



**SMS-ANALYSIS TECHNIQUES** 

NAS Powered by Menzies Aviation



# **Contents**



# What is an SMS?

• S □ **SAFETY**:

Safe operations concerning the whole organization.

• M □ MANAGEMENT:

Resource planning and assignment.

• S ☐ SYSTEM:

Organized set of processes & procedures.



**NAS Safety Policy** 

underpins the strategic approach to the Organisation's success and aims to guide us in our

We are fully committed to a safety-first culture for employees and non-employees and fully committed to a process of continual improvement to ensure efficient systems of work are available to safeguard employees, operational activities, and customers alike.

We will do this by setting the highest standards for safety, security, environmental and performance. We will focus on putting our employees and customers first, working harder to listen to their views and deliver, or exceed the quality and service they expect.

Promote proactive and systematic safety management and a positive safety culture.

continually promote the safety policy to all personnel, demonstrate its commitment to it, and provide necessary human and financial resources for its implementation.

includes, where appropriate, taking responsibility for corrective and preventative

ensure all employees are competent to do their tasks, and to give them adequate

#### Serves as a statement of commitment from the upper management to:

- Provide the necessary resources for the implementation of the safety policy.
- Apply human factors principles, including giving due consideration to the aspects of

• Promote Safety Culture related errors, incidents and hazards.

a Apply Just culture principles to internal safety reporting and the investigation of occurrences and in particular, not to make available or use the information on

> to attribute blame or liability to front-line personnel or other persons for actions, omissions or decisions taken by them that are commensurate with their

- - Report all safety and quality concerns (e.g. processes, procedures, equipment) to



•Assign resources to the SMS to ensure its proper functioning.

To achieve this objective, we will maintain a Safety Management System (SMS) and a Quality Management System (QMS) that takes into consideration all maintenance operations aspects of our services and provides controls at each stage of the maintenance operations to ensure conformance against internal, regulatory & customer standards.

#### Enable continuous improvement.

- Define safety objectives and develop means for safety performance monitoring and
- Ensure that safety objectives are communicated throughout the organisation; and

# • Have a safety reporting system.

- Recognise the need for all personnel to cooperate with the compliance monitoring
- · Apply 'just culture' principles form the basis for the organisation's internal rules describing how 'just culture' principles are guaranteed and implemented.

# Working Strategies

#### **Proactive method**

- SMART
- AUDITS
- Q5
- Actively seeks to identify risks through activity analysis.

#### Reactive method

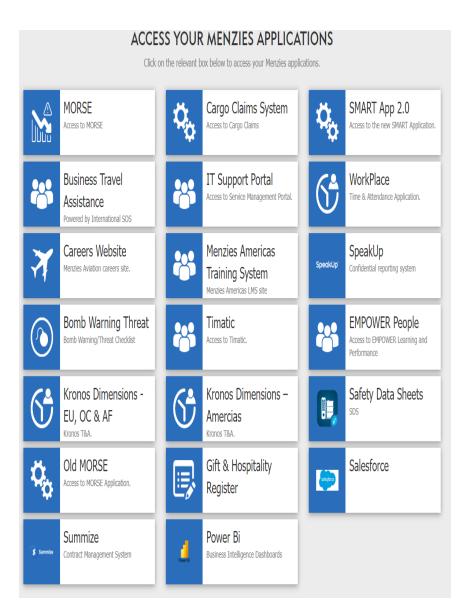
- Gives a response to situations which already took place.
- Morse
- Occurrence Report

