

Basic Aviation Risk Standard Frequently Asked Questions

Issue: Version 2.2
September 2011



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Frequently Asked Questions (and Answers)

Background

What are the benefits of the Basic Aviation Risk Standard (BARS) Program compared to the current practice for some resource companies?

- **One common standard tailored to resource sector environment:** The criteria BARS uses to assess Aircraft Operators represents best industry practice. It has been developed by the resource sector, drawing on the collective experience of numerous companies, including some of the major global resources companies.
- **A better audit:** The BARS audit process is more robust, non-subjective and utilizes two auditors for two days.
- **The quality of the auditors:** The auditors have to meet minimum knowledge and experience criteria, undergo a training course and meet stringent accreditation requirements.
- **Independence and impartial:** This is the first independent, quality-controlled audit process for the resource sector. Neither resource companies nor Aircraft Operators can influence the outcome of audits.

What issues does the BARS Program address?

- Under the pre-BARS system, each resource company had its own aviation safety standard. This subjected Aircraft Operators to a diverse and often ambiguous set of requirements within already diverse global regulatory requirements.
- The variety of standards and audits meant that Aircraft Operators underwent multiple annual audits for the various resource company clients, diverting their focus and resources away from flight operations and maintenance oversight.
- The ability of an individual resource company to alter an Aircraft Operator's practices in response to audit findings could be limited.
- Industry based safety auditing is unregulated, is not in accordance with a consistent standard has limited scope for one company to influence consistency and quality control.
- There was no formal process by which safety audit results, accident data or safety findings could be shared between companies or across the resource industry.

What is the Flight Safety Foundation?

- The Foundation is an independent, impartial and non-profit international member-supported organization.
- It was formed in 1947 to pursue the continuous improvement of global aviation safety. The Foundation meets this objective through research, auditing, education, advocacy and publishing, including *AeroSafety World*, the world's leading aviation safety magazine.
- The Foundation's head office is in Alexandria, Virginia, U.S.A., and a regional office is in Melbourne, Australia.
- For more information visit www.flightsafety.org

Who is involved in the Foundation?

- The Foundation's membership includes more than 1,200 organizations and individuals in 142 countries.
- It is staffed and managed by a highly experienced team of aviation safety specialists. Its board of governors (directors) is composed of executives from all segments of the global aviation industry, including the heads of safety for major aircraft manufacturers and some of the major airlines from around the world.
- Several standing advisory committees and ad hoc task force groups provide focused research, expert opinion and system-wide solutions on global aviation safety issues.
- It is affiliated with associate organizations in Japan, Russia, Southeast Europe, Taiwan, China and West Africa.

What is the benefit to the resource sector of collaborating with the Foundation?

- The Foundation has extensive aviation safety experience and expertise and its mission, “the continuous improvement of aviation safety and the prevention of accidents”, is aligned with that of the resource sector.
- Because the Foundation is independent, impartial and not-for-profit, resource sector companies can draw upon its expertise and gain the benefits of a collaborative approach while maintaining the appropriate commercial distance from each other. The Foundation has long provided a forum for its members to advance the cause of safety without running afoul of anti-trust laws.

Does the Foundation have the track record to implement this Program?

- Yes. A relevant example of a successful industry-wide program is the Foundation’s Approach and Landing Accident Reduction (ALAR) campaign.
- The Foundation established a task force on approach and landing accidents in 1998. Its research showed there were an average of 17 fatal approach and landing accidents annually from 1980 through 1998 in passenger and cargo operations involving aircraft weighing 5,700kg/12,500lb or more.
- The Foundation developed numerous safety products, including distribution of 40,000 copies of the ALAR Tool Kit, and conducted workshops on the subject across the world.
- Many of the ground-breaking tools and practices provided by the ALAR Tool Kit have been adopted by the majority of commercial airlines around the world and are key elements of their flight operations manuals.
- This work has significantly reduced the risk of this type of accident in commercial aviation operations.

Why is aviation safety so important to the resource sector?

