquisition Management Decision:** If the RC is not approved by the ACCB, it will be referred back to the submitter for rectification and resubmission in accordance with established ACCB procedures. Upon ACCB approval of the RC for the OI, the ASOS PPI Manager will endorse the RC and recommend to the ASOS Program Management Committee (APMC) approval of the RC. The Chair of the APMC, OPS2 will coordinate the APMC management decision making process. Upon receiving the APMC management decision approving IFW operational procurement, The ASOS PPI Manager will notify the ASOS PPI Contracting Officer's Technical Representative (COTR), OST32, to procure the planned quantity of equipment components necessary for the OI. This notification may be made before the final OAT report provided the preliminary OAT report is favorable, however the 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 The ASOS PPI Manager will suspend procurement activity until the critical issue(s) cited in the report is/(are) satisfactorily resolved. The actual procurement may occur in batches with staggered delivery dates. The planned deployment schedule will phase with the actual delivery dates and lag slightly to allow adjustment and alignment of the delivery and installation schedules.

E. **OI Deployment Decision:** Upon successful completion of either the full, or partial phased group OAT, receipt of the OAT report from OPS24, and receipt of appropriate ACCB/APMC management approval for full scale production and acquisition, the ASOS PPI Manager will conduct a Deployment Readiness Review (DRR) with other managers to make a "go-no-go" deployment decision for the larger batch of similar sites in the general population represented by the smaller group of sites referenced in the OAT report. The DRR decision team will consist of managers from various Weather Service Headquarters offices and will be specifically be identified by the ASOS PPI manager. A "Go" deployment decision will be announced by the ASOS PPI Manager to all concerned parties. This will allow other ongoing deployment planning and execution activities to continue to completion for the designated batch of sites.

F. **Identify OI Installation Locations:** The ASOS PPI Manager will coordinate the selection of locations for each procurement batch with the appropriate NWS and FAA offices and solicit their input to this decision. This implementation plan addresses all 882 ASOS locations in the combined NWS and FAA base program, plus 2 additional post-base program locations (Total: 884 sites). These locations are identified in Appendix II.

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

1. **Draw Rate Strategy:** Initially, OPS12 will issue the first two IFW kits to each Weather Forecast Office (WFO) as stock is received at the National Logistics Support

Center (NLSC). These first two kits are the spare kit and the first installation kit. Concurrent with this initial distribution, the receiving WFOs will be instructed on how to draw additional kits from the NLSC (CCx2) in accordance with the MOD NOTE # **77** issued by OPS12. Upon completion of the initial issue of two IFW kits to each WFO, NLSC will distribute subsequent IFW kits to WFOs upon receipt of a draw request from the WFOs. The NWS regions are responsible for establishing a regional draw rate strategy in consonance with the region's share of the national total, monitoring regional draw rate activity and coordinating 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.

2. **Installation Sequence Strategy:** The initial kit acquired by each WFO must be the spares kit. The spares kit includes those components most likely to require maintenance, repair, or replacement, whereas the operational MOD KIT contains all components needed for complete installation and operation. The succeeding operational MOD KITs may be implemented with consideration of the following criteria:

A. The OI may be conducted in either a single phase or a multiple phase mode. In the single phase mode, the OI strategy is applied simultaneously to all sites. In the multiple phase mode, the OI strategy is applied sequentially to selected sub-groups of sites until all sites successfully complete the OI. The successful completion of the OI for one group does not preclude the start of the OI for another group. The initial group consists of similar sites with the greatest chance for successfully completing the OI. Subsequent groups are incrementally added to the OI as confidence is gained and necessary modifications are made until all sites successfully complete the OI.

B. The first group of sites to be implemented are those 20 sites included in the OAT for the IFW. There are 10 NWS and 10 FAA sites in the IFW OAT. This group includes 13 climate continuity sites. These sites are operationally implemented at the successful conclusion of the OAT process and affirmative DRR decision.

A. The second group of sites to be implemented are the remaining 300 NWS sites in Fiscal Year (FY) 2003. This group excludes the 10 OAT and 3 WSP sites sponsored by NWS which are included in other groups. The implementation order of this group is left to the regions. Preference should be given to sites with greater operational problems and associated maintenance costs. Consideration should also be given to scheduling sites on the same day or successive days which are closely spaced wherever possible. Additional scheduling preference

should be given to IFW installation at cold weather sites over warm weather sites. No special trip is necessary when installing the new IFW. The IFW should be installed when a preventative or corrective maintenance action is otherwise initiated.

B. The third group of sites to be implemented are the next 62 FAA Service Level-C sites in descending order of maintenance hours not included in the last group. This group excludes the 10 OAT, 31 WSP, and 42 TDWR sites sponsored by FAA which are included in other groups. Current FAA funding projections support implementation of this group in FY'04. See Appendix III for list of these sites.

C. The fourth group of sites to be implemented are the remaining 426 FAA sites, excluding the 10 OAT, 31 WSP, and 42 TDWR sites sponsored by FAA which are included in other groups. The implementation order of this group is left to the regions. Preference should be given to sites with greater maintenance problems and maintenance costs associated with the new sensor/software. Consideration should also be given to scheduling sites on the same day or successive days which are closely spaced wherever possible. Additional scheduling preference should be given to IFW installation at cold weather sites over warm weather sites. No special trip is necessary when installing the new IFW. The IFW should be installed when a preventative or corrective maintenance action is otherwise initiated.

D. The last group of sites to be implemented includes those which must retain the old processor, sensor, or software in support of specialized field operations. These sites support the FAA's Weather Sensor Processor (WSP) / Terminal Doppler Weather Radar (TDWR) programs. There are 34 ASOS sites supporting WSP and 42 ASOS sites supporting TDWR. At the conclusion of these operations or when the new processor board software version 2.80 becomes operational the new IFW sensor/software can be installed and implemented at these sites. A list of these potential sites is contained in Appendix III.

E. The implementation of the IFW sensor will occur over a several year period, depending on available funds. OPS22 will manage and post schedule changes to the ASOS Implementation data base and make this information available to regional and headquarters offices. Flags will be set within the database to identify sites implemented prior to their authorized "release date." OPS22 will notify OPS12, OPS13, and OST11 of these unauthorized installations. OPS22 will also coordinate the selection and implementation scheduling of specific sites for these batches. The current schedule for NWS and FAA is:

Group #	**Fiscal Year (FY)**	**Authorized Implementation Release Date**	**# OF SITES**	
			NWS Locations	FAA Locations
1	FY '02 FY '03	09/01/02	02 (OAT sites) 08 (OAT sites)	0 10 (OAT sites)
2	FY '03	10/01/02	277 (remaining NWS sites)	0
3	FY '04	10/01/03*	0	62*
4	FY '05	10/01/04*	0	491*
5	FY '04-05	Post SW 2.80*	26 WSP	8 WSP*

NOTE: No FAA locations are scheduled to receive IFW sensor in FY '02 and FY '03.

* These numbers may change depending on available FAA funding. Any changes will be coordinated with the ASOS PPI Manager.

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:

H. Procurement: Full production and procurement of the IFW, associated equipment, and their delivery to NLSC will be managed by OST32. This function includes serving as the COTR. Upon notification of approval of the full production contract award by the ACCB, OST32 will coordinate the issuance of the production contract with the Contracting Officer (CO). A

production rate and procurement schedule will be established by OST32 at time of contract award. All NWS sponsored systems are being procured in FY'03. Some FAA sponsored systems are being procured in FY'04 (~62), but most in FY'05 (~491).

I. **Supply Support Strategy:** All procured full production IFW sensors will enter the supply channel through the NLSC. OPS14 will establish a national stock number for the IFW 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.

J. **Installation and Maintenance Coordination:** OPS12 will coordinate all activities for installation and maintenance of operational IFW at designated locations in consonance with the planned OI installation sequence. These activities include scheduling for technician installation and check-out of the IFW, ensuring all PPI 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.

K. **Stock Kits at NLSC:** The new IFW 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 prior to the start of the OI. OPS14 will manage all logistic support for the implementation of the new ASOS IFW. NLSC will manage inventory of all necessary supplies, spares, and modification kits, and filling orders from field technicians for dissemination of IFW kits.

3.3 Configuration Management Activities

This section describes CM activities for the IFW during the pre- and post-OI period. The CM activities assure the IFW functional and physical characteristics are identified and documented. All changes to the IFW and related equipment are documented in EMRS and go through the NWS Change Management process. The Requirements and Change Management Branch (OS12) performs periodic audits to ensure the IFW still conforms to its specifications, engineering drawings, interface control documents, etc.

L. **Audits:** Audits will be accomplished to verify that the final tested and accepted configuration of the IFW meets all approved requirements.

M. **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.

N. **Physical Configuration Audit:** The Physical Configuration Audit (PCA) will be completed after the FCA to assure that the configuration baseline will comply to all required configurations and markings and that the documentation reflect the individual components and that the engineering documentation represents the baselined system and interfaces. The FCA must end before PCA ends, but PCA can start before FCA ends.

O. **Configuration Status Accounting:** Configuration Status Accounting (CSA) tracks the installation of the IFW at the individual ASOS sites. The current status of MOD NOTE 77 implementation may be viewed at the ASOS CM Web site:
http://cmhome.nws.noaa.gov/asos/index.asp
Then select the "site information" option.

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:

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

1. Engineering MOD NOTES will be provided to WFO technicians by OPS12 for installation and follow-on maintenance activities. MOD NOTES will be provided prior to the start of scheduled OI.

2. Operational Release Notes will be provided by OPS22 to the NWS ASOS Regional Focal Point (RFP) for distribution to affected WFOs prior to the start of the scheduled OI of the first IFW in their region. These release notes will also be distributed by OPS22 to designated FAA focal points and made available (as appropriate) to DOD offices for distribution to their affected facilities.

3. Any update to NWS Directives System (NDS) Chapters will be provided by the appropriate Weather Service Headquarters Office to the WFOs prior to OI. OS7 will coordinate production and distribution of the updates. OPS22 will monitor and ensure timely compliance.

4. Any update to the ASOS Users' Guide and other related ASOS documents will be funded by the agency requiring the update and production management provided by OPS22. Updates will be provided to the WFOs and key focal points in other affected Federal agencies (FAA, DOD) prior to OI . Currently no updates are planned.

5. OPS22 will post the Final IFW Implementation Plan on the Surface Observation Program Web site: http:///www.nws.noaa.gov/ops2/Surface/index.htm

B. Training: In the case of the IFW, there is no functional change and therefore no observer, user training is required. Maintenance training will be modified to include the IFW.

C. 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 necessary adjustments to automated equipment and procedures prior to the implementation. This notification may take many forms including, Public Notification Statement via Advanced Weather Interactive Processing System (AWIPS), notification via Family of Services, Notice To Airmen (NOTAM), notification of local airport authority, and notification of national and international user community through NWS Telecommunications Gateway. OPS22 will coordinate with various organizations to ensure these notifications are disseminated. In the case of the IFW, there is a functional change in the wind sampling period from 5-second averages to 3-second averages, and therefore user notification is required.

Each WFO will issue a Public Notification Statement (PNS) describing the change and its impact to all affected users on a case-by-case basis until all scheduled sites in their area of responsibility have been implemented. The PNS for each site should be issued 48-72 hours prior to implementation. The following template should be modified as appropriate and used for this PNS:

NOUS41 KWBC 252021
PNSWSH

PUBLIC INFO. STATEMENT...TECHNICAL IMPLEMENTATION NOTICE 02-30A
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
420 PM EST MONDAY MARCH 10 2003

TO: FAMILY OF SERVICES /FOS/ SUBSCRIBERS...NOAA WEATHER
WIRE SERVICE /NWWS/ SUBSCRIBERS...EMERGENCY MANAGERS
WEATHER INFORMATION NETWORK /EMWIN/ SUBSCRIBERS...
OTHER NATIONAL WEATHER SERVICE /NWS/ CUSTOMERS OF
AVIATION DATA AND FORECASTS...NWS EMPLOYEES

FROM: RAINER DOMBROWSKY
CHIEF...OBSERVING SERVICES DIVISION

SUBJECT: AUTOMATED SURFACE OBSERVING SYSTEM WIND SENSOR

REPLACEMENT

THE FOLLOWING CHANGES HAVE NO DIRECT IMPACT ON NOAA WEATHER WIRE SERVICE SUBSCRIBERS

THE AUTOMATED SURFACE OBSERVING SYSTEM /ASOS/ PRODUCT IMPROVEMENT PROGRAM WILL SOON DEPLOY A REPLACEMENT WIND SENSOR. THE NEW SENSOR WILL REPORT WIND INFORMATION USING THE 3-SECOND WORLD METEOROLOGICAL ORGANIZATION /WMO/ GUST STANDARD.

THE CURRENT ASOS WIND SENSOR /BELFORT 2000 / USES ROTATING CUPS TO MEASURE WIND SPEED AND A VANE TO MEASURE WIND DIRECTION. OVER A 2-MINUTE PERIOD...ASOS USES TWENTY-FOUR 5-SECOND AVERAGES TO DETERMINE THE 2-MINUTE AVERAGE WIND SPEED AND DIRECTION. EVERY MINUTE ASOS STORES THE HIGHEST 5-SECOND AVERAGE SPEED FOR THE PAST MINUTE... ALONG WITH ITS DIRECTION... IN THE 12-HOUR ARCHIVE FOR ADDITIONAL PROCESSING. THIS HIGHEST SPEED VALUE IS USED TO DETERMINE IF A GUST AND/OR A PEAK WIND REMARK WILL BE REPORTED.

THE NEW ASOS WIND SENSOR /VAISALA 425NWS / IS A SONIC ANEMOMETER. IT HAS NO MOVING PARTS AND WILL OPERATE BETTER IN WINTER WEATHER CONDITIONS. AS WITH THE BELFORT SENSOR...OVER A 2-MINUTE PERIOD...ASOS USES TWENTY-FOUR 5-SECOND AVERAGES TO DETERMINE THE 2-MINUTE AVERAGE WIND SPEED AND DIRECTION. BUT THE HIGHEST 3-SECOND RUNNING AVERAGE SPEED IS STORED FOR GUST AND PEAK WIND PROCESSING.