#### **Predictive method**

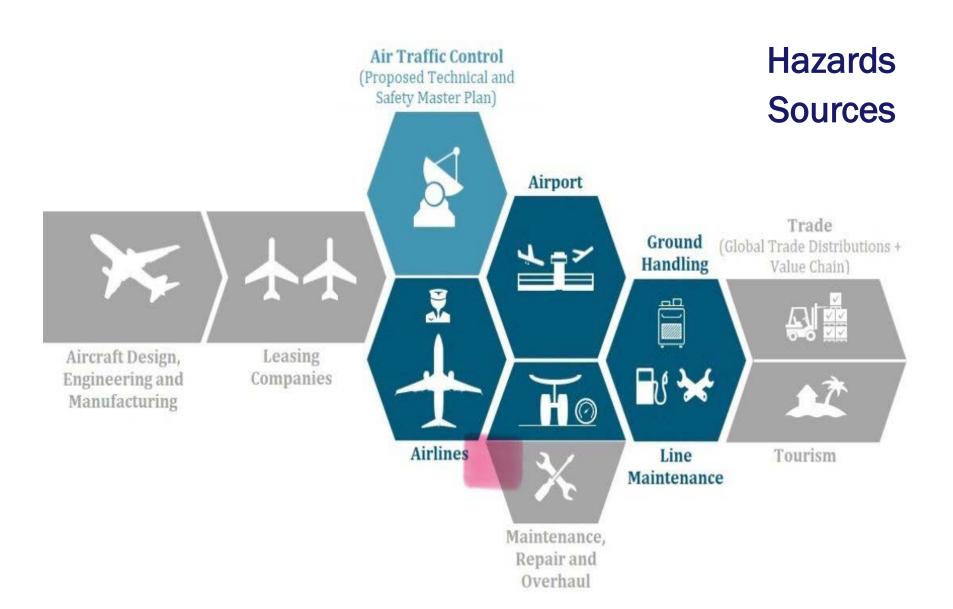
- Risk Assessment.
- SAG
- SRB.
- SPI/SPT
- Documents real performance to review it ahead of a change.

# **Analysis Techniques**

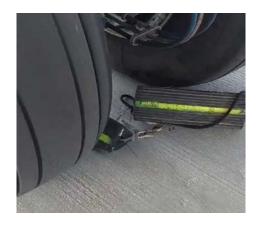
- ➤ For ICAO Complaint SMS Programs
- Based on Four Pillars of ICAO Framework
- Web Based
- Saves Time & Money
- Hazard Reporting
- Audit Management
- Affordable



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## **SNAKES**



# **RODENTS**



### **BIRDS & WILD ANIMALS**



UNFOLLOWED PROCEDURES



Examples of significant and typical aviation related hazards



WASTE OIL DISPOSAL CONTAINERS



# **KWI Internal**

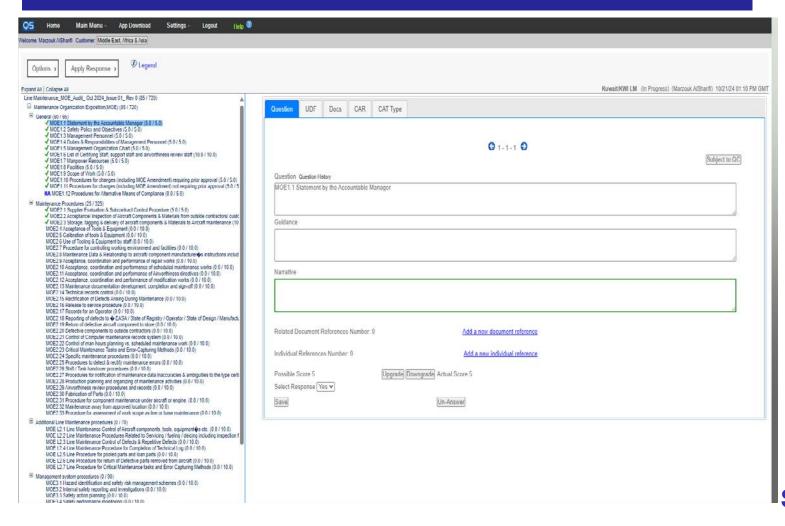
**Audit report** 

YTD 2024

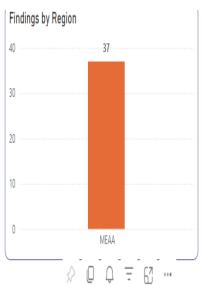


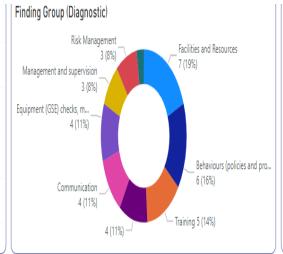


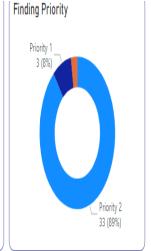
# Q5-Safety and Quality Internal Audit System



# KWI External Audit findings 2024







Findings per	·BU	Findings	per BU Type
Business Unit	Count of ID ▼	BU Type	Count of ID
KWI-GH	24	GH	25
KWI-CGO	6	CGO	6
KWI-ENG	6	LM	6
KWI-LGE	1	Total	37
Total	37		

pe	Findings per Audit Scop	е
D	Audit Scope	Count of ID ▼
5	Station Audit	16
6	GH Audit	7
6	ISO Certification Audit	4
6 <b>7</b>	Ground Handling activities	3
	Annual DGCA /Regulatory Audit for 2023-Part 145 Quality Audit	3
	Quality Compliance	2
	Airside Ground Operations	1
	Total	37

