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NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE

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Agenda Item 3

Specific Air Navigation Activities and Developments

3.2 Aircraft Operations (OPS)

PROGRESS REPORT ON THE IMPLEMENTATION OF THE ICAO UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME

(Presented by the Secretariat)

SUMMARY

This Working Paper contains a progress report on the implementation of the ICAO Universal Safety Oversight Audit Programme (USOAP) from April to October 2004. It also provides an **additional update** on the transition of USOAP to a comprehensive system approach for the conduct of audits, pre-audit documentation procedures and training dates for auditors, as resolved by the 35th Session of the Assembly. Included in this Working Paper is information on the update on the ICAO Global Aviation Safety Plan (GASP).

1. Introduction

1.1 The 35th Session of the ICAO Assembly (Resolution A-35-6 refers) resolved that the USOAP be further expanded to include the safety-related provision in all safety related Annexes to the Convention on International Civil Aviation. The Assembly further requested the Secretary General, from 1 January 2005 to restructure USOAP to adopt a comprehensive system approach in conducting safety oversight audit in all Contracting States.

1.2. On the basis of information extracted from the Audits Findings and Differences Database (AFDD), the paper presents the results of the audit follow-up missions and the progress made by States in the implementation of critical elements of safety oversight systems and the resolution of safety concerns identified during the initial audits. The paper also provides information on the ISO re-certification of Safety Oversight Audit Section (SOA) and the actions taken and/or planned to ensure the effective transition of USOAP to a comprehensive system approach for the conduct of audits, as requested by the Assembly.

2. Progress of the Programme

2.1 Follow-up missions on the validation of the implementation of States' corrective action plans and reports

2.1.1 Twenty-one audit follow-ups were conducted between April and September 2004, that included the following ICAO CAR States: **Honduras, Mexico, Trinidad and Tobago**. Results of Audit follow-ups of seven Contracting States which were scheduled for last November/December 2004.

2.1.2 As of 31 October 2004, 152 audits follow-up summary reports have been prepared and sent to the States concerned for final comments prior their publications. One hundred and thirty six of these reports had already been published and distributed to all Contracting States.

3. Results from the Audit Findings and Difference Database (AFDD)

3.1 The analysis of 152 follow-up missions showed that Contracting States continue to make progress in the implementation of their corrective Action Plan and the resolution of safety concerns. As shown in **Appendix A**, the average lack of effective implementation of the eight critical elements of a safety oversight system identified during the initial audits for the group of the 152 States declined from 29.3 per cent to 13.3 per cent. When these results are used to recalculate the average lack of effective implementation of the critical elements at the global level, the rate diminish from 32.3 percent to 18.6 per cent. Also, the use of the Compliance Checklist was proven to be very rewarding.

3.2 While these results continue to show progress, the audit follow-up mission have also revealed that thirty-six States, or approximately 24 per cent of the 152 Contracting States analyzed so far, have not made much progress in resolving the deficiencies identified during the initial audits. In this regard, the 35th Session of the ICAO Assembly (Resolution A35-7 refers) strongly supported a unified strategy to resolve safety related deficiencies, where the improvement can be accomplished through active collaboration of all stakeholders and an assistance of the Technical Cooperation Bureau to States in need.

4. Renewal of the ISO Certification of the Safety Oversight Audit Section

4.1 During 21 and 22 October 2004 SOA underwent a maintenance audit conducted by Moody International Inc. to ensure that it has continued to implement effectively its ISO-Based Quality Management System. As the results of the positive findings, the ISO certificate originally granted to SOA in October of 2002 has been renewed for another year.

5. Transition of USOAP to a Comprehensive Systems Approach

5.1 Activities undertaken during the 35th Session of the Assembly

5.1.1 At the request of the Council, an information session on the implementation of USOAP and the transition to a comprehensive system approach for the conduct of future safety oversight audit was held at ICAO Headquarters on September 26, 2004. Approximately 250 participants attended this information session.

5.1.2 During 35th Session of the Assembly a selection was made of the first Contracting States to be audited in 2005. Twelve contracting States agreed in principle to undergo the audits during 2005, among them Panama and Trinidad and Tobago. In addition, two International Organizations, which conduct safety oversight activities on behalf of their Member States, have also agreed to be audited by ICAO in 2005 as part of the USOAP audit. They are EUROCONTROL and European Aviation Safety Agency (EASA) and eventually, ACSA in Central America and RASOS in the Caribbean Region.

