# ORDER

# U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

# 6000.51A

# 11/21/00

# SUBJECT: AIR TRAFFIC SERVICE ORGANIZATIONAL RESPONSIBILITIES FOR THE SUPPORT OF NATIONAL AIRSPACE SYSTEM TERMINAL AUTOMATION SERVICES

1. **PURPOSE.** This order provides guidance to ensure that National Airspace System (NAS) terminal automation services are available and highly reliable. These services are utilized to ensure separation of aircraft and for flight advisory in the terminal airspace of the NAS.

2. **DISTRIBUTION.** This order is distributed to the division level in Airway Facilities, Air Traffic, Flight Standards, and the Office of Acquisitions in Washington; to the branch level in the regional Airway Facilities, Air Traffic, Flight Standards, Airports, and Logistics Divisions; to the section level at the Logistics Center and FAA Academy at the Aeronautical Center; to division level within the Engineering and Test Division at the Technical Center; and standard distribution to all Airway Facilities and Air Traffic field offices and facilities.

3. CANCELLATION. Order 6000.51, Air Traffic Service Operational Responsibilities, dated September 30, 1998, is canceled.

4. **BACKGROUND.** In July 1992, the Administrator of the Federal Aviation Administration (FAA) approved Notice N 1100.218, Operational Support Service, creating the Operational Support (AOS) Program within the Airway Facilities (AF) organization. This new organization is the primary provider of second level engineering support for all integrated hardware and software comprising terminal automation systems. The notice also directed AF to assume all first level hardware and software support responsibilities for these systems. First level support responsibilities are delegated to the regional AF Divisions (AXX-400). The regional Air Traffic (AT) Divisions (AXX-500) are responsible for providing support that is directly related to the execution of their operational mission.

# 5. EXPLANATION OF CHANGES. This revision:

a. Limits applicability to terminal air traffic control (ATC) automation systems. Enroute systems and Micro-Enroute Automated Radar Terminal Systems (M-EARTS) applicability will be addressed in future revisions of this order.

b. Reserves appendices 2 through 99 for future use.

c. Establishes appendices 100 through 199 for terminal applicability; appendices 200 through 299 for enroute applicability; and, appendices 300 through 399 for M-EARTS applicability.

d. Renumbers and renames Appendix 1, Operational Automation Responsibilities, as Appendix 100, Terminal NAS Automation Service Support Responsibilities, and formats the appendix to more clearly define specific roles and responsibilities and associated goals and activities.

e. Renumbers Appendix 2, Operational Software Service Requests, as Appendix 101 and limits the appendix to software change procedures.

f. Adds a table of contents and the following new appendices:

(1) Appendix 1, Glossary of Terms

(2) Appendix 102, Operational Software Delivery Process.

(3) Appendix 103, Software Installation.

(4) Appendix 104, Data Recording Operation.

(5) Appendix 105, Terminal Site Implementation Checklist.

g. Provides an implementation checklist for terminal ATC sites.

h. Assigns approval authority for safety critical functionality item waivers to the Director of Air Traffic Planning and Procedures, ATP-1. This authority was previously assigned to the Program Director for Air Traffic Operations, ATO-1.

i. Addresses ambiguities in the original order.

6. **FORM.** This order prescribes FAA Form 6000-15, CONTINUOUS DATA RECORDING (CDR) REQUEST. This form is provided in appendix 104.

7. **ROLES AND RESPONSIBILITIES.** The AF and AT organizations, under the Associate Administrator for Air Traffic Services (ATS), share responsibilities for the operational support of the automation systems used to provide services within the NAS.

a. Roles.

(1) **AF First Level Support.** First level support is the performance of duties at individual terminal NAS facilities. First level support responsibilities are assigned to regional AF Divisions and are performed by Airway Transportation System Specialists (ATSS) at operational facilities.

(3) **AF First Level Software Support.** First level software support is the performance of software duties at individual terminal NAS facilities. These duties do not include production and/or modification of operational or support computer code used in the NAS. First level software support responsibilities are assigned to regional AF Divisions, and are typically performed by ATSS at operational facilities.

(4) **AF Second Level Support.** Second level support is the production, modification, and delivery of software; production of resolutions to reported automation system problems; and, providing support to sites in analysis of system problems. Second level support responsibilities are assigned to AOS.

(5) **AF Second Level Software Support.** Second level software support is the production, modification, and delivery of software; production of resolutions to reported automation software problems; and, providing software support to sites in analysis of system problems. Second level software support responsibilities are assigned to AOS.

(6) **AT Support.** Responsibilities inherent to AT are: Requirement definition, AT functionality operational suitability testing, training system operation, production and maintenance of training scenarios, and similar duties. AT support responsibilities are assigned to regional AT Divisions and are performed by AT personnel at operational facilities.

b. **Responsibilities.** Responsibilities are described in Appendix 100, Terminal NAS Automation Service Support Responsibilities.

8. FAST TRACK. This order was processed using the "Fast Track" method with minimum coordination. By using Fast Track, the office of primary responsibility (OPR) agrees to set up a process to receive comments for a period of 1 year. Organizations are encouraged to provide any suggestions for improvement of this order to the OPR during this year. After the year, the OPR will:

a. Review the comments.

b. Update the order, if necessary.

c. Begin the coordination process prescribed in the latest edition of Order 1320.1, FAA Directives System.

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# **APPENDIX 1. GLOSSARY OF TERMS**

For the purpose of this order, the following definitions apply:

1. **AF First Level** – Refers to first level support organizations and the activities associated with operational automation support at ATC facilities. AF technical and automation support personnel assigned to and conducting AF First Level Support at ATC facilities.

2. **AF First Level Engineering** – Refers to first level engineering support organizations (AXX-470 and SMO's) and the activities associated with automation engineering support to ATC facilities. AF technical engineering support personnel assigned to and conducting AF First level Engineering support for ATC facilities.

3. **AF First Level Software** – Refers to first level software support organizations and the activities associated with operational automation software support at ATC facilities. AF technical and automation support personnel assigned to and conducting AF First Level Software support at ATC facilities.

4. **AF Second Level** – Refers to second level engineering support organizations and the activities associated with operational automation support to ATC facilities. AOS technical and automation support personnel.

5. **AF Second Level Software** – Refers to second level software support organizations and the activities associated with operational automation software support for ATC facilities. AOS technical and automation software support personnel.