WHILE THERE WILL BE LITTLE DIFFERENCE IN 2-MINUTE AVERAGE WIND SPEED AND DIRECTION REPORTING...THE CHANGES IN GUST AND PEAK WIND REPORTING MAY BE SIGNIFICANT. WE CAN EXPECT TO SEE MORE GUSTS AND PEAK WINDS REPORTED WITH THE NEW SENSOR. THE MASS OF THE MOVING PARTS IN EXISTING SENSORS LIMITS RESPONSIVENESS. THE NEW SENSOR WILL BE MORE RESPONSIVE TO SHORT TERM GUSTS.

THE FOLLOWING ASOS LOCATIONS HAVE OR WILL TRANSITION TO THE IFW CONFIGURATION ON THE INDICATED DATES:

SID STATION NAME CONFIGURATION DEPLOYMENT DATE

IF YOU HAVE ANY QUESTIONS ABOUT THIS CHANGE...PLEASE CONTACT ONE OF THE FOLLOWING INDIVIDUALS AT NWS HEADQUARTERS:

TIMOTHY ROSS
SURFACE OBSERVATIONS PROGRAM MANAGER
PHONE: 301-713-1792 X114
E-MAIL: TIM.ROSS@NOAA.GOV

OR

RICHARD AHLBERG
ASOS PLANNED PRODUCT IMPROVEMENT PROGRAM MANAGER
PHONE: 301-713-1975 X160
E-MAIL: RICHARD.AHLBERG@NOAA.GOV.

THIS AND OTHER NWS TECHNICAL IMPLEMENTATION NOTICES ARE AVAILABLE ON THE INTERNET AT /USE LOWER CASE/:

http://www.nws.noaa.gov/om/notif.htm

END
$$
NNNN

D. Verify completion of all Pre-Operational Implementation 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 this 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 product improvement and identify the office(s) responsible. These activities include: Implementation Management, Activities, Acquisition Activities, Installation Activities, and OI Monitoring and Coordination 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.

A. **Implementation Management Decision:** The ASOS PPI Manager will initiate implementation activities upon receipt of a "go" deployment decision by the DRR Group for the batch of deployment sites represented by the OAT group considered for deployment by the DRR Group. OPS22 will identify the specific sites in each batch approved for deployment and post the list on the Surface Observation Program Web page: **http://www.nws.noaa.gov/ops2/Surface/index.htm**

B. **Oversight Responsibilities:** OPS22 has overall responsibility for managing and coordinating the OI activities. These responsibilities include ensuring IFW implementation is executed according to plan and coordinating any necessary adjustments with key participants. This includes coordination with: OPS24 for managing the successful completion of all prerequisite testing prior to OI; OST32 for monitoring acquisition and delivery of MOD KITS and other material necessary for implementation to NLSC; OPS13 for tracking MOD NOTE 77 completions in accordance with this implementation plan; 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. Several implementation data base reports were created to track site implementation changes.

These reports are routinely updated and made available to OPS22 and other offices involved in implementation activities. Examples of these reports are in Appendix II. OPS22 will manage the data bases and coordinate their availability to other implementation partners.

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

C. 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 or partial phased deployment of the IFW.

Part B: This part is 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 (within 24hours, see below). 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 within 24 hours 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 IFW MOD KITS.

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

B. **Monitor & Validate Delivery:** As the COTR, OST32 will monitor and ensure timely delivery of all planned production units to the NLSC. Any discrepancies or delays in scheduled delivery of the IFW to NLSC will be reported by NLSC to OST32 in a timely manner. Throughout the production cycle OST32 will perform a quality assurance function on units being delivered to the NLSC, report any discrepancies and provide remediation recommendations to the CO.

C. **Requisition Kits from NLSC:** The first two kits will be issued to each WFO by OPS12 from the stock at NLSC. These kits are the 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 IFW Mod kit from NLSC when they are ready to install the IFW in accordance with the Draw Rate Strategy described in Section 3.1, paragraph G1.

4.3 Installation Activities

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

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

D. **Installation & Checkout:** Field technicians will perform installation and checkout of the IFW in accordance with the Engineering MOD NOTE # 77. Generally this process will take about 5 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.C. They include installation notification, initiate maintenance monitoring and confirm operations, installation status reporting, and any necessary post implementation notification to users.

E. **Installation Notification:** Upon successful completion of installation and checkout, the Electronic Technician (ET) will update the Engineering Management Reporting System (EMRS) in accordance with MOD NOTE 77 and notify, via e-mail, the responsible WFO and RFP of this occurrence. A sample A-26 is included as part of Appendix IV.

F. **Initiate Maintenance Monitoring and Confirm Operations:** Example of description:

1. **WFO Status Monitoring:** The WFO, in conjunction with the AOMC will begin routine maintenance monitoring

2. **30-Day Evaluation Report:** The WFO will also conduct a close 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 (usually within 2 business days). 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 only for those sites which they deem merit regional or national attention. 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 recommended solutions which act on the discrepancy.

3. **RFP Status Monitoring:** 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 Evaluation Reports from the WFOs and forward those which they deem merit national attention in monthly status reports to the OPS22 Implementation Manager via e-mail.

4. **AOMC Status Monitoring:** 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 apprise the OPS22 Implementation Manager of any unusual ASOS performance related to the implemented improvement during the 30-day close monitoring period.

C. Installation Status Reporting Coordination:

1. 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). Those wishing to join the list are asked to submit request to: david.mannarano@noaa.gov.

2. 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 corrective actions to resolve any difficulties and keep the implementation on schedule. The

ASOS PPI 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**.

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 IFW 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 Sensor Continuity Study. They may begin immediately upon operational activation and are accomplished in parallel.

G. **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.

H. **Operational Quality Control:** The responsible WFO will continue with normal monitoring of the operation of the newly installed IFW beyond the initial 30 day close monitoring period. This will ensure proper ongoing operation of both the installed unit and the entire system.

I. **Operations And Maintenance:** 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, OST32.

J. **Documentation:** Five operations are necessary to ensure proper documentation of changes to ASOS. They are:

1. Data entry into the EMRS;
2. Data entry into the CMIS;
3. Data entry into the MIRS; and
4. Data entry into ASOS SYSLOG
5. Completion of and submission to NCDC of WS Form A-1, A-3, B-44, etc. to document meta data change at site.

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. The Regions 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 # 77. The WFO will complete applicable WS Forms A-1, A-3, B-44 and forward them to Regional Headquarters within 5 working days after implementation for review and submission to NCDC. Note: A-1 and A-3

forms are required for all ASOS locations; B-44 forms are also required for ASOS Local Climate Data (LCD) sites.

E. **Disposal of Old Equipment:** The NWS disposal policy for the old equipment being replaced is contained in the NWS disposal document written by OPS1 (OPS12, OPS14) in coordination with OS7. Specific procedures for disposal, in accordance with the disposal guidance, is included in the MOD NOTE # 77. Note: Disposal policy/procedure may include returning some or all of old equipment to stock at NRC. The disposal policy for the IFW is that all replaced Belfort wind sensors be returned to stock at NRC and used only as spares for supporting remaining ASOS sensors.

F. **Sensor Continuity Study:** At a sub-set of implemented sites, a sensor continuity study will be conducted to ensure identification of biases or meteorological discontinuities introduced into the climate record are documented. This study will last 1-2 years. Sites will be selected based on climatic considerations. OS7 will manage this activity.

APPENDIX I

ASOS Operational Implementation Check List

For

Ice Free Wind Sensor Upgrade

REVISION # 03 AS OF: 11/19/04

ASOS Planned Product Improvement
OI Check List - Part A

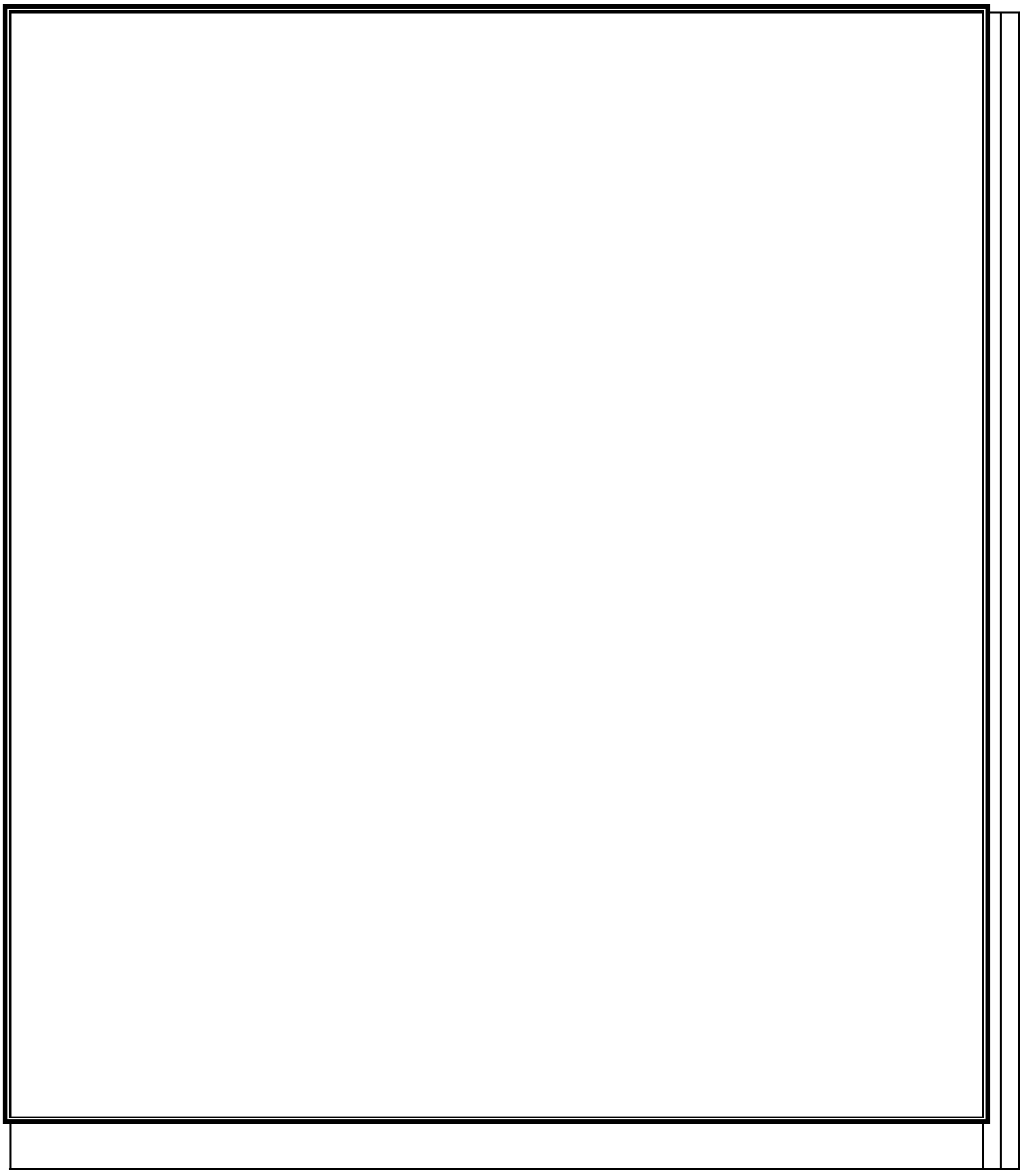
Planned Product Improvement: Ice Free Wind Sensor

Office completing this check list: OPS22 Date:_____

Item #		Item Description	OPR	Validation Date	
2.1		**Pre- System Test (ST) Activities**			
A		Submit RC for ST & obtain APMC approval to proceed	OST11	05/06/02	
B		Prepare ST plan & draft outline for ST report	OPS24	06/15/02	
C		Identify ST locations & dates	OPS24	06/15/02	
D		Initiate procurement/delivery of PPI test units to ST sites	OST11	01/25/02	
E		Deliver logistic supplies & test equipment to ST sites	OST11	07/12/02	
F		Install PPI test units at ST sites	OST11	07/30/02	
2.2		**ST Activities**			
A		**Verify start date for ST**	**OPS22**	08/14/02	
B		Complete ST data collection & analysis	OPS24	08/26/02	
C		**Verify completion date for ST**	**OPS22**	08/26/02	
D		Provide ST report to ACCB	OPS24	08/26/02	
2.3		**Pre-Operational Acceptance Test (OAT) Activities**			
A		Submit RC to ACCB for OAT	OST11	02/25/03	
B		OAT management decision by ACCB/APMC	OST11/ OPS2	03/24/03	
C		Prepare OAT plan	OPS24	10/15/02	
D		Determine OAT locations and schedule	OPS24	10/15/02	
E		Initiate procurement/delivery of OAT units	OST11	01/25/02	

F.	Coordinate OAT logistics support	OST11	09/09/02
			G.
H.	OAT Documentation: Deliver MOD NOTE # 77 to OAT sites	OST11	09/09/02
I.1.	OAT Documentation: Deliver OAT procedures to OAT sites	OPS24	10/15/02
I.2.	OAT Documentation: Deliver draft Release Notes to OAT sites	OPS22	03/11/03
2.4 OAT Activities			

A.	**Verify start date for OAT**	**OPS22**	09/13/02
B.	Complete OAT data collection and analysis	OPS24	
C.	Verify efficacy of draft OI plan	OPS24	
D.	**Verify Completion date for OAT**	**OPS22**	
E.	Provide OAT Report to ACCB	OPS24	
3.1	**Pre- Operational Implementation (OI) Planning Activities**		
A.	Prepare OI plan	OPS22	04/15/03
B.	Provide input and run Depot spares model	OST32/ OPS14	04/17/03
C.	Prepare RC for OI (Target Date: Dec, 2004)	OST11	
D.	Full-Scale Production and acquisition management decision by APMC	OST11	12/10-17/02
E.	OI Deployment Decision	OST11	
F.	Identify OI locations	OPS22	04/15/03
G.	Develop OI (draw rate/installation sequence) strategy	OPS22	04/15/03
3.2	**Pre-OI Logistic Support Activities**		
A.	Initiate procurement/delivery of OI production units to NLSC	OST32	12/23/02 09/03/04
B.	Initiate logistic support process for OI production units	OPS12/ OPS14	
C.	Coordinate installation & maintenance of OI production units	OPS12	
C.1.	Ensure all support equipment are available	OPS12	
C.2.	Ensure all necessary maintenance documentation is provided to technicians	OPS12	
C.3.	Ensure all necessary maintenance training is conducted	OPS12	NA
D.	Stock parts at NLSC	OPS14	



