The Who, What, and When of IS-BAO Training

Wednesday, November 2, 2016 | 1:00 p.m – 2:00 p.m.

PRESENTED BY:
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Nathan Predoehl – Mentair Group
Rick Malczynski – ISBAOAudits.com / ICAOAudits.com / BASC
IS-BAO Training – The Big Picture

There is no simplified, summarized list of all of IS-BAO training requirements and recommendations. We have to sort it out.

Let’s start with an overview.
From the point of view of the IS–BAO and, therefore, of an auditor, training requires all of the following:

• (1) Documented training content (your training program)
• (2) Receipt of training by those who need it
• (3) Documentation of the training that was received (your training records)
• (4) Evidence that the training was “effective” (e.g., interviews, observations, measurement, checking, monitoring, exam results). Note: For an audit, this will be assessed by the auditor.
IS-BAO Training – The Big Picture

(4) Evidence that the training was “effective”. What does this term mean when used in the IS-BAO?

• “Effective” is not defined in the IS-BAO, the Implementation Guide (IG) or the Audit Procedures Manual (APM)

• As to the SMS – Notes throughout the IS-BAO SMS Chapter describe how “effectiveness” is to be determined for the specified subject (there are 13 of these “effectiveness” determination Notes).

• For example: IS-BAO 3.2.2,b, Safety Risk Assessment and Mitigation, “Note 2: To determine effectiveness, training programs should highlight safety critical issues identified in the hazard risk analysis process.”

• As to Training in general – “effectiveness” may be translated to mean “proficient”, “competent” and/or ‘knowledgeable”, depending on the subject.
Recap: From the point of view of the IS–BAO and, therefore, of an auditor, training requires all of the following:

- (1) You need a documented training program
- (2) People need to get the training
- (3) You need accurate and up-to-date training records
- (4) The training needs to be effective.
- PS – How are you determining training effectiveness?
Designing your Training Program

Because of the Who, What, and When mix of variables in IS-BAO, an organizing principle is needed -

- Here is the template we use at Advanced Aircrew Academy when putting together our IS–BAO required training recommendations for an operator client:
  - 24-Month Subjects
  - Key Item Subjects
  - Other/Extra Subjects
Designing your Training Program

24-Month Subjects

• IS–BAO lists the specific topic to be trained for Initial and every two years or 24 Months (IS–BAO uses both terms) thereafter (recurrent); for example:

  IS–BAO 5.1.3 The operator’s ground and flight training programme shall include:

  a. for flight crew members:

    ii. initial and every two years thereafter:

    A. aircraft surface contamination training, and

    B. dangerous goods training, (see section 14.1.3)
Designing your Training Program

24-Month Subjects

• And:
  IS-BAO 5.3.1 Aircraft Type and Equipment
    a.....
    b.....
    c. Emergency procedures recurrent training shall be accomplished at least every 24 months.
Designing your Training Program

Key Item Subjects

- The topic is important enough to be specifically listed in the IS–BAO and must be trained if it is applicable to your flight department, plus subjects that can be determined by applying one of these three tests from the IS–BAO:
  1. “….such training, as applicable to the individual operation, may include...”
  2. “All of the relevant items should be covered in initial training. The recurrent training program should be designed so that key items are covered each year.”
  3. “Any other training required to ensure a safe operation.”
Designing your Training Program

Key Item Subjects

• Think of these items as either:
  • absolutely required, such as SMS training or High Altitude Operations Training
  • required if they are applicable, such as Minimum Equipment List (MEL) and Electronic Flight Bag (EFB) training
  • ought to be required based on safety considerations, such as operations into a high risk airport or night circling approaches.
Designing your Training Program

Other/Extra Subjects

• These training subjects are not specifically mentioned within the IS–BAO but could be an elective for the operator based on hazards identified by your SMS.

• Examples include Mountain Flying and Weather Radar. The “any other training required to ensure a safe operation” category applies here also.
The Who, What, and When of IS-BAO Training

Up Next: Scott Macpherson
Common Context

The Need and Response (2000 to 2003)

• No common “code”
  – International differences
  – Best practice communication

• Regulation: Diminishing Returns in Safety

• Performance Basis: Your Risks / Your Needs / Your Control
## IS-BAO Size – Past 5 Years

### Chapters 1 to 15

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Sources: IS-BAO
Why?
How to Find the Fit (the Effectiveness Loop)
Training Needs Assessments

Common To All Operators:

1. National Regulations
2. The Current IS-BAO
How to Find the Fit

Training Needs Assessments

Common Within Your Operation:
1. Your Operations Manual
2. Your Risk Profile and HITS
3. Training Manager Input
How to Find the Fit
Training Needs Assessments

Specific to Each Individual:
1. Performance Evidence (System Derived, Manager, Individual)

2. Testing

3. Individualized Correction
TNA Output
Simple: by Role

- Topics
- Periodicities
Audit Findings Related to Training

Up Next: Nathan Predoehl
IS-BAO Training Findings

Does the operator have a training program that ensures that personnel are trained and competent to perform their assigned duties?

