ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

6000.38

5/24/91

SUBJ: POLICY TO DETERMINE NAS EQUIPMENT INITIAL SPARING REQUIREMENTS FOR AIRWAY FACILITIES WORK CENTERS LOCATIONS AND FIELD LOCATIONS

1. PURPOSE. This order establishes policy and assigns responsibilities for those items which are prepositioned; i.e., line replaceable unit (LRU) as spares at Airway Facilities (AF) work centers and field locations. This order prescribes procedures that shall be used by organizational elements to identify and quantify the range (items) and depth (quantities) of initial spare parts to be used as work center/field spares and to establish criteria to identify those locations that require site spares. This policy shall be applicable to all subsystem acquisitions, major modifications, and applicable research and development projects which are to be maintained as part of the National Airspace System (NAS).

2. DISTRIBUTION. This order is distributed to the director level in Washington, with a division level distribution in the Office of Labor and Employee Relations, Office of Air Traffic Plans and Requirements Service, Office of Air Traffic Systems Management, Logistics Service, Advanced Automation, Automation, Navigation and Landing, Program Director for MLS, Surveillance, Communications, Weather and Flight Service Systems, NAS Program Management Service, Research and Development Service, Operations Research Service, NAS System Engineering Service, Facility System Engineering Service, and to branch level in the Systems Maintenance Service and the NAS Transition and Implementation Service; to division level at the FAA Logistics Center at the Mike Monroney Aeronautical Center; to division level in the Office of Research and Technology Application, Resource Management Service, Engineering, Test, and Evaluation Service, and Engineering, Research, and Development Service at the FAA Technical Center; to branch level in the regional Airway Facilities divisions; and to the Airway Facilities sectors, sector field offices, sector field office units, and sector field units with a standard distribution.

3. BACKGROUND. There are FAA directives which establish policy to identify, provision, and determine spares for FAA Logistic Center stock. A policy has not been established to define requirements to procure and preposition variable quantities of AF work center and field location of initial spares. The past practice of providing one-for-one spares for each set of equipment is not economically feasible nor is it consistent with the current state-of-the-art technology. As the modernization of the NAS proceeds, subsystems are becoming more complex with higher reliability. Establishing criteria which considers this increased reliability, in conjunction with Airway Facilities restoration requirements and work center locations, will provide more effective utilization of Capital Investment Plan (CIP) resource funding. This order has been developed to reflect the responsibilities of the program acquisition offices as they apply to the acquisition of AF work center/field location sparing requirements.

Distribution: A-W-1; A-W(LR/TR/TM/LG/AP/NA/NN/NR/NC/NW)-2; A-W(PM/RD/OR/SE/FE)-2; A-W(SM/NS)-3; ANN-150(2); A-Y(DE)-2; A-Z(CL/CM/CN/CD)-2; A-X(AF)-3; A-FAF-2/3/7(STD)

Initiated By: ASM-240

4. AUTHORITY TO CHANGE THIS ORDER. The Associate Administrator for Airway Facilities, AAF-1, is authorized to issue changes to this order. The Administrator reserves the right to approve changes which establish policy, delegate authority, or assign responsibility.

5. POLICY. It is the policy of the FAA that a defined complement of initial spares shall be prepositioned at designated servicing work centers and field locations in support of the operations and maintenance activity to achieve equipment performance and availability to enhance safety, to provide optimum service to the users, and to contribute to the efficiency of the AF field work force.

6. PROCEDURE. To determine those designated servicing AF work centers and field locations that will receive a defined set, range, and depth of initial site spares will be based on the following criteria:

a. Manned work center(s) that support one or more systems, subsystems, or equipments.

b. Individual sites which, due to their distance from a manned work center or from each other, require over two hours of one-way travel time to access under normal conditions.

c. Individual sites which require special conveyance to access under normal conditions, such as snow cats, helicopters, four wheel drive vehicles, etc.

d. Individual sites, which due to a combination of distance and location, routinely endure adverse conditions require special conveyance to access and/or are hazardous to access.

e. High visibility locations, locations that require immediate restoration, and those locations identified by Air Traffic as critical.

f. Each program acquisition office shall work with the Systems Maintenance Service and the regions to identify those unique field locations that require their own range and depth of initial spares. Whenever two or more servicing work centers are located within two hours of one-way travel time between each other, consolidation of initial spares should be accomplished to the maximum extent possible.

g. Additional initial spares will be provided to servicing work centers/field locations based upon an analysis of the number of systems, subsystems, or equipment supported, as determined by one or more of the following:

(1) The FAA Spares Planning Model.

(2) Contractor recommendations.

(3) Selected Logistics Support Analysis Record (LSAR) reports.

(4) Recommendations of the National Airspace Integrated Logistics Support Management Team (NAILSMT).

(5) Failure Modes, Effects, and Criticality Analysis (FMECA).

(6) Reliability, Maintainability, and Availability (RMA) Analysis.

(7) Results of a Market Analysis for Non-developmental Items (NDI)/Commercial-Off-The-Shelf (COTS) acquisitions.

7. DETERMINATION OF WORK CENTER AND FIELD LOCATION SPARES. The items that comprise the initial spares for work centers or field locations are determined through analysis to select those LRU's with the highest probability of failure or are required for safety purposes at the work center or field location to maintain the system/subsystem desired operational availability. Safety and operational availability take precedence over any analysis. The quantity of initial spares that make up the depth can be a variable dependent upon system redundancy, location, and operational safety of the NAS. Definition of initial spares for an NDI or COTS acquisition will be based on the results of a Market Survey Analysis for that acquisition.