B.	Perform Functional Configuration Audit (initial:10/31/02)	OPS13	
C.	Perform Physical Configuration Audit (initial: 10/31/02)	OPS13	
3.4 Pre-OI Operational Support Activities			
A.1.	Provide MOD NOTE # 77 to WFOs	OPS12	
A.2..	Provide Release Notes to WFOs	OPS22	03/11/03
A.3.	Provide updates of appropriate NDS chapters to WFOs	OS7	
A.4.	Provide updates of ASOS Users' Guide and other appropriate user information materials to WFOs, FAA, DOD	OPS22	NA
B.1.	Provide maintenance training materials to WFOs	OPS22	NA
B.2.	Provide observer training materials	FAA ATP-310	NA
B.3.	Conduct local operator/maintenance training	WFOs	NA
C.	Provide Pre-Implementation User Notification	OS7	
D.	**Verify completion of all pre-OI activities**	OPS22	
4.1 Implementation Management Activities			
A.	Implementation Management Decision (DRR conducted May30, 2003)	OST11	
4.2 Acquisition Activities			
A .	**Verify start date for Operational Implementation (OI)**	**OPS22**	
B.	Monitor & validate delivery of all production units to NLSC	OPS51	
C.	Stock production units and spare kits at NLSC	OPS14	
4.4 OI Monitoring & Coordination Activities			
B.1.	Begin routine maintenance monitoring	AOMC	
C.1.	Begin monitoring and reporting implementation status for all sites	AOMC	
C.2.	Begin monitoring implementation status reports and initiate coordination	OPS22	
5.0 Post OI Activities			
A.	Issue post-implementation notification to affected users	OPS22	

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

Planned Product Improvement: Ice Free Wind Sensor
Location (SID, Name, State):_____
Office completing this check list:_____ Date:_____

Item #	Item Description	OPR	Validation Date
3.4	**Operational Support Activities**		
C.	Provide pre-implementation user notification	WFO	
4.2	**Acquisition Activities**		
D.	Requisition PPI production units and kits from NLSC as needed	WFO	
4.3	**OI Installation Activities**		
A.	Download files for NCDC archive	WFO	
B.	Perform installation & checkout in accordance with MOD NOTE # 77	WFO	
4.4	**OI Monitoring & Coordination Activities**		
A.	Installation Notification	WFO	
B.2.	Begin 30-day monitoring & coordination	WFO	
B.3.	Begin 30-day monitoring & coordination	RFP	
B.4.	Begin 30-day monitoring & coordination	AOMC	
5.0	**Post OI Activities**		
B.	Operational Quality Control: Monitor ongoing meteorological performance	WFO	
D.1.	Ensure system changes are documented through EMRS	WFO	
D.2.	Ensure new EMRS data are documented in the CMIS	OPS13	
D.3.	Ensure CMIS documentation changes are entered into MIRS	OPS22	
E.	Dispose of old equipment in accordance with MOD NOTE # 77	WFO	
F.	Conduct sensor continuity study at selected locations (Begin 1-2 year study) Prepare and deliver report on results of sensor continuity study	OS7	

APPENDIX II

ASOS Implementation Data Base Reports

For

For New Ice Free Wind (IFW) Sensor

- ASOS Site Configuration Data Base
- ASOS Site Implementation Status Data Base
- ASOS Sensor Firmware Version Report
- ASOS Implementation Status Report

ASOS PORT CONFIGURATION REPORT

DATE:11-06-02

SID	PORT NUM	FUNCTION	STATUS	BAUD RATE	PARITY	BITS	STOP BITS	HANDSHAKE	CONNECTION	MODEM SLOT	DIAL TYPE
XNA	2-1	ACU-DCP A	Enabled	2400	NONE	8	1	RTS/CTS	Radio		
XNA	2-2	Pressure 1	Enabled	2400	NONE	8	1	None	Hard-Wire		
XNA	2-3	OID-4 User 1	Enabled	2400	NONE	8	1	None	Phone	4	Tone
XNA	2-4	VOICE	Enabled	9600	NONE	8	1	None	Hard-Wire		
XNA	3-1	ACU-DCP B	Enabled	2400	NONE	8	1	RTS/CTS	Radio		
XNA	3-2	Pressure 2	Enabled	2400	NONE	8	1	None	Hard-Wire		
XNA	3-3	OID-5 User 2	Enabled	38400	NONE	8	1	None	Phone	5	Tone
XNA	3-4	OID-1 Local	Enabled	9600	NONE	8	1	None	Hard-Wire		
XNA	4-1	UPS	Enabled	9600	NONE	8	1	None	Hard-Wire		
XNA	4-2	Pressure 3	Enabled	2400	NONE	8	1	None	Hard-Wire		
XNA	4-3	GTA Radio	Enabled	1200	NONE	8	1	None	Hard-Wire		
XNA	4-4	OID-2 Secondary	Enabled	9600	NONE	8	1	None	Hard-Wire		
XNA	5-1	ADAS	Enabled	2400	NONE	8	1	Synchronous	Hard-Wire		
YIP	1-3	RVR	Disabled	2400	EVEN	7	1	None	Hard-Wire		
YIP	2-1	ACU-DCP A	Enabled	2400	NONE	8	1	RTS/CTS	Radio		
YIP	2-2	Pressure 1	Enabled	2400	NONE	8	1	None	Hard-Wire		
YIP	2-3	OID-4 User 1	Enabled	2400	NONE	8	1	None	Phone	4	Tone
YIP	2-4	VOICE	Enabled	9600	NONE	8	1	None	Hard-Wire		
YIP	3-1	ACU-DCP B	Enabled	2400	NONE	8	1	RTS/CTS	Radio		
YIP	3-2	Pressure 2	Enabled	2400	NONE	8	1	None	Hard-Wire		
YIP	3-3	OID-5 User 2	Enabled	38400	NONE	8	1	None	Phone	5	Tone
YIP	3-4	OID-2 Secondary	Enabled	9600	NONE	8	1	None	Hard-Wire		
YIP	4-1	UPS	Enabled	9600	NONE	8	1	None	Hard-Wire		
YIP	4-2	Pressure 3	Enabled	2400	NONE	8	1	None	Hard-Wire		
YIP	4-3	CVD-1	Enabled	1200	NONE	8	1	None	Leased	6	Tone
YIP	4-4	OID-1 Local	Enabled	2400	NONE	8	1	None	Leased	2	Tone
YIP	5-1	Printer	Enabled	9600	NONE	8	1	XON/XOFF	Leased	1	Tone
YIP	5-3	ADAS	Enabled	2400	NONE	8	1	Synchronous	Hard-Wire		

ASOS Count: 976

ASOS SENSOR CONFIGURATION REPORT

DATE: 11-06-02

SID	LOCATION	ST	S/W VER	ACU S/W DATE	ACU/ UPS	DCP/ UPS	DCP 1-SENSORS					PORTS																DCP 2-SENSORS					PORTS			DCP 3-SENSORS					PORTS						LOCAL SENSORS													ACU/DCP COMM
							STAT	CPUS	SIO	UPS	A/D	1-2	1-3	1-4	2-1	2-2	2-3	2-4	3-1	3-3	3-4	4-1	4-2	4-3	4-4	5-1	5-2	STAT	CPUS	SIO	UPS	A/D	1-2	1-3	1-4	STAT	CPUS	SIO	UPS	A/D	1-2	1-3	1-4	P1	P2	P3	1	2	3	4	5	6	7	8	9	10	11	12	13	
1V4	St. Johnsbury	VT	2.6A	09/28/01			D	1	1	0	1																	D	1	1	0	1				D	1	1	0	1				X	X		WS	TD	TB											PH I RADIO
2WX	Buffalo	SD	2.6				D	0	0	0	0																	D	0	0	0	0				D	0	0	0	0				X	X		TD	WS	TB											PH I RADIO
40J	Perry - Foley Airport	FL	2.6				E	1	2	0	1				TB	WS	TD											D	0	0	0	0				D	0	0	0	0				X	X															PH I RADIO
6R6	Terrell County Airport	TX	2.6				D	0	0	0	0																	D	0	0	0	0				D	0	0	0	0				X	X					TB	WS	TD								PH I RADIO
79J	Andalusia Municipal Airport	AL	2.6		SOLA	SOLA	E	2	3	1	2	C1	FR	PW	TB	WS	TD	V1		TS								D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
87Q	Point Piedras Blancas	CA	2.6				D	0	0	0	0																	D	0	0	0	0				D	0	0	0	0				X	X		TB	WS	TD											PH I RADIO
8D3	Sisseton Municipal Airport	SD	2.6				E	1	2	0	1				TB	WS	TD											D	0	0	0	0				D	0	0	0	0				X	X															PH II RADIO
9V9	Chamberlain Municipal Airport	SD	2.6				D	0	0	0	0																	D	0	0	0	0				D	0	0	0	0				X	X		TD	WS	TB											PH I RADIO
AAF	Apalachicola Municipal Airport	FL	2.6			SOLA	E	1	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH II RADIO
AAO	Colonel James Jabara Airport	KS	2.6				E	1	2	0	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH II RADIO
AAT	Alturas Municipal Airport	CA	2.6				E	1	2	0	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH I RADIO
ABE	Lehigh Valley Int'l. Airport	PA	2.62	12/19/01	SOLA	SOLA	E	2	4	1	2			PW		WS	TD	V1		C1	C3	TB						D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
ABI	Abilene Regional Airport	TX	2.6		SOLA	CPI	E	2	4	1	2		FR	PW		WS	TD	V1		C3	C1	TB						D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
ABQ	Albuquerque Int'l. Sunport Airport	NM	2.6		SOLA	SOLA	E	2	4	1	2			PW		WS	TD	V1	V3	C1	C3	TB						D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
ABR	Aberdeen Regional Airport	SD	2.6		SOLA	SOLA	E	2	4	1	2		FR	PW	TB	WS	TD	V1		C1	C3							D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
ABY	Southwest Georgia Regional Airport	GA	2.6		SOLA	CPI	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
ACK	Nantucket Memorial Airport	MA	2.6		SOLA		E	2	2	0	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
ACT	Waco Regional Airport	TX	2.6		SOLA	CPI	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
ACV	Arcata Airport	CA	2.6		DELT	SOLA	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
ACY	Atlantic City Int'l. Airport	NJ	2.6		SOLA		E	2	2	0	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
ADG	Lenawee County Airport	MI	2.6				E	1	2	0	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH II RADIO
ADQ	Kodiak Airport	AK	2.6		SOLA	SOLA	E	2	2	1	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
AEX	Alexandria Int'l. Airport	LA	2.6		SOLA	CPI	E	2	2	1	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
AFAC1	Bullseye Aux Airfield	CO	2.6		SOLA		D	1	1	0	1																	D	1	1	0	1				D	1	1	0	1				X	X	X	C1	FR	PW	TB	WS	TD	V1	TS						PH I RADIO
AFN	Jaffrey - Silver Ranch Airport	NH	2.6		SOLA	CPI	E	1	2	1	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH II RADIO
AFW	Fort Worth Alliance Airport	TX	2.6		SOLA	CPI	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
AGC	Allegheny County Airport	PA	2.6		DELT	SOLA	E	2	2	1	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
AGS	Augusta Regional at Bush Field	GA	2.6		SOLA	CPI	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
AHN	Athens/Ben Epps Airport	GA	2.6		SOLA	CPI	E	2	2	1	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
AIA	Alliance Municipal Airport	NE	2.6				E	1	2	0	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH I RADIO
AKH	Gastonia Municipal Airport	NC	2.6				E	1	2	0	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH II RADIO
AKN	King Salmon Airport	AK	2.6		SOLA	SOLA	E	2	2	1	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
AKO	Colorado Plains Regional Airport	CO	2.6		SOLA	CPI	E	2	2	1	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
AKQ	Wakefield Municipal Airport	VA	2.6		SOLA	SOLA	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
AKR	Akron Fulton Int'l. Airport	OH	2.6		SOLA		E	1	2	0	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH II RADIO
ALB	Albany Int'l. Airport	NY	2.63	03/28/02	SOLA	SOLA	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
ALI	Alice Int'l. Airport	TX	2.6		SOLA	SOLA	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	1	1	0	1				D	1	1	0	1				X	X	X														PH II RADIO
ALO	Waterloo Municipal Airport	IA	2.6		DELT	CPI	E	2	2	1	1	C1	FR	PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
ALS	San Luis Valley Regional Airport/Bergman Field	CO	2.6		SOLA	SOLA	E	2	3	1	1	C1		PW	TB	WS	TD	V1	TS									D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
ALW	Walla Walla Regional Airport	WA	2.6		SOLA	CPI	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH I RADIO
AMA	Amarillo Int'l. Airport	TX	2.6		SOLA	SOLA	E	2	4	1	2		FR	PW		WS	TD	V1		C1	TB							D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
AMG	Bacon County Airport	GA	2.6		SOLA	SOLA	E	2	2	1	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X	X														PH II RADIO
AMW	Ames Municipal Airport	IA	2.6				E	1	2	0	1	C1		PW	TB	WS	TD	V1										D	0	0	0	0				D	0	0	0	0				X	X															PH I RADIO

ASOS Count: 975

SID: Site Location Identifier
ST: State
S/W VER: Software Version Used In Acquisition Control Unit (ACU)
ACU S/W DATE: Date Software Installed
ACU/UPS: Acquisition Control Unit Uninterruptible Power Supply (UPS)
DCP/UPS: Data Collection Package(DCP)Uninterruptible Power Supply (UPS)
DCP: Data Collection Package
STAT: Status D-Disabled, E-Enabled
CPUS: Number Of Central Processing Boards
SIO: Number Of Serial InPut/OutPut Boards
UPS: Number Of Uninterruptible Power Supplies
ACU/DCP COMM: Communications Method Between ACU & DCP