Findings per Auditing Organisation	Findings per Auditing Organisation					
External Audit Organisation Conducted by	Count of ID					
DGCA	9					
Lufthansa	8					
Emirates	6					
ISO certification	5					
DHL	3					
Air India Express	2					
Fly Dubai	2					
Salam Air	1					
SalamAir	1					
Total	37					

Findings per Finding Type					
Finding Type	Count of ID				
Other	12				
Documentation and records	4				
Equipment and Facilities	4				
	3				
Cargo Facilities	2				
GSE Maintenance	2				
Policies and	2				
Total	37				

# **SMART APPLICATION**



SMART App: SPECIFIC MEASURABLE ATTAINABLE RELEVANT TIMELY

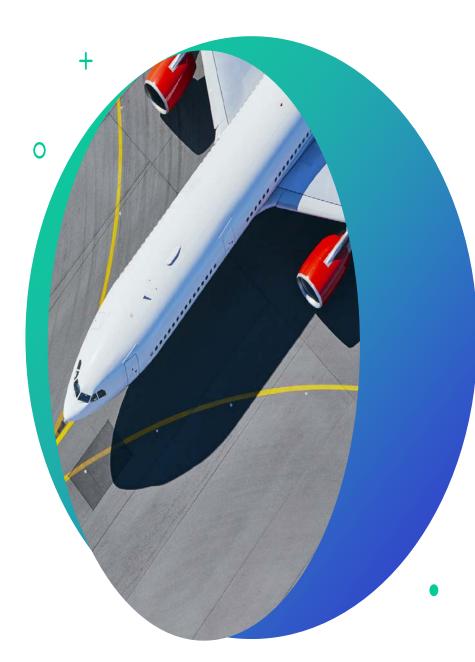
# **Event Reporting System**

 . NAS has a reporting system in place, which is key to the proper functioning of the SMS and shall involve customers as key participants

SEE SOMETHING,

SAY SOMETHING.





# **Event Reporting System**

#### Who shall report?

• Everyone shall report the events they witness.

#### How should reports be submitted?

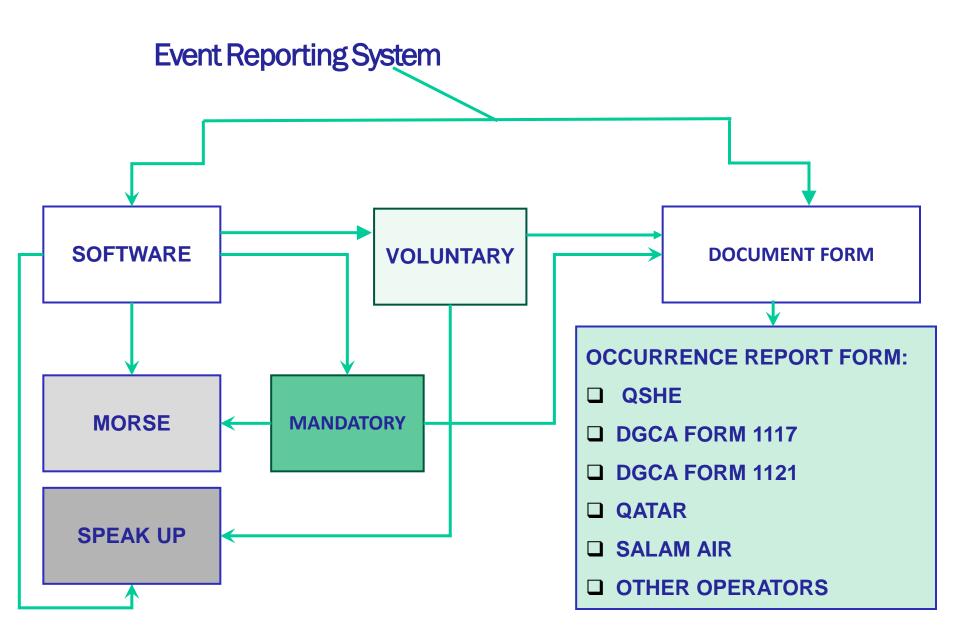
-Directly, through a Safety Focal Point or through Software applications.