6. **AOS** – The Operational Support Program created in July 1992, by Notice N 1100.218, Operational Support Service. A generic reference to second level engineering support.

7. **ATSS** – Airway Transportation System Specialist. AF technical specialists who perform first level support at ATC facilities.

8. AF Engineering – Support Engineering which may occur at the SMO, AXX-470, and/or AOS level.

9. AXX-400 – Generic reference to the regional Airway Facilities Divisions.

10. AXX-500 – Generic reference to the regional Air Traffic Divisions.

11. **Baseline** – Defined in Order 1800.8, National Airspace System Configuration Management and depicted in NAS Management Document 001. See "Software Baseline" in this glossary.

12. **Control Room –** General reference to ATC operational quarters; e.g., TRACON, TRACAB, RAPCON, Tower Cab, etc.

13. **Fall-back** – Activities associated with reverting to a previous revision or version of software on an operational ATC automation system. Usually due to extenuating circumstances, reinstallation of a previous level of operational software on an ARTS system.

14. NAR Process – The process defined in Order 6000.52, Procedures for Submitting National AOS Requests (NAR). The process by which ATC facilities communicate automation service requests to AF Second Level.

15. **OSF** – Operational Support Facility. Part of the AOS organization, the OSF's are the initial point of contact for AF Second Level Support for sites. The OSF's provide direct software support to sites, develop and deliver software products to sites, maintain adaptation databases for sites, and receive service requests from sites.

16. Safety Critical Items – Also referred to as "Safety Critical Functionality" and "Safety Critical Functionality Items." Refers to requirements, specifications and software for Minimum Safe Altitude Warning, Conflict Alert, and Mode "C" Intruder functionality.

17. Site Adaptation – That part of the operational software program that accommodates defined site specific requirements. Site adaptation is configuration managed and maintained by the servicing Operational Support Facility.

18. Site – General term that refers to an Air Traffic Control facility.

19. **Software Baseline** – Refers to the operational software program configured from specifications developed from user defined requirements. The nationally configuration managed ATC operational program.

20. Terminal ATC Automation Systems – Refers to Common ARTS IIE/IIIE, ARTS IIIA systems.

# **APPENDICES 2. – 9. RESERVED**

This appendix identifies roles and responsibilities associated with ATC operational automation support for AF First Level, AF Second Level and AT support. These support levels are assigned to regional AF Divisions, AOS, and regional AT Divisions respectively.

RESPONSIBILITY	AF 1st Level (AXX-400)	AF 2nd Level (AOS)	AT (AXX-500)
1. Certification of Automation Systems and Services	XY		
2. System Operation	X		Y
3. Operation of System Data Recording Functionality	X		Y
4. Retention of Recorded Data			XY
5. Provide System Recorded Data When Requested	X		Y
6. System Administration and Security	X		Y
7. Software Installation	X		Y
8. Hardware Maintenance	XY		
9. Configuration Management of Operational System Hardware and Spare Components	XY		
10. Hardware Modification	XY		
11. Fielding Problems Reported from the Control Room	X		Y
12. Analysis and Resolution of Automation System Problems	XY	XY	XY
13. Monitor System Status and Error Message Output	XY		<u>Y</u>
14. Re-Establish System Operation After Failures	XY		Y
15. File Service Requests with AOS	XY		Y
16. Perform End-To-End Automation Service Performance Analysis	XY	XY	+
17. Resolve End-To-End Automation Service Problems	XY	XY	
18. Suggest Improvements to Automation Systems and Support Process	XY	XY	XY
19. Develop and Maintain Training Simulator Scenarios			XY
20. Operate System Training Simulator	-		XY
21. Provide Controller Training/Briefing Required by New Software Functionality			XY
22. Conduct Operational Suitability Acceptance Testing	X	·····	XY
23. Utilize Approved Editors/Plotters/Data Manipulating Applications			XY
24. Site Database Maintenance		XY	Y
25. Safety Critical Functionality Database Maintenance		XY	
26. Baseline Program Listing Maintenance		XY	Y
27. Software Documentation Library Maintenance	Y	XY	Y
28. Assist Sites in Determining Required Improvements and Changes to System Databases		XY	
29. Develop Resolutions to Reported Operational Software Discrepancies		XY	
30. Software Quality Assurance		XY	Y
31. System Software Production and Maintenance	· [· · · · ]	XY	
32. System Software Distribution		XY	1
33. Software Configuration Management		XY	Y
34. Physical Security of Automation Systems and Data	XY	XY	XY

"Y" Indicates primary responsibility Pre-6000.51A (Transition State)

"X" Indicates primary responsibility post-6000.51A transition (end-state)

# 1. CERTIFICATION OF AUTOMATION SYSTEMS AND SERVICES

## Support Responsibility: AF First Level.

**Goal:** Determine if NAS terminal automation systems are providing, or are capable of providing, the advertised level of service within the expected quality and scope.

Activities: Suitability of the integrated system hardware and software for use in the NAS is determined in the process of service level certification. Activities associated with certification shall be recorded in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, 6000.48, General Maintenance Handbook for Automated Logging, and the applicable system handbooks.

# 2. SYSTEM OPERATION

# Support Responsibility: AF First Level.

Goal: Optimum system availability to support the ATC mission.

Activities: Include, but are not limited to: Daily system initialization; system operation for testing, maintenance, and software installation; and, configuration of available hardware for optimum system capability.

# 3. OPERATION OF SYSTEM DATA RECORDING FUNCTIONALITY

# Support Responsibility: AF First Level.

**Goal:** During facility operational hours, except when out of service for testing or maintenance activities, system data recording shall be initialized and operating to ensure optimum data availability.

Activities: Operation of Continuous Data Recording (CDR) shall be in accordance with appendix 104, Data Recording Operation. Local AT will contact AF First Level in accordance with local procedures if system alarms or messages indicate that data is not being recorded. Those procedures shall be documented in a facility supplement to this order.

#### 4. RETENTION OF RECORDED DATA

Support Responsibility: AT First Level.

**Goal:** Recorded data shall be retained in accordance with appendix 104, Data Retention Operation.

Activities: Refer to appendix 104.1.a

#### 5. PROVIDE SYSTEM RECORDED DATA WHEN REQUESTED

Support Responsibility: AF First Level.

Goal: Provide recorded data to meet AT requests.

