4th ANNUAL NATIONAL SAFETY SEMINAR

13 OCTOBER 2010

BEYOND SMS THEORY

Decision Making
& Managing Risk

SOUTH AFRICAN
CIVIL AVIATION
AUTHORITY

Airports Company South Africa

Safety Management System

4th ANNUAL NATIONAL SAFETY SEMINAR

SOUTH AFRICAN CIVIL AVIATION AUTHORITY

CONTENTS

- **Introduction**
- **Safety Policy Statement; Managing Directors Statement of Corporate Safety Commitment**
- **Palladium Safety Occurrence Reporting System**
- **Acceptable Level of Safety**

  ACSA's Safety Key Performance Indicators and Safety Targets
- **Safety Key Performance Indicators and Safety Targets (2005 -2010)**
- **What can be done by the industry and the SA CAA to speed up the process of implementation of the SMS?**

Introduction

Where are we in terms of SMS implementation?

ICAO Annex 14, chapter 1.3 ICAO Standard:

1.3.6 As of 24 November 2005, a **certified** aerodrome **shall have** in operation a Safety Management System (SMS).

Airports Company South Africa has developed and implemented:

- Safety Management System Manuals for the 10 ACSA operated and managed airports since October 2005;
- Palladium Safety Occurrence Reporting System was developed and implemented since 2004;
- Key Performance Safety Indicators were developed and implemented since 2005;

All the elements of the SMS were developed and implemented in the absence of any national legislation relating to SMS, not to ensure compliance, but because we have seen the merit in implementation of the SMS.

ACSA's Safety Policy Statement

Managing Directors Statement of Corporate Safety Commitment as required by the SMS

- Safety Policy Statement as required by the SMS: Signed Safety Policy by Managing Director.pdf

- Managing Directors Statement of Corporate Safety Commitment as required by the SMS: Signed Managing Directors Statement Of Corporate Safety Commitement.pdf

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Palladium Safety Occurrence Reporting System

All Airports

DATA CATEGORIES	JNB	CPT	DUR	ELS	PLZ	GRJ	KIM	BFN	NTY	UTN	Total + Avr Rate
APRON EQPT. - AIRCRAFT	0	1	0	0	0	0	0	0	0	0	1
APRON EQPT. - APRON EQPT.	3	1	0	0	0	0	0	0	0	0	4
APRON EQPT. - FACILITY/PROPERTY	2	0	0	0	0	0	0	1	0	0	3
APRON EQPT. - VEHICLE	8	0	0	1	0	0	0	0	0	0	9
VEHICLE - VEHICLE	2	0	0	0	0	0	0	0	0	0	2
VEHICLE - FACILITY/PROPERTY	0	1	0	0	0	1	0	0	1	1	4
VEHICLE - AIRCRAFT	0	1	0	0	0	0	0	0	0	0	1
AIRCRAFT - FACILITY/PROPERTY	0	0	1	0	0	0	0	0	1	0	2
AIRCRAFT - AIRCRAFT	2	0	0	0	0	0	0	0	0	0	2
FOD-RELATED INCIDENTS	2	0	0	1	0	0	0	0	0	0	3
TOTAL ACCIDENTS/INCIDENTS	19	4	1	2	0	1	0	1	2	1	31

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Acceptable Level of Safety

Safety Key Performance Indicators:

- Apron Incidents and Accidents;
- Runway Incursions;
- Bird and wildlife strikes;

Proposed Target:

It is proposed that Apron safety is measured by the number of incidents/accidents per 1,000 aircraft movements.
It is recommended that the regional (Africa) average of incident/accident rate as published by the ACI, in the ACI Survey on apron incidents and accidents, be adopted as a target for all airports in RSA.

It is recommended that the ACI Safety Ratios for Africa Region published in the 2004 ACI Survey are adopted as a starting/base safety targets.

KPI 1 - Apron Incidents and Accidents (Cont.)

Proposed Comparability of airports:

Airport traffic conditions differ widely, with some airports experiencing more congestion than others. In order to make comparisons, it is recommended that the airports in RSA be divided in two groups:

i) First group includes airports at which there were more than 6000 aircraft movements during the month of November of the previous year;

ii) While the second group includes airports with fewer than 6000 movements in the same month;

The level of 6000 movements represents approximately one aircraft movement every two or three minutes during peak traffic hours, signalling the onset of apron congestion.

