ORDER

6000.48B

GENERAL MAINTENANCE LOGGING HANDBOOK

October 15, 2004

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

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Initiated By: Technical Operations Services
NAS Policy Group (AOP-300)

RECORD OF CHANGES

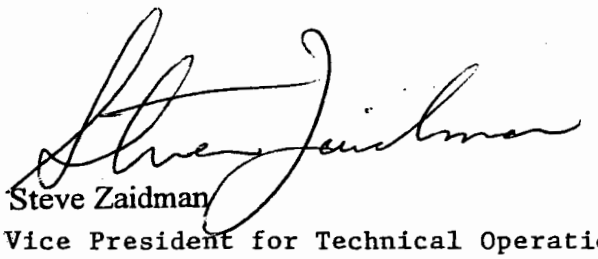
DIRECTIVE NO. 6000.48B

CHANGE TO BASIC	SUPPLEMENTS			OPTIONAL	CHANGE TO BASIC	SUPPLEMENTS			OPTIONAL

FAA FORM 1320-5 (6-80) USE PREVIOUS EDITION

FOREWORD

Accurate, timely, and accessible information regarding activities and events, which affect facilities, is critical to the management of the NAS and is necessary to capture essential logging activities. This order provides procedures and guidance regarding the logging of maintenance and administrative activities and events at all National Airspace System (NAS) facilities. This order supplements the current version of Order 6000.15, General Maintenance Handbook for NAS Facilities.



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CHAPTER 1. GENERAL

1. PURPOSE.

This order provides direction to Air Traffic Organization (ATO) maintenance personnel for performing logging of maintenance and administrative activities. Logging provides a means for documenting equipment performance and providing a historical record of site events.

2. DISTRIBUTION.

This order is distributed to Technical Operations Support, Technical Operations ATC Facilities, and Technical Operations Aviation System Standards in the Technical Operations Services organization, Air Traffic, and Airports Safety and Standards in Washington; to the Logistics Center and the Academy at the Aeronautical Center; to the division level at the ATC Engineering and Test Division and the CNS Engineering and Test Division at the Technical Center; to Technical Services and Engineering Services level in the Technical Operations Field Services organization, Air Traffic, and Airports Divisions; to Control Centers; and to Technical Operations Field Services offices with a standard distribution.

3. CANCELLATION.

Order 6000.48A, General Maintenance Logging Handbook, dated January 29, 2001, is canceled.

4. EFFECTIVE DATE.

This order is effective January 1, 2005.

5. BACKGROUND.

Maintenance documentation is accomplished by logging events and maintenance activities through the use of Maintenance Management System (MMS), Simplified Automated Logging (SAL) and event management software.

a. Maintenance automated record keeping capabilities have evolved over many years. MMS is used for maintenance documentation.

b. SAL provides a graphical user interface to the existing MMS database. SAL does not contain the same functionality as MMS logging but rather a "simplified" subset of functions.

c. Event Manager is software used by the control center to manage events and create a record of coordination activities performed.

d. National Airspace System (NAS) Infrastructure Management System (NIMS) combines event management and logging documentation in a single software package designed to replace MMS, SAL and Event Manager.

6. EXPLANATION OF CHANGES.

This revision incorporates changes resulting from field, regional, and headquarters comments, organizational realignment, and the evolution of the National Airspace System (NAS). These changes include:

a. Refining the logging procedures to make them generic and applicable to any logging method.

b. Defining events and activities with respect to logging requirements.

c. Clarifying the requirement for data standardization.

d. Changing the official "time of certification" to when the judgment is made.

e. Adding guidance for logging Sensitive Security Information (SSI).

f. Defining the Supplemental Codes and their relationship to Code Categories.

g. Adding guidance for determining invalid or improper certifications.

7. DEFINITIONS.

Appendix 1, Definitions, lists definitions that explain the various terms used by maintenance personnel during logging activities.

8. GENERAL FACILITY LOGGING PHILOSOPHY.

The need for proper and thorough documentation of equipment performance and activities at NAS facilities cannot be overemphasized. Simply stated, the job is not finished until the documentation is complete. The maintenance organization philosophy is to document all events relevant to the performance and/or operation of all NAS facilities. Logging shall be timely, accurate, and performed in a uniform manner using standard definitions, criteria, terminology, and procedures. This provides information for determining and evaluating the operations and maintenance history of NAS facilities and services.

9. EVENT TICKETING TRANSITION.

NIMS event ticketing changes the logging concept from individual facility based logs to event based logs. Current logs are identified by their facility and location identifier. Event tickets may contain facility and location information, but are primarily associated with a specific event. NIMS combines event management and maintenance logging to generate event tickets.

9. LOGGING PROCEDURES.

Several methods are available for logging maintenance and administrative activities. Standard Operating Procedures (SOP) shall be used for procedures specific for any given logging method. The Paper Logging SOP shall be used for paper logging procedures. The MMS Logging SOP shall be used for MMS logging procedures. The SAL Logging SOP shall be used for SAL logging procedures. The Event Ticketing SOP shall be used for NIMS logging procedures.