Activities: Requested data associated with an aircraft accident, incident, operational error, or pilot deviation shall be provided within the response time determined by local AT management. Priority of data requests and response times, for other than those covered by pre-existing orders, shall be defined in a facility supplement to this order.

#### 6. SYSTEM ADMINISTRATION AND SECURITY

#### Support Responsibility: AF First Level.

**Goal:** Ensure that users have access to system resources to support dynamic ATC needs and that systems remain secure.

Activities: Include, but are not limited to: Assigning user accounts and passwords; establishing security access levels; ensuring that received software files are intact; monitoring systems for unusual resource usage; and, ensuring that correct versions of software are in use.

#### 7. SOFTWARE INSTALLATION

Support Responsibility: AF First Level.

**Goal:** Correctly install the appropriate version of software onto operational system hardware platforms.

Activities: Use procedures provided with the software delivery, software user manuals, and associated documentation to install software onto hardware platforms.

# 8. HARDWARE MAINTENANCE

Support Responsibility: AF First Level.

Goal: Maintain the highest level of automation system availability and reliability possible.

Activities: Perform all maintenance activities in accordance with system handbooks and technical instruction (TI) manuals. System hardware maintenance activities include the maintenance tasks found in system handbooks and those identified in associated TI manuals, commercial manuals, and general guidance found in Order 6000.15, General Maintenance Handbook for Airway Facilities.

# 9. CONFIGURATION MANAGEMENT OF OPERATIONAL SYSTEM HARDWARE AND SPARE COMPONENTS

# Support Responsibility: AF First Level.

**Goal:** Ensure that all hardware has been modified to the current national baseline, including spare parts. Ensure that software/firmware resident on the operational system and spare hardware components is the most current version.

Activities: Baseline configuration of operational system hardware shall be maintained and correct versions of software/firmware verified. First level audits shall be performed and documented on a recurring basis. Baseline configuration shall be maintained by ensuring that spare lowest repairable/replaceable units have the current operational software/firmware version installed in accordance with orders and pollicies, prior to their integration into the NAS. Specific system requirements and local policy will dictate how this is accomplished. Local processes shall be documented in a supplement to this order.

# **10. HARDWARE MODIFICATION.**

# Support Responsibility: AF First Level.

Goal: Maintain system hardware baselines.

Activities: Perform system modifications in accordance with Electronic Equipment Modification (EEM) instructions.

#### **11. FIELDING PROBLEMS REPORTED FROM THE CONTROL ROOM**

#### Support Responsibility: AF First Level.

Goal: Timely response to problems reported from the ATC control room.

Activities: Problems from the ATC control room shall be reported to AF First Level for response. Problem analysis and data gathering shall be a collaborative effort between AF First Level and local AT. Local AT shall address problems involving controller functionality. Specific local reporting procedures shall be documented in a facility supplement to this order. AF First Level activities shall be recorded in facility logs in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Automated Logging.

### 12. ANALYSIS AND RESOLUTION OF AUTOMATION SYSTEM PROBLEMS

Support Responsibility: AF First Level/AF Second Level/AT.

**Goal:** Achieve the lowest mean time to restore possible and resolve problems as quickly as possible.

Activities: AF First Level shall perform initial response to system problems and, in collaboration with local AT, is responsible for determining if system problems are hardware or software in nature. If the problem is related to ATC operational functionality, local AT shall determine an appropriate course of action. If resolution of the problem is beyond the scope of first level support, a request for second level engineering support from AOS shall be initiated. Local AT and AF Second Level support points of contact shall be identified in appendix 105, Terminal Site Implementation Checklist.

## **13. MONITOR SYSTEM STATUS AND ERROR MESSAGE OUTPUT**

#### Support Responsibility: AF First Level.

**Goal:** Monitor system element status and error message output to ensure optimum system operation.

Activities: In accordance with applicable maintenance technical handbooks, review system status and error messages and analyze data to identify trends in system performance. Early detection of potential system derogation is critical to preventing system outages and service interruptions.

# 14. RE-ESTABLISH SYSTEM OPERATION AFTER FAILURES

## Support Responsibility: AF First Level.

**Goal:** Achieve the highest level of operational service available in a minimum amount of time and minimize service impact from system failures.

Activities: The appropriate response will be determined by the circumstances. The objective is to minimize the time the system is not available for ATC operations. Order 6030.31, Restoration of Operational Facilities, provides for regional AF and AT Division managers to identify response levels for restoration of facilities and services comprising the NAS. In the event of a system failure without automatic recovery, AT shall act in accordance with locally defined procedures; e. g., implementation of non-radar procedures, CENRAP, contingency plans, or other as appropriate.

Restoring automation systems or services without proper determination of certification is prohibited. However, re-certification is not necessarily required when an automation system recovers via automatic reallocation of system resources, automatic system reconfiguration, or auto-reset in accordance with applicable maintenance technical handbooks.

# **15. FILE SERVICE REQUESTS WITH AOS**

# Support Responsibility: AF First Level.

Goal: Service requests shall be submitted using a standard national reporting system.

Activities: Service requests requiring second level support for resolution shall be submitted to AOS in accordance with appendix 101, Operational Software Service Requests. For immediate support in emergency situations, contact AOS directly. Cooperation and close coordination between AT and AF at the site is essential. Direct communication between AOS and AT may occur for service requests associated with ATC functionality; however, AF First Level is responsible for administration and coordination of all service requests pertaining to automation systems and services for which they are assigned responsibility. Additional regional or local reporting requirements or coordination procedures associated with service requests shall be documented in a supplement to this order.

#### **16. PERFORM END-TO-END AUTOMATION SERVICE PERFORMANCE ANALYSIS**

Support Responsibility: AF First Level/AF Second Level.

Goal: Maintain the highest level of quality automation services possible.

Activities: Discern, at the first support level, negative trends in end to end automation service before an impact to service occurs.

An automation system is usually the final link in a chain of systems that work together to provide data in a usable form as an aid for air traffic control operations. The initial system in the chain is generally a primary, or secondary, radar sensor or other data input device. Data communications systems connect this data source to the automation system. A problem in any of these systems often manifests itself as a deviance in the quality of the automation service before a problem is detected in the source system. Cause and effect between individual system operation and end-to-end service quality can only be discerned if specific system data is analyzed with service performance data as a whole. General system knowledge, and skills in optimizing individual systems to work together, must be applied to ensure the proper data is collected along specific points in the system chain. The inherent capability to perform this analysis at the first level is crucial. Second level engineering support may be required to determine the best methods of collecting and interpreting data.