#### When shall be reported?

Events shall be reported <u>ASAP</u>, & no later than <u>72</u> hours

#### What shall be reported?

Any event witnessed which may imply a Safety Risk (Ground damage, Incorrect procedure applied, Leaks, Spills, Security breaches, DG Incidents...etc)



# **MORSE**



**MORSE App-MENZIES OPERATING RESPONSIBLY SAFELY EFFECTIVELY** 

# Risk Management

Risk management is a step-by-step process for controlling safety risks caused by hazards.

- Identify hazards
- Assess the risks
- Control the risks
- Record findings
- Review the controls



# Risk Management Investigations

Incident and occurrence investigation is a major component of the organization's safety management system.

The system used the three most widely tools:

- Bowtie Analysis;
- Risk Matrix; and
- Decision Trees



# **Risk Assessment**





Emergency exits are escape routes in when ever there is a need to evacuate people. The passages leading to emergency exits must be free of obstruction, always. The existence of an emergency exit can be the difference between life and death. Emergency Exits must be regularly checked and inspected, and if any blockage is found, it must be removed immediately.



# Risk Assessment (RA)

Property Incident-Cargo kept in passage obstructing emergency exit

**BU: KWI-ENG** 

Date: 18/08/2024

Prepared by: Onias Masaka

Note: The naming convention of this document, copy and paste the

below after closing this document:

Property Incident-Cargo KWI-ENG Ref 1.13 v1

Full details on Hazard Identification & Risk Assessment Policy is contained in section 3 of the Health & Safety Manual, MOE Part SMS, PIM 5.5;2.7.2; 3.7, KCASR section 19, And ICAO document 9859

# **Risk Assessment**

RISK ASSE	SSMENT											
Identif	ied Hazard		-	niti RA			(b) Have risks been	Name of	Agreed	ris (	esid k rat Effe fter	ting ect
Identify and list any Hazards?	Identify and list who/what is at risk and how harm/damage might occur?	(a)  What are you already doing?  List any existing control measures, procedures or safeguards that already exist?	L k e l i h	1	S e v e r i	RiskRati	reduced "as low as reasonably practicable"? If not, recommend further mitigating control	responsibl e person(s)	Completion Date(s)	Likeliho	S e v e r i	R i s k R a t i
1.0 Cargo Damage	Employee (jncl agency), customer, visitor, passenger, contractor, and sub-contractor. The infection may lead to:  Cargo on passageways can be knocked over.  Unsafe Conditions	Instructions to:  - Move the cargo from the passages Find a proper storage spaces for cargo Restrict use of passages littered with cargo.  SMS  - 2.0 (2.2 - Hazard Identification, Management of Change (MoC) & Risk Assessment/Mitigation - 4.0 (4.1 Training & education) - 4.0 (4.2.1 Examples of health & safety communication) - KCASR 19-Safety Management -Part I - ICAO SAR-Standard and Recommended Practices-Annex 19-Safety Management - ICAO Safety Management Manual Document 9859 - MOE:1.8: 2.7.2: 3.7;  H&S  - 3.0 (3.3.6 - Dynamic Risk Assessment) - 3.0 (3.6 - Human Factors Programme) - 5.0 (5.1 - Accident, incident and dangerous occurrence reporting -fair and just reporting culture) - 5.0 (5.3 - Near miss incidents, non-major, personal injury) - 5.0 (5.7 - Fair and just reporting culture and accountability) - 6.0 (6.4 First aid) - 7.0 (7.1 Management of contractors, sub-contractors, and visitors)  Training - CORP_INDUCTION (MORSE Induction: Module 1 Part 2 - Human Factors)	3	2		6	Move cargo from present position to the storerooms.	Mohamed Waseem	Completed on 20/08/2024	1	2	2

# **Risk Matrix**

			Probability											
		1	1 2 3 4 5											
	5	5	10	<b>1</b> 5	20	25								
	4	4	8	12	16	20								
Severity	3	3	6	9	12	15								
Se	2	2	4	6	8	10								
	1	1	2	3	4	5								

Risk PROBABILITY Assessment						
DEFINITION	Meaning Value	Value				
Frequent	Likely to happen many times.	5				
Occasional	Likely to happen a few times.	4				
Remote	Unlikely, but possible to happen.	3				
Unlikely	Very unlikely to happen.	2				
Extremely Unlikely	Almost inconceivable that the event occurs.	1				