Sensors:
C1: Primary Ceilometer
C2: Meteorological Discontinuity Ceilometer
C3: Backup Ceilometer
DT: Vaisala DTS1 Dewpoint Temperature
FP: All Weather Precipitation Accumulation Gauge
FR: Freezing Rain
P1: Pressure 1
P2: Pressure 2
P3: Pressure 3

PW: Present Weather
TB: Tipping Bucket Rain Gauge
TD: 1088 or H083 Ambient/Dew Point Temperature
TS: Lighting Detection
V1: Primary Visibility
V2: Meteorological Discontinuity Visibility
V3: Backup Visibility
WI: Ice Free Wind (Vaisala 425)
WS: Belfort Wind

ASOS SENSOR FIRMWARE VERSION REPORT

DATE: 11-06-02

SID	CEIL	VIS	TA TD	PWX	WND	PRESS	FZRA	SNOW	HAIL	SUN	L PRECIP	TSTM
12N	0000.00	0000.00	2.46	0000.00	4.0	N/A	0000.00	SD		SS	N/A	0000.00
1V4	0000.00	0000.00	A92/F91	0000.00	4.0		0000.00	SD		SS		0000.00
2WX	0000.00	0000.00	B91/F91	0000.00	4.0	N/A	0000.00	SD		SS	N/A	0000.00
40J	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	SD		SS	0000.00	0000.00
6R6	0000.00	0000.00	A92/F91	0000.00	4.00	N/A	0000.00	SD		SS	N/A	0000.00
79J	0002.46	0039.00	A92/F91	0003.64	0004.00	0000.00	0002.00	SD		SS	0000.00	0001.06
87Q	0000.00	0000.00	B91AF91	0000.00	4.0	N/A	0000.00	SD		SS	N/A	0000.00
8D3	0000.00	0000.00	A92/F91	0000.00	4.0	N/A	0000.00	SD		SS	N/A	0000.00
9V9	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	SD		SS	0000.00	0000.00
AAF	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	SD		SS	0000.00	0000.00
AAO	0002.46	0040.00	A92/F91	0003.64	0004.00	0000.00	0002.00	SD		SS	0000.00	0000.00
AAT	2.46"	039"	A92/F91	3.64"	4.0"	N/A"	"	"	"	"	N/A"	"
ABE	2.46"	040"	A92/F91	3.64	4.0	N/A	0000.00	SD		SS	N/A	0000.00
ABI	2.46	039	B91/F91	3.64	4.0	N/A	2	SD		SS	N/A	0000.00
ABQ	2.46.00	0040.00	B91/F91	0003.64	004.00	0000.00	0000.00	SD		SS	0000.00	0000.00
ABR	2.46	039	B91/F91	3.64	4.0	N/A	2	SD		SS	N/A	0000.00
ABY	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	SD		SS	0000.00	0000.00
ACK	2.46"	040	A92/F91	3.64	4.0	N/A	2	SD		SS	N/A	0000.00
ACT	2.46	039	A92/F91	3.64	40	N/A	0000.00	SD		SS	N/A	0000.00
ACV	2.46	039	B91/F91	3.64	4.0	N/A	0000.00	SD		SS	N/A	0000.00
ACY	2.46	040	A92/F91	3.64	4.0	N/A	2	SD		SS	N/A	0000.00
ADG	2.46	040	A92/F91	3.64	4.0	N/A	2	SD		SS	N/A	0000.00
ADQ	2.46	039	A92/F91	3.64	4.00	N/A	2	SD		SS	N/A	0000.00
AEX	K.46	040"	A9K/F91	3.64	4.0	N/A	3	SD		SS	N/A	0000.00
AFAC1	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	SD		SS	0000.00	0000.00
AFN	2.46	040	A92/F91	3.64	4.00	N/A	2	SD		SS	N/A	0000.00
AFW	2.46	040	B91AF91	3.64	4.0	N/A	2	SD		SS	N/A	0000.00
AGC	2.46	040	A92/F91	3.64	4.0	N/A	0000.00	SD		SS	N/A	0000.00
AGS	2.46	040	A92/F91	3.64	4.0	N/A	2	SD		SS	N/A	0000.00
AHN	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	0000.00	SD		SS	0000.00	0000.00
DAB	2.46	040	A92/F91	3.64	4.00	0000.00	0000.00	SD		SS	0000.00	0000.00

ASOS Count: 887

	Date: 11/27/02	ASOS Implementation Status Report															
	AOMC Update 136																
			NWS				Processor	Previous	Previous	ACU	S/W			DTS1	IFW	AWPAG	ALDARS
SID	City	ST	Region	Agency	Svr Lvl	Processor	Installation	ACU S/W	Installed	S/W	Installed	Ta Sensor	Td Sensor	Installation	Installation	Installation	Turn-On
12N	Andover	NJ	E	NWS	0	Synergy	10/01/02	2.6		2.6A-3	10/01/02	H083	H083				
1V4	St. Johnsbury	VT	E	NWS	0	Synergy	09/28/01	2.6		2.6A-3	05/10/02	1088	1088				
2WX	Buffalo	SD	C	NWS	0	Xycom		2.6A-3	09/27/02	2.6	10/02/02	HO83	HO83				
6R6	Dryden	TX	S	NWS	0	Synergy	10/03/02	2.6		2.6A-3	10/03/02	1088	1088				
AAF	Apalachicola	FL	S	NWS	D	Xycom				2.6		1088	1088				
AAT	Alturas	CA	W	NWS	D	Xycom				2.6		1088	1088				
ABE	Allentown	PA	E	NWS	C	Xycom		2.62I	12/19/01	2.6	06/03/02	1088	1088				
ALB	Albany	NY	E	NWS	A	Xycom		2.6		2.63	03/28/02	1088	1088				
ARR	Chicago - Aurora	IL	C	FAA	C	Xycom				2.6		1088	1088				3/19/01 A
ASD	Slidell	LA	S	FAA	D	Synergy	01/29/02	2.6		2.6A-3	05/16/02	1088	1088				5/11/00 A
ATT	Austin (Camp Mabry)	TX	S	NWS	0	Synergy	08/12/02	2.6A-5	08/13/02	2.7A-3	11/20/02	1088	DTS1				
AUS	Austin (Bergstrom)	TX	S	FAA	C	Xycom		2.6		2.63	04/01/02	1088	1088				5/10/00 A
AVL	Asheville	NC	E	NWS	C	Xycom		2.6		2.62I	12/19/01	1088	1088				8/01/01 A
BDL	Windsor Locks	CT	E	NWS	A	Xycom				2.63	08/27/02	1088	1088				
BFF	Scottsbluff Heilig	NE	C	NWS	D	Xycom				2.6		1088	1088				
BGM	Binghamton	NY	E	NWS	C	Xycom		2.6		2.62I	12/12/01	HO83	HO83				10/01/02 A
BHM	Birmingham	AL	S	FAA	B	Xycom		2.6		2.63	04/16/02	1088	1088				
BIS	Bismark	ND	C	NWS	C	Synergy	01/22/02	2.6		2.6A-5	08/09/02	H083	DTS1				10/01/02 A
BLU	Blue Canyon	CA	W	NWS	D	Synergy	10/04/02	2.7A-1	10/04/02	2.7A-3	11/19/02	1088	1088		10/30/02		
BNA	Nashville	TN	S	NWS	A	Synergy	03/27/02	2.6		2.6A-3	03/27/02	1088	1088				
BOI	Boise	ID	W	NWS	C	Synergy	01/23/02	2.6		2.6A-5	08/12/02	1088	DTS1				
BRW	Barrow	AK	A	NWS	D	Xycom				2.6		1088	1088				
BTV	Burlington	VT	E	NWS	B	Synergy	09/03/02	2.7A-1	09/03/02	2.7A-3	11/19/02	1088	1088		09/13/02		
BUF	Buffalo	NY	E	NWS	A	Xycom		2.6		2.63	09/06/02	H083	H083				
BVE	Boothville	LA	S	NWS	0	Synergy	09/24/01	2.6V	09/24/01	2.6A-5	08/28/02	1088	1088				
CAK	Akron	OH	E	NWS	A	Xycom		2.6		2.62I	12/13/01	1088	1088				
CAO	Clayton	NM	S	NWS	D	Xycom				2.6		1088	1088				
CAR	Caribou	ME	E	NWS	D	Synergy	09/12/02	2.6		2.7A-1	09/12/02	1088	1088		09/26/02		
CDJ	Chillicothe	MO	C	NWS	0	Synergy	06/27/02	2.6		2.6A-3	06/27/02	1088	DTS1				
CHA	Chattanooga	TN	S	NWS	B	Xycom		2.6		2.62I	12/19/01	1088	1088				
CID	Cedar Rapids	IA	C	FAA	C	Xycom		2.6		2.63	03/21/02	HO83	HO83				03/08/01 A
CLE	Cleveland	OH	E	NWS	A	Synergy	05/15/02	2.6A-3	05/15/01	2.7A-3	11/13/02	1088	1088				
CMX	Hancock	MI	C	FAA	D	Synergy	11/26/02	2.6		2.7A-3	11/26/02	1088	1088				10/14/99 A
CNK	Concordia	KS	C	NWS	D	Synergy	09/12/02	2.7A-2	10/15/02	2.7A-3	11/07/02	1088	DTS1				
CSM	Clinton	OK	S	FAA	C	Xycom		2.6A-5	08/14/02	2.6	05/28/02	1088	1088				3/09/00 A
CUT	Custer	SD	C	NWS	D	Xycom				2.6		1088	1088				
CYS	Cheyenne	WY	C	NWS	C	Synergy	01/22/02	2.6A-3	04/12/02	2.6	08/21/02	1088	1088				11/01/02 A

CZZ	Campo	CA	W	NWS	0	Synergy	02/20/02	2.6		2.6A-3	05/24/02	1088	DTS1				
DFW	Dallas / Ft Worth	TX	S	NWS	A	Synergy	09/05/02	2.6		2.6A-3	09/05/02	H083	H083				
DMH	Baltimore	MD	E	NWS	0	Synergy	12/20/01	2.6		2.6A-3	07/02/02	1088	DTS1				
DSM	DesMoines	IA	C	NWS	A	Xycom		2.6		2.63	09/11/02	1088	1088				
ELP	El Paso	TX	S	NWS	B	Xycom		2.6		2.63	04/04/02	1088	1088				
ERI	Erie	PA	E	NWS	C	Xycom		2.6		2.62I	12/12/01	1088	1088				10/01/01 A
EYE	Indianapolis	IN	C	FAA	D	Synergy	01/22/02	2.6		2.6A-5	08/09/02	1088	1088				

Appendix III

IFW IMPLEMENTATION GROUP LISTS

GROUP 1: FY ‘03 IFW OAT SITES (10 NWS; 10 FAA)

GROUP 2: FY ‘03 REMAINING NWS SITES
(Excluding WSP Sites Remaining On Old Processor)

GROUP3: FY ‘04 62 FAA SERVICE LEVEL C SITES
(Excluding WSP Sites Remaining On Old Processor)

GROUP 4: FY ‘04 REMAINING FAA SITES (Excluding WSP Sites Remaining On Old Processor)

GROUP 5: WSP SITES

IFW Implementation Group 1:
OAT Sites

05/08/03

SID	SITE_NAME	ST	AGN	S/L	PROCESSOR	PROC GRP	PROC INST	IFW GRP	IFW INST
UAO	Aurora	OR	EXP	D	SYNERGY	5	01/23/2002	1	
ARR	Chicago/Aurora	IL	FAA	C	SYNERGY	6	12/06/2002	1	12/06/2003
CMX	Hancock	MI	FAA	D	SYNERGY	6	11/26/2002	1	11/26/2002
FTW	Fort Worth	TX	FAA	C	SYNERGY	6	02/10/2003	1	02/10/2003
GFK	Grand Forks	ND	FAA	B	SYNERGY	6	03/31/2003	1	
HUF	Terre Haute	IN	FAA	C	SYNERGY	6		1	01/16/2003
KTN	Ketchikan	AK	FAA	C	SYNERGY	6	01/09/2003	1	01/10/2003
NEW	New Orleans	LA	FAA	C	SYNERGY	6	01/07/2003	1	
OSH	Oshkosh	WI	FAA	C	SYNERGY	6	11/04/2002	1	11/04/2002
SIT	Sitka	AK	FAA	C	SYNERGY	6	01/23/2003	1	01/24/2003
BFF	Scottsbluff	NE	NWS	D	SYNERGY	7	02/04/2003	1	
BLU	Emigrant Gap	CA	NWS	D	SYNERGY	6	10/04/2002	1	04/23/2003
BRW	Barrow	AK	NWS	D	SYNERGY	8	12/16/2002	1	
BTV	Burlington	VT	NWS	B	SYNERGY	6	09/03/2002	1	04/15/2003
CAR	Caribou	ME	NWS	D	SYNERGY	7	09/12/2002	1	04/16/2003
ITO	Hilo	HI	NWS	C	SYNERGY		12/13/2002	1	
LLJ	Challis	ID	NWS	D	SYNERGY	4	01/02/2003	1	01/02/2003
SFO	San Francisco	CA	NWS	A	SYNERGY	8	05/15/2002	1	
TKA	Talkeetna	AK	NWS	C	SYNERGY	6	01/08/2003	1	
TOP	Topeka	KS	NWS	C	SYNERGY	6	08/20/2002	1	10/17/2002