NOTE: These SOPs are available online at: http://intranet.faa.gov/ats/aaf/aop/300/logging/.

10. LOG ENTRY AUTHORITY.

Log entry authorization shall be made a matter of written record as per the latest version of Order 6000.15, General Maintenance Handbook for NAS Facilities.

11. CLASSIFIED LOGS.

Order 1370.82, Information Systems Security Program, prohibits the storage of classified or Sensitive Security Information (SSI) data in electronic format. Procedures for logging at classified facilities are contained in the Paper Logging SOP.

12. LOAN OF MAINTENANCE LOGS.

Neither access to, nor copies of, the maintenance log shall be provided to anyone outside the FAA without prior approval of the regional division of concern or the FAA headquarters. Hard copies approved for non-FAA use shall be certified as representing maintenance log entries for the periods addressed and signed by the appropriate manager or designee.

13. RECOMMENDATIONS FOR CHANGES.

Pre-addressed comment sheets are provided at the back of this order. Users are encouraged to submit recommendations for improvement.

14. - 19 RESERVED.

CHAPTER 2. DOCUMENTING EVENTS

20. INTRODUCTION.

Complete, accurate, and comprehensive documentation of events is crucial to the management of events as they affect the NAS. This chapter contains guidance on the methods used for documenting events and maintenance or administrative activities.

21. EVENT TICKETING.

Events, as used in this order, are those occurrences in the NAS that give rise to maintenance or administrative activities.

a. ATO maintenance personnel use an Event Ticket (ET) as a traceable method of documenting events.

b. Events associated with facilities or services may generate maintenance or administrative activities.

c. Maintenance or administrative activities in response to an event must be documented.

22. TYPES OF EVENTS.

Events are classified as either scheduled, unscheduled, or administrative.

a. Scheduled Event. Scheduled events are planned events that are coordinated in advance for approval, if required. An example of a scheduled maintenance event would be "Periodic Maintenance" where the specialist would perform various activities which are logged: Site Arrival and Departure, Removal/Return of Equipment from Service, Performance of Maintenance Tasks, Equipment/ Service certification and Administrative Tasks.

b. Unscheduled Event. Unscheduled events are unexpected events that are beyond the capability of reasonable prevention and cause facility or service degradations.

c. Administrative Event. Administrative events are informational or general in nature with no adverse effect on facility or service operations, i.e. commissioning, vandalism, aircraft accident/ incidents, log reviews etc.

23. DOCUMENTATION SECURITY.

a. System Access. Security in the electronic system shall be maintained through a layered access authorization requiring password entry to system functions. Authorized users will be granted general logging access to the system as a whole and specific certification access according to requirements and qualifications.

b. Authorization. The user's initials/user ID and password is required as authenticating identification with each log entry.

(1) No two employees shall be assigned the same set of initials within the same cost center code. No employee shall be assigned more than one user ID.

(2) Entries for multiple-party activities shall have the originator's (person making the entry) initials/user ID entered and the additional parties shall be identified.

(3) Each statement regarding facility operations or status made by Air Traffic, Flight Inspection, or other FAA organizational representatives shall be entered into the log by designated personnel only. The source of the statement shall be identified by initials and organization. Statements from non-FAA sources

shall be identified by last name and organization. With facility work projects, the name of the person in charge of the project shall be noted. Any known effects of the project on facility operation or status shall be included in the entry.

c. System Administration. Access to other subsystems such as security, data base maintenance, and high-level report functions will be granted in accordance with the needs and responsibilities of the individual users.

24. - 29 RESERVED.

CHAPTER 3. LOGGING FORMAT

30. INTRODUCTION.

This chapter provides guidance for the format and type of information captured in the log. Entries in the log shall provide a complete historical accounting of maintenance and administrative activities by a chronological order of events.

31. GENERAL CHARACTERISTICS.

a. Log content shall be accurate, complete, clear, concise, and entered in a timely manner. Elaborate details and opinions shall be avoided. The use of approved contractions and reference to substantive records and directives should be used when describing maintenance activities.

b. Electronic logs shall be stored in a nationally standardized database and shall be used at all facilities requiring maintenance logs in accordance with the latest edition of Order 6000.15, General Maintenance Handbook for NAS Facilities.

c. All NAS facilities in the Facilities Service and Equipment Profile (FSEP) shall use a standardized data format in accordance with national standards. A standardized model database shall be provided for each facility by headquarters.

32. CODE CATEGORY (CODE CAT).

All log entries shall be coded. Codes are used to define the type of activity being logged. The two types of Code Categories are Cause Codes and Activity Codes.

a. Cause Codes. Cause Codes are used for logging interrupts and outages.

(1) Cause codes were designed to identify causes of interruptions.

(2) Cause codes shall only be used with interruption events.