#### **17. RESOLVE END-TO-END AUTOMATION SERVICE PROBLEMS**

Support Responsibility: AF First Level/AF Second Level.

Goal: Maintain the highest availability level of quality automation services possible.

Activities: Correct identified end-to-end service problems as soon as possible.

Changes in the performance of one system in an end-to-end chain of systems can manifest itself by effecting the performance of associated systems or resultant automation services. The source of a specific problem may be external to the NAS itself; e. g., radio frequency interference, atmospheric conditions, sunspots, grounding deficiencies, power problems, etc. Knowledge of specific systems, system optimization, and system integration is crucial for timely resolution of end-to-end service problems. In the event of complex and difficult to isolate problems, second level engineering support may be required.

# **18. SUGGEST IMPROVEMENTS TO AUTOMATION SYSTEMS AND SUPPORT PROCESSES**

#### Support Responsibility: AF First Level/AF Second Level/AT

**Goal:** Stay abreast of changing technology, operational requirements, and organizational needs without effecting the level of support for automation systems and services.

Activities: Feedback processes (e.g., NAS Change Proposal (NCP), Unsatisfactory Condition Report (UCR), Employee Suggestion Program) are expected to be used by all support levels to ensure that automation systems, software, and support practices evolve as needed.

# **19. DEVELOP AND MAINTAIN TRAINING SIMULATOR SCENARIOS**

#### Support Responsibility: AT.

Goal: Produce and maintain training simulator scenarios to meet local AT requirements.

Activities: Utilize off-line software applications to produce and maintain training simulator scenarios to support site training and other needs.

## **20. OPERATE SYSTEM TRAINING SIMULATOR**

#### Support Responsibility: AT.

Goal: Operate system training simulator as required to meet local AT needs.

Activities: Utilize an integrated, or approved stand-alone, system training simulator to conduct ATC controller training, functionality verification, airspace evaluation and utilization, etc. AF First Level may utilize integrated system training simulators to accomplish safety critical function performance verification. At sites where access to the equipment room is necessary to initialize the training simulator, local AF and AT shall establish an agreement to allow AT adequate availability of the training simulator to accomplish the training mission. Such agreements shall be recorded in a supplement to this order.

# 21. PROVIDE CONTROLLER TRAINING/BRIEFING AS REQUIRED

#### Support Responsibility: AT.

**Goal:** Ensure end users are adequately trained and/or briefed, as appropriate, on new or changed functionality introduced with new software installations.

Activities: Prior to making new or modified functionality available for use by ATC personnel, appropriate training and/or briefings shall be accomplished. Local AT will determine the degree and type of training/briefing required.

#### 22. CONDUCT OPERATIONAL SUITABILITY ACCEPTANCE TESTING

#### Support Responsibility: AF First Level/AT.

Goal: Ensure suitability of delivered software for operational use.

Activities: Off-line testing of new software deliveries shall be conducted to ensure defined requirements have been met. Operational suitability testing is not intended to be a form of baseline regression testing. Regression testing is completed by AOS prior to software delivery. The purpose of operational suitability testing is to confirm that defined requirements are reflected in the performance of the delivered software product. This entails executing site specific test plans, which may be delivered with the software or developed at the site. AT shall develop test plans to verify that new ATC functionality requirements have been met. Results of AT testing shall be reported to AF First Level to facilitate a determination of service level certification. AF First Level shall develop test plans to verify system changes not associated with ATC functionality. The system user conducts operational suitability testing at the site, on the site automation system. This testing will normally be conducted on a certified automation system and is followed, prior to operational use, by certification of the automation service effected. After completion of operational suitability testing, local AT will coordinate the time and date for making the new software available for operational use.

# 23. UTILIZE APPROVED EDITORS/PLOTTERS/DATA MANIPULATING APPLICATIONS

#### Support Responsibility: AT.

**Goal:** Produce appropriate reports, plots and data analyses to meet AT operational information needs.

Activities: Utilize approved off-line software tools to manipulate recorded system data for analysis purposes.

#### 24. SITE DATABASE MAINTENANCE

#### Support Responsibility: AF Second Level.

Goal: Current, accurate and configuration managed site databases.

Activities: Site databases shall be maintained with the highest degree of accuracy possible and within established configuration management guidelines. Accuracy of site adaptation requires close coordination between the servicing Operational Support Facility (OSF), local AT and local AF. The site shall be provided a copy of the current site database as part of the normal software delivery package. Any changes to the database shall be described in the documentation accompanying the delivery. AOS shall explicitly state if there have been no changes made since the last delivery and reference to the specific version shall be made.

#### 25. SAFETY CRITICAL FUNCTIONALITY DATABASE MAINTENANCE

#### Support Responsibility: AF Second Level.

Goal: Current and accurate Minimum Safe Altitude Warning (MSAW), Conflict Alert (CA), and Mode 'C' Intruder (MCI) functionality databases.

Activities: Safety critical databases shall be maintained in accordance with applicable NAS Management Documents and Order 7210.3, Facility Operation and Administration. Updated MSAW digital and general terrain maps will be included in scheduled periodic software deliveries. Software baseline and adaptation changes that may degrade safety critical functionality must receive approval from the Program Director for Air Traffic Planning and Procedures, ATP-1, with a copy to the Program Director for NAS Operations, AOP-1, prior to implementation. The MSAW Team shall review all changes to MSAW databases prior to implementation.

#### 26. BASELINE PROGRAM LISTING MAINTENANCE

#### Support Responsibility: AF Second Level.

Goal: Current and accurate national software baseline program listings.

Activities: National software baseline program listings shall be maintained by the supporting AOS organization and shall be current and accurate.

#### 27. SOFTWARE DOCUMENTATION LIBRARY MAINTENANCE

#### Support Responsibilities: AF Second Level.

**Goal:** Current and accurate system operator manuals, user manuals, NAS Management Documents (NAS-MD), etc.

Activities: System software documentation shall be controlled, distributed and maintained by AOS. AF First Level shall have adequate system documentation to support the roles and responsibilities defined in this order. AOS shall provide appropriate system documentation via normal distribution channels, as it becomes available to the government.

#### 28. ASSIST SITES IN DETERMINING REQUIRED IMPROVEMENTS AND CHANGES TO SYSTEM DATABASES

Support Responsibility: AF Second Level.