IFW Implementation Group 2:
Remaining 277 NWS Sites, Less WSP

05/08/03

SID	LOCATION	ST	AGN	S/L	PROCESSOR	PROC GRP	PROC INST	IFW GRP	IFW INST
12N	Andover	NJ	NWS	D	SYNERGY	1	10/1/02	2	
1V4	St. Johnsbury	VT	NWS	O	SYNERGY		9/28/01	2	
2WX	Buffalo	SD	NWS	O	SYNERGY		12/6/02	2	
40J	Perry-Foley	FL	NWS	D				2	
6R6	Dryden	TX	NWS	D	SYNERGY		10/3/02	2	
87Q	Pt. Piedras Blancas	CA	NWS	O	SYNERGY		2/10/03	2	
8D3	Sisseton	SD	NWS	D	SYNERGY	2	2/5/03	2	
9V9	Chamberlain	SD	NWS	D		2		2	
AAF	Apalachicola	FL	NWS	D	XYCOM	4		2	
AAT	Alturas	CA	NWS	D	XYCOM	3		2	
ABE	Allentown	PA	NWS	C	XYCOM	7		2	
ABI	Abilene	TX	NWS	C		7		2	
ABR	Aberdeen	SD	NWS	D	SYNERGY	7	3/20/03	2	
ACT	Waco	TX	NWS	C		6		2	
ACY	Atlantic City	NJ	NWS	C	XYCOM	7		2	
ADQ	Kodiak	AK	NWS	B		6		2	
AGS	Augusta	GA	NWS	C		6		2	
AHN	Athens	GA	NWS	C		6		2	
AKN	King Salmon	AK	NWS	B		6		2	
AKQ	Wakefield	VA	NWS	D		6		2	
ALO	Waterloo	IA	NWS	C		6		2	
ALS	Alamosa	CO	NWS	D		7		2	
AMA	Amarillo	TX	NWS	B	SYNERGY	7		2	
ANC	Anchorage	AK	NWS	A		8		2	
ANJ	Sault Ste. Marie	MI	NWS	D		6		2	
ANN	Annette Island	AK	NWS	D	XYCOM	6		2	
APN	Alpena	MI	NWS	D		8		2	
AST	Astoria	OR	NWS	D		8		2	
ATL	Atlanta	GA	NWS	A		9		2	
ATT	Austin	TX	NWS	D	SYNERGY	7	8/12/02	2	
AVL	Asheville	NC	NWS	C	XYCOM	7		2	
AVP	Wilkes-Barre/Scranton	PA	NWS	C	SYNERGY	7	4/1/03	2	
BDR	Bridgeport	CT	NWS	C		8		2	
BET	Bethel	AK	NWS	A		6		2	
BFL	Bakersfield	CA	NWS	C		7		2	
BGM	Binghamton	NY	NWS	C	XYCOM	6		2	
BIH	Bishop	CA	NWS	D		6		2	
BIL	Billings	MT	NWS	B		6		2	
BIS	Bismarck	ND	NWS	C	SYNERGY	6	1/22/02	2	
BKW	Beckley	WV	NWS	D		7		2	
BNA	Nashville	TN	NWS	A	SYNERGY	9	3/27/02	2	
BNO	Burns	OR	NWS	D		4		2	
BOI	Boise	ID	NWS	C	SYNERGY	7	1/23/02	2	
BOS	Boston	MA	NWS	A		9		2	
BPT	Beaumont/Port Arthur	TX	NWS	C	SYNERGY	6	3/14/03	2	
BRO	Brownsville	TX	NWS	C		6		2	
BTR	Baton Rouge	LA	NWS	B		6		2	

BVE	Bootheville	LA	NWS	D	SYNERGY	3	9/24/01	2	
BWI	Baltimore	MD	NWS	A		9		2	
CAE	Columbia	SC	NWS	A		6		2	
CAK	Akron	OH	NWS	A	XYCOM	6		2	
CAO	Clayton	NM	NWS	D	SYNERGY	4	2/11/03	2	
CDB	Cold Bay	AK	NWS	D		6		2	
CDJ	Chillicothe	MO	NWS	O	SYNERGY	1	6/27/02	2	
CHA	Chattanooga	TN	NWS	A	XYCOM	6		2	
CLE	Cleveland	OH	NWS	A	SYNERGY	9	5/15/02	2	
CLT	Charlotte	NC	NWS	A		9		2	
CMH	Columbus	OH	NWS	A		9		2	
CNK	Concordia	KS	NWS	D	SYNERGY	7	9/12/02	2	
CON	Concord	NH	NWS	D				2	
COS	Colorado Springs	CO	NWS	B		6		2	
COU	Columbia	MO	NWS	C		6		2	
CPR	Casper	WY	NWS	C		6		2	
CQC	Clines Corner	NM	NWS	O		7		2	
CQT	Los Angeles	CA	NWS	O		7		2	
CRP	Corpus Christi	TX	NWS	B		7		2	
CRW	Charleston	WV	NWS	A		6		2	
CSG	Columbus	GA	NWS	C		7		2	
CTY	Cross City	FL	NWS	D		2		2	
CUT	Custer	SD	NWS	D	SYNERGY	3	1/27/03	2	
CVG	Covington/Cincinnati	KY	NWS	A		9		2	
CYS	Cheyenne	WY	NWS	C	SYNERGY	6	1/7/03	2	
CZZ	Campo	CA	NWS	O	SYNERGY	1	2/20/02	2	
D07	Faith	SD	NWS	D		2		2	
DAB	Daytona Beach	FL	NWS	B		7		2	
DAY	Dayton	OH	NWS	A		9		2	
DBQ	Dubuque	IA	NWS	C		6		2	
DCA	Arlington	VA	NWS	A	SYNERGY	9	3/4/03	2	
DDC	Dodge City	KS	NWS	D		6		2	
DEN	Denver	CO	NWS	A		9		2	
DFW	Dallas/Fort Worth	TX	NWS	A	XYCOM	9	12/19/02	2	
DLH	Duluth	MN	NWS	B		8		2	
DMH	Baltimore	MD	NWS	O	SYNERGY	1	12/20/01	2	
DRA	Mercury	NV	NWS	D		6		2	
DRT	Del Rio	TX	NWS	D		6		2	
DTW	Detroit	MI	NWS	A		9		2	
EKN	Elkins	WV	NWS	C		6		2	
ELY	Ely	NV	NWS	D		7		2	
ENN	Nenana	AK	NWS	D	SYNERGY	4		2	
ERI	Erie	PA	NWS	C	XYCOM	8		2	
EUG	Eugene	OR	NWS	C		8		2	
EVV	Evansville	IN	NWS	C		7		2	
EWR	Newark	NJ	NWS	A		9		2	
EYW	Key West	FL	NWS	C		6		2	
FAI	Fairbanks	AK	NWS	A	SYNERGY	8	5/18/02	2	
FAR	Fargo	ND	NWS	C		6		2	
FAT	Fresno	CA	NWS	A		6		2	
FCA	Kalispell	MT	NWS	D		8		2	
FLG	Flagstaff	AZ	NWS	C		6		2	

FMN	Farmington	NM	NWS	C	SYNERGY	4	2/10/03	2	
FNT	Flint	MI	NWS	B		6		2	
FSD	Sioux Falls	SD	NWS	B		6		2	
FSM	Fort Smith	AR	NWS	C		7		2	
FWA	Fort Wayne	IN	NWS	A	XYCOM	9		2	
GCC	Gillette	WY	NWS	D	SYNERGY	4	1/30/03	2	
GDP	Pine Springs	TX	NWS	O	SYNERGY	7	9/25/01	2	
GGW	Glasgow	MT	NWS	D		6		2	
GJT	Grand Junction	CO	NWS	C	SYNERGY	6	3/19/03	2	
GLD	Goodland	KS	NWS	D		6		2	
GNA	Grand Marais	MN	NWS	O	SYNERGY	1	4/10/03	2	
GNR	Greenville	ME	NWS	O				2	
GNT	Grants	NM	NWS	D	SYNERGY	2	1/8/03	2	
GRB	Ashwaubenon	WI	NWS	C	SYNERGY	7		2	
GRI	Grand Island	NE	NWS	C		6		2	
GSP	Greer	SC	NWS	C		8		2	
GTF	Great Falls	MT	NWS	C		6		2	
GUY	Guymon	OK	NWS	D		7		2	
HLN	Helena	MT	NWS	C		6		2	
HOM	Homer	AK	NWS	C		6		2	
HON	Huron	SD	NWS	C		6		2	
HSE	Hatteras	NC	NWS	D		6		2	
HTL	Houghton Lake	MI	NWS	D		7		2	
HTS	Huntington	WV	NWS	C		6		2	
HVR	Havre	MT	NWS	D		7		2	
IAD	Sterling	VA	NWS	A	XYCOM	9		2	
IAH	Houston	TX	NWS	A		8		2	
ICT	Wichita	KS	NWS	A	XYCOM	9		2	
IGM	Kingman	AZ	NWS	D	SYNERGY	3	1/29/03	2	
ILG	Wilmington	DE	NWS	C		6		2	
ILM	Wilmington	NC	NWS	C		7		2	
ILN	Wilmington	OH	NWS	D	SYNERGY	3	1/24/03	2	
IND	Indianapolis	IN	NWS	A		9		2	
INL	International Falls	MN	NWS	D		8		2	
INW	Winslow	AZ	NWS	D	SYNERGY	3	1/28/03	2	
IPT	Williamsport	PA	NWS	C		6		2	
IRK	Kirksville	MO	NWS	D	SYNERGY	4	5/2/03	2	
ISN	Williston	ND	NWS	D		7		2	
JAN	Jackson	MS	NWS	B		6		2	
JCT	Junction	TX	NWS	D	XYCOM	3		2	
JDN	Jordan	MT	NWS	D	SYNERGY	2	9/30/02	2	
JFK	New York	NY	NWS	A		9		2	
JKL	Jackson	KY	NWS	D		6		2	
LAN	Lansing	MI	NWS	B	SYNERGY	8	3/11/03	2	
LAS	Las Vegas	NV	NWS	A		9		2	
LBF	North Platte	NE	NWS	D		6		2	
LCH	Lake Charles	LA	NWS	C	XYCOM	6	3/14/03	2	
LEX	Lexington	KY	NWS	C		7		2	
LGA	New York	NY	NWS	A		8		2	
LGB	Long Beach	CA	NWS	A		6		2	
LIC	Limon	CO	NWS	D	SYNERGY	3	2/12/03	2	
LIH	Lihue	HI	NWS	C				2	

LND	Lander	WY	NWS	D		7		2	
LNK	Lincoln	NE	NWS	B		6		2	
LWD	Lamoni	IA	NWS	D	SYNERGY	3	2/5/03	2	
LWS	Lewiston	ID	NWS	C		6		2	
LXV	Leadville	CO	NWS	D		7		2	
LYH	Lynchburg	VA	NWS	C		6		2	
MAF	Midland	TX	NWS	C		6		2	
MBG	Mobridge	SD	NWS	D	SYNERGY	3	1/23/03	2	
MCG	McGrath	AK	NWS	D		6		2	
MCI	Kansas City	MO	NWS	A		9		2	
MCN	Macon	GA	NWS	C	SYNERGY	7	2/27/03	2	
MCO	Orlando	FL	NWS	A		9		2	
MEH	Meacham	OR	NWS	O		7		2	
MEI	Meridian	MS	NWS	C		6		2	
MFD	Mansfield	OH	NWS	C		6		2	
MFR	Medford	OR	NWS	C		6		2	
MGM	Montgomery	AL	NWS	B		6		2	
MHS	Mt. Shasta	CA	NWS	O	SYNERGY	3	2/12/03	2	
MIA	Miami	FL	NWS	A		9		2	
MKE	Milwaukee	WI	NWS	A		9		2	
MKG	Muskegon	MI	NWS	B		8		2	
MKK	Kaunakakai	HI	NWS	C		4		2	
MLF	Milford	UT	NWS	D	SYNERGY	4	2/19/03	2	
MLI	Moline	IL	NWS	C		6		2	
MOB	Mobile	AL	NWS	B	SYNERGY	7	9/30/02	2	
MQE	East Milton	MA	NWS	O	SYNERGY	1	10/9/02	2	
MSO	Missoula	MT	NWS	C		6		2	
MSP	Minneapolis	MN	NWS	A		9		2	
MSY	New Orleans	LA	NWS	A		9		2	
MTP	Montauk	NY	NWS	D	SYNERGY	2	11/1/02	2	
MWT	Mount Ida	AR	NWS	O		7		2	
MYL	McCall	ID	NWS	D	SYNERGY	4	2/16/03	2	
N60	Garrison	ND	NWS	O	SYNERGY	1	1/28/03	2	
NYC	New York City	NY	NWS	D		7		2	
OFK	Norfolk	NE	NWS	D		7		2	
OGG	Kahului	HI	NWS	C		8		2	
OKC	Oklahoma City	OK	NWS	A		9		2	
OLM	Olympia	WA	NWS	C		6		2	
OME	Nome	AK	NWS	B		8		2	
OQT	Oak Ridge	TN	NWS	O		7		2	
ORD	Chicago	IL	NWS	A		9		2	
ORH	Worcester	MA	NWS	C		6		2	
OTZ	Kotzebue	AK	NWS	B		8		2	
P28	Medicine Lodge	KS	NWS	O	SYNERGY	1	2/19/03	2	
P38	Jackpot	NV	NWS	O				2	
P58	Port Hope	MI	NWS	O	SYNERGY	1	3/14/03	2	
P59	Copper Harbor	MI	NWS	O	SYNERGY	1	1/24/03	2	
P60	Yellowstone Lake	WY	NWS	D		2		2	
P68	Eureka	NV	NWS	O	SYNERGY	1	10/16/02	2	
P69	Lowell	ID	NWS	D	SYNERGY	1	10/8/02	2	
P75	Manistique	MI	NWS	O	SYNERGY	1	1/23/03	2	
P92	Salt Point	LA	NWS	D	SYNERGY	2	2/27/03	2	

