



**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**
Air Traffic Organization Policy

**ORDER
JO 1000.41**

Effective Date:
01/01/2009

SUBJ: Air Traffic Organization NextGen and Operations Planning Safety Management System

The United States has one of the safest, yet most complex, aviation systems in the world. To maintain and improve the safety of the National Airspace System (NAS), the Federal Aviation Administration (FAA) assigns the highest priority to improving safety, with the fundamental goal of eliminating unacceptable risk from the NAS. As changes to the NAS become more complex—involving new technologies, more interrelated systems and cross-organizational relationships—safe Air Traffic Control (ATC) and navigation services become even more crucial. The introduction of new systems and technologies into the NAS requires new safety requirements and processes. Accordingly, the FAA is implementing an integrated Safety Management System (SMS) in the Air Traffic Organization (ATO). The SMS will allow the FAA to continue to improve safety while it improves services.

The SMS ensures that improving efficiency and implementing best value initiatives are accomplished at current or improved levels of safety in the NAS. The ATO SMS integrates current ATO safety-related operational processes, procedures, policies, and programs, with new elements to create a new system for managing safety while providing new and improved ATC and navigation services. Implementation and operation of an SMS in the ATO is also a requirement in FAA Order 8000.369, *Safety Management System Guidance*, FAA Order 1100.161, *Air Traffic Safety Oversight*, which establishes the oversight relationship between the ATO and the Air Traffic Safety Oversight Service (AOV) and ATO Order JO1000.37, *Air Traffic Organization Safety Management System*. Key elements of an SMS are also required by International Civil Aviation Organization (ICAO) Annex 11 to which the United States is a signatory. As a part of the ATO, NextGen and Operations Planning Service (ATO-P) is implementing SMS in compliance with FAA, ATO, AOV and ICAO requirements.

This order defines the scope and requirements for SMS in ATO-P. It identifies the strategic and tactical safety roles and responsibilities for AJP-0 personnel and safety risk management document processes and responsibilities. Finally, it discusses the requirements and safety standards under which the AJP operates. As a leader in the introduction of new technologies in the NAS, ATO-P must also be a leader in applying SMS to the new technologies.

A handwritten signature in cursive script that reads "Victoria H. Cox".

Victoria H. Cox
Senior Vice President, NextGen and Operations
Planning Services

12-30-08
Date Signed

1. Purpose of This Order. This order provides requirements for implementing Safety Management System (SMS) within the Air Traffic Organization (ATO) Next Generation Air Transportation System (NextGen) and Operations Planning Services (ATO-P).

2. Audience. All ATO Next Generation Air Transportation System and Operations Planning employees.

3. Where Can I Find this Order. You can find this order on My FAA website: https://employees.faa.gov/tools_resources/orders_notices/

4. Effective Date. This order is effective January 1, 2009.

5. Background. The Federal Aviation Administration (FAA), in accordance with FAA Order 8000.369, FAA Order 8040.4, AOV Order 1100.161, FAA Order JO 1000.37, and its international civil aviation responsibilities, must implement a formal SMS. Each ATO Service Unit (SU) must establish safety policy and procedures, promote a safety culture, implement Safety Risk Management (SRM) procedures, and develop a process to ensure program compliance as detailed in the *ATO SMS Manual* and the *SRM Guidance for System Acquisition (SRMGSA)*. This order supports the related FAA SMS Orders, *ATO SMS Manual* and the *SRMGSA*. When these documents are revised, this order will be reviewed and revised as appropriate.

6. Scope. The NAS comprises documents, personnel, procedures, systems and services used to provide Air Traffic Control (ATC) and navigation services. This order applies to all programs, demonstration, test or prototype activities or any other efforts on the part of ATO-P which may impact components of the NAS now or in the future. The ATO-P Safety Management Office (SMO), reporting to the ATO-P Senior Vice President (SVP), will provide guidance and support to all ATO-P offices and organizations so that they may comply with and support the SMS program.

SMS focuses on the safe provision of ATC and navigation services. SMS does not, however, address occupational safety, e.g. the Occupational Safety and Health Administration (OSHA), physical security, or information security, because the FAA has robust programs in place for those areas. Nevertheless, when an SRM panel identifies OSHA or security issues, the panel should report them to management for forwarding to the proper office.

7. Transition to SMS. Implementation of the SMS within ATO-P must be completed by March 14, 2010. The *ATO-P SMS Implementation Plan* describes implementation activities, tasks and timeframes to achieve completion. Additional tools, training requirements, competencies, and processes to reach this milestone may be identified at a later time. While the *ATO SMS Manual* provides implementation guidance, this order provides specific requirements for all elements of ATO-P to begin using the SMS. This order and the *ATO-P SMS Implementation Plan* will be revised as the ATO SMS process and requirements evolve and mature.

8. Requirements. This order directs the creation and staffing of the ATO-P SMO, with its head reporting directly to the ATO-P SVP. The SMO consists of the Safety Director, Safety Manager, Safety Engineer, other employee, and contractor support. All programs and program areas in ATO-P will be in full compliance with ATO Order JO 1000.37 and the *ATO SMS Manual* by March 14, 2010. Compliance will be completed in accordance with the *ATO-P SMS Implementation Plan*. The applicability of SRM for projects within ATO-P program areas shall be determined as detailed in the *ATO SMS Manual*.

9. Roles and Responsibilities.

a. Senior Vice President (SVP) shall:

(1) Promote a safety culture that comprises new attitudes, processes, and structures affecting individuals and the organization.

(2) Allocate sufficient resources, funding, and personnel to implement and maintain the SMS.

(3) Accept risk for hazards assessed with an initial high risk accordant with the *ATO SMS Manual* and the *SRMGSA*.

b. Directors shall:

(1) Ensure that 100 percent of their assigned federal workers are trained in the SMS and SRM according to their assigned duties.

(2) Designate in writing a focal point for SMS reporting, tracking, and coordination and advise the ATO-P SMO of completion and designation within 14 days after the effective date of this order.

c. ATO-P Safety Director (SD) shall:

(1) Report directly to the ATO-P SVP.

(2) Meet competency and training requirements established by The Office of Safety (ATO-S).

(3) Facilitate intra- and inter-Service Unit coordination on safety.

(4) Provide input and advice on safety to the ATO-P SVP and other appropriate employees.

(5) Act as the senior ATO-P safety liaison with ATO-S.

(6) Participate, as appropriate, in safety-related meetings with ATO-S.

(7) Direct available assigned resources (funding and personnel) for SMS implementation, operation, and a centralized safety assessment contract vehicle.

(8) Fulfill all SMS responsibilities as detailed for the SD in the *ATO SMS Order* and the *ATO SMS Manual*.

d. ATO-P Safety Manager (SM) shall:

(1) Meet competency and training requirements established by ATO-S.

(2) Assist in developing the SMS for all ATO-P Directorates in support of NextGen and assist in providing SMS guidance and support as needed.

(3) Work with managers to define specific projects and to clarify and refine SRM requirements for their respective program areas.

(4) Act as the alternate Safety Director when necessary.

(5) Support, advise, and assist program teams in applying SRM tools and techniques.

(6) Develop process revisions, guidance materials, directive/handbook updates, and other materials, as may be needed to apply SMS and SRM within the ATO-P environment.

(7) Assist Directors in maintaining SMS training requirements.

(8) Review and approve completed SRM packages (and all necessary supporting safety studies and reports) prior to the SRM packages being signed by other review authorities per the *ATO SMS Manual*. Coordinate with the NAS Change Control Board (NAS CCB), System Safety Working Group (SSWG), Safety Operations Working Group (SOWG), ATO-S, and AOV as appropriate.

(9) Consolidate safety data collection and coordinate with ATO-S and AOV as needed.

(10) Coordinate with ATO-S to implement the ATO voluntary safety reporting system.

(11) Promote safety culture enhancements within ATO-P.

(12) Develop metrics and monitor the effectiveness of the ATO-P Safety Management System.

(13) Ensure risk acceptance and approval for safety assessments and SRMDs is in accordance with the *ATO SMS Manual*.

(14) Develop a centralized safety assessment contract vehicle that ATO-P offices can fund and access to get certain safety studies, analyses, and documentation accomplished.

- (15) Facilitate intra- and inter-Service Unit coordination on safety.
- (16) Participate in safety-related meetings with ATO-S.
- (17) Act as ATO-P's liaison with ATO-S.
- (18) Provide input to the ATO-P SVP, SD, and directors on the SMS.
- (19) Fulfill all SM SMS responsibilities as detailed in the *ATO SMS Order* and the *ATO SMS Manual*.

e. ATO-P Safety Engineer (SE) shall:

- (1) Meet competency and training requirements established by ATO-S.
- (2) Facilitate integration of SRM into existing processes used to make changes to the NAS, including concepts, engineering, and document changes.
- (3) Support, advise, and assist programs and analysis teams in conducting SRM activities.
- (4) Ensure the high quality and fidelity of the safety analyses within ATO-P.
- (5) Facilitate, if needed, the SRM decision process and development of the resulting documentation.
- (6) Manage and track risk mitigation assessment efforts to verify that safety levels are maintained.
- (7) Provide recommendations to the SM on SRM document review and approval.
- (8) Provide input as requested to the SVP, SD, SM, other managers, and directors on risk acceptance, SRM document approval, and other SRM-related topics.
- (9) Cooperate with, and facilitate, as requested, audits/evaluations conducted by the SRM Office within ATO-S regarding ATO-P's application of SRM.
- (10) Participate, as appropriate, in safety-related meetings with ATO-S.
- (11) Participate as needed on Safety Risk Management Panels (SRMP), the ATO System Safety Working Group (SSWG) and the ATO Safety Operational Working Group (SOWG).
- (12) Fulfill all SE SMS responsibilities as detailed in the *ATO SMS Order* and the *ATO SMS Manual*.

f. ATO-P Chief System Engineer for Safety (CSES) shall:

- (1) Participate in the Joint Planning and Development Office (JPDO) Safety Working Group (SWG).
- (2) Identify and monitor safety analysis activities necessary for developmental systems within the NAS Enterprise Architecture (NASEA).
- (3) Develop the framework to document allocation of safety objectives for the NASEA. (Shared with the ATO-P SM or SE.).
- (4) As a member of the ATO Technical Review Board (TRB), provide technical support for all safety facets of the NASEA, including the Safety Roadmap (XV-2) and incorporating the SMS into the NASEA Safety Roadmap.

g. ATO-P Focals shall:

- (1) Be administrative or technical representatives assigned by their Directors to assist the SMO with SMS compliance.
- (2) Be their division's primary liaison for safety-related work and initiatives.
- (3) Participate as needed in Safety Focal Team meetings convened by the ATO-P SD, SM, or SE.
- (4) Provide the ATO-P SMO monthly status reports on SRM projects within their programs areas. The first report shall be submitted to the ATO-P SMO within 60 days of the effective date of this order. Subsequent reports will be due on the last working day of each month. The ATO-P SMO will issue additional guidance, separate from this Order, concerning the reporting mechanism.
- (5) Provide support for internal audits and reviews conducted by the ATO-P SMO, ATO-S, and the Air Traffic Safety Oversight Service (AOV). Provide records and other documentation that may be required by AOV, ATO-S, or the ATO-P SMO as they conduct program audits.
- (6) Establish a records retention process to ensure that SRM decision memos (SRMDM), SRM documents (SRMD), safety assessments, and other pertinent safety documents — such as plans, independent assessments, audits, and their subsequent updates — are logged, retained, and updated or revised as required.
- (7) Forward completed SRM packages (supporting safety studies, reports, plans, Document Change Proposals, NAS Change Proposals (NCP), test NCPs, flight demonstrations, and so on) to the ATO-P SMO for review by the ATO-P SM and for coordination with ATO-S and AOV as defined in the SMS Manual. This includes SRM packages concerning NAS changes from any ATO-P source. Documentation shall be forwarded by the designated safety focal or representative within each ATO-P division.

h. ATO-P Employees shall:

- (1) Comply with established safety standards, the SMS, and any safety directives issued by ATO-P, ATO-S and/or AOV within their areas of responsibility.
- (2) Be continuously aware of the safety of the NAS in their daily work and report conditions that may impact the safety of the NAS to their management or to the SMO.
- (3) Complete SMS training commensurate with their responsibilities.

10. Safety Risk Management Document Responsibilities

a. Document review and approval for ATO-P generated safety work. The SM must review and approve all ATO-P generated SRMDs, SRMDMs, and safety assessments by any other name, which includes System Safety Assessment Reports (SSAR), before they leave ATO-P to ensure that the policies and processes invoked by the *ATO SMS Order*, the *ATO SMS Manual* and the *SRMGSA* have been followed. This review applies to all safety documents that are generated at any stage within the Acquisition Management System (AMS), and NCP process, as well as to any other safety documents where ATO-P is a stakeholder. This includes safety assessments or SRMDs done in collaboration with other SUs, Lines of Business (LOB), or AOV. The following policies apply:

- (1) All safety assessments, SRMDs, and SRMDMs generated by ATO-P employees or contractors must be sent to Systems Engineering and Safety (AJP-1) for review and approval or concurrence before they are sent outside of ATO-P.
- (2) All draft NCPs, including test NCPs, must be reviewed by the SM before being sent to the NAS CCB or other CCB control desks for casefile number assignment (the prescreening stage in Web CM).
- (3) All NCPs of any sort appearing before the NAS CCB without the SM's concurrence on the safety work will be given a non-concur response by Systems Engineering and Safety and will not be forwarded to the NAS CCB Chair for approval.
- (4) The safety assessments, SRMDs, and SRMDMs are to be sent to the SM via the Safety focals or representatives already assigned to each ATO-P Directorate. Those focals will determine response due dates and will administratively track the documents to ensure that those response due dates are met.

b. Collaborative document review and approval. ATO-P conducts SRM for projects and activities developed in collaboration with other stakeholders and LOBs outside of ATO, including the Office of Aviation Safety (AVS). The prime example of this is the weather products, which are different from those in Section 10.a. in that the products under review typically will not enter the AMS. These weather products are reviewed and approved through a research-to-operations process managed by the Aviation Weather Office in which the safety documentation shall be signed by the appropriate stakeholders from ATO and other LOBs. ATO-P and the ATO-S Safety Risk

Management Director have agreed that if another LOB is unable to provide review and concurrence, ATO-P may consider the documentation to be approved by the LOB.

c. Document review and approval when supporting outside Lines of Business. ATO-P participates in SRM for projects and activities developed for LOBs outside ATO, including AVS, where the LOB is the project or program owner. In this relationship, ATO-P simply provides support for the program or project office; the receiving unit or LOB (i.e., the customer), is completely responsible for risk acceptance, and document review and approval. The safety documentation done by ATO-P under this paragraph is not reviewed or approved by the ATO-P SM or other member of the SMO. The LOB project or program owner is responsible for all such administrative processing, including risk acceptance (i.e. so that dual reporting/responsibility are not an issue).

11. Distribution. The ATO-P SMO will distribute this order to ATO-P Washington Headquarters, the William J. Hughes Technical Center (WJHTC), and, as appropriate, to field facilities and other LOBs.