

HIGH STAKES

ICAO auditors' findings on Australian and U.S. dangerous goods oversight reflect challenges of achieving global consistency.

BY WAYNE ROSENKRANS



Two countries with high overall scores on effective implementation of critical elements of a safety oversight system¹ lost points when teams of international auditors looked at how they regulate the transport of dangerous goods by air.² Australia and the United States hosted auditors representing the International Civil Aviation Organization (ICAO) in February 2008 and November 2007, respectively, under ICAO's Universal Safety Oversight Audit Program (USOAP).^{3,4} The results were released to the public this year.⁵

The audits were the first for each state conducted under the comprehensive systems approach in the 2005–2010 cycle of audits (ASW, 2/07, p. 39). ICAO agreed that each country's resultant action plan fully addressed most of the findings and recommendations. Most corrective actions in response to dangerous goods-related findings had been completed by mid-2009; others were scheduled to be completed by the end of 2010, the states said in the final reports.

Around the time of the previous visits by USOAP auditors to Australia and the United States under the program's initial approach, a passenger airliner was destroyed in Malaysia. According to accident information compiled by the Aviation Safety Network, citing news media accounts in China and other sources, Malaysia Airlines Flight 085, an Airbus A330, arrived at Kuala Lumpur International Airport after a flight from Beijing on March 15, 2000. At about 2340, five of 20 cargo handlers suddenly became ill when they encountered fumes while unloading 80 canisters weighing 2,000 kg (4,409 lb) from the cargo hold of the aircraft. None of the 252 passengers and 14 crewmembers was injured.⁶

Aircraft rescue and fire fighting personnel identified the source of the fumes emitted by the canisters as oxalyl chloride, a liquid used in laboratory chemical analysis that may be fatal if swallowed or inhaled, and releases toxic and corrosive fumes in contact with water or moist air.

Several canisters had leaked inside the hold, causing fuselage damage so severe that the insurer judged the five-year-old airplane to be damaged beyond economic repair. A Chinese court found



© Chris Sorensen Photography

that the shipper had misidentified the canisters as a safe powder-type chemical.

Australian Improvements

USOAP auditors found that regulations of the Civil Aviation Safety Authority (CASA) had prescribed Australian



International Civil Aviation Organization

requirements for the consignment and carriage of dangerous goods by air and addressed training, documentation, record keeping, incident reporting, packaging, marking, labeling and loading. “However, the regulations are not up to date with the latest amendments of ICAO’s Annex 18, *The Safe Transport of Dangerous Goods by Air*, and its *Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)*,” ICAO said.

The government agreed to conduct “a thorough review of the provisions of Annex 18 ... to determine if Australian legislation requires amendment. ... CASA will also develop and implement processes to ensure future Annex 18 amendments are considered and either appropriately incorporated into the Australian safety system or differences are lodged with ICAO.”

The auditors found that CASA had two dangerous goods inspectors at the time of the audit. “This number is not sufficient for the level of activity in Australia as to ensure effective safety oversight,” ICAO said. “In addition, the dangerous goods inspectors have not

been provided with adequate dangerous goods training or technical guidance materials.” The auditors noted that this contrasted with CASA’s practice of issuing advisory circulars to inform the aviation industry about the regulatory requirements for dangerous goods.

The government agreed with the finding and responded that a new dangerous goods project, called DG Vision 2010, would develop new approaches to ensure that adequate numbers of trained inspectors are available. The government also agreed to establish clear standards and processes, including a program for surveillance and enforcement; develop systems for reporting, capturing and analyzing dangerous goods data; and revise and update CASA’s dangerous goods training course.

Another finding was that CASA did not have a finalized and approved “process for granting specific authorizations related to the transport of dangerous goods by air, including review of the air operator’s acceptance checklists, loading procedures, in-flight emergency response procedures, and approval of dangerous goods training programs.”

The government said that CASA would introduce a layered approach to dangerous goods inspection, beginning with surveillance and audit training of existing flight operations inspectors, cabin safety inspectors, air transport inspectors and airport inspectors. “Once trained, these inspectors will provide initial safety oversight in conjunction with their other duties,” CASA said. “Recruitment and development of specialists will be undertaken as necessary. ... A core team of dangerous goods specialists will be supported by the other inspectors (up to two per office) [who] have received enhanced dangerous goods oversight training. ... Australia will examine and consider instituting specific authorizations to carry dangerous goods ... make any necessary legislative amendments and update supporting documentation including the advisory circular.”

The auditors found that CASA did not have “a comprehensive surveillance program of regular and random inspections of activities pertaining to the safe transport of dangerous goods by air.” The government said, “Currently, inspections by the dangerous goods inspectors are being undertaken on a risk-management basis with a particular focus on both random and scheduled audits occurring in areas that are of higher risk or have not been closely scrutinized in recent times. However, a specific surveillance program is not yet in place.”

