Flight Safety Foundation and the BARS Program

GHAC #10
Sharm el Sheik, Egypt
October 2018

71 years young

Partners

Aviation Safety Network (ASN)
https://aviation-safety.net/

Skybrary
https://skybrary.aero/

Aust Aviation Wildlife Hazard Group (AAWHG)
http://www.aawhg.org/

Aero Safety World (ASW)
https://flightsafety.org/aerosafety-world/
Example from the Standard

<table>
<thead>
<tr>
<th>Types of Audit</th>
<th>Types of Designation (Color)</th>
<th>Operational Categories</th>
<th>Monitoring Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial Audit</strong></td>
<td>Comprehensive Renewal Stream (including Offshore)</td>
<td>Green, Silver and Gold available</td>
<td>Monitoring Audit required</td>
</tr>
<tr>
<td>(including Offshore)</td>
<td>Core Renewal Stream</td>
<td>Green only No Silver or Gold</td>
<td>Operational Categories available</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aerial Work Audit</strong></td>
<td>Valid for Initial and Renewal</td>
<td>Green only No Silver or Gold</td>
<td>Limited Categories available</td>
</tr>
<tr>
<td><strong>Offshore Audit</strong></td>
<td>Valid for Initial and Renewal</td>
<td>Green, Silver and Gold available</td>
<td>Operational Categories available</td>
</tr>
</tbody>
</table>
Global nonferrous exploration budgets

Data as of January 31, 2018.
Source: S&P Global Market Intelligence

Mining Exploration 2006-2017

BARS Safety Alerts (2017-2018)
BARS Safety Performance Indicator (SPI) Study

Critical Factors for the Operator under Stage II

- Check the appropriate stream for your clients
- Renewal window is 90 to 30 days prior to expiry
- Monitoring audit for the Gold Operators
- Audit questions have stronger emphasis on implementation and systematic approach to safety
Components of the BARS Program

1. The Standard
   - Best Practices
   - Industry-Driven
   - Living Document

2. Audit Program
   - Standardization
   - Assurance
   - Audit Sharing

3. Aviation Safety Training Program

4. Global Data Analysis Program
   - Resource Company
   - Independent Monitoring
   - Continuous Standard

Central Database

BARS Controls - High Finding Areas

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BARS Controls- High Finding Areas

BARS Controls- High Finding Areas – RW External/Sling Loads
BARS Geographic Performance

*As at 01 Aug 2018*
The BARS Suite

Program Output – Reports and Analysis

Data Analysis Reports

Quality Reports (QA/QC)
BARS Success Measurement

Close Out Rate Performance

Some BARS Member Organizations
2 Dimensional Model

First Determine **Design Effectiveness**
- Verify Controls in Place
  - FSF BARS Audit
    - FSF Accredited Auditor
      - Accredited auditor and company
    - Recovery Currency in Audit
    - Previous auditor qualifications
    - Objective, repeatable audits
  - Audit Documentation and Verification of:
    - Safety management system
    - Flight and duty time change management
    - Pilot and engineer training / recovery
    - List of aircraft maintenance
    - Spares parts control, tooling management etc.

Then Validate **Operating Effectiveness**
- Validate Effectiveness of Controls
  - Operations Review
  - Field Location Risk Based Safety Audit Resource Company specific
  - Competent Aviation Specialist
    - Company designated
    - Demonstrated operational experience
    - Resource sector experience environment
    - Documented, auditable operation reviews

Audit vs Operational Effectiveness

**BARS Audit Questions**

<table>
<thead>
<tr>
<th>P</th>
<th>BARS Audit Question</th>
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<th>ISOS/ISAE Mapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td>FLT 1.01.03</td>
<td>The Operator should ensure FRM fuel load calculations include fuel for startup, taxi, enroute, approach and transit to an alternate destination (if required). (B1.4)</td>
<td>3.4</td>
<td>A6-1.4.3.3, A6-1.3.5.2, 3.8.2</td>
</tr>
<tr>
<td>F2</td>
<td>FLT 1.01.03</td>
<td>The Operator should ensure FRM fuel load calculations include or available reserve of 200% of total trip fuel. (B1.4)</td>
<td>3.4</td>
<td>A6-1.4.3.3, A6-1.3.5.2, 3.8.2, 3.8.5.1</td>
</tr>
<tr>
<td>F2</td>
<td>FLT 1.01.03</td>
<td>The Operator should ensure FRM fuel load calculations include or available reserve of 150% of total trip fuel. (B1.4)</td>
<td>3.4</td>
<td>A6-1.4.3.3, A6-1.3.5.2, 3.8.2</td>
</tr>
<tr>
<td>F2</td>
<td>FLT 1.01.03</td>
<td>The Operator should ensure FRM fuel load calculations include or available reserve of 125% of total trip fuel. (B1.4)</td>
<td>3.4</td>
<td>A6-1.4.3.3, A6-1.3.5.2, 3.8.2</td>
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<td>A FMS is available for this question. See the latest ISOS/ISAE Notification for further information. (B1.4)</td>
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**AIRCRAFT FUEL CHECKS**

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<td>F2</td>
<td>FLT 1.08.03</td>
<td>The Operator should have a procedure to ensure fuel supplied to an aircraft is tested (where detection equipment is in service). (B1.4)</td>
<td>3.4</td>
<td>A6-1.4.3.3, A6-1.3.5.2, 3.8.2</td>
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BAR Standard and BARS Implementation Guidelines

BARS Critical Controls

Critical Control Performance - Fuel
Rates of non-conformity

0.0%  20.0%  40.0%  60.0%  80.0%  100.0%  120.0%

BC3.1 Fuel Check  BC3.2 Flt Plan data  BC3.3 Planning  BC3.4 IFR Plan  BC3.5 VFR Plan

NAC  SAM  WCA  SEA  ASP  EUR
KEEP CALM AND USE DATA WISELY