	Risk Severity Assessment									
Category	1 (Negligible)	2 (minor)	3 (major)	4 (hazardous)	5 (catastrophic)					
Safety	No effect	Degrades or affects procedures or aircraft performance	Significant system partial failure. Application of abnormal procedures	Significant system total failure. Application of emergency procedures	Aircraft/Hull loss.					
Life Loss	No loss	Minor Injury	Major Injury	One fatal injury	Several fatal injuries.					
Income/Propert y Impact	No loss	Minor loss (less than €50k)	Major loss (less than €100k)	Significant loss (less than €500k)	Massive loss (greater than €500k)					
Environmental Impact	No impact	Minor effect	Contained effect	Important effect	Massive effect					
Reputation Impact	No impact	Localised and limited impact	Limited impact at industry level	National/European Impact	International Impact					
-										

#### Intolerable

Tolerability >14
Requires mitigation prior to operate

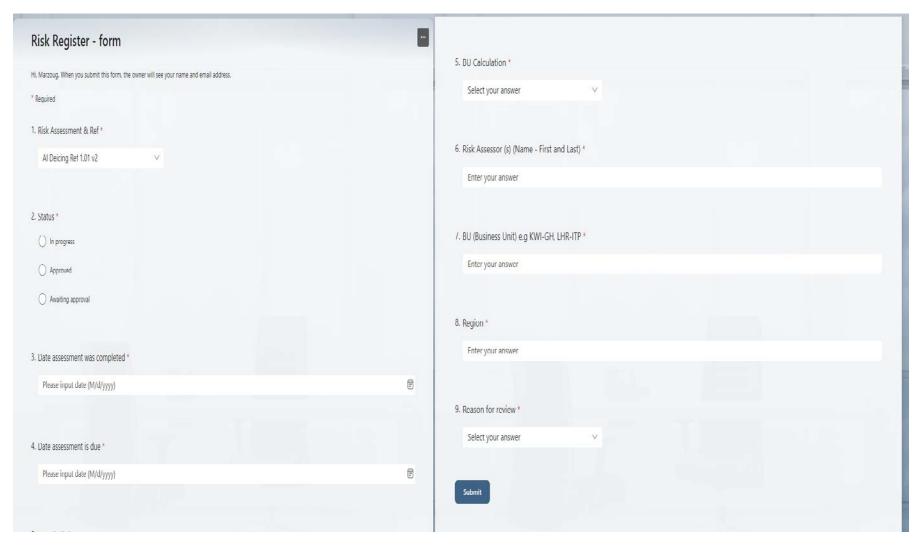
#### **Tolerable**

Tolerability between 8 and 14
Requires mitigation

Acceptable

Tolerability <8

# Risk Register



#### **MORSE WEEK**

#### **GUIDE BOOK**

#### **SAFETY NOTICES**

#### **POSTERS**









#### **EMPOWERIN TRAINING**



#### **LEARN FROM INCIDENT**



# HOURS OF AWARNESS

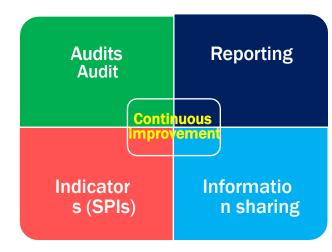
**Promotion** 

**Safety** 

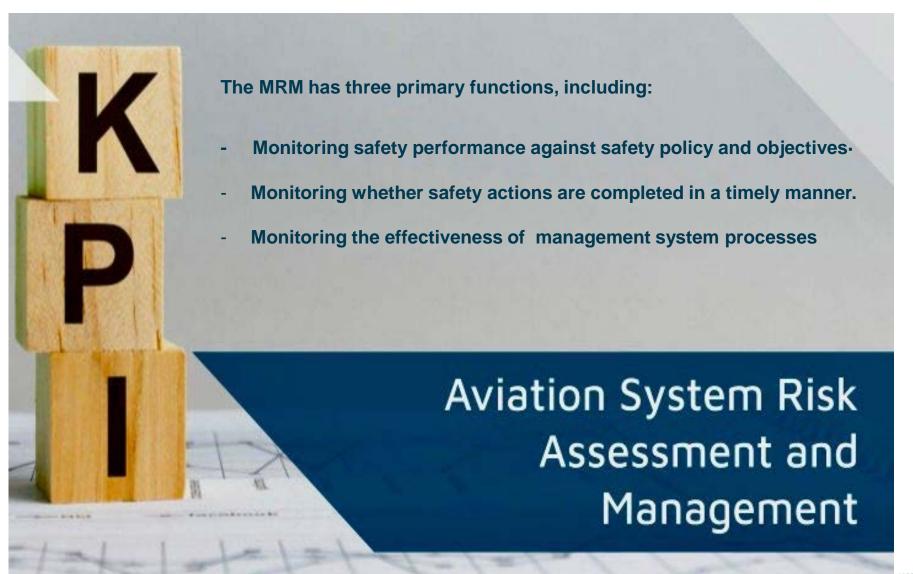


# **Operators Responsibility**

- -Provide communiqués, announcements and other documentation
- -Facilitate the sending of reports
- -Distribute applicable procedures.
- -Additionally, participate in auditing processes