(3) Cause codes are listed in Table 3-3, Scheduled Interruption Cause Codes and Supplemental Codes and Table 3-4, Unscheduled Interruption Cause Codes and Supplemental Codes, and further defined in Order 6040.15, National Airspace Performance Reporting System.

b. Activity Codes. Activity Codes are used for logging maintenance and administrative activities.

(1) Activity codes were designed to identify maintenance and administrative activities that maintenance personnel perform.

(2) Activity codes shall be used with every maintenance or administrative log entry.

33. USING ACTIVITY CODES.

Activity codes are listed in Table 3-1, Administrative Activity Codes and Supplemental Codes, and Table 3-2, Maintenance Activity Codes and Supplemental Codes, and defined as follows:

a. 00 - Administrative.

b. 01 - Log review. This code is limited to the periodic supervisory log review.

c. 02 - Entries resulting from routine Air Traffic (AT) log review ("E" entries) as identified in the current version of Order 6000.15, General Maintenance Handbook for NAS Facilities.

d. 03 – Aircraft Accident/Incident. Administrative entries, which relate to any aircraft accident or incident, shall use a code 03.

e. 04 - Commissioning. Used to document the commissioning of a facility.

f. 05 - Decommissioning. Used to document the decommissioning of a facility.

g. 06 – Install/Special Project. Used to document equipment installations and other special projects.

h. 07 – Radio Frequency Interference. Used to document activities related to radio frequency interference events.

i. 08 - Vandalism.

j. 09 – Performance Examination.

k. 10 – Arrive/Depart an unmanned site.

l. 50 – Periodic Maintenance.

m. 51 - Certification.

n. 52 - Decertification. Code 52 shall be used when any certification is removed from a service, system, or equipment.

o. 53 – Flight Inspection.

p. 54 – Technical Evaluation.

q. 55 - PM not accomplished prior to the next scheduled window. Code 55 shall also be used on partial PM completion entries.

r. 56 – Modification.

s. 57 – Remote Monitoring.

t. 58 – Corrective Maintenance.

u. 59 - Other.

34. SUPPLEMENTAL CODES.

The Supplemental code is used in conjunction with the Code Category to further describe the reason for the log entry.

35. MAINTENANCE ACTION CODES.

All log entries require a Maintenance Action Code (MAC) to describe the maintenance action being performed. Available MACs are listed in Table 3-5, Maintenance Action Codes.

36. IDENTIFICATION NUMBERS.

Each event ticket or log entry shall have a unique identification number assigned by the electronic logging system.

37. DATES AND TIME.

All date and time fields shall be made in Coordinated Universal Time (UTC). Electronic log entries shall be automatically date- and time-stamped when made and considered part of the official maintenance log at that time. For example, data entered on a Maintenance Data Terminal (MDT) in a disconnected mode is considered official but cannot be extracted for reports or analysis until successful upload occurs. Once uploaded, the data on the mainframe is considered the official record, and the MDT data is considered a copy and may be deleted from the MDT.

38. CORRECTIONS.

Logs are official records and shall not be deleted. Erroneous entries shall be voided or corrected and shall contain an explanation for the change.

39. RESERVED.

Table 3-1 Administrative Activity Codes and Supplemental Codes.

CODE CATEGORY	ADMINISTRATIVE ACTIVITIES	SUPPLEMENTAL CODE
00	Administrative	None
01	Log Review	None
02	"E" Entry in AT Log	None
03	Aircraft Accident/Incident	None
04	Commissioning	None
05	Decommissioning	None
06	Install/Special Project	None
07	Radio Frequency Interference	None
08	Vandalism	None
09	Performance Exam	None
10	Site Arrival/Departure	None

Table 3-2 Maintenance Activity Codes and Supplemental Codes.

CODE CATEGORY	MAINTENANCE ACTIVITIES	SUPPLEMENTAL CODE
50	Periodic Maintenance	0-Periodoc Maintenance 1-Non-FAA Circuits F-Facility Power & Support Systems
51	Certification	None
52	Decertification	None
53	Flight Inspection	None
54	Technical Evaluation	None
55	PM Not Performed	None
56	Modification	0-Modification 1-Improvement 2-Relocation 3-Long Term Improvement 4-Construction 5-Non-FAA Equipment F-Facility Power & Support Systems
57	Remote Maintenance	None
58	Corrective Maintenance	0-Troubleshooting Repair 1-Snow/Ice Removal 2-Vegetation Control 3-Perform Diagnostic 4-Remove and Replace 5-Repair Parts 6-Order Parts 7-Reset 9-Other F-Facility Power & Support Systems
59	Other	None

Table 3-3 Scheduled Interruption Cause Codes and Supplemental Codes.