Goal: Act as a subject matter expert in support of customer needs.

Activities: Function as a subject matter expert on system related software issues. This includes assisting site personnel in defining site adaptation to meet operational requirements.

# 29. DEVELOP RESOLUTIONS TO REPORTED OPERATIONAL SOFTWARE DISCREPANCIES

#### Support Responsibility: AF Second Level.

**Goal:** Resolution of reported operational software discrepancies within the priority timelines established in appendix 101, Operational Software Service Requests.

Activities: Utilize data provided by the site, and any other available resources, to analyze and develop resolutions for operational software discrepancies. Provide periodic feedback to the report originator of progress toward problem resolution. Analysis of operational software discrepancies often requires close coordination with site personnel and access to other organizational resources.

#### **30. SOFTWARE QUALITY ASSURANCE**

Support Responsibility: AF Second Level.

Goal: Ensure software products are subject to approved quality control processes.

Activities: This includes verification for conformance to established criteria of safety critical baselines and adaptation databases.

# **31. SYSTEM SOFTWARE PRODUCTION AND MAINTENANCE**

#### Support Responsibility: AF Second Level.

Goal: Operational software that meets validated requirements.

Activities: All software baseline modifications and software releases will be deployed through AOS at the William J. Hughes Technical Center (WJHTC). Only AOS is authorized to produce modifications to operational automation software. This includes site adaptation modifications, Program Technical Report (PTR) resolutions and implementation of NCP's and Program Improvements (PI).

#### **32. SYSTEM SOFTWARE DISTRIBUTION**

Support Responsibility: AF Second Level.

Goal: Deliver fully tested, accurate software products.

Activities: Deliver fully tested and accurate software products. This includes scheduling, packaging and distribution of national baselines and revisions; site adaptation and revisions; approved local modifications where applicable; program builds; PTR resolutions; NCP's; PI's; other software modifications utilized in the NAS; and, appropriate supporting documentation. Delivery of software will be made to the local System Support Center (SSC) unless otherwise directed by the applicable regional AF Division. Such direction shall be documented in a supplement to this order.

#### **33. SOFTWARE CONFIGURATION MANAGEMENT**

#### Support Responsibility: AF Second Level.

**Goal:** Maintain operational software in accordance with current configuration management guidelines.

Activities: Operational software shall be maintained in accordance with established configuration management guidelines to ensure quality and accuracy of delivered software products. Operational software baselines are configuration managed by AOS at the WJHTC. Site adaptation is configuration managed by the OSF's.

### 34. PHYSICAL SECURITY OF AUTOMATION SYSTEMS AND DATA

Support Responsibility: AF First Level/AF Second Level/AT.

**Goal:** Physical security, as well as access to automation systems and data will only be made in accordance with agency orders and policies.

Activities: Requests by organizations outside the FAA will be handled in accordance with Order 1200.22. Responsibilities associated with such requests will be outlined in Memoranda of Agreement required by order 1200.22.

#### **APPENDIX 101. OPERATIONAL SOFTWARE SERVICE REQUESTS**

1. SERVICE REQUESTS. Requests for changes to ATC operational software shall be as follows:

a. Changes to national software baselines shall be requested utilizing the Case File and NCP processes identified in Order 1800.8, National Airspace System Configuration Management.

b. Corrections to national software baselines to resolve identified out of specification problems shall be processed utilizing the PTR process identified in Order 1800.8, National Airspace System Configuration Management.

c. Improvements to national software baselines that will not result in a baseline document change shall be processed utilizing the PI process identified in Order 1800.8, National Airspace System Configuration Management.

d. Requests for site adaptation changes and site generated problem reports shall be submitted to the servicing OSF utilizing the process defined in Order 6000.52, Procedures for Submitting National AOS Requests (NAR). Site problems reported via the NAR process may result in a PTR being filed or the requirement for a Case File.

(1) Data or information that can support analysis and resolution of a service request should be provided with the submitted NAR.

(2) Updates to previously reported problems may be required for subsequent occurrences of the same or like events.

**2. SERVICE REQUEST COORDINATION.** Coordination of service requests shall be as follows:

a. Case Files and PTR's shall be processed per current directives with the following additional coordination: When the site is the originator, provide a courtesy copy to the supporting AOS organization.

b. NAR's shall be coordinated as follows:

(1) In accordance with local procedures, AT shall provide a completed NAR form, approved by AT management, to AF First Level for submission to AOS.

(2) AF First Level shall be responsible for submitting NAR's to the servicing OSF and tracking them to final resolution.

(3) AF First Level shall provide a courtesy copy of submitted NAR's to the servicing System Management Office (SMO).

# APPENDIX 101. OPERATIONAL SOFTWARE SERVICE REQUESTS (CONTINUED)

c. All locally developed procedures and coordination steps shall be documented in a supplement to this order.

**3. SERVICE REQUEST PRIORITIZATION.** Service requests shall be prioritized as follows:

a. Case Files and PTR's shall be prioritized per current directives.

b. NAR's shall be prioritized as follows:

(1) NAR Priority 1 - This priority identifies safety or operationally critical items requiring immediate attention. Such items, if unresolved, derogate safety and/or preclude continued normal and usual ATC operation. AOS shall begin work immediately to resolve the request using all reasonable resources and shall coordinate with the request originator to establish a resolution delivery date. If a satisfactory date can not be negotiated, the site shall contact the regional AT Division to facilitate negotiation of an acceptable delivery date.

(2) NAR Priority 2 - Requests with this priority, although not critical, are urgent and require minimal delay. Response to a priority 2 request shall be within 14 days of receipt by AOS.

(3) NAR Priority 3 - This priority identifies routine changes. Unless otherwise coordinated, response to a priority 3 request shall be within 90 days of receipt by AOS.

#### **APPENDIX 102. OPERATIONAL SOFTWARE DELIVERY PROCESS**

1. **DELIVERY METHOD.** AOS shall deliver software products to the local SSC unless otherwise directed by the applicable regional AF Division. Such direction shall be documented in a supplement to this order. Software shall be delivered on an appropriate magnetic media as follows:

a. ARTS IIIA

(1) Routine software deliveries shall be in the form of a complete Recovery System Library (RSL) not requiring AF First Level to integrate new code into existing code.

(2) Delivery media shall be appropriate for the target system; e.g., optical disk, Zip disk or floppy diskette.

(3) Delivery shall be accomplished by a method appropriate to the circumstances; e.g., hand delivery, U. S. Postal service, commercial overnight, next business day, etc.

b. Common ARTS IIE/IIIE

(1) Routine software deliveries shall be in the form of a complete build or file not requiring AF First Level to integrate new code into existing code.

(2) Delivery media shall be appropriate for the target system; e.g., CD-ROM, Zip disk or floppy diskette.

(3) Delivery shall be accomplished by a method appropriate to the circumstances; e.g., hand delivery, U. S. Postal service, commercial overnight, next business day, etc.

**2. DELIVERY SCHEDULE.** Software products shall be delivered to supported sites as follows:

a. ARTS IIIA - As required to meet site needs.

b. Common ARTS IIE/IIIE - On monthly chart dates established by the servicing OSF and coordinated with the site.

# 3. DELIVERY NOTIFICATION.

a. AF Second Level shall notify the appropriate SMO and the site AT manager when software products are shipped. Any other notification requirements shall be identified in a supplement to this order.

b. As part of the notification process, AOS shall make available to the SMO copies of applicable Site Program Bulletin (SPB) documents. SPB's may be provided as hard copy or in electronic format.

c. AF First Level is responsible for notifying local AT when a software delivery has been received.

d. AF Second Level is responsible for documenting when the addressee has received software shipments.

#### **APPENDIX 103. SOFTWARE INSTALLATION**

1. INSTALLATIONS. Software installations include:

a. Operational software baselines and site databases.

b. Training scenarios.

c. Diagnostic software.

d. Digital video maps.

e. Other software that supports the ATC mission.

**2. INSTALLATION COORDINATION.** Coordination of software installation shall be as follows:

a. Operational software baselines and site databases.

(1) AF First Level shall be responsible for upward coordination within AF and with local AT prior to installation of new software, including for testing purposes.

(2) Local AT shall coordinate with AF First Level to schedule AT operational suitability testing.

(3) Local AT shall define timelines for software installations that require controller training/briefing or will impact normal operations.

b. Training scenarios.

(1) Local AT shall deliver training scenarios to AF First Level on appropriate magnetic media for installation.

(2) Local AT shall establish availability requirements for delivered scenarios; e.g., install for test only, permanent installation for continued use, etc.

(3) Local AT shall define timelines for availability of training scenarios; e. g., immediate availability required, date and time of availability, etc.

c. Diagnostic software. AF First Level shall coordinate installation of diagnostic software applications with local AT if an operational impact is anticipated.

# **APPENDIX 103. SOFTWARE INSTALLATION (CONTINUED)**

- d. Digital video maps.
  - (1) Common ARTS IIE/IIIE
    - (a) Local AT shall acquire digital video maps.

(b) Local AT shall define composition of 'map sets' and deliver digital video maps on an appropriate magnetic media to AF First Level for installation.

(c) Local AT shall establish timelines for digital video map installations and availability.

# (2) STARS EDC

(a) Local AT shall acquire digital video maps.

(b) Local AT shall provide digital video maps to AF Second Level for inclusion in the site adaptation database.

# 3. INSTALLATION PRIORITIES.

a. Operational software baselines and site databases.

(1) Shall be installed after any required controller training/briefing has been completed but not later than 90 days after receipt at the site.

(2) Software deliverables marked "Safety Critical" shall be installed within 72 hours of receipt at the site or, if controller training/briefing is required, within 72 hours of completion of controller training/briefing.

(a) Software deliveries labeled 'Load and Go' are usually due to MSAW digital or general terrain map updates and do not require AT operational suitability testing prior to operational use. Testing may be required for AF First Level to determine service level certification.

(3) Requests to deviate from these requirements shall be made to the regional AT Division and coordinated with the regional AF Division.

## **APPENDIX 103. SOFTWARE INSTALLATION (CONTINUED)**

b. Training scenarios.

(1) AF First Level shall accomplish installations based on timelines requested by local AT.

(2) If higher priority duties preclude accommodation of the local AT requested timelines, AF First Level and local AT shall coordinate an acceptable timeline.

c. Diagnostic software. Installation of diagnostic software shall be determined by criticality of need.

d. Digital video maps. Local AT shall determine installation priority.

#### 4. INSTALLATION NOTIFICATION.

a. Operational software baselines and site databases.

(1) In addition to notifying local AT when installations are completed, AF First Level is responsible for upward notification within AF as required.

(2) AF First Level shall record installation of software for operational use in facility logs in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Automated Logging.

(3) Local AT shall record installation of software for operational use on FAA Form 7230-4, Daily Record of Facility Operations.

b. Training scenarios.

(1) In addition to notifying local AT when installations are completed, AF First Level is responsible for upward notification within AF as required.

(2) AF First Level shall record temporary and permanent installations in facility logs in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Automated Logging.

c. Diagnostic software. AF First Level shall record installations in facility logs in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Automated Logging.

# APPENDIX 103. SOFTWARE INSTALLATION (CONTINUED)

# d. Digital maps.

(1) In addition to notifying local AT when installations are completed, AF First Level is responsible for upward notification within AF as required.

(2) AF First Level shall record installations in facility logs facility logs in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Automated Logging.

(3) Local AT shall record installations on FAA Form 7230-4, Daily Record of Facility Operations.

# 5. SOFTWARE ARCHIVES.

a. Operational software baselines and site databases.

(1) AF First Level shall archive a copy of the current and previous version of the operational software.

(2) A minimum of 30 days successful operation on new operational software is required prior to discarding a former previous level; e. g., after installation of a new operational software package, re-label the current version as "PREVIOUS", re-label the previous version as "FORMER PREVIOUS" and archive a new "CURRENT" version. After a minimum of 30 days of successful operation on the new software, the "FORMER PREVIOUS" version may be discarded.

(a) In the event an operational software package does not remain in service for the minimum 30 days before being replaced, if the software can be considered available for 'fall-back' purposes, this requirement applies from the date the software is removed from operation.

(b) Software that can not be considered available for 'fall-back' purposes is exempt from this requirement.

(3) A copy of archived software versions shall be stored outside of the equipment area to ensure security and availability.

b. Training scenarios. Local AT shall establish policy and procedures for archiving training scenarios.

c. Diagnostic software. AF First Level shall establish policy and procedures for archiving diagnostic software.

d. Digital maps. Local AT shall establish policy and procedures for archiving digital maps.