# **Monthly Review Meetings**



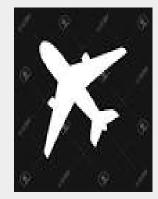
# 2024 Risk Business Plan

# "Simplify to Multiply"



Reduce 10% Personal Incidents against 2023.

"Consistent hazard identification and risk assessments"



Reduce 10 % Aircraft Incidents against 2023.

"GSE Preventive Maintenance, Weekly Inspection, Pre-use 360degree check"



Reduce 10 % Security Incidents against 2023.

"Security Training, Regular awareness on ZERO tolerance policy."



Reduce 10% Near Miss Incidents against 2023.

"Proactive hazard identification and risk assessments"

# **Lagging Indicators**

# STN Risk Business Plan- Tracker- Lagging Indicators- KWI 2024 Presented by: Mansour//Marzouq (LM)

SI	Tracking / Measure of Success	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	YTD
1	Hazard Reporting YTD >1% improvement against Pr. Yr 355 Measure: every month meet or exceed Monthly Target Average 31 Calculation: SUM (355*1%) 359/12=monthly average.					Target:≥5 Actual:2	Target:≥5 Actual:5	Target:≥5 Actual:6	Target:≥5 Actual:6	Target: ≥ 5 Actual: 6	Target:≥5 Actual:6			31
2	Near Miss YTD 10% reduction against Pr. Yr 1 Measure: every month no more than Monthly Average Calculation: SUM (2023 actual - 10%)/12=monthly average.		-			Target:≤2 Actual:0	Target:≤2 Actual:0	Target:≤2 Actual:0	Target:≤2 Actual:0	Target: ≤ 2 Actual: 0	Target:≤2 Actual:0			0
3	Personal Incident YTD 10% reduction against Pr. Yr 19 Measure: Every month no more than Monthly Average xxx Calculation: SUM (2023 actual - 10%)17 /12=monthly average.				-	Target:≤0 Actual:0	Target:≤0 Actual:0	Target:≤0 Actual:0	Target:≤0 Actual:0	Target: ≤ 0 Actual: 0	Target:≤0 Actual:0			0
4	Aircraft Incident YTD 10% reduction against Pr. Yr 6 Measure: Every month no more than Monthly Average xxx Calculation: SUM (2023 actual - 10%) 5/12=monthly average.					Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0			0
5	Security Incident YTD 10% reduction against Pr. Yr 3 Measure: Every month no more than Monthly Average xxx Calculation: SUM (2023 actual - 10%)/12=monthly average.			-		Target:≤0 Actual:0	Target:≤0 Actual:0	Target:≤0 Actual:0	Target:≤0 Actual:0	Target: ≤ 0 Actual: 0	Target:≤0 Actual:0			0
6	Vehicle/GSE Incident YTD 10% reduction against Pr. Yr 23 Measure: every month no more than Monthly Average xxx Calculation: SUM (2023 actual - 10%)21/12=monthly average.					Target:≤1 Actual: 0	Target:≤1 Actual: 0	Target:≤1 Actual: 0	Target:≤1 Actual: 0	Target:≤ 1 Actual: 0	Target:≤1 Actual: 1			1
7	Environmental YTD 10% reduction against Pr. Yr 6 Measure: every month no more than Monthly Average xxx Calculation: SUM (2023 actual - 10%)/12=monthly average.					Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0	Target: ≤ 0 Actual: 0			0
8	Property YTD 10% reduction against Pr. Yr Measure: every month no more than Monthly Average xxx Calculation: SUM (2023 actual - 10%)/12=monthly average		-			Target: ≤ 1 Actual: 0	Target: ≤ 1 Actual: 0	Target: ≤ 1 Actual: 0	Target: ≤ 1 Actual: 0	Target: ≤ 1 Actual: 0	Target: ≤ 1 Actual: 0			0