5.2 *Development of audit tools*

5.2.1 The successful implementation of the comprehensive system approach will depend on the effective application of a series of audit tools designed to assist both Contracting States and ICAO in the preparation for, and conduct of safety oversight audits. These tools include the State Aviation Activity Questionnaire (SAAQ) compliance checklist for each Annex concerned and Audit Protocol for each area of audit. A CD-ROM containing an initial version of several of these tools is available and can be accessed through the ICAO-Net under SOA page: www.icao.int/icaonet/index_ie.html

5.2.2 Compliance Checklist for each Annex concerned have been prepared to assist States in ascertaining the status of implementation of Standards and Recommended Practices (SARPs) and in identifying any difference that may exist between national regulations and the corresponding ICAO Annex provisions. Compliance Checklist submitted by States will enable ICAO to maintain an up-to-date database on the level of compliance by States with ICAO SARPs and facilitate the preparation for, and conduct of standardized audits of all Contracting States. The Completed Compliance Checklist should be received by SOA no later than **31 May 2005**.

5.2.3 Audit protocols for all the areas have been developed with the cooperation of the relevant sections of the Air Navigation Bureau. Audit protocol constitutes the primary tools for the conduct of on-site safety oversight audits. They enable auditing against the critical elements of a safety oversight system, and can also be used by Contracting States both in preparation for an ICAO audit and in the conduct of internal audits.

6. **Auditor Training Courses and Seminars/Workshops for Safety Oversight Coordinators**

6.1 In preparation for the launching of safety oversight audits under the comprehensive system approach in 2005, ICAO have conducted a series of National Safety Oversight Coordinator training courses, both at ICAO HQ and in the Regional Offices. The objective of these courses were to train a sufficient number of auditors, both from ICAO and seconded by States. Five courses were held in 2005, one at ICAO HQ and four at ICAO Regional Offices. In the NACC Regional Office in Mexico City the training course was conducted during 10-11 March 2005.

7. **Update of the ICAO Global Aviation Safety Plan (GASP)**

7.1 During the 35th Session of the Assembly under the Agenda Item 24 the progress of development of GASP was reviewed comparing the accomplishments reached since the 33rd Session of the Assembly. The progress report included details of the more significant accomplishments under GASP, as well as an updated GASP document (2004 version). The 2004 version of GASP removed reference to tasks that had been completed, amended some tasks that were currently underway, and added new tasks in order to focus on safety priorities identified by recent accident trends a copy of 2004 version GASP has been placed on the ICAO public website (www.icao.int/icao/en/anb/)

7.2 In its review of the progress report on GASP, the Assembly noted that the most significant safety issues that had been identified through an analysis of recent accidents were controlled flight into terrain (CFIT), loss of control, and technical failures. In order to ensure that the focus of safety efforts remained on current safety issues, the Assembly urged States to support ICAO's efforts in accomplishing GASP objectives and tasks.

7.3 Under the GASP agenda item, the Assembly also reviewed a progress report on the ICAO programme for the prevention of CFIT. The report included a description of actions that ICAO had undertaken in the area of CFTT reduction, as well as an indication of future activities. The Assembly urged States to implement the ICAO provisions related to CFIT prevention, particularly those relating to the equipment of aircraft with ground proximity warning systems having a forward-looking terrain avoidance function, the installation of minimum safe altitude warning systems at airports, the design and implementation

8. The ICAO Global Aviation Safety Plan (GASP) (2004 Edition)

8.1 Objectives

8.1.1 The objectives of the ICAO Global Aviation Safety Plan (GASP) are to:

- a) reduce the number of accidents and fatalities worldwide irrespective of the volumes of air traffic; and
- b) achieve a significant decrease in accident rates, particularly in regions where these remain high.

8.2 Fundamentals

8.2.1 In addressing these objectives, GASP concentrates on three fundamental aspects of a safety management system, as follows:

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| <i>1st Fundamental</i> | Reviewing the causal factors of aircraft accidents worldwide in order to identify specific safety issues which must be addressed to reduce accident numbers and rates. Attention will be given to the reasons for regional variations in accident rates; |
| <i>2nd Fundamental</i> | Promoting safety awareness worldwide by facilitating the effective sharing and use of aviation safety data and information; and |
| <i>3rd Fundamental</i> | promoting safety awareness worldwide by facilitating the effective sharing and use of aviation safety data and information. |

8.2.2 The Global Aviation Safety Plan therefore identifies those tasks and programmes likely to produce the best safety dividend in terms of reducing accident numbers and rates both on a global and regional basis. It is intended that GASP serve all parties involved in aviation safety, including acting as a planning and a tracking tool to monitor progress in the relevant areas of activity.