8. REQUIRED ANALYSIS. An analysis shall be performed by the acquiring office, assisted by the NAILSMT, to determine the range and depth of initial spares required for each servicing work center or field location. The minimum number of initial spares will be the range and depth (i.e., items and quantity) necessary at each servicing work center to ensure necessary equipment availability. System redundancy will be considered when computing the range and depth of initial spares necessary to support the equipment. The requirement for additional initial spares will be justified based upon the following:

a. Equipment mean time between failure (MTBF) rates and their distribution among the various components within the system coupled with mean time to repair (MTTR) will be used when determining the range and depth of spares.

b. Contractor generated output products or data that are available to the acquisition office as a part NAILS process.

(1) Interim Support Items List (ISIL). The ISIL is the contractor recommendation for the necessary range and depth of site initial spares required to support the equipment at the time of fielding. The value of the ISIL is that if the equipment is developmental, the contractor provides a recommended listing of items and quantities required based upon an analysis of the component reliability as it functions within the system plus considers total component/equipment population (redundancy). If the equipment is an NDI or COTS, the range and depth of items recommended should be based on actual usage data that the manufacturer has experienced with the equipment. Whenever requesting the ISIL, the Government should specify the period of time for which the contractor is making recommendations.

(2) Level of repair analysis used to recommend the appropriate level of repair for an item.

(3) Failure mode reports/summaries used to identify design weaknesses, likely modes in which components or equipment can fail and the effects of the failure.

(4) In the case of NDI/COTS items, there is normally a contractor recommended site repair kit or initial spares kit which the manufacturer uses.

9. APPLICABILITY. This policy is applicable to all NAS acquisitions where AF initial spare parts are purchased by the program acquisition office for a system, subsystem, equipment acquisition, or major modification. This order does not define or establish policy for provisioning or procuring spare parts for the FAA Logistics Center.

10. SCOPE. This policy is applicable to all FAA program acquisition offices that make determinations of quantities of spare parts to support agency acquisitions or modifications of facilities and equipment in support of the NAS. This order does not change organizational responsibilities for initial spare parts determinations, but specifies the procedures to be used to establish the quantity of AF initial spares, range and depth of initial spares, and to designate those work centers and field locations to receive prepositioned initial spares.

11. RESPONSIBILITIES. The overall responsibility to implement and ensure compliance with this policy is that of the Associate Administrator for Airway Facilities. In support of this:

a. The Systems Maintenance Service.

(1) Develops, monitors, and maintains this policy and other related documents.

(2) Reviews and verifies that the subsystem acquisition document (i.e., Request for Proposals (RFP), Invitation for Bid (IFB), and Request for Quote (RFQ)) complies with this policy. Provides follow up and monitors subsystem acquisition throughout the procurement to verify that the deployed subsystem is spared in accordance with this order.

(3) Performs analysis with the acquisition offices, the regions, and the NAILSMT to identify and quantify the quantity of work center and field location initial spares necessary to ensure system availability is maintained.

(4) Reviews requests for waivers to this policy and provides recommendations (concurrence/approval) to the Associate Administrator for Airway Facilities.

b. The NAS Transition and Implementation Service.

(1) Ensures that the Associate Program Manager for Logistics (APML) assists with the sparing analysis.

(2) Ensures that this policy, contractor recommendations, and subsequent analysis are an integral part of the National Airspace Integrated Logistics Support (NAILS) process.

c. The Associate Administrator for NAS Development and the Associate Administrator for Systems Engineering and Development will ensure Acquisition Offices.

(1) Procures the work center and field location of initial spares in accordance with this policy and the maintenance concept for the system to ensure supportability.

(2) Prepares budget submittals and obtains all necessary funding to fulfill supportability/fielding requirements in accordance with this policy.

(3) Directs the inclusion of supportability requirements for NAS subsystem acquisitions in accordance with this policy order, NAILS policy order, and the NAS system specification.

(4) Coordinates with the FAA Logistics Center to ensure that coordinated default values are factored into the FAA Spares Planning Model when computing the range and depth of initial spares to be acquired. This coordination is required to provide the checks and balances necessary to prevent purchasing excessive quantities of spare parts and to ensure that the correct range and depth of items are ordered for work center, field locations, and Logistics Center stocks.

(5) Ensures that initial sparing is consistent with the maintenance and repair strategy for that system/subsystem/equipment.

(6) Prepares request for waivers to this policy on individual subsystems basis in accordance with paragraph 12 of this order.

(7) Performs analysis with ASM and the NAILSMT to ensure that the correct quantities of work center and field location for initial spares are purchased to ensure restoration levels and system availability is maintained.

d. The Logistics Service.

(1) Periodically reviews and recommends changes to the default values of the FAA Spares Planning Model.

(2) Reviews and verifies that the subsystem acquisition document(s) comply with this policy order.

e. Air Traffic identifies those facilities that are critical/essential to air traffic control.

f. The Mike Monroney Aeronautical Center.

(1) Coordinates with the acquisition office to ensure that the quantity of work center and initial field spares are factored into the FAA Logistics Center spares computation. This coordination is designed to provide the checks and balances necessary to prevent purchasing excessive quantities of initial spare parts and to aid in ensuring the correct range and depth of depot stocks are procured to support the fielded systems.

(2) Reviews and verifies that the subsystem acquisition document complies with this policy. Provides follow up and monitors subsystem acquisition throughout the procurement cycle to ensure that the deployed subsystem is supportable.

(3) Ensures that depot initial spares requirements are consistent with the maintenance and repair strategy the system/subsystem.

g. Regional Airway Facilities Division.

(1) Coordinates with the program acquisition office and identifies those work center and field locations that require initial spares.

(2) Manages work center and field location initial spares in accordance with FAA directives.

12. WAIVER. All requests for waivers to any portion of this policy for a specific acquisition shall contain complete justification, including the impact on system supportability. The requests shall be submitted to the Associate Administrator for Airway Facilities.

James B. Busey
Administrator