RAG Legends

Meeting Target Achieved /Better / Yes

Below monthly Target/ Worse /No

# **Leading Indicators**

SI	Tracking / Measure of Success	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	YTD
1	Consistent SMART oversight (meet the agreed monthly target, 100% (Set SMART Targets)  LM Transit checks (maintenance actions)(10) LM routine Transit checks(5)					Target:≥15 Actual:18	Target:≥15 Actual:21	Target: ≥15 Actual:26	Target: ≥15 Actual:32	Target: ≥15 Actual:16	Target: ≥15 Actual:26			139
2	No. Inspection + Spot check findings The target is NOT to have 0 findings. Guidelines: No. of findings= Insp Target x 5%.					1	2	6	6	3	4			22
3	Zero SMART overdue CARs					Target: 0 Actual: 0		Target: 0 Actual: 0	Target: 0 Actual: 0	Target: 0 Actual: 0	Target: 0 Actual: 0			0
	Zero Q5 overdue CARs					Target: 0 Actual: 0		Target: 0 Actual: 0	Target: 0 Actual: 0	Target: 0 Actual: 0	Target: 0 Actual: 0			0
4	No repeat trend two months in a row					Target: 0 Actual: 0	Target: 0 Actual: 0	Target: 0 Actual: 0	Target: 0 Actual: 0	Target: 0 Actual: 0	Target: 0 Actual: 0			0
5	YTD 95% of external audits resulting in zero findings					1 audit (2 findings)	1 audit 0 finding s	1 audit 0 findings	1 audit 0 findings	1 audit 0 finding	1 audit 0 finding			2
6	98% Training conformance against all categories of training.					99%	99%	99%	99%	98%	99%			99%
7	100% Tools Calibration.					100%	100%	100%	100%	100%	100%			100%
8	Complete all 5 enrolled Ready to Lead courses.  Measure: meet or exceed Monthly Average xx Calculation: SUM (2024 Plan / 12) =monthly average.  Overall total trained: 204 (whole KWI)		-			Target: 0 Actual: 0	Target: 3 Actual: 0	Target: 3 Actual: 0	Target:0 Actual:0	Target:0 Actual:0	Target:0 Actual:0		Target: 0 Actual: 0	0
9	Complete all 4 enrolled Living Leadership courses.  Measure: meet or exceed Monthly Average xx Calculation: SUM (2024 Plan / 12) =monthly average  Overall total trained: 3 (LM team)	-		Target: 1 Actual: 1		Target: 2 Actual: 2	Target: 0 Actual: 0	Target: 0 Actual: 1	Target:0 Actual:0	Target:0 Actual:0			Target: 0 Actual: 0	4

RAG Legends	Meeting Target Achieved /Better / Yes
	Below monthly Target/ Worse /No

 $<sup>^{*}</sup>$  if there are zero incidents and near miss, then target is N/A and RAG colour should be Amber.

# **NAS Safety Action Group**

# Safety Action Group (SAG):

- The operational arm that implements safety
- plans and
- monitors performance.

#### **SAFETY ACTION GROUP MEETING (SAG)**

#### MINUTES OF MEETING-August-2024

Venue: NAS L/M MEETING ROOM

Date:07-August-2024 Time: 10:00 to 11:00

Attendees:

Mr. Marzoug JMM Alsharif, Safety Management Manager (SMM)

Mr. Issam Musharafieh, Aircraft Engineer

Ms. Manisha Kannoujia, Quality Assurance Engineer (QAE)

Mr. Masaka Onias Mr. Mohamed Waseem Mr. Waleed Alshemeri

Subject:

Safety Action Group (SAG) Meeting

#### 1. Purpose of meeting:

The Safety Manager refreshed the attendees of the purpose of the meeting, the agenda to be discussed and the reference regulations. The meeting comprised of two elements of being the Safety Action Group (SAG) meeting.

#### 2. Points Discussed

- A. In the first element, the SAG:-The Safety Manager gave a presentation and apprised the participants on the following topics:-
  - 24 July 2024 Safety Review Board Meeting.
  - General Training for Mechanics.
  - ii. Jazeera complains about Flights Delay due to mechanics not reporting on time.
  - iv. Interaction with Menzies Software: Smart Inspections.
  - v. Airfield Driving.
  - vi. Safety Issues.

#### In the second element, the following issues were covered

- Briefing on the following:
  - The role Lead Mechanic (A1) plays in Shift management
     Need to cheave Aircide Driving speed limit

# **NAS Safety Review Board**

# Safety Review Board (SRB):

➤ The highest safety decision-making body that sets policies and oversees the SMS.