8.2.3 For practical application, the objectives and fundamentals of GASP are addressed by different focus areas, or elements, each having associated tasks and programmes as shown in paragraph 7.4.

8.3 *Elements*

8.3.1 *Carry out an annual review of the causal factors in accidents and incidents using all available sources of information/data (1st Fundamental)*

Related Tasks

- a) identify specific safety issues;
- b) identify the safety issues that result in differences in accident rates at a regional level;
- c) develop safety indicators to readily identify trends in safety performance; and A-2; and
- d) disseminate the results of these activities for use in accident prevention programmes by States and industry.

8.3.2 *Recommend safety actions and provide assistance in response to findings of the ICAO Universal Safety Oversight Audit Programme (USOAP) (1st and 2nd Fundamentals)*

Related Tasks

- a) review the safety critical findings identified by the ICAO Universal Safety Oversight Audit Programme (USOAP);
- b) assist States in developing effective safety oversight structures, including, wherever appropriate, multinational entities;
- c) assist States in developing regulatory material; and
- d) promote the expansion of USOAP to all safety-related fields.

8.3.3 *Enhance the identification of, and address deficiencies in the air navigation field provided by all sources, including ICAO Planning and Implementation Regional Groups (PIRGs) (2nd Fundamental)*

Related Tasks

- a) Review the deficiencies and where possible provide guidance to States in the implementation of appropriate corrective actions.

8.3.4 *Review and improve existing safety database systems to facilitate the dissemination of safety-related information (3rd Fundamental)*

Related Tasks

- a) participate in the Global Aviation Information Network (GAIN) Government Support Team (GST) to explore ways to reduce impediments, legal or otherwise, to the communication of safety-related information;
- b) develop Annex provisions and guidance material for voluntary incident reporting systems;
- c) develop appropriate means to ensure the non-punitive nature of voluntary incident reporting systems;
- d) develop appropriate means to ensure non-disclosure of confidential safety information;

- e) participate in industry activities, such as the CAST/ICAO taxonomy working group, to develop common taxonomies to facilitate the worldwide coding, storage and dissemination of safety-related information;
- f) update Annex provisions aimed at facilitating the collection and dissemination of safety-related information;
- g) provide relevant safety-related information on an ICAO website; and
- h) develop Annex provisions and guidance material for normal operations monitoring systems.

8.3.5 Collaborate with States and the aviation industry to identify additional safety measures (2nd Fundamental)

Related Tasks

- a) liaise with the Commercial Aviation Safety Team (CAST) in the United States, the Joint Strategic Safety Initiative (JSSI) in Europe and any other potential safety initiatives;
- b) participate in industry/government safety initiatives addressing specific safety issues;
- c) examine current safety initiatives to determine their global perspective and likely impact on safety in order to decide if they warrant inclusion in the Technical Work Programme (TWP) of the Organization in the Air Navigation Field;
- d) hold regular consultations with aviation industry leaders. The purpose of these consultations, which gather representatives of industry and international organizations together with the Commission and supported by members of the ICAO Secretariat, is to:
 - i) update all participants on progress achieved on safety issues in the context of GASP;
 - ii) exchange information, and in light of the experience gathered by the industry, review accident data and proposals to develop further GASP initiatives; and
 - iii) allow the industry and international organizations to provide input into GASP.

8.3.6 Develop solutions to identified safety issues (2nd and 3rd Fundamentals)

8.3.6.1 Most significant issues: The most significant safety issues identified through an analysis of recent accident trends are:

- a) CFIT: Although the number of CFIT accidents has been declining over the last three years, they still account for approximately one third of airline fatal accidents;
- b) loss of control: This type of accident is the second most important in terms of fatalities and it has not shown any improvement over the last three years. It is of particular concern in the take-off phase; and
- c) technical failures: This cause plays an increasing role in fatal accidents. It can affect the aircraft, its systems or engines, and has proven particularly critical in the take-off phase.

