

Basic Aviation Risk Standard

Frequently Asked Questions



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 used under the BAR Standard 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 must undergo a training course and meet stringent accreditation, minimum knowledge and experience criteria.
- **Independent 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?

- Prior to the BAR Standard, 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 various resource company clients, diverting their focus and resources away from flight operations and maintenance oversight.
- The ability of an individual resource company to influence change within an aircraft operator's practices in response to audit findings was often 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.

Who 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, USA 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 1,000 organizations and individuals in 150 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. 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.

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 the BAR Standard 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 the BARS Program Office was formed to manage the Program.
- The twelve founding BARS Member Organizations worked with FSF over twelve months to develop the Program.

How is the BARS Program funded?

- The BARS Program is funded by annual subscription fees paid by participating BARS Member Organizations, by audit company registration fees, 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 or other organizations.
- The more organizations that participate in the Program, the more data and expertise will be available to share amongst all members.

Why should my company become a member?

- There are numerous commercial benefits from higher safety standards and reduced accident risk, such as lower insurance premiums and fewer lost working days.
- With the leading resource sector companies already participating, membership is expected to become an industry standard.
- This is a unique opportunity to support a step increase in aviation safety.
- The Program is gaining industry association support. The Minerals Council of Australia endorsed it in December 2009.
- The International Council on Mining & Metals (ICMM) expressed support for the BARS Program in late 2012.

Who are the current members?

- A list of some of the current members may be found on the Foundation’s website.

What are the levels of membership?

- Benefactor members are those Tier 1 members who elect to provide further funding to support the development of additional safety programs under development by the Foundation.
- Tier 1 members are those organizations that have mining or other facilities extending across more than one location and typically utilize the

services of more than three aircraft operators to provide them with contract aviation support.

- Tier 2 members are those organizations that have mining or other facilities at one location and typically utilize the services of less than three aircraft operators to provide them with contract aviation support.
- OGP members are those organizations from the Oil, Gas and Petroleum sector that have their own discreet aviation safety systems and standards in place that wish to supplement their risk oversight processes by becoming a part of the BARS Program.

How much does membership cost?

- For Benefactor members, a subscription/membership fee of \$90,000 is charged per annum.
- For Tier 1 members, a subscription/membership fee of \$53,000 is charged per annum.
- For Tier 2 members, a subscription/membership fee of \$23,000 is charged per annum.
- For OGP members, a subscription/membership fee of \$23,000 is charged per annum.

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) for Benefactor and Tier 1 members; a seat at the table that influences the ongoing development of the BAR Standard and the structure of the Program more generally.
- Access to the Technical Advisory Committee (TAC) as an observer for Tier 2 and OGP members.
- 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?

- 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 operation reviewed 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?

- The TAC, which is comprised of and chaired by resource sector representatives, must approve any change to the BAR Standard.

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?

- Each year, the TAC will review the preceding 12 months of data to determine if the BAR Standard can be improved.
- Any changes to the BAR Standard will be incorporated into a revised edition.

The Audit Model

How was the audit process developed?

- By Foundation, 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 agreement allows the BARS Program Office to release the report on BARSoft for viewing by

BARS Member Organizations once the Quality Control (QC) process has been completed.

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

The Audit Agreement between FSF, the audit 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.

How are auditors accredited?

- By meeting the experience/qualification requirements and completing the BARS auditor accreditation training course, including passing an examination.

What does the BARS Program require of auditors?

- Individual auditors conducting BARS audits must be accredited by the BARS Program Office.
- 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").
- Complete recurrent training.

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 audit 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 long does each audit take?

- A standard audit takes 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 both the Foundation's website and 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 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 registered without a direct request from a resource company, that aircraft operator would bear the audit cost.

What will an aircraft operator audit cost?

- The current fee for audits is \$19,000, but may be adjusted by FSF from time to time.
- There is an additional variable fee to cover travel and incidentals costs 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 (IATA) 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 following completion of the QC process between the audit company and the BARS Program Office.

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

- The tripartite agreement, signed by the aircraft operator, authorizes the release of the report by the BARS Program Office onto BARSoft at the conclusion of the QC process.
- Only BARS Member Organizations will be able to see audit reports. They are required to treat them in confidence.
- 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 "BARS Member Organization Agreement" with FSF.
- The accredited auditors are required to sign an "Auditor Accreditation Agreement" with FSF.

- The registered 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.

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 thirty (30) days of the audit closing meeting.
 - **Priority 2:** Findings that will need to be closed within 90 days of publication of the audit report. Variations to the closing date may be accommodated where it is not possible to close the finding within the 90-day time frame. This is to be agreed upon with the lead auditor with oversight by the BARS Program Office.
 - **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 has not undergone a BARS audit?

- Resource company members are free to use any aircraft operator. However if an aircraft operator has undergone a BARS audit, 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.

Do aircraft operators receive 'accreditation' or 'certification' under BARS?

- The BARS Program does not provide either 'accreditation' or 'certification' for aircraft operators that have undergone a BARS audit.
- Aircraft operators may achieve a color status associated with their audit report, however this only indicates the status of the closure of any findings.
- Whilst aircraft operators may be recognized as having undergone a BARS audit, this does not infer that any conclusion can be drawn as to the aircraft operators risk profile. This may only be determined in part through a review of the audit report.

Are there any benefits in the BARS Program for auditors?