PAH	Paducah	KY	NWS	C		6		2	
PBI	West Palm Beach	FL	NWS	B		9		2	
PDT	Pendleton	OR	NWS	C		6		2	
PGA	Page	AZ	NWS	D	SYNERGY	3	3/26/03	2	
PGSN	Saipan Island	MP	NWS	C				2	
PGUM	Agana	GU	NWS	C				2	
PHL	Philadelphia	PA	NWS	A		9		2	
PHP	Philip	SD	NWS	D	SYNERGY	3	1/29/03	2	
PHX	Phoenix	AZ	NWS	A	SYNERGY	9	3/15/02	2	
PIA	Peoria	IL	NWS	B		6		2	
PIH	Pocatello	ID	NWS	C		6		2	
PIT	Pittsburgh	PA	NWS	A		9		2	
PNE	Philadelphia	PA	NWS	C		6		2	
POF	Poplar Bluff	MO	NWS	D	SYNERGY	4	3/17/03	2	
PUB	Pueblo	CO	NWS	C		6		2	
PVD	Providence	RI	NWS	A		7		2	
PWM	Portland	ME	NWS	C	SYNERGY	8	5/6/02	2	
RAP	Rapid City	SD	NWS	C		6		2	
RBL	Red Bluff	CA	NWS	D		6		2	
RDD	Redding	CA	NWS	C		8		2	
RDU	Raleigh/Durham	NC	NWS	A		9		2	
REO	Rome	OR	NWS	D	SYNERGY	2	10/8/02	2	
RFD	Rockford	IL	NWS	A		6		2	
RIW	Riverton	WY	NWS	D	SYNERGY	6	3/24/03	2	
RMG	Rome	GA	NWS	D	XYCOM	3		2	
RNM	Ramona	CA	NWS	D	SYNERGY	3	1/27/03	2	
RNO	Reno	NV	NWS	A		7		2	
ROA	Roanoke	VA	NWS	B		7		2	
ROW	Roswell	NM	NWS	C		6		2	
RQE	Window Rock	AZ	NWS	D		4		2	
RST	Rochester	MN	NWS	C		6		2	
RTN	Raton	NM	NWS	D	SYNERGY	4	2/4/03	2	
SAD	Safford	AZ	NWS	D	SYNERGY	3	2/6/03	2	
SAN	San Diego	CA	NWS	A		7		2	
SAV	Savannah	GA	NWS	B		6		2	
SBN	South Bend	IN	NWS	B		6		2	
SCK	Stockton	CA	NWS	C		7		2	
SDB	Sandberg	CA	NWS	O	XYCOM	3		2	
SDF	Louisville	KY	NWS	A		6		2	
SDM	San Diego	CA	NWS	C		6		2	
SGF	Springfield	MO	NWS	C	XYCOM	6		2	
SHN	Shelton	WA	NWS	D	SYNERGY	3	1/30/03	2	
SHR	Sheridan	WY	NWS	D		7		2	
SHV	Shreveport	LA	NWS	B		6		2	
SJT	San Angelo	TX	NWS	C		6		2	
SJU	San Juan	PR	NWS	B		9		2	
SLC	Salt Lake City	UT	NWS	A	SYNERGY	9	3/24/02	2	
SLE	Salem	OR	NWS	C		6		2	
SMP	Stampede Pass	WA	NWS	O		6		2	
SMX	Santa Maria	CA	NWS	C		6		2	
SNP	St. Paul Island	AK	NWS	D		6		2	
SNT	Stanley	ID	NWS	O	SYNERGY	1	9/25/01	2	

SPD	Springfield	CO	NWS	O	SYNERGY	1	1/22/03	2	
SPI	Springfield	IL	NWS	C	SYNERGY	7	2/13/03	2	
SPS	Wichita Falls	TX	NWS	C		7		2	
STC	St. Cloud	MN	NWS	D		7		2	
STL	St. Louis	MO	NWS	A		9		2	
SUX	Sioux City	IA	NWS	C		6		2	
SXT	Sexton Summit	OR	NWS	O		6		2	
TCS	Truth Or Consequences	NM	NWS	D		6		2	
TEB	Teterboro	NJ	NWS	B		6		2	
TLH	Tallahassee	FL	NWS	B		6		2	
TPA	Tampa	FL	NWS	A		9		2	
TRI	Bristol/Johnson/Kingsport	TN	NWS	A	SYNERGY	7	3/11/03	2	
TUL	Tulsa	OK	NWS	A		9		2	
TUP	Tupelo	MS	NWS	C		7		2	
UIL	Quillayute	WA	NWS	D		6		2	
VCT	Victoria	TX	NWS	D		7		2	
VTN	Valentine	NE	NWS	D		7		2	
WAL	Wallops Island	VA	NWS	D		4		2	
WMC	Winnemucca	NV	NWS	D		7		2	
YAK	Yakutat	AK	NWS	D		8		2	
YKM	Yakima	WA	NWS	C		6		2	
YNG	Youngstown/Warren	OH	NWS	B		6		2	

IFW Implementation Group 3:
FY ‘04 Next 62 FAA Service Level C Sites, Less WSP

05/08/03

SID	LOCATION	ST	AGN	S/L	PROCESSOR	PROC GRP	PROC INST	IFW GRP	IFW INST
AAO	Wichita	KS	EXP	D		5		3	
ARA	New Iberia	LA	EXP	C	SYNERGY	6	04/28/2003	3	
BFM	Mobile	AL	EXP	C		6		3	
IAG	Niagara Falls	NY	EXP	C		6		3	
IXD	Olathe	KS	EXP	C		6		3	
ABY	Albany	GA	FAA	C		6		3	
ACK	Nantucket	MA	FAA	C		6		3	
AEX	Alexandria	LA	FAA	C		6		3	
AFW	Fort Worth	TX	FAA	B		6		3	
ALW	Walla Walla	WA	FAA	C		6		3	
APC	Napa	CA	FAA	C		6		3	
ARB	Ann Arbor	MI	FAA	C		6		3	
ASE	Aspen	CO	FAA	C		6		3	
BAF	Westfield	MA	FAA	C		6		3	
BED	Bedford	MA	FAA	C		6		3	
BKL	Cleveland	OH	FAA	C		6		3	
BLI	Bellingham	WA	FAA	C		6		3	
BMG	Bloomington	IN	FAA	C		6		3	
BTL	Battle Creek	MI	FAA	C		6		3	
BUR	Burbank	CA	FAA	C		8		3	
BVY	Beverly	MA	FAA	C		6		3	
CCR	Concord	CA	FAA	C		6		3	
CDW	Caldwell	NJ	FAA	C		6		3	
CHO	Charlottesville	VA	FAA	C		6		3	
CKB	Clarksburg	WV	FAA	C		6		3	
CLL	College Station	TX	FAA	C		6		3	
CMA	Camarillo	CA	FAA	C		6		3	
CMI	Champaign/Urbana	IL	FAA	C		6		3	
CNO	Chino	CA	FAA	C		6		3	
CPS	Cahokia/St. Louis	IL	FAA	C		6		3	
CSM	Clinton	OK	FAA	D	XYCOM	6		3	
CXY	Harrisburg	PA	FAA	C		6		3	
ESF	Alexandria	LA	FAA	D		6		3	
FMY	Cape Coral	FL	FAA	C		6		3	
GNV	Gainesville	FL	FAA	C	SYNERGY	6	03/24/2003	3	
GON	Groton/New London	CT	FAA	C		6		3	
GPT	Gulfport	MS	FAA	C		6		3	
HKS	Jackson	MS	FAA	C		6		3	
HRL	Harlingen	TX	FAA	C		6		3	
HUT	Hutchinson	KS	FAA	C		6		3	
HWO	Hollywood	FL	FAA	C		5		3	
HYA	Hyannis	MA	FAA	C		6		3	
LAW	Lawton	OK	FAA	C		6		3	
MDH	Carbondale/Murphysboro	IL	FAA	C		6		3	
MHT	Manchester	NH	FAA	C		6		3	
MIE	Muncie	IN	FAA	C		6		3	
MKC	Kansas City	MO	FAA	C		6		3	
OXR	Oxnard	CA	FAA	C		6		3	
PDK	Atlanta	GA	FAA	C		6		3	

PHF	Newport News	VA	FAA	C		6		3	
PMD	Palmdale	CA	FAA	C		6		3	
PWA	Oklahoma City	OK	FAA	C		6		3	
PWK	Chicago/Prospect Hgts/Wheeling	IL	FAA	C		6		3	
RAL	Riverside	CA	FAA	C		6		3	
RSW	Fort Myers	FL	FAA	C		6		3	
SFF	Spokane	WA	FAA	C		6		3	
SLN	Salina	KS	FAA	C		6		3	
TCL	Tuscaloosa	AL	FAA	C		6		3	
TTD	Portland	OR	FAA	C		6		3	
UCA	Utica	NY	FAA	C	XYCOM	6		3	
VRB	Vero Beach	FL	FAA	C	XYCOM	6	04/11/2003	3	
YIP	Detroit	MI	FAA	C		6		3	

IFW Implementation Group 4
FY ‘05 Remaining 492 FAA Sites, Less WSP

05/08/03

SID	LOCATION	ST	AGN	S/L	PROCESSOR	PROCP GRP	PROC INST	IFW GRP	IFW INST
ADG	Adrian	MI	EXP	D		5		4	
AFN	Jaffrey	NH	EXP	D		5		4	
AIA	Alliance	NE	EXP	D		5		4	
AKH	Gastonia	NC	EXP	D		5		4	
AKW	Klawock	AK	EXP	D		5		4	
AMW	Ames	IA	EXP	D		5		4	
AOH	Lima	OH	EXP	D		5		4	
AQT	Nuiqsut	AK	EXP	D		5		4	
AQW	North Adams	MA	EXP	D		5		4	
ASD	Slidell	LA	EXP	D	SYNERGY	5	01/29/2002	4	
ASX	Ashland	WI	EXP	D		5		4	
AVX	Avalon	CA	EXP	D		5		4	
AWI	Wainwright	AK	EXP	D		5		4	
BAZ	New Braunfels	TX	EXP	D		5		4	
BDE	Baudette	MN	EXP	D		5		4	
BEH	Benton Harbor	MI	EXP	D		5		4	
BFD	Bradford	PA	EXP	D		6		4	
BGD	Borger	TX	EXP	D		5		4	
BHK	Baker	MT	EXP	D		5		4	
BIV	Holland	MI	EXP	D		5		4	
BJJ	Wooster	OH	EXP	D		5		4	
BKV	Brooksville	FL	EXP	D		5		4	
BML	Berlin	NH	EXP	D		5		4	
BMQ	Burnet	TX	EXP	D		5		4	
BPI	Big Piney	WY	EXP	D		5		4	
BPK	Mountain Home	AR	EXP	D		5		4	
BRD	Brainerd	MN	EXP	D		5		4	
BUY	Burlington	NC	EXP	D		5		4	
BVO	Bartlesville	OK	EXP	D		5		4	
BYG	Buffalo	WY	EXP	D		5		4	
CAG	Craig	CO	EXP	D		5		4	
CEU	Clemson	SC	EXP	D		5		4	
CEZ	Cortez	CO	EXP	D	SYNERGY	5	03/25/2003	4	
CFV	Coffeyville	KS	EXP	D		5		4	
CKV	Clarksville	TN	EXP	D		5		4	
CLM	Port Angeles	WA	EXP	D		5		4	
CNY	Moab	UT	EXP	D	SYNERGY	5	03/25/2003	4	
CQX	Chatham	MA	EXP	D		5		4	
CRS	Corsicana	TX	EXP	D		5		4	
CUB	Columbia	SC	EXP	D		5		4	
CXO	Conroe	TX	EXP	D		5		4	
DAW	Rochester	NH	EXP	D		5		4	
DCU	Decatur	AL	EXP	D		5		4	
DDH	Bennington	VT	EXP	D		5		4	
DEE	Deering	AK	EXP	D		5		4	
DEQ	De Queen	AR	EXP	D		5		4	

DEW	Deer Park	WA	EXP	D		5		4	
DFI	Defiance	OH	EXP	D		5		4	
DGW	Douglas	WY	EXP	D		5		4	
DKK	Dunkirk	NY	EXP	D		5		4	
DLN	Dillon	MT	EXP	D		5		4	
DMO	Sedalia	MO	EXP	D		5		4	
DNL	Augusta	GA	EXP	D		5		4	
DRO	Durango	CO	EXP	D		5		4	
DSV	Dansville	NY	EXP	D		5		4	
DTO	Denton	TX	EXP	D		5		4	
DTS	Destin	FL	EXP	D		5		4	
DVN	Davenport	IA	EXP	D		5		4	
DYL	Doylestown	PA	EXP	D		5		4	
EAA	Eagle	AK	EXP	D		5		4	
EAT	Wenatchee	WA	EXP	D		6		4	
EEO	Meeker	CO	EXP	D	SYNERGY	5	03/27/2003	4	
EET	Alabaster	AL	EXP	D		5		4	
EKO	Elko	NV	EXP	C		6		4	
ELN	Ellensburg	WA	EXP	D		5		4	
ELZ	Wellsville	NY	EXP	D		5		4	
ENW	Kenosha	WI	EXP	C		6		4	
EQY	Monroe	NC	EXP	D		5		4	
EST	Estherville	IA	EXP	D		5		4	
EVW	Evanston	WY	EXP	D	SYNERGY	5	03/24/2003	4	
EYE	Indianapolis	IN	EXP	D	SYNERGY	5	01/22/2002	4	
FDR	Frederick	OK	EXP	D		5		4	
FFC	Atlanta	GA	EXP	D		5		4	
FFT	Frankfort	KY	EXP	D		5		4	
FHR	Friday Harbor	WA	EXP	D		5		4	
FIG	Clearfield	PA	EXP	D		5		4	
FIT	Fitchburg	MA	EXP	D		5		4	
FLD	Fond Du Lac	WI	EXP	D		5		4	
FOK	Westhampton Beach	NY	EXP	D		6		4	
FST	Fort Stockton	TX	EXP	D		5		4	
FVE	Frenchville	ME	EXP	D		5		4	
FWN	Sussex	NJ	EXP	D		5		4	
FZY	Fulton	NY	EXP	D		5		4	
GED	Georgetown	DE	EXP	D		5		4	
GEY	Greybull	WY	EXP	D		5		4	
GEZ	Shelbyville	IN	EXP	D		5		4	
GIF	Winter Haven	FL	EXP	D		5		4	
GKJ	Meadville	PA	EXP	D		5		4	
GKY	Arlington	TX	EXP	D	SYNERGY	5	05/16/2002	4	
GLR	Gaylord	MI	EXP	D		5		4	
GOK	Guthrie	OK	EXP	D		5		4	
GRD	Greenwood	SC	EXP	D		5		4	
GSH	Goshen	IN	EXP	D		5		4	
GVL	Gainesville	GA	EXP	D		5		4	
GWO	Greenwood	MS	EXP	C		6		4	
GZH	Evergreen	AL	EXP	D		5		4	
HAO	Hamilton	OH	EXP	D		5		4	
HBG	Hattiesburg	MS	EXP	D		5		4	
HDO	Hondo	TX	EXP	D		5		4	
HEI	Hettinger	ND	EXP	D		5		4	

