

ON THE BEAT

CASA general aviation inspectors are using new surveillance tools in a bid to bring safety checks into line with a new systems approach to managing risk, writes Mark Wolff.



WE LOBBED IN EARLY in the morning to be greeted by some very stunned faces. A few operators who fell short of regulatory requirements were caught short.” That’s how aerodromes inspector Bob Wickbold describes a CASA safety check of aviation businesses in the Torres Strait Islands.

Local aviators would usually know well in advance when to expect a “surprise” visit from CASA inspectors. This check was different.

“As soon as we would book an aircraft to go there, the whole area would know we were coming. And nearly everything would turn up squeaky clean,” Wickbold says. “But this time we went to some lengths to keep the operation under wraps.”

This kind of surveillance operation is a little unusual – around 70 per cent of audits are scheduled inspections, with the operator notified in advance.

The Torres Strait exercise was a special surveillance operation, one of around 1,450 audits conducted each year by CASA’s 300-strong team of inspectors located in 13 offices around the country.

Now CASA inspectors are updating their approach to safety audits in a move designed to bring surveillance procedures

into line with a new systems approach.

Leading safety specialists, including Manchester University’s Professor James Reason, say that auditors could home in on underlying safety problems by scrutinising organisations’ management systems.

CASA has redeveloped its method of auditing general aviation, and is rolling out the new systems approach over the next few months.

The regulator’s Adelaide office is at the frontline of the change programme.

Flying operations team leader in Adelaide, Dale South, says safety audits have come a long way under the new system.

“The old way of auditing used a standard checklist of expected outcomes,” he says.

“If not used well, this can lead to results that don’t get to the heart of any problems.”

The systems approach involves more research and preparation by auditors. “Inspectors review manuals and other documentation, including any approvals or exemptions unique to the organisation’s business and the operator’s regulatory history.

This ensures they understand the nature of the operation, its supporting systems and how they interact,” South says.

“As a result, CASA auditors are better

prepared and are able to run a more targeted safety audit to get to the factors that can contribute to poor outcomes.”

Experts in systems auditing are holding seven-day training sessions with CASA flying operations, airworthiness and aerodrome inspectors to introduce the new approach, outlined in CASA’s updated surveillance procedures manual.

The training is backed up by mentors who guide each team.

Checking Surveillance Australia: To examine a systems audit in operation, *Flight Safety Australia* followed part of a safety check of Adelaide-based Surveillance Australia, a sister company of National Jet, contracted by Customs to patrol the Australian coast.

It is a big operation, with 60 pilots flying at low levels offshore and along the coastline. The company uses five Dash 8s, six Britten-Norman BN-2Bs, three Reims Cessna F406s and an Aero Commander 500S.

The initial audit “entry” meeting was held in the company’s training room. Surveillance Australia’s general manager, Steve Gray, the company’s chief pilot, John Crowe, maintenance controller, John Sjostedt, and other senior staff were seated around the table with CASA’s audit team.

Lead auditor Paul Daw gave the briefing on the scheduled three-year audit: “This audit is based on a new systems approach instead of the old aviation safety surveillance programme (ASSP) manual.

“The on-site part of the audit will be similar to the past, especially checks of records and documents. The main differences are in reporting and preparation.”

He goes on to describe the process in some detail.

“So, if you’ve got something to hide, we need to see it”, jokes one of the CASA inspectors. “No you don’t,” retorts Crowe. Everyone laughs. They know that the old blame culture is hard to shake.

And they understand that this audit is looking at how Surveillance Australia’s systems work to produce a safe outcome, rather than fishing for errors or regulatory breaches.

Given the nature of the business, often involving long night flights, the audit team looks closely at the company’s management of pilot fatigue.

Surveillance Australia uses a computer-based system to roster pilots and record flight and duty times after each flight. It's colour coded so that pilots approaching flight-time limits will be indicated in red on the spreadsheet, halting further flying until they've had adequate rest.

The audit team questions the chief pilot and the company's operations manager closely on the system before checking it against paper records to verify data.

Daw then asks the operator to run some scenarios. It's a step beyond verification.

He explains: "This is the 'show me the system at work'. We're trying to stress the limits of the system with a variety of scenarios to make sure it works."

The system comes up trumps, keeping the roster within fatigue score limits at each test. But the auditors aren't finished yet. Daw asks the ops manager to run through what the company would do if the system "fell over".

Again SA's fatigue management program comes up clean. At the end of each day data are backed up off site. SA also keeps paper records so that the company's rostering and fatigue management system can continue if there are computer problems.

Meanwhile, airworthiness inspector Peter Goodwin checks out the company's maintenance functions.

After reviewing manuals and operating procedures, Goodwin zeros in on the systems in place for control of airworthiness data, together with the company's maintenance subcontracting arrangements.

"While Surveillance Australia has a maintenance controller who manages the function, it subcontracts the management of technical aspects to National Jet. But SA still has responsibility to make sure it's done right," Goodwin says.

"Whenever a function is contracted out, arrangements should be in place to monitor contracted functions and be satisfied the system is working and meeting regulatory requirements."

Management system model The basis of the new toolbox used by inspectors to analyse data throughout a systems audit is the "management system model".

The model consists of four systems attributes: management responsibility; infrastructure; process in practice; and monitoring and improvement (see diagram for application to general aviation).

When scrutinising management responsibility, auditors focus on the responsibility directors and managers have for exercising "due care and diligence" for compliance and safety.

They check that everyone in the company

"But the auditors aren't finished yet. Daw asks the ops manager to run through what the company would do if the system fell over. Again SA's fatigue management system comes up clean."

knows who is responsible for what, and how they discharge that responsibility.

They also look at policies, safety and quality planning, internal communication and hazard and risk management.

Hazard identification and risk management must ensure the integrity of the system is maintained during periods of change. When auditors examine an organisation's infrastructure, they ensure facilities, tools and equipment, data management and personnel are up to scratch.

They check that companies "walk the talk" outlined in their policy and procedures manuals as part of their process in practice.

As Daw says, "All company manuals must meet or exceed regulatory requirements, and it must be the guide for actual processes. It cannot just be a manual that sits on a shelf gathering dust." And the auditors check how organisations identify and solve safety problems to achieve continuous improvement.

How did Surveillance Australia's audit go? CASA's Daw says "Surveillance Australia run a very professional operation. But there were a couple of minor safety issues that need addressing."

SA's Crowe welcomes the findings. "It's always good to get an external view of how we are operating. The results of the CASA audit will help us to continue improving our operation."

For further information about the management system model or the new approach to GA auditing, contact:

Srini Srinivasan, ph: 131757 (local call)
e-mail: srinivasan_s@casa.gov.au

MANAGEMENT SYSTEM MODEL (GA)

Attributes	Components	Sub-components
Management Responsibility	Management Commitment	Policy
		Responsibility and Authority
	Planning	Nominated Management Representative
		Objectives and Quality/Safety Planning
Infrastructure	Management Review	Internal Communication and Consultation
	Facilities	Hazard Identification and Risk management
	Tools, Equipment and Materials	N/A
Process in Practice	Data, Information and Records	
	Personnel	
Monitoring and Improvement	Process in Practice	
	Internal Audit	
	Internal Reporting	
	Investigation	
	Remedial, Corrective and Preventive Action	Remedial Action
		Corrective Action