#### MINUTES OF MEETING-Jan-2024 Venue: NAS HQ-CEO Office

Date: 07-Jan-2024 Time: 12:00 to 13:30

Mr. Mansour Al Kheziem, CEO, Accountable Manager & GM, ( AM ) Mr. Abdel Gadir Salih, Quality Assurance Manager, (QAM)

Mr. Hatim Mohd Abdelrazig, Line maintenance manager (LMM) Mr. Adel Hassan Farrag, Senior Manager QHSE Safety & Quality

Management Review Meeting (MRM) - Safety Review board ( SRB) meeting

#### 1. Purpose of the meeting:

The Quality manager refreshed the attendees of the purpose of the meeting, the agenda to be discussed and the reference regulations. The meeting comprised two elements, one being the Management Review Meeting (MRM) and the other being the Safety Review Board (SRM) meeting.

#### 2. POINTS DISCUSSED

Attendees:

Subject:

A. In the first element, the MRM:-The Quality Manager used a power point presentation and apprised the Accountable Manager on the following topics:-

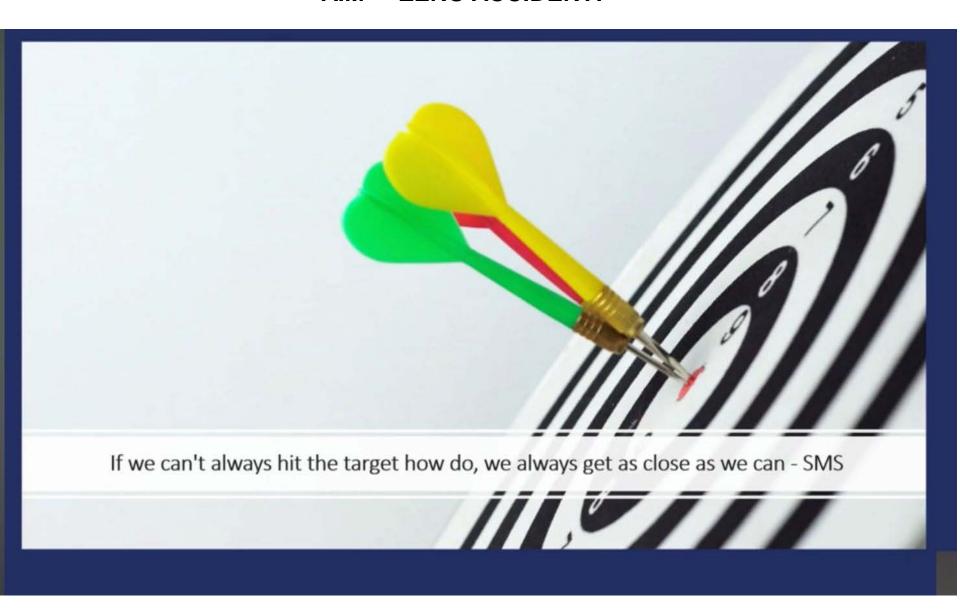
#### a) Discussion of Internal and External audit program 2023.

i) The Audit Program was started in Jan-2023 as planned. All internal audits were completed on time.

Internal Audit	Date	Finding / Observations	Status	Highlights
PA-01-2023	17-Jan-23	Nil	Closed	
SC-01-2023	23-Jan-23	3/0	Closed	
Supplier Evaluation- Jan 2023	24-Jan-23	Nil	Closed	
IA-01-2023	28-Feb-23	Nil	Closed	
IA-02-2023	28-Mar-23	Nil	Closed	
IA-03-2022	19-Apr-23	Nil	Closed	
DXB-01-2023	04-Apr-23	-	Canceled	Audit Canceled-NIL operation
KRT-01-2023	04-May-23	-	Canceled	Audit Canceled-Due to WAR
IA-04-2023	28-May-23	Nil	Closed	
IA-05-2023	21-Jun-23	1/1	Closed	
NAS-EXT-01- 2023	25-Jul-23	NIL	Closed	
IA-06-2023	26-Jul-27	6/0	Closed	3 NCR's extended till Dec-2023. They are re evaluated and transferred to IA-11-23. -DXB and SHJ station communication Issues. -Procurement Related Issues

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# AIM = ZERO ACCIDENT!



# **MENZIES 10 GOLDEN RULES**