KPI 2 - Runway Incursions

- Runway incursions have sometimes led to serious accidents with significant loss of life. Although they are not a new problem, runway incursions have been on the rise along with increase of traffic. (ACI)

- Safety survey data have shown that pilots, drivers and controllers consider runway incursions and the potential for collusions to be the most significant risk in aerodrome operations. (ACI)

- **Proposed Target:**

  Due to the significance of the risk associate with runway incursions, it is proposed that safety target of 0 runway incursions be set for all airports in RSA.

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Bird and Wild Life Management

- Airports Company South Africa in partnership with the Endangered Wildlife Trust has established and implemented an airport specific Bird and Wildlife Management Program;
- The EWT provides ACSA with advise on the existing best international practices for dealing with birds and wild life at ACSA operated airports;
- In many instances the measures implemented at ACSA operated airports for bird and wildlife control are unique and ground breaking for the aviation industry;

AIRPORTS COMPANY SOUTH AFRICA

ENDANGERED WILDLIFE TRUST
AIRPORT WILDLIFE PROGRAMME
conservation in action

Bird and wildlife

KPI 3 - Bird and wildlife

- Taking into account the nature of bird and wildlife strikes and the complexity of factors impacting on the increase or decrease of bird/wildlife activities at a specific airport and surroundings it is proposed that a specific targets based on historical data be set for the specific airports. Unfortunately there can not universal target set for all the airports.

Target:

It is proposed that Bird strike risk benchmark is determined for every single airport as per the example bellow for every 10 000 air traffic movements as per the requirement of relevant ICAO Manual:

Define:

- High;
- Medium;
- Low;

Risk value for every type of bird strike.

KPI 3 - Bird and wildlife (Cont.)

2010 Targets

Airport	Bird Strike Rate / 10 000 ATMs
FABL	13.6
FACT	1.3
FALE	9.7
FAEL	8.2
FAGG	3.0
FAJS	4.9
FAKM	7.6
FAPN	0.7
FAPE	2.7
FAUP	0.6

What can the industry do to accelerate the implementation of the SMS requirements?

- **Achieving positive safety culture:**

  All workshops and forums are not attended by the CEO's and senior decision makers in organisations from the industry and this is a problem, as we are preaching to the converted. We need to target Captains of Industry and make them actively participate and drive the safety process.

- **Speeding up the process of implementation of SMS requirements:**

  The CEO's of organizations shall be asked to conduct GAP analysis in terms of SMS implementation and provide the Director of Civil Aviation with feedback on their current progress.

What can the industry do to accelerate the implementation of the SMS requirements?(Cont.)

- **Enforcement of standards:**

  Director of SA CAA, use your powers to enforce the set standards, for example: Ask CEO's of organizations to conduct GAP analysis of qualifications and experience of Safety Managers and safety personnel and provide you with action plans and feedback. This will provide necessary focus on Safety training.

  Determine an acceptable level of Safety in conjunction with the airport operators and set Safety **Key** Performance Indicators and Targets.

What can the industry do to accelerate the implementation of the SMS requirements?(Cont.)

The CEO's of organizations shall be asked to conduct self analysis in terms of existing safety culture in their respective organizations and provide reports to the Director of Civil Aviation as per the ICAO **Doc 9859:**

EXISTING SAFETY CULTURE

Characteristics of different safety cultures (as defined by ICAO Doc 9859)

Safety Culture: → / Characteristics ↓	Poor	Bureaucratic	Positive
Hazard information is:	Supressed	Ignored	Actively sought
Safety messengers are:	Discouraged or punished	Tolerated	Trained and encouraged
Responsibility for safety is:	Avoided	Fragmented	Shared
Dissemination of safety information is:	Discouraged	Allowed but discouraged	Rewarded
Failures lead to:	Cover-ups	Local fixes	Inquiries and systematic reform
New ideas are:	Crushed	Considered as new problems (not opportunities)	Welcomed