HIB	Hibbing	MN	EXP	D		6		4	
HIE	Whitefield	NH	EXP	D		5		4	
HJO	Hanford	CA	EXP	D		5		4	
HKA	Blytheville	AR	EXP	D		5		4	
HNS	Haines	AK	EXP	D		5		4	
HRI	Hermiston	OR	EXP	D		5		4	
HSI	Hastings	NE	EXP	D		5		4	
HWV	Shirley	NY	EXP	D		5		4	
HYR	Hayward	WI	EXP	D		5		4	
HZY	Ashtabula	OH	EXP	D		5		4	
IEN	Pine Ridge	SD	EXP	D		5		4	
IGX	Chapel Hill	NC	EXP	D		5		4	
IJD	Willimantic	CT	EXP	D		5		4	
IMT	Iron Mtn./Kingsford	MI	EXP	D		5		4	
IOW	Iowa City	IA	EXP	D		5		4	
ISW	Wisconsin Rapids	WI	EXP	D		5		4	
ITR	Burlington	CO	EXP	D		5		4	
IWI	Wiscasset	ME	EXP	D		5		4	
IZG	Fryeburg	ME	EXP	D		5		4	
JEF	Jefferson City	MO	EXP	C		6		4	
JER	Jerome	ID	EXP	D		5		4	
KAL	Kaltag	AK	EXP	D		5		4	
KOA	Kailua/Kona	HI	EXP	C				4	
KVL	Kivalina	AK	EXP	D		5		4	
LAA	Lamar	CO	EXP	D		5		4	
LBT	Lumberton	NC	EXP	D		5		4	
LBX	Angleton/Lake Jackson	TX	EXP	D		5		4	
LEE	Leesburg	FL	EXP	D	SYNERGY	5	03/21/2003	4	
LGU	Logan	UT	EXP	D	SYNERGY	5	03/25/2003	4	
LHQ	Lancaster	OH	EXP	D		5		4	
LLQ	Monticello	AR	EXP	D		5		4	
LPR	Lorain/Elyria	OH	EXP	D		5		4	
LVJ	Houston	TX	EXP	D		5		4	
LWC	Lawrence	KS	EXP	D		5		4	
LWV	Lawrenceville	IL	EXP	D		5		4	
MAE	Madera	CA	EXP	D		5		4	
MAI	Marianna	FL	EXP	D		5		4	
MCK	McCook	NE	EXP	D		5		4	
MEB	Maxton	NC	EXP	D		5		4	
MFI	Marshfield	WI	EXP	D		5		4	
MGJ	Montgomery	NY	EXP	D		5		4	
MGY	Dayton	OH	EXP	D		5		4	
MIW	Marshalltown	IA	EXP	D		5		4	
MKO	Muskogee	OK	EXP	D		5		4	
MLP	Mullan Pass	ID	EXP	O		5		4	
MLT	Millinocket	ME	EXP	D		5		4	
MMK	Meriden	CT	EXP	D		5		4	
MMV	McMinnville	OR	EXP	D		5		4	
MNN	Marion	OH	EXP	D		5		4	
MPO	Mount Pocono	PA	EXP	D		5		4	
MRH	Beaufort	NC	EXP	D	XYCOM	5	04/10/2003	4	
MTH	Marathon	FL	EXP	D		5		4	
MTJ	Montrose	CO	EXP	D	SYNERGY	5	03/24/2003	4	
MTO	Mattoon/Charleston	IL	EXP	D		5		4	

MVL	Morrisville	VT	EXP	D	SYNERGY	5	03/25/2003	4	
ODO	Odessa	TX	EXP	D		5		4	
OFP	Richmond/Ashland	VA	EXP	D		5		4	
OGB	Orangeburg	SC	EXP	D		5		4	
OKB	Oceanside	CA	EXP	D		5		4	
OLF	Wolf Point	MT	EXP	D		5		4	
OLS	Nogales	AZ	EXP	D		5		4	
OMK	Omak	WA	EXP	D		5		4	
ONO	Ontario	OR	EXP	D		5		4	
ORE	Orange	MA	EXP	D		5		4	
OVE	Oroville	CA	EXP	D		5		4	
OVS	Boscobel	WI	EXP	D		5		4	
OXB	Ocean City	MD	EXP	D		5		4	
PBV	St. George Island	AK	EXP	D		5		4	
PEO	Penn Yan	NY	EXP	D		5		4	
PGD	Punta Gorda	FL	EXP	D		5		4	
PHD	New Philadelphia	OH	EXP	D		5		4	
PIL	Port Isabel	TX	EXP	D		5		4	
PKD	Park Rapids	MN	EXP	D		5		4	
PLB	Plattsburgh	NY	EXP	D		5		4	
PNC	Ponca City	OK	EXP	D		6		4	
POR	Portage Glacier	AK	EXP	O		7		4	
PPF	Parsons	KS	EXP	D		5		4	
PQL	Pascagoula	MS	EXP	D		5		4	
PSF	Pittsfield	MA	EXP	D		5		4	
PTW	Pottstown	PA	EXP	D		5		4	
PUC	Price	UT	EXP	D	SYNERGY	5	03/19/2003	4	
PUW	Pullman/Moscow	WA	EXP	D		5		4	
PYM	Plymouth	MA	EXP	D		5		4	
RAC	Racine	WI	EXP	D		5		4	
RBG	Roseburg	OR	EXP	D		5		4	
RHI	Rhinelander	WI	EXP	D		5		4	
RIL	Rifle	CO	EXP	D		5		4	
RKP	Rockport	TX	EXP	D		5		4	
RUE	Russellville	AR	EXP	D		5		4	
RXE	Rexburg	ID	EXP	D		5		4	
RZZ	Roanoke Rapids	NC	EXP	D		5		4	
SBM	Sheboygan	WI	EXP	D		5		4	
SEG	Selinsgrove	PA	EXP	D		5		4	
SFD	Winner	SD	EXP	D		5		4	
SGY	Skagway	AK	EXP	D		5		4	
SJN	St. Johns	AZ	EXP	D		5		4	
SLK	Saranac Lake	NY	EXP	D		5		4	
SMQ	Somerville	NJ	EXP	D		5		4	
SOV	Seldovia	AK	EXP	D		5		4	
SPB	Scappoose	OR	EXP	D		5		4	
SPW	Spencer	IA	EXP	D		5		4	
SWD	Seward	AK	EXP	D		5		4	
SWO	Stillwater	OK	EXP	D		5		4	
TAN	Taunton	MA	EXP	D		5		4	
TDZ	Toledo	OH	EXP	D		5		4	
THV	York	PA	EXP	D		5		4	
TKI	McKinney	TX	EXP	C		5		4	
TOI	Troy	AL	EXP	D		6		4	

TOR	Torrington	WY	EXP	D		5		4	
TQE	Tekamah	NE	EXP	D	SYNERGY	5	04/09/2002	4	
TRL	Terrell	TX	EXP	D		5		4	
TRM	Palm Springs	CA	EXP	D		6		4	
TVR	Tallulah/Vicksburg	LA	EXP	D		5		4	
UNO	West Plains	MO	EXP	D		5		4	
UTS	Huntsville	TX	EXP	D		8		4	
UUU	Newport	RI	EXP	D		5		4	
UZA	Rock Hill	SC	EXP	D		5		4	
VAY	Mount Holly	NJ	EXP	D		5		4	
VCB	Vacaville	CA	EXP	D		5		4	
VEL	Vernal	UT	EXP	D		5		4	
VPC	Cartersville	GA	EXP	D		5		4	
VSF	Springfield	VT	EXP	D		5		4	
VTA	Newark	OH	EXP	D		5		4	
VUO	Vancouver	WA	EXP	D		5		4	
WLD	Winfield/Arkansas City	KS	EXP	D		5		4	
WST	Westerly	RI	EXP	D		5		4	
WVI	Watsonville	CA	EXP	D		5		4	
XNA	Fayetteville/Springdale	AR	EXP	C		5		4	
ACV	Arcata/Eureka	CA	FAA	D		6		4	
AGC	Pittsburgh	PA	FAA	B		6		4	
AKO	Akron	CO	FAA	D		6		4	
AKR	Akron	OH	FAA	D		5		4	
ALI	Alice	TX	FAA	D		6		4	
AMG	Alma	GA	FAA	D	XYCOM	6		4	
ANB	Anniston	AL	FAA	C		6		4	
AND	Anderson	SC	FAA	C		6		4	
AOO	Altoona	PA	FAA	C		6		4	
APA	Denver	CO	FAA	A		6		4	
APF	Naples	FL	FAA	C		5		4	
ART	Watertown	NY	FAA	D		6		4	
ATY	Watertown	SD	FAA	D		6		4	
AUG	Augusta	ME	FAA	D		6		4	
AUW	Wausau	WI	FAA	D	SYNERGY	6	03/25/2003	4	
AWM	West Memphis	AR	FAA	D				4	
AXN	Alexandria	MN	FAA	D		6		4	
AZO	Kalamazoo	MI	FAA	B		6		4	
BBW	Broken Bow	NE	FAA	D		5		4	
BCE	Bryce Canyon	UT	FAA	D		6		4	
BFI	Seattle	WA	FAA	C		6		4	
BGR	Bangor	ME	FAA	A		6		4	
BIG	Delta Junction/Ft. Greely	AK	FAA	D		6		4	
BKE	Baker	OR	FAA	D		6		4	
BLF	Bluefield	WV	FAA	D		6		4	
BLH	Blythe	CA	FAA	D		6		4	
BRL	Burlington	IA	FAA	D		6		4	
BTM	Butte	MT	FAA	D		6		4	
BTT	Bettles	AK	FAA	D		6		4	
BWG	Bowling Green	KY	FAA	D		6		4	
BYI	Burley	ID	FAA	D		6		4	
BZN	Bozeman	MT	FAA	C		6		4	
CDC	Cedar City	UT	FAA	C		6		4	
CDR	Chadron	NE	FAA	D		6		4	

CDS	Childress	TX	FAA	D		6		4	
CDV	Cordova	AK	FAA	D		6		4	
CEC	Crescent City	CA	FAA	D		5		4	
CEW	Crestview	FL	FAA	D		6		4	
CGI	Cape Girardeau	MO	FAA	D		6		4	
CNM	Carlsbad	NM	FAA	D		6		4	
CNU	Chanute	KS	FAA	D		6		4	
COT	Cotulla	TX	FAA	D		6		4	
CRE	North Myrtle Beach	SC	FAA	C		6		4	
CRG	Jacksonville	FL	FAA	C	SYNERGY	6	03/21/2003	4	
CRQ	Carlsbad	CA	FAA	C		6		4	
CSV	Crossville	TN	FAA	D		6		4	
CTB	Cut Bank	MT	FAA	D		5		4	
DAG	Daggett	CA	FAA	D		6		4	
DAL	Dallas	TX	FAA	A		8		4	
DAN	Danville	VA	FAA	D		6		4	
DEC	Decatur	IL	FAA	C		6		4	
DET	Detroit	MI	FAA	C		6		4	
DHN	Dothan	AL	FAA	C		6		4	
DHT	Dalhart	TX	FAA	D		6		4	
DIK	Dickinson	ND	FAA	D		6		4	
DLS	The Dalles	OR	FAA	D		6		4	
DMN	Deming	NM	FAA	D		6		4	
DPA	Chicago/West Chicago	IL	FAA	C		6		4	
DTN	Shreveport	LA	FAA	C		6		4	
DUG	Douglas Bisbee	AZ	FAA	D		5		4	
DUJ	Du Bois	PA	FAA	D		5		4	
DVT	Phoenix	AZ	FAA	C		6		4	
DWH	Houston	TX	FAA	C		6		4	
DXR	Danbury	CT	FAA	C		6		4	
EAU	Eau Claire	WI	FAA	D		5		4	
ECG	Elizabeth City	NC	FAA	D		6		4	
EED	Needles	CA	FAA	D		5		4	
ELD	El Dorado	AR	FAA	D		6		4	
ELM	Elmira	NY	FAA	B		6		4	
EMP	Emporia	KS	FAA	D		6		4	
ENA	Kenai	AK	FAA	C		6		4	
EPH	Ephrata	WA	FAA	D		6		4	
EWB	New Bedford	MA	FAA	C		6		4	
EWN	New Bern	NC	FAA	C	SYNERGY	6	03/25/2003	4	
FAY	Fayetteville	NC	FAA	C		6		4	
FCM	Minneapolis	MN	FAA	B		6		4	
FDY	Findlay	OH	FAA	D		5		4	
FLL	Fort Lauderdale	FL	FAA	B		9		4	
FLO	Florence	SC	FAA	C		6		4	
FNB	Falls City	NE	FAA	D		5		4	
FOE	Topeka	KS	FAA	C		6		4	
FPR	Fort Pierce	FL	FAA	C		6		4	
FRG	Farmingdale	NY	FAA	C		6		4	
FTY	Atlanta	GA	FAA	C		6		4	
FUL	Fullerton	CA	FAA	C		6		4	
FXE	Fort Lauderdale	FL	FAA	C		6		4	
FYV	Fayetteville	AR	FAA	C		6		4	
GAG	Gage	OK	FAA	D		6		4	