CODE CATEGORY	INTERRUPTION CAUSES	SUPPLEMENTAL CODE
60	Periodic Maintenance	0-PM F-Facility Power & Support Systems
61	Non-FAA Circuits	0-Equipment 1-Circuit/Line 2-Satellite 3-Power 4-Military
62	Improvements	0-Modification 1-Improvements 2-Relocation 3-Long Term Improvement/Relocation 4-Construction F-Facility Power & Support Systems
63	Flight Inspection	0-Scheduled 1-Post Aircraft Accident 2-Special
64	Administrative	0-Special Tests 1-DoD Activities 2-Facility Inspections 3-Training 4-Performance Examinations 5-Key Site Testing F-Facility Power & Support Systems
65	Corrective Maintenance	0-Troubleshooting Repair 1-Snow/Ice Removal 2-Vegetation Control 9-Other F-Facility Power & Support Systems
66	Software	0-Testing 1-New Program/Database Load 2-Corrective Software Maintenance
67	Reserved	None
68	Related	0-Facility Interruption 1-Service Interruption
69	Other	9-Other

Table 3-4 Unscheduled Interruption Cause Codes and Supplemental Codes.

CODE CATEGORY	INTERRUPTION CAUSES	SUPPLEMENTAL CODE	
80	Equipment	0-Antenna System 1-Transmission Line/Connector 2-Fuse/Circuit Breaker 3-Power Supply 4-Equipment Part Failure 5-FAA Control/Monitor Line	6-Physical Storage Medium of Software 7-Unable to Determine Cause (Equipment Only) 8-Intermittent Errors 9-Auto Reset F-Facility Power & Support Sys.
81	Non-FAA Circuits	0-Equipment 1-Line/Circuit 2-Satellite 3-Power 4-Military	5-Cable Cut 6-Environmental Causes 7-Unknown 8-Personal Error 9-Other
82	Prime Power	F-Facility Power & Support Systems	
83	Standby Power	F-Facility Power & Support Systems	
84	Interference	0-Anomalous Propagation 1-ECM/ECCM/Chaff 2-Path Fade, 3-RFI/Intentional Interference 3-Solar Activity 9-Other	
85	Environmental	0-Snow 1-Ice 2-Wind/Tornado/Hurricane 3-Lightning Strike 4-Flood	5-Rain 6-Temperature Extremes/Variation 7-Birds/Animals/Insects 8-Earthquake/Volcanic Event 9-Fire
86	Software	0-Operational Program Abort 1-Operational Program Hang 2-I/O Lockout 3-Monitor/Control Software 4-Other Software Problem 5-Instruction Set	
87	Unknown	0-Unknown	
88	Related	0-Facility Interruption 1-Service Interruption	
89	Other	0-AOS Restoration Activities 1-Key Site Testing 2-Program Implementation 3-Vandalism 4-Non-FAA Owned Facility Caused	5-Personnel Error AF 6-Personnel Error AT 7-Personnel Error Other FAA 8-Personnel Error Non-FAA 9-Other F-Facility Power & Support Sys.

Table 3-5 Maintenance Action Codes (MAC).

Code	Action	Code	Action
1	Adjusted/Aligned	K	Mod on Hold – Fiscal Constraints
2	Cleaned	L	Mod on Hold – Awaiting Flight Check
3	Military Corrected	M	Mod on Hold - Waiver Required
4	Other	N	PM Not Performed (Code Cat 55 only)
5	Parts on Order (AWP)	O	Mod on Hold – Until Equip Failure
6	Patched/Switched	P	PM Performed (Code 50, not 55)
7	Propagation Condition Improved	Q	Mod on Hold – Equip Not Commissioned/F&E Project
8	Retried	R	Mod on Hold – Regional (RNOT)
9	Repaired	S	Service Complaint (Code Cat 80/87)
A	Replaced	T	Mod on Hold – Sector
B	Replaced Card	U	Equip Not Avail for PM (Code Cat 55 only)
C	Restored	V	Mod on Hold – Washington (GNOT)
D	Self Corrected/No Trouble Found	W	Mod Not Applicable
E	Startover	X	Certification (Code Cat 51; not 52)
F	Telco Unspecified Correction	Y	Mod parts Not Ordered
G	Mod Completed	Z	Mod Ready to Install
H	Mod Not Performed	$	Mod Issued
I	PM Incomplete (Code Cat 50; not 55)		
J	Mod on Hold – Manpower Shortage		

CHAPTER 4. ACTIVITIES REQUIRING LOG ENTRIES

40. INTRODUCTION.

This chapter provides direction for logging maintenance activities. Although this directive cannot specifically encompass all possible activities, the scope of events described is intended to clarify most situations. Procedures for logging maintenance activities are contained in the appropriate SOP to further clarify required actions.

41. DOCUMENTATION POLICY.

A maintenance activity is defined as an action performed in response to an event, whether scheduled, unscheduled, or administrative. The system specialist shall document maintenance and administrative activities performed in response to an event.

42. PERIODIC MAINTENANCE.

The accomplishment of Periodic Maintenance (PM) activities shall be documented.

a. Documentation shall include time, duration, and the PM tasks accomplished referenced by order and paragraph number.

b. Periodic maintenance is derived from the maintenance technical handbooks, technical instruction books, or other sources and is typically scheduled in advance.

