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**Fourteenth Scrutiny Working Group Meeting (GTE/14)**  
Mexico City, Mexico, 1 – 5 December 2014

**Agenda Item 4: Lessons learned by CAR/SAM States to reduce LHDs**

**MITIGATION MEASURES FOR LHD REPORTS IN THE SOUTH ATLANTIC**

(Presented by Argentina)

<b>EXECUTIVE SUMMARY</b>	
The purpose of this information paper is to present to the Meeting the steps and measures adopted by Argentina to face the increase in the amount of LHD reports regarding the flights carried out in the South Atlantic Airspace.	
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• GTE/13 Meeting Report (Lima, Peru, 09 – 13 September 2013)</li><li>• SAT/19 Meeting Report (Buenos Aires, Argentina, 06 – 08 August 2014)</li></ul>

**1. Introduction**

1.1 1.1 During the last year, due to a series of circumstances and events, the provision of air navigation services in the South Atlantic Airspace have presented some contributing factors which have put safety at a level of risk.

1.2 The four (4) FIRs in question (Comodoro Rivadavia, Ezeiza, Montevideo and Atlantico) have their oceanic airspace classified as Class G, that is to say, in such airspace aircraft separation is not provided but there is a provision of flight information and alert services. Also, for IFR traffic, permanent communication is required, both ways.

1.3 The volume of air traffic is extremely low (an average of 20 to 30 monthly movements for Ezeiza and Comodoro Rivadavia FIR).

1.4 To the specific characteristics of this air space, we must add the following:

- a) the implementation of Atlantic Ocean Random Routing RNAV Area (AORRA), which contemplates aircraft selection of the most convenient flight path;
- b) the absence of HF communication equipment for aircraft communicating with Montevideo FIR (ADS-C/CPDLC implementation is in process) and the lack of trust in HF equipment in general;

- c) the permanent information omissions (DEP – EST – CPL messages) by the Monte Agradable ATS Unit regarding aircraft flying from Islas Malvinas, which constitutes a breach of Point III 2) of the Joint Statement signed on September 25th, 1991, by the Governments of Argentina and United Kingdom and of the Operational Letter of Agreement between Comodoro Rivadavia ACC and Monte Agradable Aerodrome Air Traffic Unit (Islas Malvinas) which causes a gap in the coordination chain necessary between the FIRs involved; and
- d) the absence of communications by some flight crews when entering or flying over Comodoro Rivadavia and Ezeiza FIR.

1.5 This group of circumstances have caused the provision of the service to be irregular, thus, sometimes being difficult to estimate the passing from one FIR to another; moreover, sometimes such traffic might not be acknowledged.

1.6 During 2013, Montevideo filed thirty five (35) LHD reports to Ezeiza FIR due to the lack of departed flight transfers from Islas Malvinas, which caused that the GTE/13 Final Report urged Argentina and Uruguay administrations to double the efforts to substantially reduce LHD reports in the South Atlantic.

1.7 Also, SAT/19 Meeting adopted Conclusion SAT/19-10 which expressed its concern on unknown air traffic and the increase in the amount of LHD reports in the South Atlantic Airspace, due to the lack of coordination and information of the flights flying from or to Islas Malvinas and acknowledged the need for the provision of information by all involved ATS units to their respective ACCs pursuant to current international agreements (Operational Letters of Agreement, being one of them) and all ICAO regulations and applicable procedures, in order to enhance the coordination among the involved FIRs.

## 2. Analysis

2.1 As a first step in the investigation of this issue, many visits were made to Comodoro Rivadavia and Ezeiza FIR where the following was observed (also see observations detailed in 1.3):

- a) Insufficient knowledge by the staff of the consequences the concept of Large Height Deviation (LHD) has regarding RVSM airspace safety; and
- b) deficiencies in the coordination among ATS units (Monte Agradable – Comodoro Rivadavia – Ezeiza and Montevideo).

2.2 The information flow associated with the LHD reports filed by Argentina's bordering FIRs was deficient, thus, events happening were discovered months past said events which complicated investigation due processes and the corresponding implementation of mitigation measures.

2.3 Facing such a complex situation, measures were taken in the short and middle term in order to mitigate the detected gaps, covering from regulations, procedures and technologies, among which the following are worth mentioning:

- a) Training of personnel from both ACC in the topic Large Height Deviation (LHD) and the consequences LHD concept has on RVSM airspace safety.

- b) Elaboration, distribution and promotion of an Operational Circular in Comodoro Rivadavia and Ezeiza ACC, establishing procedures and communication channels suitable to make the proper coordinations among these units and them with Montevideo and Atlantico FIR.
- c) Specific teleconference among the involved countries (Brazil, Uruguay and Argentina) with the purpose of establishing an analysis methodology of the LHD taking into account the peculiarities of the South Atlantic Airspace.
- d) Elaboration and distribution of a manual for the Comodoro Rivadavia and Ezeiza staff with the conclusions achieved in the teleconference mentioned in c).
- e) Establishment of a permanent coordination channel with Montevideo as a focal point in order to channel the requirement for information and for the notification of inconveniences detected by any interested party.
- f) Planning for a future adjustment of the Republica Argentina oceanic airspace, unifying the service in only one area.
- g) Preoperational tests should be carried out of the Automatic Dependant Surveillance System by Contract (ADS – C) and of Controller-pilot Data Link Communication (CPDLC), to be used as the link with those aircraft having said system onboard.

### 3. **Conclusions**

3.1 Although the implementation of some of the mitigation measures detailed above has already been completed during the past months, which prevents us from having indicators allowing the quantification of the effective reduction of LHD reports to be achieved, up to the present time, from the reports carried out during September and October of 2014, there are only three (3) flights which (without prior Monte Agradable CTR coordination) have not established the required HF communication with the FIRs of its venue.

3.2 This situation, although still an operational safety risk in the South Atlantic Airspace, results to be comparatively smaller when considering the forty (40) reports carried out during the first semester of 2014 by the Montevideo, Ezeiza and Comodoro Rivadavia FIR, amount which doubles its size if the reports carried out by the Atlantico FIR are taken into account.

### 4. **Actions suggested**

The Meeting is invited to take knowledge of this information paper.