- Aviation poses one of the single largest potential risks to safety in the sector and one of the few activities that has the potential for double digit-fatalities.
- Indications are that reliance on aviation in the sector is increasing as exploration pushes further afield to more remote areas, and “fly in/fly out” activities becomes more frequent.
- The increased focus by resource companies on aviation safety over recent years means the opportunity for further improvements at the individual company level are small compared to the unprecedented scope for improvement at an industry level through the sector-wide initiative that BARS provides.

How was the Program established?

- The Program developed from informal discussions between representatives from resource companies and the Foundation. When it was realized that the industry and the Foundation were exploring the same issues, the idea to launch a collaborative effort was formalized and FSF was formed to have the carriage of the Program.
- The twelve founding BARS member organizations have worked with FSF over twelve months to develop the Program. These companies are: BHP Billiton, Downer EDI, Freeport McMoRan Copper and Gold, Leighton Contractors, Lihir Gold, Minerals and Metals Group (MMG), Morobe Mining Joint Venture, Newcrest Mining, Rio Tinto, Shell, Vale and Xstrata.

How is the BARS Program being funded?

- The BARS Program is funded by annual subscription fees paid by participating BARS member organizations, by training course fees paid by auditors and resource sector aviation coordinators, and by audit fees paid by Aircraft Operators.

Membership of the Program

Who should become a BARS Member Organization (BMO)?

- Any organization that is an end user of contract aviation services.
- The initial focus of the Program has been for the resource sector, however membership will benefit any operation with employees who frequently fly in contracted aircraft, such as humanitarian organizations or other corporate organizations.
- The more organizations that participate in the Program, the more data and expertise will be available to share amongst all members.

N.B. Program Membership is at the discretion of the BARS Program Office.

Why should my company become a member?

- This is a unique opportunity to support a step increase in aviation safety.
- There are numerous commercial benefits from higher safety standards and reduced accident risk, such as lower insurance fees and fewer working days lost.
- With the leading resource sector companies already participating, membership is expected to become an industry standard.
- The Program is gaining industry association support. The Minerals Council of Australia endorsed it in December 2009.

Who are the current members?

- The current members are: BHP Billiton, Downer EDI, Freeport McMoRan Copper & Gold, Leighton Contractors, MMG, Morobe Mining JV, Newcrest Mining, Rio Tinto, Shell, Vale, Xstrata, Anglo American and the World Food Program.

What are the levels of membership?

- For the resource sector:
 - Tier 1 members are those organizations, and associated entities, that have mining facilities, or conduct associated activities, extending across more than one site, and/or are users of more than three Aircraft Operators who provide them with contracted aviation services.
 - Tier 2 members are those organizations, and associated entities, that have mining facilities, or conduct associated activities, at one location and/or are users of up to three aircraft operators who provide them with contracted aviation services.
- For the non-resource sector:
 - Tier 1 members are those organizations, and associated entities, that have facilities or conduct associated activities extending across more than one location, and/or are end users of more than three Aircraft Operators who provide them with contracted aviation services.
 - Tier 2 members are those organizations, and associated entities, that have facilities, or conduct associated activities at one location and/or are users of up to three aircraft operators who provide them with contracted aviation services.

How much does membership cost?

- For Tier 1 members, a subscription/membership fee of US\$45,000 is charged per annum, with an additional one-off joining fee of US\$15,000 when the membership is established.
- For Tier 2 members, a subscription/membership fee of US\$15,000 is charged per annum, with an additional fee of US\$10,000 when the membership is established.

Why is the Program priced in US dollars?

- It is an international program, so a pricing structure based on a single currency provides consistency.

What does the membership fee buy my company?

- Access to a consistent industry standard to provide an informed means of assessing risk.
- Access to the Technical Advisory Committee (TAC); a seat at the table that influences the ongoing development of the BAR Standard and the structure of the Program more generally.
- Participation in the TAC that provides access to the collective experience and intelligence of the range of companies within the Program. Never before has there been a forum within the resource sector that allows companies to share knowledge and experience on aviation safety.
- Access to the database of all current BARS audits undertaken within the Program.
- Access to the range of training programs developed as part of the overall Program.
- Access to industry safety data and analysis derived from the collective BARS audit process.