(1) PM entries may be automatically generated by a scheduling program and then closed by a system specialist when the task is completed.

(2) PM entries may also be made manually.

c. The PM records are used to produce PM accomplishment reports for performance analysis.

d. Periodic maintenance activities that require the removal of a facility/service from operation require additional documentation of the interruption as required in this order.

e. Other activities performed during a periodic maintenance event may also require additional documentation. These may include site visit, corrective maintenance, and certification.

43. CERTIFICATION.

Certification must be documented for services, systems, or subsystems as required in Order 6000.15. The certification entry shall be used to record both scheduled and unscheduled certifications.

a. The time used for certification shall be the time when the certification judgment is made. The certification must be documented before the specialist begins another maintenance activity or departs the facility.

b. The certification statement shall be made for a service, system, or subsystem by the specialists in accordance with the appropriate maintenance technical handbook.

Note: If the logging tools are unavailable due to software or hardware failure, alternate methods for documenting certification are contained in the appropriate logging SOP.

c. Certification documentation that does not follow the published standard may raise questions about the validity. The criteria for determining certification validity are that the intent must be understandable and the documentation must be reproducible.

(1) Improper certifications should be considered valid even though they may require Regional/SMO attention to correct the errors. Examples of these include:

(a) The certification has the wrong text but the intent can still be determined. For whatever reason, the text is different than that specified in the associated order.

(b) The certification was made with the wrong activity code.

(c) Certifications that have the correct wording but contain extra superfluous text that should have been put in another log entry or omitted altogether.

(d) The entry close date/time typed by the specialist is significantly different then the automated date/time stamp of the certification.

(2) Certifications are considered invalid under the following criteria and require immediate attention as specified in the latest version of 6000.15.

(a) The certification has no text. Certification logs with no text are meaningless.

(b) Certification entries made with the wrong facility/service type.

(c) The certification does not designate the specific system or subsystem if required, i.e. a communications certification where the frequency and main/standby of the transmitter or receiver is not identified in the text. When there is redundant equipment, the frequency and main/standby information must be included in the certification statement.

44. CORRECTIVE MAINTENANCE.

The accomplishment of corrective maintenance activities performed on specific facilities, systems, subsystems or equipment modules shall be documented.

a. Corrective maintenance activities requiring documentation include performing restoration, fault identification, diagnostics, alignment, troubleshooting, repair, and module replacement.

b. Corrective maintenance may be performed on-site or via remote maintenance monitoring (RMM) access.

c. Corrective maintenance activities that require the removal of a facility/service from operation may require additional documentation for the interruption as required in this order.

(1) If the interruption is unscheduled, the supporting corrective maintenance documentation shall be related to the interruption report.

(2) Corrective maintenance activities with no facility/service interruption do not require an interruption report.

d. Other activities performed during a corrective maintenance event may also require additional documentation. These may include site visit and certification.

45. INTERRUPTIONS

All facility or service interruptions must be documented.

a. Interrupt documentation must contain the duration of the interruption and a brief description of the interruption.

b. The current version of Order 6040.15, National Airspace Performance Reporting System, (NAPRS) and regional policy determine the interrupt reporting requirements.

c. All NAPRS reportable facility or service interruptions must include additional documentation of maintenance or administrative activities to support the interrupt report.

d. Interrupt documentation shall be made by the control center specialist. Supporting documentation should be made by those responsible for the supporting activities, such as coordination, periodic maintenance, corrective maintenance, modification, or administrative activities.

46. MODIFICATIONS.

The accomplishment of modification activities must be tracked and documented to ensure the accuracy of system configurations.

a. The documentation shall record system, subsystem, and module modification information including the issuing organization, modification number and status, etc.

b. Each individual modification shall be documented as specified within the modification issuance. Additional guidance is contained in the latest version of Order 6032.1, National Airspace System Modification Program.

c. Modification activities that require the removal of a facility/service from operation require additional documentation of the interruption as required in this order.

d. Other activities performed during an equipment modification may also require documentation. These may include site visit, periodic maintenance, corrective maintenance, and certification.

47. FLIGHT INSPECTION.

Flight inspections must be documented if on-site personnel are involved or notified of a discrepancy.

a. Flight inspections shall be documented as administrative activities.

b. Documentation shall include the flight inspection aircraft tail number and any discrepancies noted.

c. Flight inspection activities that require the removal of a facility/service from operation require additional documentation of the interruption as required in this order.

d. Other activities performed during a flight inspection event may also require documentation. These may include site visit, periodic maintenance, corrective maintenance, and certification.