- Yes, with one audit model, a structure is in place to standardize the process across many audits.
- Accreditation as a BARS Auditor means that you are a part of a select pool of individuals who are able to conduct these audits.

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.

Aviation Safety Training Programs

Aviation Coordinator (AVCO) Training for Onshore Personnel

What is the course about?

- This two-day course provides participants with an understanding of the Basic Aviation Risk Standard and how it can be used by resource and other sector personnel to help identify potential aviation safety risks. Participants will be able to use knowledge gained on the course to review their company's aviation management policies and procedures and formulate appropriate risk management strategies to manage identified day-to-day risks.

Who can attend the course?

- Anyone may attend.
- The course is intended for non-technical personnel from all departments involved in the development, monitoring and enhancement of aviation safety related activities for their organizations.
- These personnel include mine/site/asset managers, contract administrators, corporate assurance/risk managers and onsite accountable persons.
- The course will also be a valuable supplement to executive managers with accountability for decisions that directly impact on the selection of aviation service providers.

What is the format and content of the training?

- The training takes two days to complete.
- The course comprises of sessions covering basic aviation knowledge for both fixed and rotary wing operations, aviation hazard and risk awareness and the application of the BAR Standard to mitigate aviation risks for those associated with aviation support activities.
- The course is aligned with updates to the BAR Standard.

What is the cost of the training?

- The training cost will be an extra per head charge additional to the BARS membership rate and is priced reasonably.

Aviation Coordinator (AVCO) Training for Offshore Personnel

What is the course about?

- This two-day course provides participants with an understanding of the Basic Aviation Risk Standard and how it can be used by personnel operating in the oil and gas sectors to help identify potential aviation safety risks. Participants will be able to use knowledge gained on the course to review their company's aviation management policies and procedures and formulate appropriate risk management strategies to manage identified day-do-day risks.



Who can attend the course?

- Anyone may attend.
- The course is intended for non-technical personnel from all departments involved in the development, monitoring and enhancement of aviation safety related activities for their organizations.
- These personnel include offshore installation managers, contract administrators and procurement/supply personnel, company safety and risk professionals and HLOs (Helideck Landing Officers) and assistants.
- The course will also be a valuable supplement to executive managers with accountability for decisions that directly impact on the selection of aviation service providers.

What is the format and content of the training?

- The training takes two days to complete.
- The course comprises of sessions covering basic aviation knowledge for rotary wing operations, offshore helicopter operations, aviation hazard and risk awareness and the application of the BAR Standard to mitigate aviation risks for those associated with aviation support activities.
- The course is aligned with updates to the BAR Standard.

What is the cost of the training?

- The training cost will be an extra per head charge additional to the BARS membership rate and is priced reasonably.



Helicopter External Load Operations for Ground Personnel

What is the course about?

- External loads carried by helicopters vary considerably across different industries. Until now, there has been little standardization of procedures, equipment or training involving this activity.
- This two-day course provides the standardization necessary for this activity and provides participants with basic training in helicopter under-slung load activities.
- The course can be tailored for all industry sectors that utilize helicopters in similar support roles including fire fighting, humanitarian support and flood and fire relief.

Who can attend the course?

- Anyone may attend.
- The course is ideally suited for site managers, mining personnel, drillers and ground support personnel, aircrew including loadmasters, hookup personnel and anyone else engaged in this activity.

What is the format and content of the training?

- The training takes two days to complete.
- The course comprises of both classroom and practical tuition in the use of equipment used in external load activities.
- Extensive use of 3-D animations, graphics and videos makes the course vibrant and easy to understand.
- The course provides a recommended standard in the use of hand signals and color identification of key personnel engaged on site.

What is the cost of the training?

- The training cost will be an extra per head charge additional to the BARS membership rate and is priced reasonably.

Aviation Risk for Managers

What is the course about?

- This half-day course is designed for executives and senior managers who are unable to attend the two-day AVCO course due to time constraints. The course provides participants with an understanding of the Basic Aviation Risk Standard and how it can be used by resource and other sector personnel to help identify potential aviation safety risks. Participants will be able to use knowledge gained on the course to review their company's aviation management policies and procedures and formulate appropriate risk management strategies to manage identified day-to-day risks.

Who can attend the course?

- Anyone may attend
- The course is intended for executives and senior managers with accountability for decisions that directly impact on the selection of aviation service providers.

What is the format and content of the training?

- The training takes one half day to complete.
- The course comprises of sessions covering basic aviation knowledge for both fixed and rotary wing operations, aviation hazard and risk awareness and the application of the BAR Standard to mitigate aviation risks for those associated with aviation support activities.
- The course is aligned with updates to the BAR Standard.

What is the cost of the training?

- The training cost will be an extra per head charge additional to the BARS membership rate and is priced reasonably.

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 development of the BAR Standard, as all of the learning will be fed back into the Program and FSF's training programs.





ICMM
International Council
on Mining & Metals

ICMM supports the use of the Basic Aviation Risk Standard (BARS) to improve aviation safety. The BARS Program is specifically aimed at contributing to improved aviation safety in the extractive industries and was developed by the Flight Safety Foundation in conjunction with a number of extractive industry companies, including several ICMM member companies.

The standard is developed from a risk-based model framed against the actual threats posed to aviation operations which are then directly linked to associated controls and recovery and mitigation measures. The BARS Program is a useful resource for any organization wanting to develop new flight safety requirements or review existing ones.



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