What is expected of my company if it becomes a member?

- Taking into account the transition period associated with implementing the Program, it is expected that BARS Member Organizations will seek to promote the use of the BAR Standard by their chosen Aircraft Operators and encourage them to have their safety tested through a BARS audit.
- Active participation in the TAC is strongly encouraged but is not obligatory.

The Basic Aviation Risk Standard

How does the BARS Program relate to existing regulations?

- The BAR Standard is intended to supplement the guidance and requirements of national and international regulations pertaining to aviation operations. These must always be followed.

What is the difference between a prescriptive standard and the risk-based format used for the BARS?

- The prescriptive standards are categorized under the components that make up an aviation system, such as equipment, personnel, operations, etc.
- The BARS Program is framed around the actual threats to aviation operations and directly links these to associated controls and recovery/mitigation measures.
- It provides a ready-made framework for assessing risk.

Will the BARS Program be used in the same way as previous prescriptive standards?

- No. Prescriptive standards were often aspirational and presented as an ideal scenario not based on reality.
- The BAR Standard is intended to provide a basic safety standard to be met 100% of the time, lowering residual risk to minimal levels.

Who controls the BAR Standard?

- FSF controls the BAR Standard based on the advice and approval of the TAC.

How can I be confident that if my company signs up to use the BARS Program that the integrity and relevance of the Standard to the resource sector will be maintained?

- There are two formal mechanisms:
 - 1) The TAC, which is comprised of and chaired by resource sector representatives, has to approve any change to the BAR Standard.
 - 2) FSF's Technical Review Team, comprising senior aviation technical experts, reviews all recommendations made by the TAC and must also approve changes on behalf of FSF before the changes are adopted.

How was the BAR Standard developed?

- The BAR Standard was developed by FSF in collaboration with resource industry input from the founding BARS Member Organizations.
- It was developed drawing on world's best practice in aviation safety generally and from the resource sector specifically.
- Every part of the Program can be tied to what has been learned from previous accidents and incidents.

How often will the BAR Standard be updated?

- It will be reviewed annually.
- Each year, the TAC will review the preceding 12 months of data to determine if the BAR Standard can be improved. Then, FSF's Technical Review Team will review and endorse some or all of the TAC's recommendation(s) for change.
- Any changes to the BAR Standard will then be reflected in the auditor/aviation coordinator safety training and updates.

The Audit Model

How was the audit process developed?

- By FSF, through its BARS Program Office and in consultation with the TAC.
- The BARS Program Office evaluated the leading audit programs around the world, consolidated the best elements of these and tailored them to the Standard.

How does the tripartite audit agreement work?

- The Aircraft Operator selects a registered BARS Audit Company.
- These two entities enter into a three-way agreement with FSF that outlines the terms and conditions, price and code of conduct for the audit (called the "Audit Agreement").
- Once the Audit Fees have been paid to FSF the BARS Audit commences and an initial audit report is produced. Any issues identified at this stage are then able to be addressed before the issue of the final audit report.
- The Aircraft Operator is the owner of the resulting audit report.
- When the Aircraft Operator is comfortable with the audit report, it permits its release authorizing FSF to post the audit report on the BARS online platform (BARSoft), which is accessible to BARS Member Organizations only.

What are the benefits of the audits being commissioned via an Audit Agreement?

The Audit Agreement between FSF, the auditing company and the Aircraft Operator provides:

- A clear framework for the Aircraft Operator and the Audit Company to work within.
- An independent dispute resolution process.
- A fixed pricing schedule for BARS audits.
- A truly independent third-party audit for BARS member organizations.
- The ability for FSF to maintain audit quality control.

What does the BARS audit program require of auditors?