48. SITE ARRIVAL AND DEPARTURE.

Site arrivals and departures by all personnel at un-staffed facilities must be documented.

a. Site arrival and departure information shall be documented to record arrival and departure times when visiting facilities without a permanent staff or on callback to a duty station.

b. Documentation shall include the reason for the site visit if not contained in another entry, and any associated one-way travel time.

c. At locations with multiple facilities, arrival and departure information shall be associated with the primary facility as listed in the current version of Order 6000.5 Facility Service Equipment Profile, Appendix 5, Preferred Designation of Primary Facilities, unless dictated otherwise by regional or SMO policy.

49. AIRCRAFT ACCIDENTS/INCIDENTS.

a. Activities related to aircraft accidents/incidents shall be logged. Following notification of an aircraft accident/incident, the appropriate control center, the Airway Facilities Aircraft Accident Representative (AFAAR), and System Management Office (SMO) personnel will have responsibilities concerning the event. Only the control center and SMO personnel have logging responsibilities.

b. The accident AFAAR makes decisions about facility involvement and contacts one or more control centers as necessary to implement investigative decisions.

c. Control centers are the focal points for all coordination and communication for aircraft accident/incident events within their boundaries of responsibility. Each control center shall establish a single administrative entry to document pertinent coordination and communications.

d. SMO personnel shall document all their activities required by the AFAAR.

e. Maintenance activities in response to an aircraft accident/incident may include site visit, corrective maintenance if authorized by the AFAAR, flight inspections, and certification. The specific logging procedures contained in the appropriate logging SOP shall be used.

NOTE: These SOPs are available online at: http://intranet.faa.gov/ats/aaf/aop/300/logging/.

f. Further guidance may be found in the current version of Order 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting.

50. COORDINATION.

a. Coordination entries involving maintenance organization personnel concerning operational channel changes, equipment transfer actions, refusal of interruption requests, shutdown, or restoration shall state the organizational element and initials of the person(s) contacted; i.e., AFSS (KMS), ARTCC (RJS), AT (BB), and approvals granted.

b. Coordination events that require the removal of a facility/service from operation require additional documentation of the interruption as required in this order.

51. TECHNICAL INSPECTIONS/EVALUATIONS.

National Air Space Technical Evaluation Program (NASTEP) inspections and evaluations shall be documented as administrative activities.

a. Documentation must include the time, duration, and participants of the evaluation, and classify the activity as a routine or special.

b. Facility related performance exceptions must be documented, along with any other pertinent details.

c. The entry should include a reference to the NASTEP report name and number.

d. Other activities performed during technical inspection/evaluation events may also require additional documentation. These may include site visit, interruptions, periodic maintenance, corrective maintenance, and certification.

52. PERFORMANCE EXAMINATIONS.

Performance exams shall be documented as administrative activities.

a. Documentation must include the time, duration, participants, and exam number.

b. Other activities performed during a performance exam event may also require additional documentation. These may include site visit, interruptions, periodic maintenance, corrective maintenance, and certification.

53. EQUIPMENT CHANGES OR REPLACEMENTS.

Facility equipment relocation, removal, initial installation, or special projects shall be documented as administrative activities.

a. Documentation must include the date, time, and duration of the activity, along with any appropriate details.

b. Other activities performed during the change or replacement of equipment may also require additional documentation. These may include site visit, interruptions, periodic maintenance, corrective maintenance, and certification.

54. COMMISSIONING/ DECOMMISSIONING ACTIVITIES.

The commissioning, decommissioning, or temporary change in facility or service status is documented as an administrative activity.

a. Documentation must include the date and time when the facility or service is actually commissioned or the change in commissioned status becomes effective.

b. Other activities performed during this type of event may also require additional documentation. These may include site visit, periodic maintenance, corrective maintenance, and certification.

55. SUPERVISORY LOG REVIEW.

The supervisory log review shall be documented as an administrative activity. Documentation should reflect the time each review is completed, along with the level of review, the period of review, and any significant discrepancies noted.

56. PILFERAGE, VANDALISM, OR RELATED EVENTS.

a. Pilferage, vandalism, or actions of this nature shall be documented as administrative activities. All details of the event shall be entered together with all findings and related coordination.

b. Other activities performed during this type of event may also require additional documentation. These may include site visit, periodic maintenance, corrective maintenance, and certification.

57. MISCELLANEOUS FACILITY ACTIVITIES.

Any maintenance or administrative activity that may affect a facility, and not specifically identified in this order shall be documented as an administrative activity.

a. Examples include:

(1) Delivery or shipment of supplies, parts, instruments and equipment.

(2) Adverse weather conditions that affect facility status.

(3) Commercial power failures that do not result in facility outage.

(4) Visits by regional headquarters or non-FAA personnel.

(5) Site access restrictions, or access road conditions deemed to have an effect on facility status.

(6) Livestock or game on the site.

(7) Any other conditions deemed to have a possible effect on the facility or air traffic operations.

58. LINE/FREQUENCY.

Interruptions to contract lines, communication frequencies, or channels not NAPRS reportable or not connected to a reportable facility in the FSEP must be documented.

a. Documentation shall include the date, time, duration of the interruption, and coordination information.

b. Line/frequency documentation shall be made by the control center specialist.