Related Tasks

- a) analyse recent accident reports and other available information pertaining to CFIT occurrences in order to identify and address the remaining actions that need to be undertaken concerning such accidents;
- b) promote the implementation, wherever precision approaches are not available, of approaches with vertical guidance (APV) or non-precision approaches with a stabilized descent path;
- c) analyse all sources of information relative to loss of control accidents and those involving technical failures to identify corrective actions;
- d) develop Standards and Recommended Practices (SARPs) in order to prevent loss of control in flight;
- e) develop SARPs aimed at improving the technical reliability of aircraft and at limiting the consequences of technical failures;
- f) upgrade the provisions relating to licensing of maintenance personnel, especially as regards training and identification of privileges;
- g) establish and foster regional flight safety groups;
- h) Increase the visibility and transparency of audit systems;
- i) monitor the introduction of safety management systems for aerodromes and air traffic services;
- j) monitor the progress achieved by States in implementing new language proficiency requirements and provide assistance as necessary;
- k) develop a revised edition of the Accident Prevention Manual; and
- l) develop a runway safety manual as well as a runway safety toolkit.

9. Conclusion

9.1 A system approach to conduct safety oversight audit is addressing the safety-related provisions contained in safety related Annexes by focusing on the States overall safety oversight capability and specific safety critical areas, while assessing the implementation of all provisions through the review of the SAAQ and Compliance Checklist. It also offers the potential for cost saving in the long term, when compared to Annex-by-Annex approach.

9.2 With the introduction of the comprehensive system approach and in order to ensure proper communication and coordination with Contracting States during all phases of the audit process, ICAO has invited States to appoint a person responsible of this matter to liaise with the various authorities or departments responsible for safety oversight within the State, and to make sure that all audit-related documentation is appropriately completed and submitted to ICAO in a timely manner.

9.3 The objective of the courses for the National Safety Oversight Coordinator, seconded from States is to train sufficient number of auditors capable of executing the audit initially under the supervision of the team leader (on the job training) and latter on as an independent audit team member.