- 5.1.3 (b) (i) Cabin Crew Initial and annual aircraft specific cabin training for operators
- 5.1.6 (b) Is the training course outline referenced in the company operations manual?
- 5.6.1 Does the operator have a system to record licensing, training and qualifications information

Sources: IS-BAO Standard, IS-BAO Toolkit, IS-BAO Protocols
IS-BAO Training Findings

Training Requirements In Other Places

- **3.2.4 Safety Promotion**
  
  (a) Training and Education
  
  - 1. The organization shall develop and maintain a safety training program that ensures that personnel are trained and competent to perform their SMS related duties.
  
  - 2. The scope of the safety training shall be appropriate to each individual’s involvement in the SMS.

Sources: IS-BAO Standard, IS-BAO Toolkit, IS-BAO Protocols
IS-BAO Training Findings

Training Requirements In Other Places

• 6.18A Personnel Qualified to Taxi Aeroplane
• 6.19H Helicopter Rotor Turning Under Power
• 7.3.1 Flight Crew Authorization
• 13.1 OSHA – Provision of Safety Training
• 15.2 Security Training that is Appropriate to Personnel

Sources: IS-BAO Standard, IS-BAO Toolkit, IS-BAO Protocols
The Who, What, and When of IS-BAO Training

Up Next: Rick Malczynski
Is your training matrix fully loaded?

Rick Malczynski
ISBAOAudits.com
IS-BAO, FAA, ICAO… Who do I follow?
IS-BAO on electronic record keeping
How long should I retain my training records for?

IS-BAO: 3 years

“I had my initial training 15 years ago…”

What do YOUR risk management folks say? Can become a Liability.
Emergency and Safety Procedures Training

IS-BAO IG 2016 has the 11 areas you MUST address!
Emergency Response Plan

IS-BAO: “Personnel who have a role in the emergency response plan shall be trained in their role…”

IS-BAO IG 2016
IS-BAO: “receive recurrent training annually.”

IS-BAO IG 2016
Fatigue Management

IS-BAO: “regarding preventive and operational fatigue countermeasures”

No stated recurrent requirement

Benchmark: 12-24 months.
IS-BAO: No stated recurrent requirement.

Benchmark: 24-36 months
The power of a Flight Risk Analysis and outstanding training processes…
The Who, What, and When of IS-BAO Training

Up Next: Jim Weaver
Training Needs Assessment

Challenges in determining required topics, personnel, and frequency

• Requirements from multiple sources
  – IS-BAO (the Standard)
  – home CAA, likely from multiple agencies (e.g. FAA, DoT, OSHA)
  – destination CAAs
  – company needs

• Spread among several sections of the Standard

• Largely situational per your risk profile
  – Missions
  – Acceptable levels of risk
  – Risk mitigations
Training Needs Assessment

Resources

• IS-BAO (the Standard, implementation guide, audit protocols)

• Regulations from applicable CAAs

• ICAO SARPs

• Industry best practices
  – Alphabet organizations (e.g. NBAA, ACSF, HAI)
  – Safety forums (e.g. Bombardier Safety Standdown)
  – Audits (e.g. IS-BAO, ACSF, ARG/US, Wyvern, IEP)

• Your SMS processes
Training Needs Assessment
## Training Needs Assessment

**IS-BAO prescribed topics for all registrants — we have completed the first table for you**

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<td>IS-BAO 5.1.3.a.c.a</td>
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<td>Dangerous Goods (DG)</td>
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**IS-BAO prescribed topics that may apply to your organization’s specific activities/equipment/environment**

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<th>Topic</th>
<th>Reference</th>
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**Performance-based topics that you have identified as risk mitigation and/or in response to audit findings**

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Training Needs Assessment

- Various topics may be found to mitigate risks in a particular operation – topics listed here are examples of additional training. The IS-BAO requires consideration of topics such as:
  a) CAT II and CAT III operations,
  b) RVSM, PBN, RNAV operations,
  c) MEL procedures,
  d) FSP: Approach and Landing Accident Reduction,
  e) Aircraft upset recovery,
  f) Dynamic rollover, loss of tail rotor effectiveness and vortex ring for helicopters,
  g) Specialized mission training where applicable,
  h) International airspace operations,
  i) Aircraft servicing and ground handling,
  j) EFIS, FMS, ACAS and HGS,
  k) Signalling procedures for aircraft maneuvers,
  l) Operator policies and procedures,
  m) Computer skills and software applications used by the organization,
  n) Interpersonal skills,
  o) Human factors,
  p) Leadership and teamwork,
  q) HAZMAT,
  r) Safety procedures,
  s) Safety risk management,
  t) Manual flying skills,
  u) Stabilized approaches,
  v) Runway excursion prevention,
  w) Automation management, and
  x) Upset recovery.

(IS-BAO 5.1.3.e, IS-BAO 5.1.6.e, and IS-BAO 6.21)
Training Needs Assessment
NBAA BACE
BUSINESS AVIATION CONVENTION & EXHIBITION
NOVEMBER 1–3, 2016
ORLANDO, FL