59. REMOTE MONITORING.

Remotely monitored events and alarm acknowledgements must be documented.

APPENDIX 1. DEFINITIONS.

1. GENERAL. This appendix contains definitions that explain the various logging terms used by ATO maintenance personnel. These definitions apply to terms used in maintenance technical directives and may not agree with those used in some FAA reporting systems, data processing systems, etc.

ACTIVITY CODE. A two-digit code which may be combined with a supplemental code to describe the type of activity being logged. Detailed information concerning activity codes is contained in paragraph 33. See CODE CATEGORY.

AUTOMATIC LOGGING. A chronological record of events in the form of status data gathered by sensors at a remote location, then sent to a host or master computer, which stores the data in a computer database. This database is typically called a history log/file or activity log/file. It is used to automatically log facility operation status for monitoring and control purposes.

CAUSE CODE. A two-digit code which may be combined with a supplemental code to describe the type of facility or service interruption. Detailed information concerning cause codes is contained in Order 6040.15. See CODE CATEGORY.

CERTIFICATION. Certification is the determination and validation that a system, subsystem, or service is providing or is capable of providing the advertised service to the user. Certification includes an independent determination, which ascertains the quality of advertised services, and a validation, which officially confirms and documents in the maintenance log that advertised services are meeting a standard.

CERTIFICATION PARAMETER. Certification parameters are selected critical indicators of the quality of the required advertised services being provided to the user of systems, subsystems, equipment, and services.

CODE CATEGORY (CODE CAT). Code category is a two-digit code field, which closely describes the reason for the log entry. For logging interrupts, cause codes are used for the code category. For logging maintenance or administrative activities, activity codes are used for the code category.

COMMISSIONED. A facility is considered to be commissioned if it has been formally accepted and placed into operational use of service in the NAS. It indicates that the maintenance organization has assumed formal maintenance responsibility.

COMMISSIONING. The formal exercise of incorporating a facility, system, subsystem, or equipment into the NAS. This term has legal and budgetary significance and has been used to justify logistic and manpower operational support as a FAA obligation under public law.

CONTROL CENTER. The Control Center is the NAS management entity responsible for coordination with the air traffic operations organization or other users of the NAS.

COORDINATED UNIVERSAL TIME (UTC). See UTC. The time provided in worldwide time signal broadcasts used in aviation. It has replaced Greenwich Mean Time (GMT) as the accepted standard clock time in many countries.

CORRECTIVE MAINTENANCE. Corrective maintenance is maintenance performed to identify or correct a problem.

APPENDIX 1. DEFINITIONS (CONTINUED)

ELECTRONIC LOG. A chronological record of all maintenance activities (such as restoration, repair, modification, flight inspections, certification) contained or resident on a software system operating on a computer. It consists of a combination of databases of logged entries and reference tables of data which may be inserted (electronically or manually) into logging entries for validation and linking of information.

EQUIPMENT. Equipment is a complete assembly, operating either independently or within a subsystem or system, that performs a specific function.

EVENT TICKET. An Event Ticket is the NIMS equivalent of a maintenance log entry and is a record used to track events.

FACILITY. Used generically in this order; reference Order 6000.5, Facility Service and Equipment Profile, for other uses of this term.

FACILITY TYPE. An acronym, identified in the current version of Order 1380.40, Airway Facilities Sector Level Staffing Standard System and the FSEP Deskguide. It is commonly used in the FSEP subsystem to denote a type of facility, e.g., LOC for localizer, ARTCC for air route traffic control center, etc.

FLIGHT INSPECTION. An evaluation, performed with an aircraft, of a NAS facility in order to verify that it meets established tolerances.

HARDWARE. In computer applications, hardware refers to the physical equipment or device(s) used to perform simple or complex functions.

INTERRUPTION. A break in continuity, the loss or unavailability of a facility/service, regardless of duration or cause.

MAINTENANCE. Maintenance, as used in connection with NAS systems, subsystems, and equipment, means any specified sequence of steps prescribed to accomplish an activity to verify, continue, or return a system or service to full operation.

MAINTENANCE ACTIVITY. Any response to a maintenance event that is required to be logged, whether the event was scheduled, unscheduled or administrative. Examples of maintenance activities are arriving or departing unmanned facilities, performing periodic or corrective maintenance.

MAINTENANCE DATA TERMINAL (MDT). An MDT is a computer workstation (may include a laptop computer) that is used to connect directly to operational NAS systems. A MDT is not an integral or imbedded part of any operational NAS system and it can be turned off with no direct negative impact to the operational NAS system.

MAINTENANCE EVENT. Any occurrence or incident that results in maintenance activities to NAS facilities. The event may be externally or internally generated, and can be scheduled, unscheduled or administrative in nature. An example of an externally generated, unscheduled event is an equipment outage due to weather. An example of an internally generated, scheduled event is the performance of an equipment modification. An event typically results in multiple activities.