U.S. Improvements

In the United States, the USOAP audit team cited difficulty identifying lines of accountability because of the ways that oversight has been divided among the U.S. Federal Aviation Administration (FAA) and other agencies. Essentially, the Department of Transportation has authority to issue dangerous goods–related regulations but delegates overall



A prohibited corrosive liquid spilled in cargo left this Airbus A330 a constructive total loss.

rulemaking authority to another of its agencies — the Pipeline and Hazardous Material Safety Administration (PHMSA) — while delegating to the FAA the enforcement of hazardous material regulations (HMRs) for the aviation sector, and involving the FAA in dangerous goods rulemaking related to ICAO Annex 6, *Operation of Aircraft*.

The auditors found a system of exemptions from regulatory requirements that did not comply with ICAO standards and an unclear division of responsibilities. “Although the [federal law] in general permits compliance with ICAO’s *Technical Instructions* [TI], subsidiary regulations applicable to the transport of dangerous goods are not in full compliance with ICAO Annex 18 ... and the [TI],” ICAO said.

The exemption-related discrepancy was between ICAO’s basis for granting exemptions from dangerous goods regulations to aircraft operators and findings that PHMSA had issued exemptions without these conditions being met. The TI essentially says that states may issue exemptions to dangerous goods regulations “in cases of extreme urgency, or when other forms of transport are inappropriate, or full compliance with the prescribed requirements is contrary to public interest ... provided that in such cases, every effort is made to achieve an overall level of safety in transport, which is equivalent to the level of safety provided by [the TI].”

The U.S. government replied, “PHMSA concurs that we may issue a variance to the ICAO TI only provided [that] an equivalent level of safety is demonstrated, or is necessary to protect life or property. Such authorizations for the use of an alternative means of compliance support medical necessities, [and] allow shippers and [air] carriers to quickly implement new technologies

and to evaluate new operational techniques that enhance safety and increase productivity in support of U.S. interests. Individual technical safety evaluations are conducted, and more stringent safety provisions than the standard applicable provisions of the TI are often required as a condition of the [exemption].” Nevertheless, the United States agreed to provide ICAO with a written description of the procedures followed by PHMSA for accepting, reviewing, approving or denying applications for exemptions from dangerous goods regulations.

The auditors found that, except for the FAA, agencies on the U.S. Interagency Group on International Aviation (IGIA) — including PHMSA — lacked formal procedures to amend U.S. regulations in concert with updates to ICAO standards and recommended practices or to identify national differences and notify ICAO accordingly. They also found a lack of formal coordination on dangerous goods issues among the rulemaking departments of the Department of Transportation, the FAA and PHMSA, and no procedure or practice for them to consult with each other on harmonization of proposed U.S. amendments and ICAO standards and recommended practices.

The government responded, “We will establish standard operating procedures for IGIA members and include provisions for coordination with the appropriate rulemaking departments in the U.S. government. ... FAA and PHMSA are addressing the coordination concerns raised in this finding in a new memorandum of understanding between the two agencies. ... We believe that [a written FAA process already] satisfies the recommendation to develop coordination procedures among the various rulemaking departments.”

The government’s action plan also included commitments to “identify all

incorrect ICAO references and standards [in U.S. regulations]; take action to update all incorrect ICAO references and standards; identify and file any differences as appropriate; initiate action to consider requiring mandatory compliance with the provisions of the ICAO TI, in addition to specifically identified more restrictive requirements of the U.S. HMRs, for hazardous material shipments by air from the United States; [and] identify the specific differences between the ICAO TI and the U.S. HMRs and consider the appropriate means to address each difference.”

Notes

1. Australia scored 83.38 percent effective implementation of ICAO’s critical elements of a safety oversight system compared with a global average of 58.48 percent for 115 audited states in 2008. The United States scored 91.13 percent compared with a global average of 57.77 percent for 108 audited states in 2007.
2. U.S. regulations and guidance material use the term *hazardous materials*.
3. ICAO. “Final Report on the Safety Oversight Audit of the Civil Aviation System of the United States of America: 5 to 19 November 2007.” Universal Safety Oversight Audit Program. August 2008.
4. ICAO. “Final Report on the Safety Oversight Audit of the Civil Aviation System of Australia: 5 to 19 November 2007.” Universal Safety Oversight Audit Program. January 2009.
5. Both governments — in the interest of public confidence in air travel through transparency of safety information (ASW, 8/08, p. 30) — exceeded the typical practice of the 190 states by authorizing public posting of the final reports on the ICAO Flight Safety Information Exchange Web site, <www.icao.int/fsix>.
6. Among the sources cited was “Chinese Chemical Firm Ordered to Pay Insurers \$65 Million in Plane Damage Case.” *People’s Daily Online*, June 12, 2007.