#### **APPENDIX 104. DATA RECORDING OPERATION**

#### 1. GENERAL.

a. Data Retention.

(1) Recorded data shall be retained in accordance with Order 1350.15, Records Organization, Transfer, and Destruction Standards, and Order 7210.3, Facility Operation and Administration.

(2) Retention of recorded data relating to accidents/incidents shall be in accordance with Order 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting.

(3) A method of cataloging and tracking recording media and recorded data shall be established at the site and documented in a supplement to this order to ensure:

(a) Data over 15 days old is not available.

(b) Available data is easily located to accommodate data requests.

(c) Recording media are routinely cycled through the recording process.

(d) Recording media can be removed from the recording cycle when required to accommodate accident/incident data retention needs and an appropriately labeled replacement inserted.

b. Operation.

(1) AF First Level shall ensure data recording is available and operating during facility hours of operation.

(2) In accordance with applicable maintenance technical handbooks, AF First Level shall monitor system messages to ensure recording media is changed as required.

(3) AF First Level shall respond to requests for recorded data in accordance with priorities established in appendix 100, Terminal NAS Automation Service Support Responsibilities.

(4) Requests to change default enabled or disabled CDR data classes shall be made to local AF management and coordinated with local AT and the supporting OSF.

#### 2. COMMON ARTS (IIIE).

a. Operation.

(1) Instructions for CDR operation are contained in the current Common ARTS IIIE Computer System Operator's Manual/System User's Manual (CSOM/SUM), ATC 61097.

(2) Optical discs shall be changed as necessary to ensure that not more than 24 consecutive hours of information is recorded per side.

(3) Requests for CDR data shall be made on the CDR Request Form defined in this appendix.

(4) CDR maintenance tasks shall be recorded in facility logs in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Automated Logging.

(5) Optical discs shall be numbered on the bottom edge of the disc on a label designed for that purpose. Only labels designed to properly fit on the body of the disc may be used and placing multiple labels, one over the other, is not permitted. No other labels or devices shall be attached to the disc.

(6) When an optical disc is changed out, the following information shall be recorded on either a removable label placed on the outside of the optical disc storage sleeve or in a log (manual or electronic) used to track optical disc usage:

(a) Optical disc number.

(b) UTC date and time that each recording was started and ended.

(c) Data classes listed in paragraph b.(1) below that are not recorded.

(d) Data classes listed in paragraph b.(2) below that are recorded.

(e) Initials of the specialist changing the recording.

b. Data Classes (Defined in NAS-MD-648).

(1) Per Software Product Specification, ATC 61246, the following data classes shall be default enabled upon initialization of the operational software:

- (a) TA (Tracking Associated Data)
- (b) TU (Tracking Unassociated Data)
- (c) MA (MSAW Alarms)
- (d) CA (Conflict Alert Data)
- (e) KF (Keyboard Functions)
- (f) AF (Auto Functions)
- (g) IF (Interfacility Messages)
- (h) RB (Radar Reinforced Beacon Target Reports)
- (i) BT (Beacon Target Reports)
- (j) RT (Radar Target Reports)
- (k) GD (Ghost Data File)
- (l) AT (ATMIS Data)
- (m)CO (ASCII Error and Status Messages)

(2) Per Software Product Specification, ATC 61246, the following data classes shall be default disabled upon initialization of the operational software:

(a) TP (TP Active Track Data)

- (b) NC (Conflict Alert Non-Conflict Data)
- (c) CP (CP CTS Data)
- (d) BR (Beacon Replies)

c. Replay.

(1) Instructions for operation of Replay are contained in the current Common ARTS IIIE CSOM/SUM, ATC 61097.

(2) The ATSS shall operate Replay in response to requests from AT or AOS.

(3) Priority of Replay requests from AT shall be established through coordination between local AT and AF management.

(4) Requests for Replay in association with aircraft accidents/incidents, operational errors or pilot deviations shall take priority over other tasks with the exception of NAS restoration activities.

# 3. COMMON ARTS (IIE).

a. Operation.

(1) Instructions for CDR operation are contained in the current Common ARTS IIE CSOM/SUM, ATC 61552.

(2) CDR data shall be archived to Digital Data Storage tapes as necessary to ensure that not more than 24 consecutive hours of information is contained on a single tape.

(3) Requests for CDR data shall be made on the CDR Request Form defined in this appendix.

(4) CDR maintenance tasks shall be recorded in facility logs in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Automated Logging.

(5) Digital Data Storage tapes shall be numbered on the bottom edge of the tape cartridge on a label designed for that purpose. Only labels designed to properly fit on the cartridge may be used and placing multiple labels, one over the other, is not permitted. No other labels or devices shall be attached to the cartridge.

(6) When CDR data has been archived to a Digital Data Storage tape, the following information shall be recorded on either a removable label placed on the outside of the protective tape storage case or in a log (manual or electronic) used to track tape usage:

(a) Digital Data Storage tape number.

(b) UTC date and time that each recording was started and ended.

(c) Data classes listed in paragraph b.(1) below that are not recorded.

(d) Data classes listed in paragraph b.(2) below that are recorded.

- (e) Initials of the specialist archiving the data.
- b. Data Classes (Defined in NAS-MD-648).

(1) Per Software Product Specification, ATC 61246, the following data classes shall be default enabled upon initialization of the operational software:

- (a) TA (Tracking Associated Data)
- (b) TU (Tracking Unassociated Data)
- (c) MA (MSAW Alarms)
- (d) CA (Conflict Alert Data)
- (e) KF (Keyboard Functions)
- (f) AF (Auto Functions)
- (g) IF (Interfacility Messages)
- (h) RB (Radar Reinforced Beacon Target Reports)
- (i) BT (Beacon Target Reports)
- (j) RT (Radar Target Reports)
- (k) GD (Ghost Data File)
- (l) AT (ATMIS Data)
- (m)CO (ASCII Error and Status Messages)

(2) Per Software Product Specification, ATC 61246, the following data classes shall be default disabled upon initialization of the operational software:

(a) TP (TP Active Track Data)

(b) NC (Conflict Alert Non-Conflict Data)

(c) CP (CP CTS Data)

(d) BR (Beacon Replies)

c. Replay.

(1) Instructions for operation of Replay are contained in the current Common ARTS IIE CSOM/SUM, ATC 61552.