MAINTENANCE MANAGEMENT SYSTEM (MMS). A software application, which resides on the centralized maintenance processor subsystem (MPS). It provides ATO maintenance personnel with an electronic method of monitoring, controlling, reporting, and tracking maintenance activities.

APPENDIX 1. DEFINITIONS (CONTINUED)

MAINTENANCE PROCESSOR SUBSYSTEM (MPS). The centralized computer platform on which logging and remote maintenance monitoring activities reside.

MAY. As used in maintenance documentation, MAY denotes permission. For example: at navigational aid facilities, certain maintenance activities MAY be performed without recourse to flight inspection. See the current version of Order 1320.1, FAA Directives System. (Also see Shall, Should, and Will.)

MODIFICATION. A modification to a ground facility, system, subsystem or equipment is an alteration in its electrical, mechanical, or physical characteristics, arrangement, configuration, or use that results in a need for:

a. Changes to record documentation.

b. Changes to existing standards and tolerances/limits.

c. The need for establishing new standards and tolerances/limits.

NOTE: See the current version of Order 6032.1, Modifications to Ground Facilities, Systems, and Equipment in the National Airspace System.

MODULE. Analogous to line replaceable unit (LRU). These are the lowest level items within a system or subsystem, which are normally removed and replaced when they fail; e.g., printed circuit cards, etc. In MMS, an inventory of modules is maintained in the FSEP subsystem Module Detail File (FMO), which is used by MMS during LCM log entries.

MONITORS. A monitor is a device designed to detect when a designated parameter has deviated beyond its prescribed tolerance/limit, and then to activate an alarm to this effect or alter the operation or both.

MUST. This is equivalent to Shall. See Shall.

NAS CHANGE PROPOSAL (NCP). The means for proposing changes to NAS configuration items using FAA Form 1800-2, Case File/NAS Change Proposal.

PARENT LOG. The first entry generated for an event or logging activity.

PERIODIC MAINTENANCE (PM). Any scheduled or preventive maintenance activities that include performance checks and/or other maintenance tasks are PM activities.

RELATED LOG ENTRY. A log entry related to an event or activity, which references a common log, ID number.

RESTORATION. Restoration encompasses the maintenance activities required to return a system, subsystem, equipment, or service to normal use following an interruption, equipment failure, or out-of-tolerance/limit condition.

SIMPLIFIED AUTOMATED LOGGING (SAL). A software application. It is an automated logging system used to support MMS.

SHALL. As used in maintenance documentation, SHALL denotes compulsory or mandatory action that the person being directed is obliged to take. For example: The equipment SHALL be adjusted to operate in accordance with directive tolerances. See Order 1320.1. (Also see Should, Will, and May.)

SHOULD. As used in maintenance documentation, SHOULD denotes an action that is desirable but not mandatory. For example: The equipment SHOULD be shut down if, in the opinion of the System Specialist, a failure is imminent. See Order 1320.1. (Also see Shall, Will, and May.)

APPENDIX 1. DEFINITIONS (CONTINUED)

SOFTWARE. A set of programs, procedures, rules, and documentation concerned with the operation of a data processing system; for example, compilers, library routines, and manuals.

SUBSYSTEM. A subsystem is a portion of a system that performs a specific function.

SUPPLEMENTAL CODE. The supplemental code is a single digit field that, used in conjunction with the cause or activity code, will more accurately identify the event or activity being logged.

SYSTEM. A system is a combination of subsystem(s) and/or equipment(s) whose individual functions produce by engineering design a specific operating product in the NAS.

SYSTEM COMPONENT (SYSTEM ELEMENT). This may be a major operating element, active or passive, which would affect the overall performance or characteristics of the system if removed or maladjusted.

SYSTEM SPECIALIST. A member of the FAA work force who maintains NAS facilities and services.

TASK. A task is the smallest unit of work in a maintenance activity. Tasks are identified in the lowest subparagraphs of each maintenance technical handbook.

TYPE DESIGNATION. An assigned combination of alphanumeric characters used to identify specific production equipment, custom-built for the FAA. The identification is also imprinted on the equipment nameplate. Examples are FA-9996, FA-7201, RTA-2, ASR-9.

UPLOAD. The process of transferring computer data via communications lines; e.g., from MDT to MPS.

UTC (COORDINATED UNIVERSAL TIME). UTC is the time provided in the worldwide time signal broadcasts used in aviation.

WILL. As used in maintenance documentation, WILL is intended to denote action in the future tense. For example: Obsolete equipment WILL be replaced as soon as funds can be made available. See Order 1320.1. (See also Shall and May.)

Memorandum

U.S. Department
of Transportation

**Federal Aviation
Administration**

Subject: **INFORMATION**: Suggested improvements to Order 6000.48B, General Maintenance Logging Handbook

Date:

From: _____

Reply to _____

Signature and Title

Attn of: Facility Identifier
Address

To: Director, ATO Technical Services Support

Problems with present handbook:

Recommended improvements: