Hartsfield-Jackson
Atlanta International Airport

Part 139 SMS Implementation Pilot Study

SMS Presentation Agenda

- Introduction
- ATL Stakeholders
- SMS Committees
- Risk Assessments
- SRA Step 6 Risk Management
- ASOCS and SMS DASHBOARD
- SMS Performance Assessment
- Challenges
- Benefits
- Pilot Study Experience Summary
- ATL SMS Logo and Safety Poster

ATL Statistics

- Owner/Operator: The City of Atlanta / Department of

- Total Airport Area: 4,700 acres
- Terminal building and 5 concourses
- 199 gates (171 domestic and 28 international gates)
- 5 Parallel Runways
- Economic impact of more than $32.5 billion for the metro Atlanta
- World's busiest airport in 2010
  - **950,119 flight operations**
  - **89.3 million passengers**

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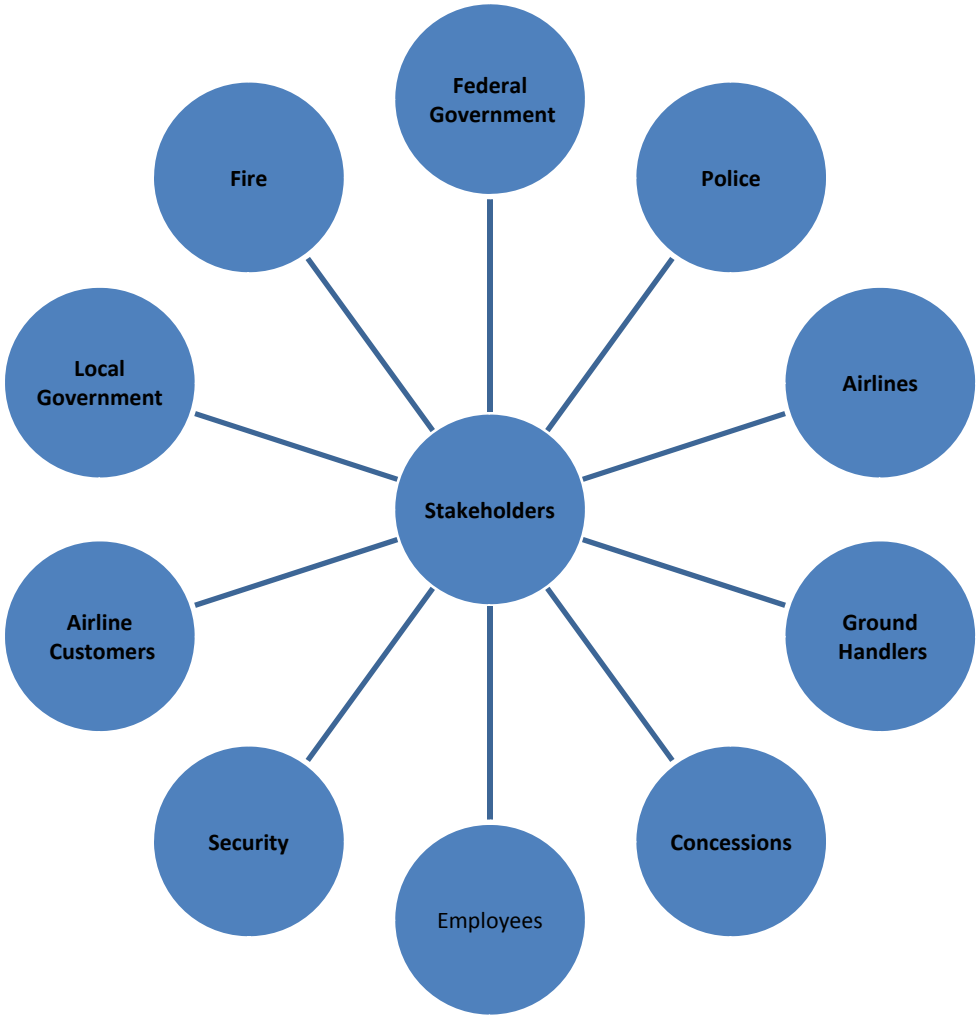
Where Is ATL with SMS?

- Participated in 1st Airport SMS Pilot Study
- Draft ATL Safety Management System Manual
- SMS Implementation Plan
- Created ATL SMS Working Group
- Participant 3rd Part 139 SMS Implementation Pilot Study

Airport Stakeholders



ATL & Stakeholders

- ATL has an excellent working relationship with its stakeholders
- Stakeholders work together through the ATL SMS Working Group
- Participation in SMS Initiatives
- Data sharing is to benefit ATL and its stakeholders

Airport SMS Committees

- Allows concerns of all airport stakeholders to be raised and taken into account
- Offers a structured forum for discussion and an opportunity to reach a common understanding between interested groups concerning Airport operations and issues of concern among interested stakeholders
- Promotes understanding about Airport operations more widely, through dissemination of relevant information to committee participants

Risk Assessments

- Vehicle Traffic on The Ramp assisted by ATO Safety Assurance Group/Airport Operations
- FOD- assisted by ACE/ESIS
- Taxiway Dixie Conversion-NLVR crossing assisted by ATO Safety Assurance/Airport Operations

SRA Step 6: Risk Management and Risk Reduction

Step 6 Risk Management and Risk Reduction					
Critical Control (Y if Residual Severity is Catastrophic or Serious, or if Residual Risk is High)	**Describe the Critical Control? (add to inspection, testing or observation)**	**Critical Control Owner** (by Title)	**Control Category** (based on Corrective Action)	**Hierarchy/Defense in Depth Met** (If No, then add additional controls via CAs is Step 5)	**Risk Reduction Target**

Risk Management:

- Conformance to using or following Critical Controls
- Ensuring Preferred Controls or Defense in Depth is in place

Risk Reduction = Continuous Improvement: Establishing Goals to add better/more controls based on your Risk Priorities

Step 6: Identify Critical Controls

Residual Severity	Residual Probability	Residual Risk Total	Critical Control	Describe the Critical Control? (add to inpsection, testing or observation)	Critical Control Owner (by Title)
M	L	M	N	Enclosure of electrical junctions.	Maint
C	L	H	Y	Training	Security
S	L	H	Y	Flight Path. Clearance areas.	Tower

If Residual Severity is

- S=Serious or
- C=Catastrophic

- If Residual Risk is
  - High

Then Control is “Critical”

(Other Controls may be Critical, based on Assessor’s judgment)

Assign Critical Control Owners

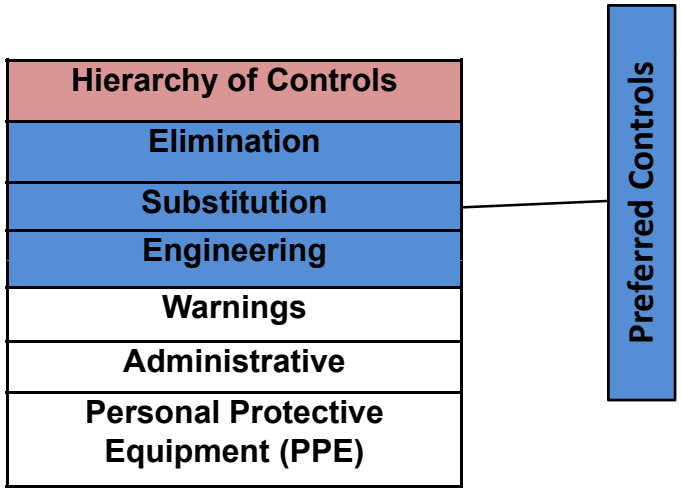
Require “Failure Rate Metrics” from them periodically
Validate through inspections and observations
Hold them accountable for maintenance & long-term controls

Control Selection – Preferred Controls and Defense in Depth

If The Preferred Controls

- Elimination,
- Substitution or
- Engineering

are not feasible, or the risk is high, then additional and multiple controls (Defense in Depth) should be identified to control the Risk!



For example: (See next page)

Hierarchy/Defense in Depth Control Verification

Scenario (outcome)	Description of Controls	Residual Risk Total	Critical Control (Y if Residual Severity is Catastrophic or Serious, or if Residual Risk is High)	Describe the Critical Control? (add to inspection, testing or observation)		Critical Control Owner (by Title)	Control Category (based on Corrective Action)	Hierarchy/Defense in Depth Met (If No, then add additional controls via CAs is Step 5)	Risk Reduction Target
								Y/N	
Vehicle striking and damaging an airplane.	Training, licensure, markings, control tower observations.	High	Y	Training	Security	Warning/Administrative		N	Y	

"High" Residual Risk

Training is a "Less Effective" control

Additional Controls are expected (H/DiD not Met)

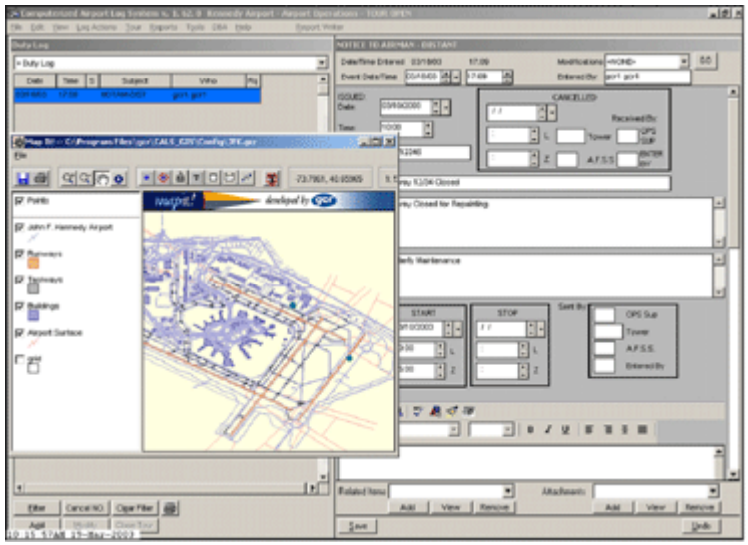
Either Identify better/more controls or set this Action as part of your Annual SMS Goal Setting

Risk Reduction

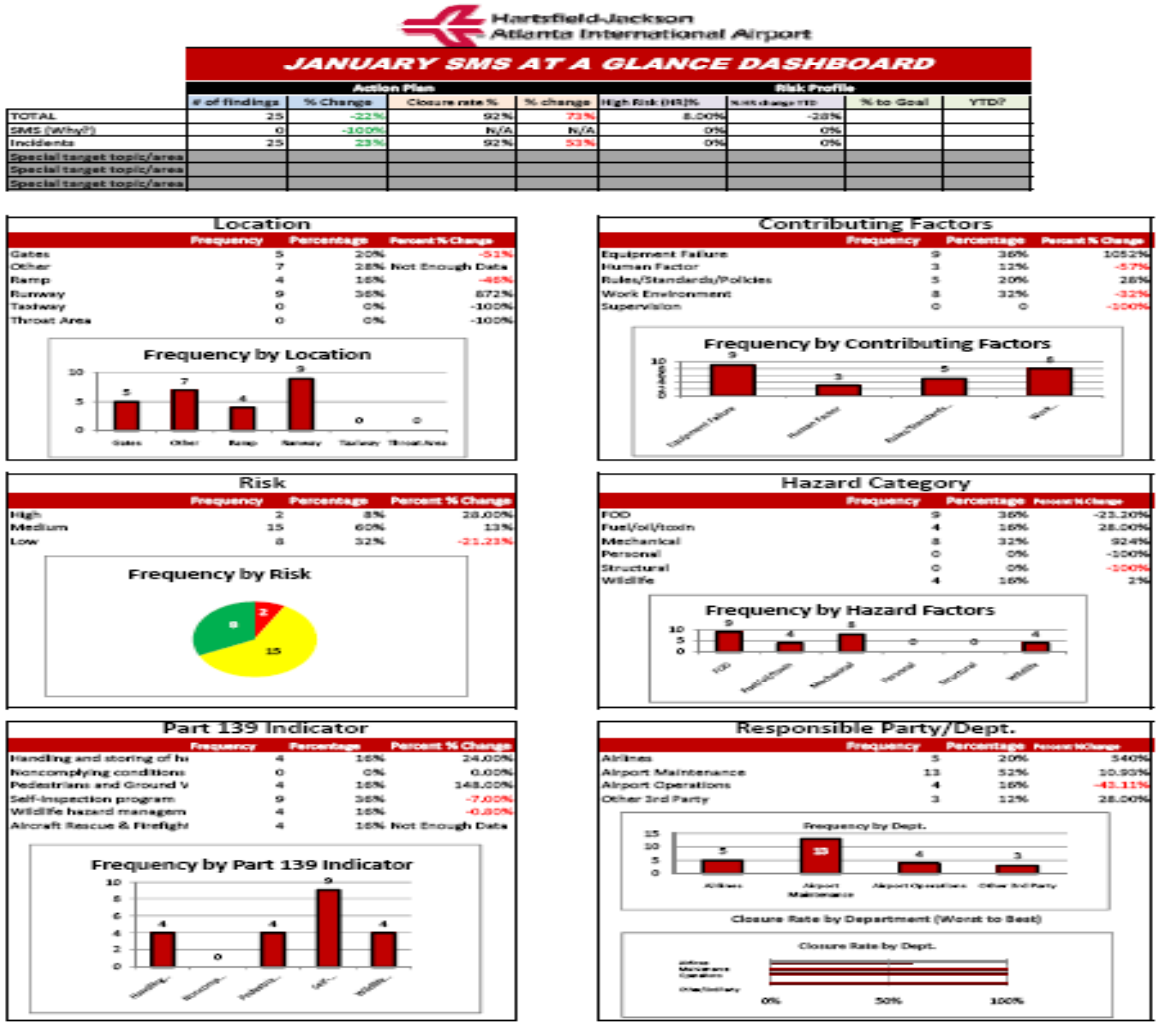
- Safety Management System and Risk Management philosophy both include the concept of:
  - Continuous Improvement
- This means ongoing efforts should continually be looking for opportunities to improve, or REDUCE RISKS
- Set targets for risk reduction, either buy developing
  - Corrective Actions for additional Controls and or
  - SMS Goals to investigate, fund etc. additional controls

AIRPORT SECURITY AND OPERATIONS COMPLIANCE SYSTEM SOFTWARE

- ASOCS provides a computer-based means to document all airport inspections, incidents, manage the Part 139 compliance process, document calls for service, issue NOTAMS, and store operational and activity data for the facilities. ASOCS allows for a simple means of data research, report generation, and providing an easily accessible and searchable, yet secure, server-based database of information.



SMS Dashboard - Sample - Part 139



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JANUARY SMS AT A GLANCE DASHBOARD

	Action Plan				Risk Profile			
	# of findings	% Change	Closure rate %	% change	High Risk (HR)%	% change YTD	% to Goal	YTD?
TOTAL	25	-22%	92%	73%	8.00%	-28%		
SMS (Why?)	0	-100%	N/A	N/A	0%	0%		
Incidents	25	-23%	92%	53%	0%	0%		
Special target topic/area								
Special target topic/area								
Special target topic/area								

Location

	Frequency	Percentage	Percent % Change
Gates	5	20%	-51%
Other	7	28%	Not Enough Data
Ramp	4	16%	-46%
Runway	9	36%	872%
Taxiway	0	0%	-100%
Throat Area	0	0%	-100%

Frequency by Location

Contributing Factors

	Frequency	Percentage	Percent % Change
Equipment Failure	9	36%	1052%
Human Factor	3	12%	-57%
Rules/Standards/Policies	5	20%	28%
Work Environment	8	32%	-32%
Supervision	0	0	-100%

Frequency by Contributing Factors

Risk

	Frequency	Percentage	Percent % Change
High	2	8%	28.00%
Medium	15	60%	13%
Low	8	32%	-21.23%

Frequency by Risk

Hazard Category

	Frequency	Percentage	Percent % Change
FOD	9	36%	-23.20%
Fuel/oil/Icoin	4	16%	28.00%
Mechanical	8	32%	92.4%
Personal	0	0%	-100%
Structural	0	0%	-100%
Wildlife	4	16%	2%

Frequency by Hazard Factors

Part 139 Indicator

	Frequency	Percentage	Percent % Change
Handling and storing of hi	4	16%	24.00%
Noncomplying conditions	0	0%	0.00%
Pedestrians and Ground V	4	16%	148.00%
Self-inspection program	9	36%	-7.00%
Wildlife hazard managem	4	16%	-0.80%
Aircraft Rescue & Firefight	4	16%	Not Enough Data

Frequency by Part 139 Indicator

Responsible Party/Dept.

	Frequency	Percentage	Percent % Change
Airlines	5	20%	540%
Airport Maintenance	13	52%	10.93%
Airport Operations	4	16%	-43.11%
Other 3rd Party	3	12%	28.00%

Frequency by Dept.

Closure Rate by Department (Worst to Best)

Closure Rate by Dept.

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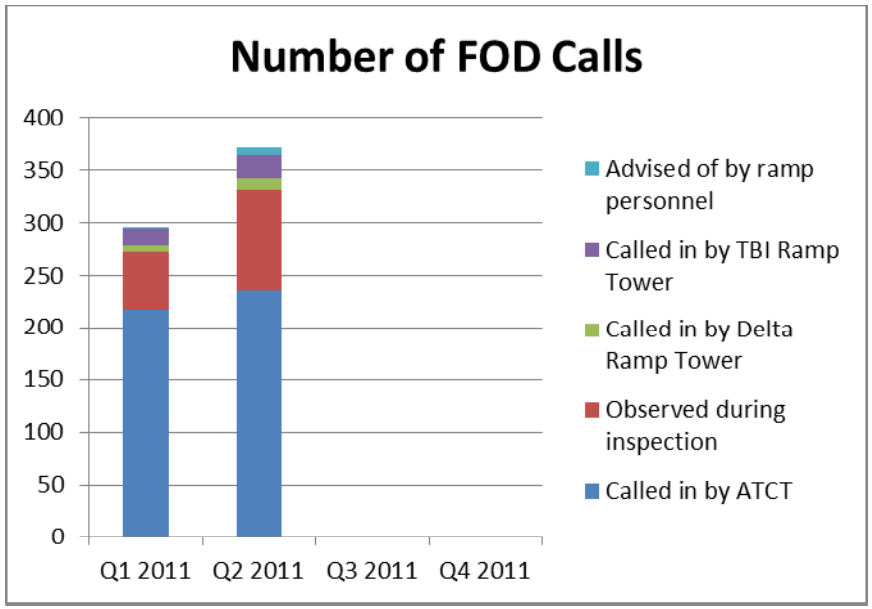
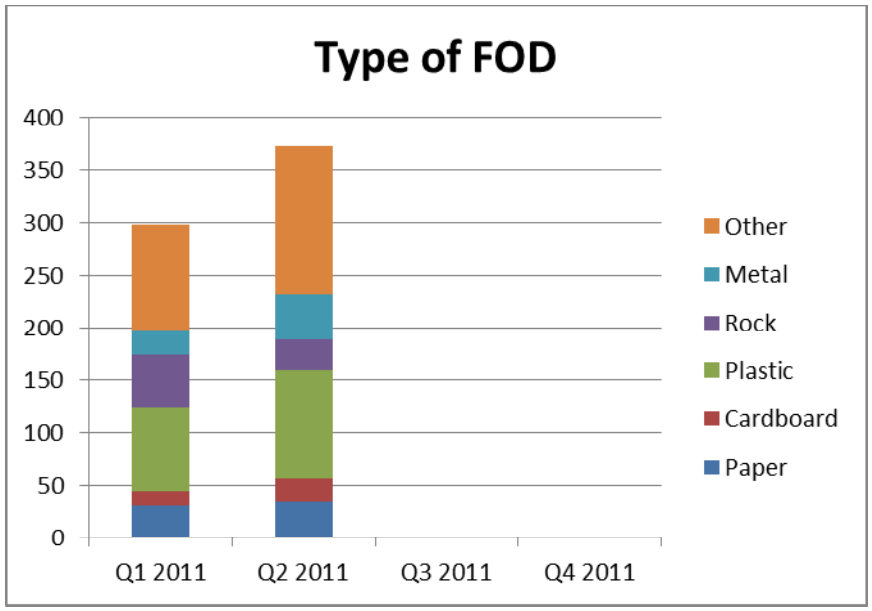
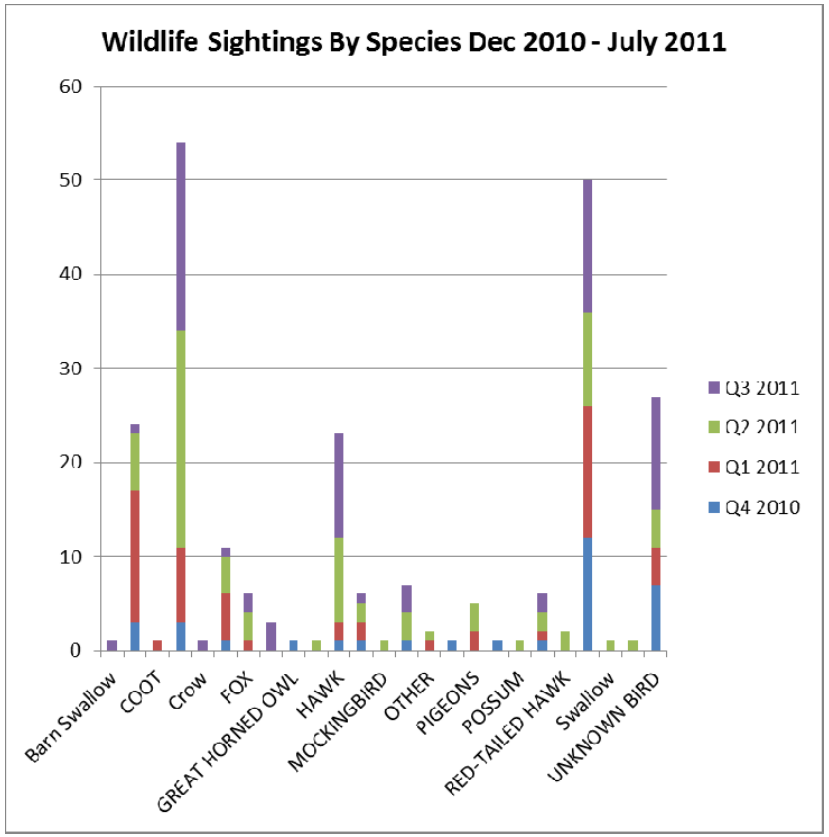
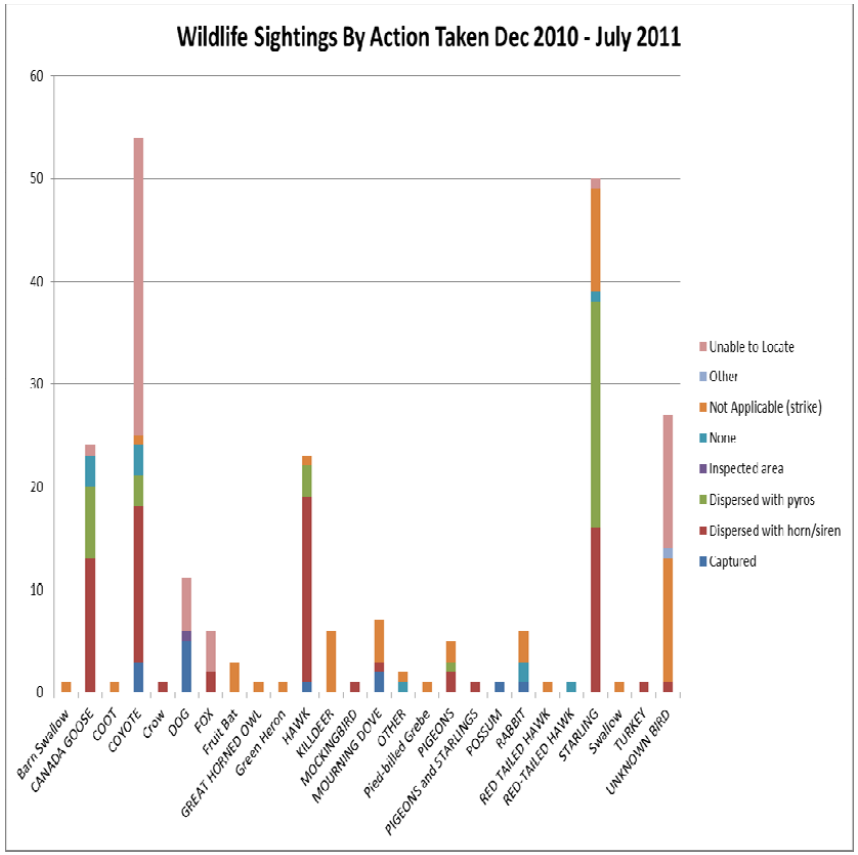
SMS Dashboard - Sample - Part 139





SMS Dashboard - Sample - Part 139





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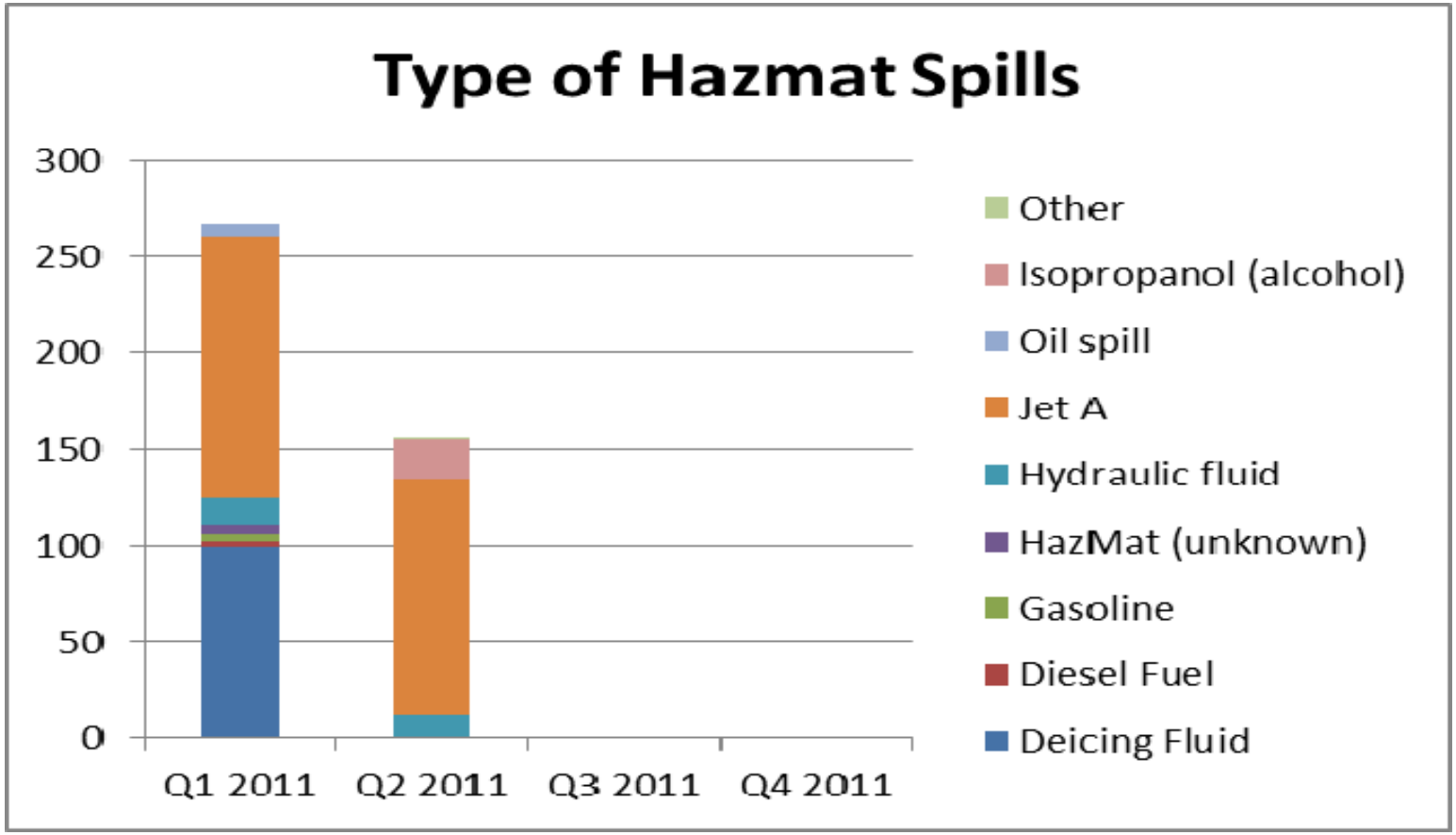
SMS Dashboard - Sample - Part 139



SMS Performance Assessment

- Internal assessment was a focus audit on the implementation of Safety Risk Management components.
- Used ESIS Insurance assessment tool based on the SMS NPRM

2.0 Risk Management	*The organization will develop processes to understand the critical characteristics of its systems and operational environment and apply this knowledge to identify hazards, analyze and assess risk and design risk controls.*				
2.1 Hazard Identification	*The organization will identify and document the hazards in its operations that are likely to cause death, serious physical harm, or damage to equipment or property in sufficient detail to determine associated level of risk and risk acceptability.*				
Evidence:	D. Written SRM Process, Risk Assessments, Hazard Reports, Corrective Action Logs. I. Top Mgmt, SMS Executive, Key risk Assessment Personnel V. Significant risks and their controls.				
2.1.1	The organization has clearly documented the System Description and Task Analysis Process.	Outlined in SMS Manual	M	3	3
2.1.2	Procedures will also define who is responsible for accomplishing the process.	Outlined in SMS Manual; SRM Panel Organizational Chart	M	3	3
2.1.3	The organization has clearly identify who is responsible for the quality of the Hazard Identification Process. The process is effective.	Need More Clarification	N/A		0
2.1.4	There is a process to identified and document hazards based on task analysis.	Outlined in SMS Manual	M	3	3
2.1.5	A high hazard task and activity list is documented and maintained.	Activity List Premature	UD	1	3
2.1.6	Hazard information is tracked.	Work In Progress	UD	1	3
2.1.7	The hazards associated with aircraft, vehicles, equipment, tools and materials and their maintenance procedures are considered.	Yes	M	3	3
2.1.8	The hazards associated with hazardous and toxic substances are considered.	Yes	PM	2	3
2.1.9	The hazards associated with mechanical and structural issues are considered.	Yes	M	3	3
2.1.10	The hazards associated with physical environment, i.e. runways, taxiways, structures, NAVAID's are considered.	Yes	M	3	3
2.1.11	The hazards associated with incident history are considered.	Yes	UD	1	3
2.1.12	Hazards associated with the human element are considered.	Yes	M	3	3
2.1.13	Hazards associated with the environmental conditions (i.e. weather) are considered.	Yes	PM	2	3
2.1.14	Hazards associated with external services (e.g., FBO, FAA, or law enforcement, etc.) are considered.	Yes	M	3	3
2.1.15	The organization identifies and documents hazards that are likely to cause death, serious physical harm, or damage to equipment or property in sufficient detail to determine associated risk and acceptability.	Yes: Risk Matrix Established	M	3	3
		Total:		34	42
					81%

Challenges

- Safety Risk Management: FAA guidance material does not address which entity (airport, air carrier, service provider, etc.) is responsible for accepting any known risks for shared responsibilities/areas.
- Develop a documented process/protocol for the Airport and its business partners ensuring acceptance and harmonization of the decision making process and defining responsibilities to evaluate, accept and mitigate risks; need to be addressed in each operator's particular SMS (i.e. MOUs MOAs, Lease Agreements).

Challenges Continued

- Time required to conduct an SRM Panel can be substantial depending on the nature of the scenario; After three risk assessments, none were completed within a six-hour, one-day session; should be two four-hour sessions to complete an external risk assessment.
- The initial SRM Tools that were used from the ACRP Report 1 Safety Management System for Airports, Volume 2: Guide Book was inadequate for an effective risk assessment evaluation.
- Safety Assurance: The FAA should provide an example of an SMS assessment table that airports could use when conducting an assessment. The ACRP SMS Guidebook and ICAO provide examples of SMS assessment tables.

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Challenges Continued

- FAA should provide resources to assist airports in creating a training curriculum. ICAO has provided a ten-module presentation and handouts on the ICAO website for the industry to use. This would provide a uniform and consistent set of standards for initial and recurrent training that would meet the goals and expectations of SMS.
- FAA should provide guidance on how the airport, air carrier and FAA Air Traffic SMS programs would interface. There are concerns related to responsibilities, auditing processes and interests regarding ramp/gate areas that may be exclusively leased by an air carrier or other entity; provide guidance on how these issues should be addressed with regards to notification and data sharing requirements.

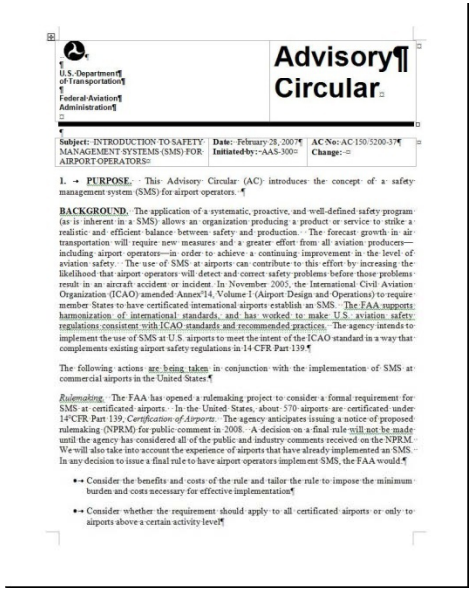
Benefits

- The use of SMS at ATL can contribute by increasing the likelihood that airport operators will detect and correct safety problems before those problems result in an aircraft incident or accident.
- The SMS will allow ATL to realistically and efficiently balance safety and operations. Perhaps most importantly, ATL will be at the forefront of the FAA mandated SMS requirement for all airports in the future.
- The Safety Risk Assessment process is helping to effectively evaluate, hazards with construction projects and changes on the airfield.
- Establishing an SMS Working Group with tenant involvement has provided cohesive business relationships in the development and refinement of the ATL SMS Program. The SMS Working Group will become the Safety Committee, as directed in the SMS Program.

Benefits

- The ASOCS database system is very beneficial for Part 139 reporting and being able to fulfill SMS reporting requirements. The SMS Dashboard will supplement the ASOCS data with trend analysis and tracking capability.
- This Part 139 Implementation Study provided ATL a robust SMS program with more resources and tools, a refined SMS Manual, and an informed staff on the Safety Risk Management and Safety Assurance components of SMS. Overall, this will enhance safety initiatives at ATL.
- As a result of partnering with ESIS Insurance and the Air Traffic Organization, the following have been successfully developed:
  - Robust Safety Risk Assessment process, a
  - Conceptual SMS Dashboard/SMS Module to be incorporated into the ASOCS system for SMS reporting
  - Through SMS Manual and Implementation Plan,
  - An effective SMS Performance Assessment Tool

Principle Reference Documents



U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: INTRODUCTION TO SAFETY MANAGEMENT SYSTEMS (SMS) FOR AIRPORT OPERATORS	Date: February 28, 2007	AC No: AC 150/5200-37
	Initiated by: AAS-300	Change:

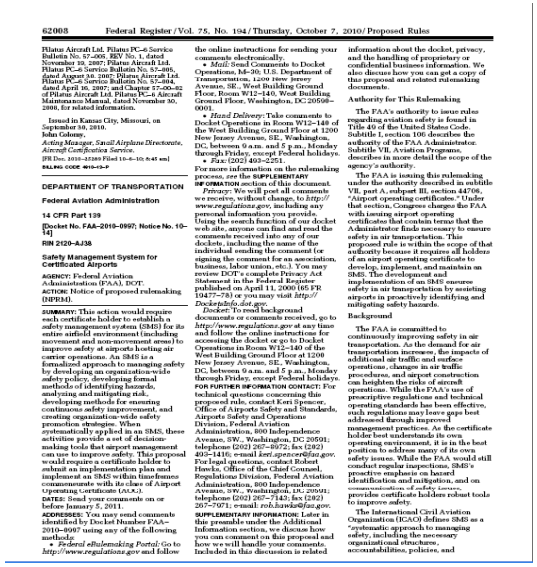
1. PURPOSE. This Advisory Circular (AC) introduces the concept of a safety management system (SMS) for airport operators.

BACKGROUND. The application of a systematic, proactive, and well-defined safety program (as is inherent in a SMS) allows an organization producing a product or service to strike a realistic and efficient balance between safety and production. The forecast growth in air transportation will require new measures and a greater effort from all aviation producers—including airport operators—in order to achieve a continuing improvement in the level of aviation safety. The use of SMS at airports can contribute to this effort by increasing the likelihood that airport operators will detect and correct safety problems before those problems result in an aircraft accident or incident. In November 2005, the International Civil Aviation Organization (ICAO) amended Annex 14, Volume I (Airport Design and Operations) to require member States to have certificated international airports establish an SMS. The FAA supports harmonization of international standards, and has worked to make U.S. aviation safety regulations consistent with ICAO standards and recommended practices. The agency intends to implement the use of SMS at U.S. airports to meet the intent of the ICAO standard in a way that complements existing airport safety regulations in 14 CFR Part 139.

The following actions are being taken in conjunction with the implementation of SMS at commercial airports in the United States.

Rulemaking. The FAA has opened a rulemaking project to consider a formal requirement for SMS at certificated airports. In the United States, about 570 airports are certificated under 14 CFR Part 139, *Certification of Airports*. The agency anticipates issuing a notice of proposed rulemaking (NPRM) for public comment in 2008. A decision on a final rule will not be made until the agency has considered all of the public and industry comments received on the NPRM. We will also take into account the experience of airports that have already implemented an SMS. In any decision to issue a final rule to have airport operators implement SMS, the FAA would:

- Consider the benefits and costs of the rule and tailor the rule to impose the minimum burden and costs necessary for effective implementation.
- Consider whether the requirement should apply to all certificated airports or only to airports above a certain activity level.



62008 Federal Register / Vol. 75, No. 194 / Thursday, October 7, 2010 / Proposed Rules

Pilatus Aircraft Ltd. Pilatus PC–6 Service Bulletin No. 57–005, REV No. 1, dated November 10, 2007; Pilatus Aircraft Ltd. Pilatus PC–6 Service Bulletin No. 57–005, dated August 30, 2007; Pilatus Aircraft Ltd. PC–6 Aircraft Maintenance Manual, dated April 30, 2007; and Chapter 57–00–02 of Pilatus Aircraft Ltd. Pilatus PC–6 Aircraft Maintenance Manual, dated November 30, 2008, for related information.

Issued in Kansas City, Missouri, on September 30, 2010.

John Colomy,
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2010–25360 Filed 10–6–10; 8:45 am]
BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 139

[Docket No. FAA–2010–0997; Notice No. 10–14]

RIN 2120–AJ38

Safety Management System for Certificated Airports

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action would require each certificate holder to establish a safety management system (SMS) for its entire airfield environment (including movement and non-movement areas) to improve safety at airports hosting air carrier operations. An SMS is a formalized approach to managing safety by developing an organization-wide safety policy, developing formal methods of identifying hazards, analyzing and mitigating risk, developing methods for ensuring continuous safety improvement, and creating organization-wide safety promotion strategies. When systematically applied in an SMS, these activities provide a set of decision-making tools that airport management can use to improve safety. This proposal would require a certificate holder to submit an implementation plan and implement an SMS within timeframes commensurate with its class of Airport Operating Certificate (AOC).

DATES: Send your comments on or before January 5, 2011.

ADDRESSES: You may send comments identified by Docket Number FAA–2010–0997 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov* and follow the online instructions for sending your comments electronically.
- *Mail:* Send Comments to Docket Operations, M–30; U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.
- *Hand Delivery:* Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- *Fax:* (202) 493–2251.

For more information on the rulemaking process, see the SUPPLEMENTARY INFORMATION section of this document.

Privacy: We will post all comments we receive, without change, to *http://www.regulations.gov*, including any personal information you provide. Using the search function of our docket web site, anyone can find and read the comments received into any of our dockets, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477–78) or you may visit *http://DocketInfo.dot.gov*.

Docket: To read background documents or comments received, go to *http://www.regulations.gov* at any time and follow the online instructions for accessing the docket or go to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this proposed rule, contact Keri Spencer, Office of Airports Safety and Standards, Airports Safety and Operations Division, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–8972; fax (202) 493–1410; e-mail *keri.spencer@faa.gov*. For legal questions, contact Robert Hawks, Office of the Chief Counsel, Regulations Division, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–7143; fax (202) 267–7971; e-mail: *rob.hawks@faa.gov*.

SUPPLEMENTARY INFORMATION: Later in this preamble under the Additional Information section, we discuss how you can comment on this proposal and how we will handle your comments. Included in this discussion is related information about the docket, privacy, and the handling of proprietary or confidential business information. We also discuss how you can get a copy of this proposal and related rulemaking documents.

Authority for This Rulemaking

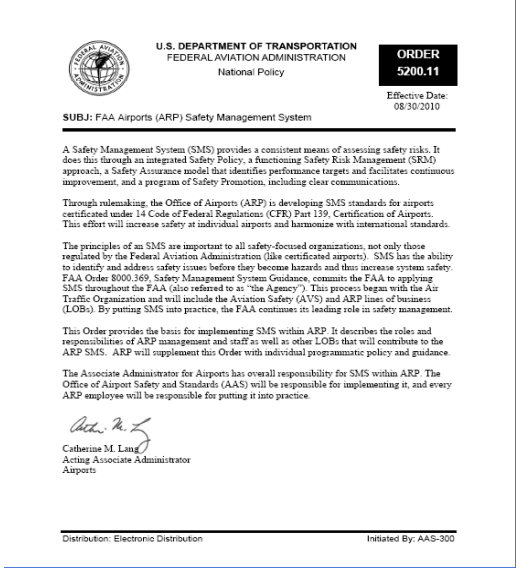
The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

The FAA is issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44706, "Airport operating certificates." Under that section, Congress charges the FAA with issuing airport operating certificates that contain terms that the Administrator finds necessary to ensure safety in air transportation. This proposed rule is within the scope of that authority because it requires all holders of an airport operating certificate to develop, implement, and maintain an SMS. The development and implementation of an SMS ensures safety in air transportation by assisting airports in proactively identifying and mitigating safety hazards.

Background

The FAA is committed to continuously improving safety in air transportation. As the demand for air transportation increases, the impacts of additional air traffic and surface operations, changes in air traffic procedures, and airport construction can heighten the risks of aircraft operations. While the FAA's use of prescriptive regulations and technical operating standards has been effective, such regulations may leave gaps best addressed through improved management practices. As the certificate holder best understands its own operating environment, it is in the best position to address many of its own safety issues. While the FAA would still conduct regular inspections, SMS's proactive emphasis on hazard identification and mitigation, and on [illegible] of safety issues, provides certificate holders robust tools to improve safety.

The International Civil Aviation Organization (ICAO) defines SMS as a "systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies, and



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
National Policy

ORDER 5200.11

Effective Date: 08/30/2010

SUBJ: FAA Airports (ARP) Safety Management System

A Safety Management System (SMS) provides a consistent means of assessing safety risks. It does this through an integrated Safety Policy, a functioning Safety Risk Management (SRM) approach, a Safety Assurance model that identifies performance targets and facilitates continuous improvement, and a program of Safety Promotion, including clear communications.

Through rulemaking, the Office of Airports (ARP) is developing SMS standards for airports certificated under 14 Code of Federal Regulations (CFR) Part 139, Certification of Airports. This effort will increase safety at individual airports and harmonize with international standards.

The principles of an SMS are important to all safety-focused organizations, not only those regulated by the Federal Aviation Administration (like certificated airports). SMS has the ability to identify and address safety issues before they become hazards and thus increase system safety. FAA Order 8000.369, Safety Management System Guidance, commits the FAA to applying SMS throughout the FAA (also referred to as "the Agency"). This process began with the Air Traffic Organization and will include the Aviation Safety (AVS) and ARP lines of business (LOBs). By putting SMS into practice, the FAA continues its leading role in safety management.

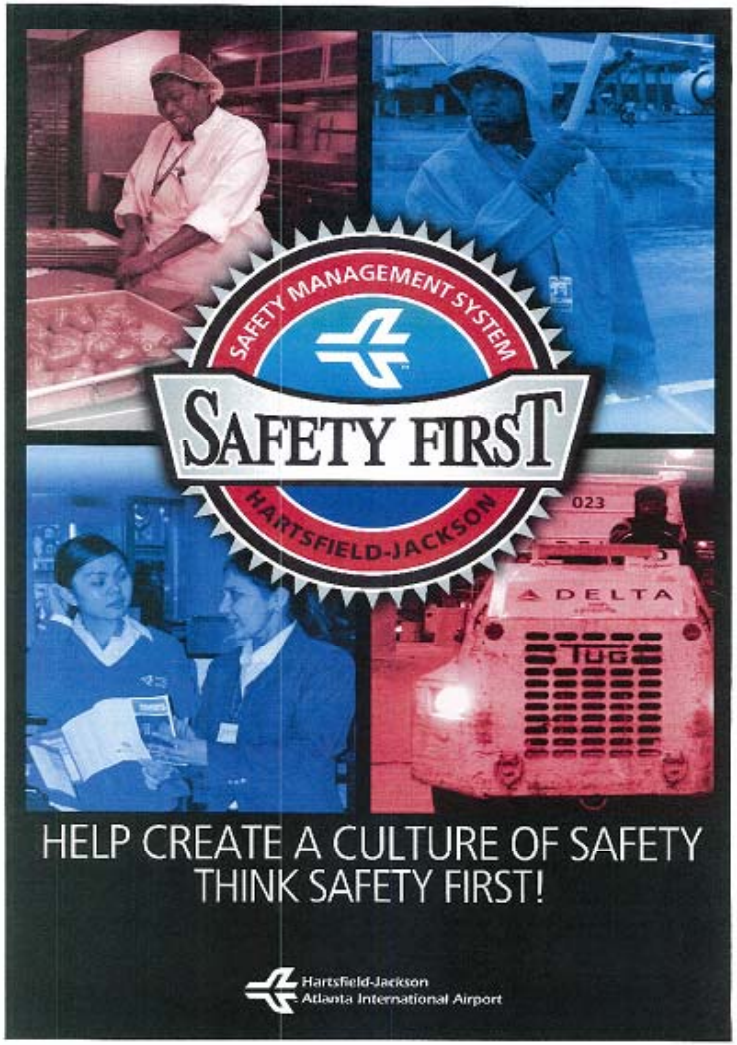
This Order provides the basis for implementing SMS within ARP. It describes the roles and responsibilities of ARP management and staff as well as other LOBs that will contribute to the ARP SMS. ARP will supplement this Order with individual programmatic policy and guidance.

The Associate Administrator for Airports has overall responsibility for SMS within ARP. The Office of Airport Safety and Standards (AAS) will be responsible for implementing it, and every ARP employee will be responsible for putting it into practice.

Catherine M. Lang
Acting Associate Administrator
Airports

Distribution: Electronic Distribution — Initiated By: AAS-300

HJAIA SMS Logo & Safety Poster



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SMS Pilot Study Experience Summary

- SMS will increase the likelihood that airport operators will detect and correct safety problems before those problems result in an aircraft accident or incident.
- The SMS will allow ATL to strike a realistic and efficient balance between safety and operations, and most importantly, ATL will be in the forefront of the upcoming FAA mandatory SMS requirement for all airports in the future.
- The SMS initiative will help support the strategic priorities *enhancing the customer experience* and *optimizing operational efficiencies*.

Questions ?

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