(2) The ATSS shall operate Replay in response to requests from AT or AOS.

(3) Priority of Replay requests from AT shall be established through coordination between local AT and AF management.

(4) Requests for Replay in association with aircraft accidents/incidents, operational errors or pilot deviations shall take priority over other tasks with the exception of NAS restoration activities.

#### 4. ARTS IIIA.

a. Operation.

(1) Instruction for CDR operation is contained in the current ARTS IIIA System Operator's Manual, NASP-2501-6.

(2) Optical disc partitions shall be formatted as necessary to ensure data over 15 days old is not retained.

(3) Requests for CDR data shall be made on the CDR Request Form defined in this appendix.

(4) CDR maintenance tasks shall be recorded in facility logs in accordance with Orders 6000.15, General Maintenance Handbook for Airway Facilities, and 6000.48, General Maintenance Handbook for Automated Logging.

(5) Optical discs shall be numbered on the bottom edge of the disc on a label designed for that purpose. Only labels designed to properly fit on the body of the disc may be used and placing multiple labels, one over the other, is not permitted. No other labels or devices shall be attached to the cartridge.

(6) When an optical disc is changed out, the following information shall be recorded on either a removable label placed on the outside of the optical disc storage sleeve or in a log (manual or electronic) used to track optical disc usage:

(a) Optical disc number.

(b) UTC date and time that recording started and ended per partition.

- (c) Data classes listed in paragraph b.(1) below that are not recorded.
- (d) Data classes listed in paragraph b.(2) below that are recorded.
- (e) Initials of the specialist changing the recording.

b. Data Classes (Defined in ARTS IIIA Computer Program Functional Specifications).

- (1) The following data classes shall be adapted as default enabled:
  - (a) RB (Radar Reinforced Target Reports)
  - (b) BT (Beacon Target Reports)
  - (c) RT (Radar Target Reports)
  - (d) TD (Tracking Data)
  - (e) AF (Auto-Function Reports)
  - (f) KF (Keyboard Function Reports)
  - (g) IF (Interfacility Message Reports)
  - (h) CA (Conflict Alert)
  - (i) MA (MSAW Alarm Reports)
  - (j) AT (Altitude Tracking Data Reports)

- (k) GD (Ghost File Data) (If CRDA is adapted)
- (l) SO (Sign-On/Off Data)
- (2) The following data classes shall be adapted as default disabled:
  - (a) CT (Central Track Store Data)
  - (b) MD (Memory Dump Reports)
  - (c) NC (Conflict Alert Non-Conflict Data)

### 5. STARS EDC.

- a. Operation. ARTS IIIA requirements apply.
- b. Data Classes. ARTS IIIA requirements apply.

# **CONTINUOUS DATA RECORDING (CDR) REQUEST**

Kequesteu by:			
		· · · · · · · · · · · · · · · · · · ·	
		Routine (circle one	
Date/Time Range:			
Start Date/Time (UTC End Date/Time (UTC	C)		
Replay Requested:	Y N (circle	e one)	
Remarks:			
	ted by the ATSS.		
This portion to be comple System:		Number:	
This portion to be comple	Disc/Tape		

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# **APPENDIX 105. TERMINAL SITE IMPLEMENTATION CHECKLIST**

**INFORMATION:** Transition dependencies identified in paragraph 4 of this appendix can be met individually as part of the process of implementing this order. As transition dependencies are met, representatives of AF and AT management at the site shall initial this form in the appropriate location to signify mutual concurrence that the dependency has been met. After all transition dependencies have been met, the facility AT manager and the site AF manager shall sign and retain this form as part of facility records. Site/facility managers shall notify their respective regional divisions when implementation of this order has been completed. Completion of this checklist shall be a collaborative effort between local AF and AT.

#### 1. GENERAL.

a. Order 6000.51A:

(1) Date available at the site

(2) Date joint site AF/AT review completed

# 2. POINTS OF CONTACT (POC).

- a. AT Division POC: (1) Phone #
- b. AF Division POC:
- (1) Phone #c. AF Second Level POC:
  - (1) Primary Phone #
  - (2) Secondary Phone #
- d. Site AF POC
  - (1) Primary Phone #
  - (2) Secondary Phone #
- e. Site AT POC
  (1) Primary Phone #
  (2) Secondary Phone #

# 3. SUPPORT PHONE NUMBERS.

- a. OSF Help Line:
- b. AOS Help Line
- c. Operations Control Center (OCC)
- d. Maintenance Control Center (MCC)
- e. System Management Office (SMO)
- f. System Support Center (SSC)
- g. NAS Documentation at the WJHTC
- h. Regional IRM Support

800-475-ANOS (2667)

<u>609-485-5964</u>

# APPENDIX 105. TERMINAL SITE IMPLEMENTATION CHECKLIST (CONTINUED)

# 4. TRANSITION DEPENDENCIES.

		I	nitials	
a.	<ul> <li>Documentation Available at the Site (As applicable)</li> <li>(1) System NAS-Management Documents</li> <li>(2) System operator manual(s)</li> <li>(3) System Technical Manuals</li> <li>(4) Copy of current site data</li> <li>(5) Copy of system Site Program Bulletins</li> <li>(6) Copy of System Support Modifications</li> </ul>	AF		AT
b.	Completed Training (Adequate to support normal ATC (1) Prescribed academy training for ATSS's (2) Prescribed academy training for SPS's (3) Prescribed academy training for AT Support Specia		ls) -	
c.	<ul> <li>Continuous Data Recording</li> <li>(1) Joint review of applicable orders completed <ul> <li>(a) Order 1350.15.</li> <li>(b) Order 7210.3</li> <li>(c) Order 8020.11</li> </ul> </li> <li>(2) Refresher training for AF completed by AT</li> <li>(3) Management of CDR library transferred to AF</li> <li>(4) CDR Quick Reference Cards available</li> </ul>		-	
d.	Hardware Issues (1) ZIP drive EEM completed (2) AT Support Specialist PC installed			
e.	<ul> <li>Software Tools for AT Support Specialist</li> <li>(1) PC based CDR Editor</li> <li>(2) PC based plotter program</li> <li>(3) WorldView</li> <li>(4) ETG scenario conversion application for ARTS IIIA</li> </ul>	A	- - -	
f.	Facility Supplements to this Order (List all facility supplements to this order)			

Site AF Management

Site AT Management