GCK	Garden City	KS	FAA	C		6		4	
GCN	Grand Canyon	AZ	FAA	C		6		4	
GFL	Glens Falls	NY	FAA	D	XYCOM	6		4	
GGG	Longview	TX	FAA	C		6		4	
GKN	Gulkana	AK	FAA	D		6		4	
GLH	Greenville	MS	FAA	C		6		4	
GLS	Galveston	TX	FAA	D		6		4	
GMU	Greenville	SC	FAA	C		6		4	
GUP	Gallup	NM	FAA	D		6		4	
HBR	Hobart	OK	FAA	D		6		4	
HFD	Hartford	CT	FAA	C		6		4	
HGR	Hagerstown	MD	FAA	C		6		4	
HHR	Hawthorne	CA	FAA	C		6		4	
HIO	Portland	OR	FAA	C		6		4	
HKY	Hickory	NC	FAA	C		6		4	
HLC	Hill City	KS	FAA	D		6		4	
HLG	Wheeling	WV	FAA	C		6		4	
HOT	Hot Springs	AR	FAA	D		6		4	
HOU	Houston	TX	FAA	A		9		4	
HQM	Hoquiam	WA	FAA	D		6		4	
HRO	Harrison	AR	FAA	D		6		4	
HUL	Houlton	ME	FAA	D		6		4	
HVN	New Haven	CT	FAA	C		6		4	
HWD	Hayward	CA	FAA	C		6		4	
IDA	Idaho Falls	ID	FAA	C		6		4	
ILI	Iliamna	AK	FAA	C		6		4	
IML	Imperial	NE	FAA	D		5		4	
INK	Wink	TX	FAA	D		6		4	
INT	Winston Salem	NC	FAA	C		6		4	
IPL	Imperial	CA	FAA	D		6		4	
JBR	Jonesboro	AR	FAA	C		6		4	
JLN	Joplin	MO	FAA	C		6		4	
JMS	Jamestown	ND	FAA	D		6		4	
JNU	Juneau	AK	FAA	A		6		4	
JST	Johnstown	PA	FAA	D		6		4	
JXN	Jackson	MI	FAA	C		6		4	
LAF	Lafayette	IN	FAA	C		6		4	
LAR	Laramie	WY	FAA	D		6		4	
LEB	Lebanon	NH	FAA	C	XYCOM	6		4	
LFK	Lufkin	TX	FAA	D		6		4	
LFT	Lafayette	LA	FAA	C		6		4	
LHD	Anchorage	AK	FAA	D		8		4	
LHX	La Junta	CO	FAA	D		6		4	
LIT	Little Rock	AR	FAA	A		6		4	
LMT	Klamath Falls	OR	FAA	C		6		4	
LNR	Lone Rock	WI	FAA	D		5		4	
LNS	Lancaster	PA	FAA	C		6		4	
LOL	Lovelock	NV	FAA	D		6		4	
LOU	Louisville	KY	FAA	C		9		4	
LOZ	London	KY	FAA	D		6		4	
LSE	La Crosse	WI	FAA	C		6		4	
LUK	Cincinnati	OH	FAA	C		6		4	
LVK	Livermore	CA	FAA	C		6		4	
LVM	Livingston	MT	FAA	D		6		4	

LVS	Las Vegas	NM	FAA	D		6		4	
LWM	Lawrence	MA	FAA	C		6		4	
LWT	Lewistown	MT	FAA	D		5		4	
LXT	Lee's Summit	MO	FAA	D		6		4	
MBS	Saginaw	MI	FAA	B		6		4	
MCB	McComb	MS	FAA	D		6		4	
MCE	Merced	CA	FAA	D		5		4	
MCW	Mason City	IA	FAA	D		6		4	
MDW	Chicago	IL	FAA	A	SYNERGY	9	03/10/2002	4	
MEM	Memphis	TN	FAA	A	SYNERGY	9	05/16/2002	4	
MFE	McAllen	TX	FAA	C		6		4	
MGW	Morgantown	WV	FAA	C		6		4	
MHE	Mitchell	SD	FAA	D		5		4	
MHK	Manhattan	KS	FAA	C		6		4	
MIC	Minneapolis	MN	FAA	B		6		4	
MIV	Millville	NJ	FAA	C		6		4	
MKL	Jackson	TN	FAA	C		6		4	
MLB	Melbourne	FL	FAA	C	XYCOM	6		4	
MLC	McAlester	OK	FAA	D		6		4	
MLS	Miles City	MT	FAA	D		6		4	
MLU	Monroe	LA	FAA	C		6		4	
MOD	Modesto	CA	FAA	C		6		4	
MOT	Minot	ND	FAA	C		6		4	
MPV	Barre/Montpelier	VT	FAA	D		6		4	
MRB	Martinsburg	WV	FAA	D		6		4	
MRI	Anchorage	AK	FAA	C		8		4	
MRY	Monterey	CA	FAA	C		6		4	
MSL	Muscle Shoals	AL	FAA	D		6		4	
MSS	Massena	NY	FAA	D		6		4	
MVY	Vineyard Haven	MA	FAA	C		6		4	
MWH	Moses Lake	WA	FAA	C		6		4	
MWL	Mineral Wells	TX	FAA	D		6		4	
MYF	San Diego	CA	FAA	C		6		4	
MYV	Marysville	CA	FAA	D		6		4	
OAK	Oakland	CA	FAA	A		7		4	
ODX	Ord	NE	FAA	D		5		4	
OGD	Ogden	UT	FAA	C	SYNERGY	6	03/14/2003	4	
OJC	Olathe	KS	FAA	C		6		4	
OMA	Omaha	NE	FAA	B		6		4	
OPF	Miami	FL	FAA	C		6		4	
ORL	Orlando	FL	FAA	C	SYNERGY	6	03/27/2003	4	
ORT	Northway	AK	FAA	C		6		4	
OSU	Columbus	OH	FAA	C		6		4	
OTM	Ottumwa	IA	FAA	D		6		4	
OWD	Norwood	MA	FAA	C		6		4	
PAE	Everett	WA	FAA	C		6		4	
PAQ	Palmer	AK	FAA	C		6		4	
PBF	Pine Bluff	AR	FAA	D		6		4	
PFN	Panama City	FL	FAA	C		6		4	
PIE	St. Petersburg/Clearwater	FL	FAA	C		6		4	
PIR	Pierre	SD	FAA	D		6		4	
PKB	Parkersburg	WV	FAA	C		6		4	
PLN	Pellston	MI	FAA	D		6		4	
PMP	Pompano Beach	FL	FAA	C		6		4	

PNS	Pensacola	FL	FAA	C		6		4	
POU	Poughkeepsie	NY	FAA	C		6		4	
PRB	Paso Robles	CA	FAA	D		6		4	
PRC	Prescott	AZ	FAA	C		6		4	
PSC	Pasco	WA	FAA	C		6		4	
PSP	Palm Springs	CA	FAA	C		6		4	
PSX	Palacios	TX	FAA	D		5		4	
PTK	Pontiac	MI	FAA	A		6		4	
RBD	Dallas	TX	FAA	C		6		4	
RDG	Reading	PA	FAA	C		6		4	
RDM	Redmond	OR	FAA	C		6		4	
RKS	Rock Springs	WY	FAA	D		5		4	
RNT	Renton	WA	FAA	C		6		4	
RSL	Russell	KS	FAA	D		6		4	
RVS	Tulsa	OK	FAA	C		6		4	
RWF	Redwood Falls	MN	FAA	D		6		4	
RWI	Rocky Mount	NC	FAA	D		6		4	
RWL	Rawlins	WY	FAA	D		5		4	
SAC	Sacramento	CA	FAA	C		6		4	
SAF	Santa Fe	NM	FAA	C		6		4	
SBA	Santa Barbara	CA	FAA	C		6		4	
SBP	San Luis Obispo	CA	FAA	C		6		4	
SBY	Salisbury	MD	FAA	C		6		4	
SCC	Deadhorse	AK	FAA	B		6		4	
SDL	Scottsdale	AZ	FAA	C		6		4	
SET	St. Charles	MO	FAA	D		6		4	
SFB	Orlando	FL	FAA	C		6		4	
SGR	Houston	TX	FAA	C		6		4	
SIY	Montague	CA	FAA	D		5		4	
SJC	San Jose	CA	FAA	B		6		4	
SMF	Sacramento	CA	FAA	B		6		4	
SMO	Santa Monica	CA	FAA	C		6		4	
SNA	Santa Ana	CA	FAA	A		8		4	
SNS	Salinas	CA	FAA	C		6		4	
SNY	Sidney	NE	FAA	D		6		4	
SPG	St. Petersburg	FL	FAA	C		6		4	
SRC	Searcy	AR	FAA					4	
SSF	San Antonio	TX	FAA	C		6		4	
SSI	Brunswick	GA	FAA	D	SYNERGY	6	02/06/2002	4	
STJ	St. Joseph	MO	FAA	C		6		4	
STP	St. Paul	MN	FAA	B		6		4	
STS	Santa Rosa	CA	FAA	C		6		4	
STT	Charlotte Amalie, St. Thomas	VI	FAA	C		6		4	
STX	Christiansted, St. Croix	VI	FAA	C		6		4	
SUS	St. Louis	MO	FAA	C		6		4	
TAD	Trinidad	CO	FAA	D		5		4	
TAL	Tanana	AK	FAA	D		6		4	
TCC	Tucumcari	NM	FAA	D		6		4	
TIW	Tacoma	WA	FAA	C		6		4	
TMB	Miami	FL	FAA	C		6		4	
TPH	Tonopah	NV	FAA	D		6		4	
TTN	Trenton	NJ	FAA	C		6		4	
TVC	Traverse City	MI	FAA	B		6		4	
TVL	South Lake Tahoe	CA	FAA	C		6		4	

TWF	Twin Falls	ID	FAA	C		6		4	
TXK	Texarkana	AR	FAA	C		6		4	
TYR	Tyler	TX	FAA	C		6		4	
UGN	Waukegan	IL	FAA	C		6		4	
UIN	Quincy	IL	FAA	D		5		4	
UKI	Ukiah	CA	FAA	D		5		4	
VGT	Las Vegas	NV	FAA	C		6		4	
VIH	Rolla/Vichy	MO	FAA	D		6		4	
VLD	Valdosta	GA	FAA	C		6		4	
VNY	Van Nuys	CA	FAA	A		6		4	
VPZ	Valparaiso	IN	FAA	D		5		4	
WJF	Lancaster	CA	FAA	C		6		4	
WRL	Worland	WY	FAA	D		6		4	
ZZV	Zanesville	OH	FAA	D		6		4	

IFW Implementation Group 5
FY ‘04-05 Remaining 34 WSP Sites

05/08/03

SID	LOCATION	ST	AGN	S/L	PROCESSOR	PORC GRP	PROC INST	IFW GRP	IFW INST
AUS	Austin	TX	FAA	A	XYCOM	9		5	
BHM	Birmingham	AL	FAA	B	XYCOM	9		5	
CID	Cedar Rapids	IA	FAA	C	XYCOM	9		5	
HPN	White Plains	NY	FAA	B	XYCOM	9		5	
ISP	Islip	NY	FAA	A	XYCOM	9		5	
MDT	Harrisburg	PA	FAA	C	XYCOM	9		5	
ONT	Ontario	CA	FAA	A	XYCOM	9		5	
SRQ	Sarasota/Bradenton	FL	FAA	C	SYNERGY	9	2/10/03	5	
ABQ	Albuquerque	NM	NWS	A		9		5	
ALB	Albany	NY	NWS	B	XYCOM	9		5	
BDL	Windsor Locks	CT	NWS	A	XYCOM	9		5	
BUF	Buffalo	NY	NWS	A	XYCOM	9		5	
CHS	Charleston	SC	NWS	B	XYCOM	9		5	
DSM	Des Moines	IA	NWS	A	XYCOM	9		5	
ELP	El Paso	TX	NWS	B	XYCOM	9		5	
GEG	Spokane	WA	NWS	A		6		5	
GRR	Grand Rapids	MI	NWS	A	XYCOM	9		5	
GSO	Greensboro	NC	NWS	B	XYCOM	9		5	
HNL	Honolulu	HI	NWS	B	XYCOM	9		5	
HSV	Huntsville	AL	NWS	B	XYCOM	9		5	
JAX	Jacksonville	FL	NWS	A	XYCOM	9		5	
LAX	Los Angeles	CA	NWS	A	XYCOM	9		5	
LBB	Lubbock	TX	NWS	B	XYCOM	9		5	
MSN	Madison	WI	NWS	B	XYCOM	9		5	
ORF	Norfolk	VA	NWS	B	XYCOM	9		5	
PDX	Portland	OR	NWS	A	XYCOM	9		5	
RIC	Richmond	VA	NWS	A	XYCOM	9		5	
ROC	Rochester	NY	NWS	A	XYCOM	9		5	
SAT	San Antonio	TX	NWS	A	XYCOM	9		5	
SEA	Seattle	WA	NWS	A	XYCOM	9		5	
SYR	Syracuse	NY	NWS	A		9		5	
TOL	Toledo	OH	NWS	C	XYCOM	9		5	
TUS	Tucson	AZ	NWS	C	XYCOM	9		5	
TYS	Knoxville	TN	NWS	A	XYCOM	9		5	

Appendix IV

Sample of EMRS Form A-26

ENGINEERING MANAGEMENT REPORTING SYSTEM
MAINTENANCE RECORD

Document Number
G 49978

General Information	1. Open Date	Time	2. Initials	3. Response Priority (check one)	4. Close Date	Time
	12/ 20 / 01	0730	DKR	O Immediate O Low O Routine Q Not Applicable	12 / 20 /01	1430

5. Description
INSTALL NEW DEWPOINT SENSOR IAW MOD NOTE 75

Equipment Information	6. Station ID	7. Equipment Code	8. Serial Number	9. TM	10. AT	11. How Mal.
	DMH	ATDP	T0807	M	M	999

12. EQUIPMENT OPERATIONAL STATUS TIMES	a. Fully Operational	b. Logistics Delay	Partly Operational	c. All Other	d. Logistics Delay	Not Operational	e. All Other
							1:00

13. *Parts Failure Information*

Block #	a. ASN	b. NSN	c. TM	d. AT	e. How Mal.	f. Qty.	g. Maint. Hrs.
1							
2							
3							
4							
5							

14. *Work Load Information*

Type	Staff Hrs.
a. Routine	
b. Non-routine	
c. Travel	3:00
d. Misc.	4:00
e. Overtime	

Miscellaneous Information	15. Maintenance Comments	16. Initials
	INSTALLED NEW DEWPOINT SENSOR	DKR

17. SPECIAL PURPOSE REPORTING	a. Mod. No.	b. Mod./Act./Deact.Dat	c.	d.	e.
	75	12/20/01			

18. CONFIGURATION MGMT. REPORTING (use as directed)	ASN	Vendor Part Number (New Part)	Serial Number (Old Part)	Serial Number (New Part)

3