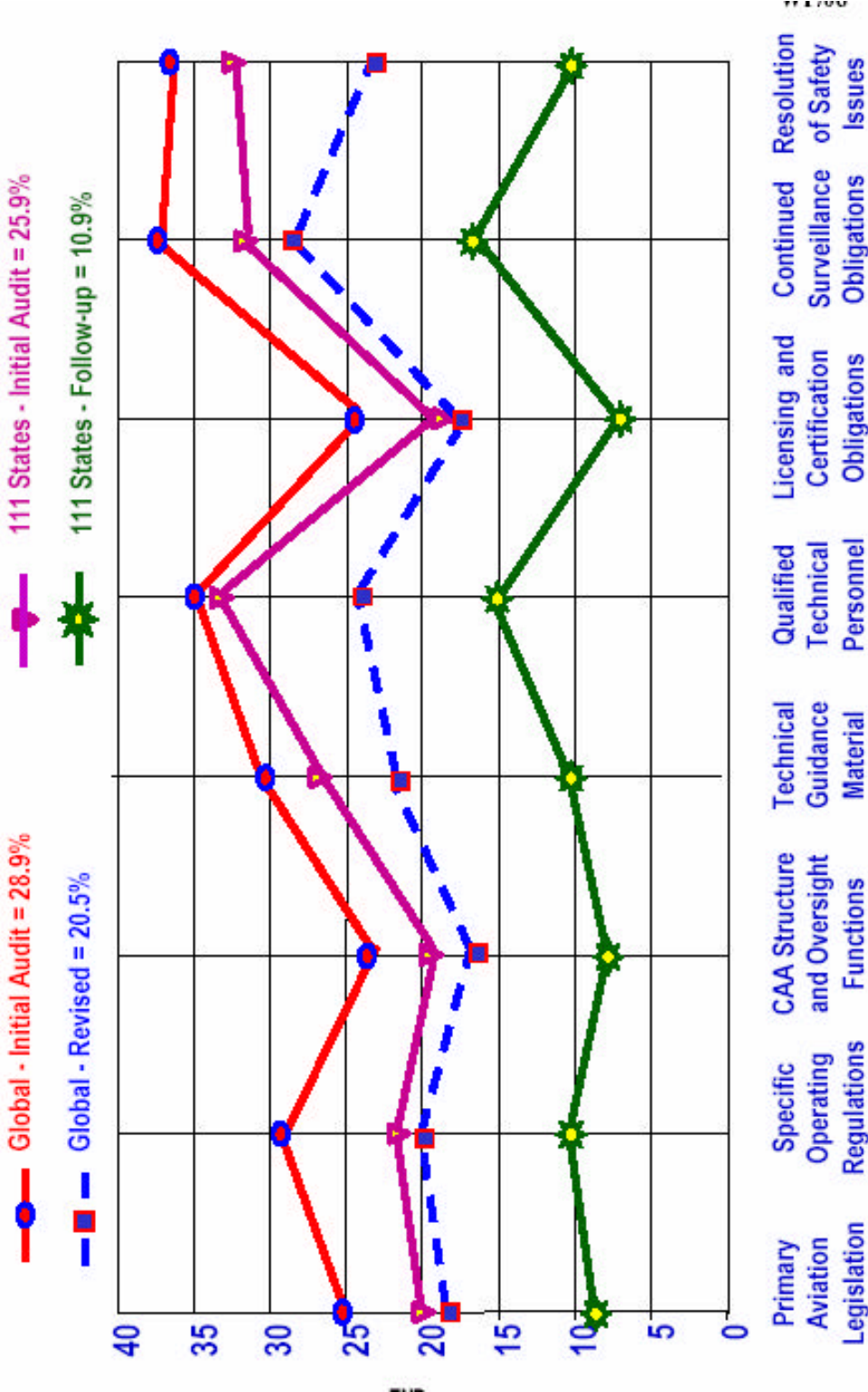
10. Action by the Working Group

10.1 The Working Group is invited to:

- a) note the information provided in this Working Paper;
- b) note information contained in **Appendix B** addressing the Action expected to be implemented by the States and action of the State-Appointed Safety Oversight Coordinator;
- c) take note of the available audit tools and required pre-audit documentation and comply with its submission deadlines;
- d) note information about the National Safety Oversight Coordinator training courses and seminars/workshops conducted in the ICAO Regional Offices and Headquarters' as contained in paragraph 6;
- e) urge States/Territories/International Organizations to adequately prepare for the expanded USOAP System Audit Programme;
- f) urge States/Territories/International Organizations to adequately prepare for the expanded USOAP systemic audit programme;
- g) consult the State Letter AN/19/9-04/102 Implementation of the Universal Safety Oversight Audit Programme-Activity Plan and its Attachment; and
- h) take note of the State Letter AN/6/37-05/40 the Global Aviation Safety Plan (GASP) 2004 Edition and its Attachment.

APPENDIX A

Critical Elements of a Safety Oversight System - Lack of Effective Implementation (%)



APPENDIX B

THE COMPREHENSIVE SYSTEM APPROACH TO SAFETY OVERSIGHT AUDITS AS OF 2005 ACTIONS THAT STATES ARE EXPECTED TO IMPLEMENT

- Identify and appoint State Safety Oversight Coordinator.
- Complete State Aviation Activity questionnaire.
- Complete Compliance Checklist.
- Prepare for the Safety Oversight Audit.
- Participate in onsite audit.
- Prepare Action plan to correct deficiencies (if any).
- Comment on interim and final safety oversight audit reports.
- Note audit reports of other States.

ACTION OF THE STATE APPOINTED SAFETY OVERSIGHT COORDINATOR

The State Safety Oversight Coordinator is to:

- Act as the contact focal point with ICAO.
- Ensure that the State Aviation Activity Questionnaire is completed.
- Ensure that the compliance checklist is completed for all safety-related Annexes.
- Submit all the documentation to ICAO by May 2005.
- Arrange for the submission of any additional documentation/clarification required.
- Coordinate the pre-audit activities with ICAO.
- Finalize the Memorandum of Understanding (MOU) between ICAO and State concerned.
- Distribute the protocol questions to the relevant section for preparation of evidence and documentation.
- Advise his/her other State participants of the audit dates and confirm the availability of participants
- Coordinate location and time and compile list of State participants in opening and closing of the meeting.
- Coordinate State participants activities during the on-site audit.
- Coordinate State corrective Action Plan and submission to ICAO.
- Coordinate comments on interim safety oversight audit report and submit to ICAO at the determined date.
- Coordinate comments on final safety oversight audit report and submit to ICAO at the determined date.

- END -