- Individual auditors conducting BARS audits must be accredited by FSF. This involves meeting the pre-requisite experience and qualifications criteria, taking an accreditation training course including passing an exam and completing ongoing periodic training.
- Individual BARS accredited auditors must conduct BARS audits under the umbrella of an Audit Company that is formally registered with FSF (a "registered BARS Audit Company").

How do Audit Companies register with FSF?

- They must contact the BARS Program Office, meet the requirements to become a BARS accredited Audit Company and pay the registration fee.

What are the requirements for an auditing company to become registered?

- Agreeing to conduct the audits according to FSF's terms and conditions.
- Meeting the prescribed requirements such as presenting proof of professional indemnity insurance held by the company, documentation outlining ownership shareholding and governance provisions, business registration documentation, etc.

How are auditors accredited?

- By meeting the experience and qualification requirements and completing the BARS accredited auditor training program, which includes passing an examination.

How long will each audit take?

- A standard audit will take two days.

How will the Audit Company be selected?

- Aircraft Operators will choose the BARS accredited Audit Company. A list of BARS accredited Audit Companies can be found on the secure online platform, BARSoft.

Who owns the audit report?

- The Aircraft Operator will own the audit report.

How will payment for audits be managed?

- Aircraft Operators will need to pay FSF upfront before an audit is initiated. Out of this FSF, FSF pays the Audit Company as the audit is progressed and finalized.
- It is expected that Aircraft Operators will pass on the audit costs to their BARS Member Organization clients in an appropriate way which may include, for example, increases to standing charges or increases in flying hour rates.

As an Aircraft Operator, how can I be confident that I won't be out of pocket for an audit?

- The expectation is that Aircraft Operators will spread the BARS audit costs amongst their resource company clients who want them to be registered, but some may simply choose to bear the cost themselves in recognition of the commercial benefit of having completed a BARS audit.
- If an Aircraft Operator makes a commercial decision to become BARS accredited without a direct request from a resource company, that Aircraft Operator would bear the audit cost.

What will an Aircraft Operator audit cost?

- There is a standard fee for audits set by the FSF in US dollars. The fee level is currently US\$18,000, but may be adjusted by FSF from time to time.
- There is an additional variable fee that is negotiated with, and payable to, the selected Audit Company.

Why is FSF setting the cost of audits?

- The fixed fee that will be paid by the Aircraft Operator to FSF is to ensure that audit quality is not compromised by auditors reducing the resources devoted to BARS Audits. The importance of this point was learned from the International Air Transport Association's experience with its (IATA) Operational Safety Audit (IOSA) program.

How will the audit reports be made available?

- The reports will be made available to BARS Member Organizations via BARSoft, once the Aircraft Operator has approved the report for release.

How will access to the audit reports be managed to maintain the appropriate level of commercial confidence?

- An agreement will be signed by the Aircraft Operator to authorize the release of the report.
- Only BARS Member Organizations will be able to see audit reports. They are bound to treat them confidentially.
- Aircraft Operators will not have access to reports other than their own.

As an Aircraft Operator, if I disagree with the audit report, what can I do?

- Any audit-related disputes can be taken to the BARS Program Office to be dealt under the Audit Agreement dispute resolution process.

What legal agreements are involved with the BARS Program?

- The resources companies are required to sign a basic “BARS Member Organization Agreement” with FSF.
- The accredited auditors are required to sign an “Auditor Accreditation Agreement” with FSF.
- The accredited Audit Company is required to sign a service agreement with FSF – “Audit Company Registration Agreement”.
- The Aircraft Operator and registered Audit Company are required to sign an audit agreement with FSF for each individual BARS audit.
- The Aircraft Operator is expected to sign a release with FSF for the BARS audit report to be shared with BARS Member Organizations.

What will an audit report look like?

- There will be three levels of findings:
 - **Priority 1:** A significant finding that is a safety issue that needs to be closed within seven (7) days of the audit closing meeting.
 - **Priority 2:** The remaining findings that will need to be addressed. It is possible to become registered with an open Priority 2 finding if a corrective action plan with an appropriate deadline has been set, with a completion date that has been accepted by the lead auditor.

After 12 months, when the Aircraft Operator is due for its BARS renewal, any repeat Priority 2 finding automatically becomes Priority 1. This means that all Priority 2 findings must be closed in order to renew registration.
 - **Priority 3:** These findings are opportunities for improvement, identified based on best industry practice and/or related to other support available from FSF, such as a targeted program along the lines of the ALAR effort. An Aircraft Operator is encouraged to take the action but has no obligation to close a Priority 3 finding.

How are significant findings (Priority 1) closed?

- As with all audit findings, the Aircraft Operator will work with the auditor. The majority of the time this should be possible at a distance, however, there may be occasions when a re-audit is required. A Priority 1 finding cannot be closed, and BARS registration given, until the lead auditor has confirmed to FSF that it is resolved.

Can a resource company member use an Aircraft Operator that is not BARS registered?

- Resource company members are free to use any Aircraft Operator. However if an Aircraft Operator is BARS registered, the company will have a clear picture of the safety standards achieved by that operator, which will address a key concern for all companies.
- The risk-based format of the BARS Program should assist companies in their risk assessment and mitigation activity in such a circumstance.

Is there a self-assessment checklist I can use before commissioning an audit?

- Yes. After registering in BARSoft, an audit checklist relevant to that Aircraft Operator is automatically produced.

Are there any benefits in the BARS Program for auditors?

- A benefit for auditors should be that with just one audit per year, an Aircraft Operator is likely to give that audit more attention and be more responsive, facilitating the audit process.

Is there a precedent for a global audit program?

- Yes, in the commercial airline industry.
- The IATA Operational Safety Audit (IOSA) program is an internationally recognized and accepted evaluation system designed to assess the operational management and control systems of an airline.

The BARS Program is aligned with the IOSA model. Aviation Safety Training Programs

Aviation Coordinator Training

Who can attend the aviation coordinator training?

- Anyone nominated by a BARS Member Organization or FSF can attend.
- The training is intended for non-technical resource sector staff accountable for aviation-related operations i.e. those who by their proximity to operations have the potential to contribute to managing safety risks.
- For example, supply or logistics managers, baggage handlers, aircraft refuelers, or the contract holder of the operation, such as a mine site manager.

What is the format and content of the training?

- The training takes two days.
- The first half-day covers basic general aviation knowledge, such as how airplanes and helicopters fly and different types of engines.
- The remaining 1.5 days is focused on the BAR Standard.
- The training is to an accepted level of competency involving assessment via a web-based exam, with a certificate issued.
- It will be aligned to any updates to the BAR Standard.

What will the training cost?

- The training cost will be an extra per head charge on top of the BARS membership rate at reasonable industry prices.
- The price will be in US dollars per person. The price is currently US\$2,500 per person, but may be varied by FSF from time to time.

Other Training Programs

What other training programs will be available through the BARS Program?

- A range of programs will be developed by FSF as a result of the broad range of safety data that is collected identifying specific industry needs.
- One of the programs already under development is External Load Sling Operations - Ground Training and Checklist. This program is being developed through collaboration with and contributions from TAC members.

Global Safety Data Analysis Program

Why is data capture and analysis important?

- FSF's data capture program will give the resource sector greater ability to avoid accidents by enabling better identification of accident pre-indicators and establishing controls to manage them.
- Analysis of accidents in the commercial airline industry — which, along with the oil and gas sector, for many years has had formal data collection processes in place and now has mature data sets — shows that in every accident there were pre-accident indicators that signaled a higher risk of having an accident.

What type of data will be collected?

- Flight hours and sectors, passengers carried and accident and serious incident information.

How will the data capture and analysis benefit the resource industry?

- Sharing of lessons learned will increase awareness of risks amongst BARS Member Organizations, and will also be shared amongst Aircraft Operators during audits.
- It will result in relevant and data-driven decisions to drive BARS development, as all of the learning will be fed back into the Program and FSF's training programs.

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