International Civil Aviation Organization

Middle East Regional Monitoring Agency Board

Eleventh Meeting (MIDRMA Board/11)
(Cairo, 27–29 September 2011)

Agenda Item 4: RVSM Monitoring and related Technical Issues

DRAFT MID RVSM SMR 2012

(Presented by MIDRMA)

SUMMARY

This working paper details the results of the MID RVSM Safety Monitoring Report 2011 and tries to demonstrate according to the data used that the key safety objectives set out in section 2 of the SMR in accordance with ICAO Doc 9574 were met in operational service.

Action by the meeting is at paragraph 3.

REFERENCES

- MIDANPIRG/12 Report
- MIDRMA Board/9 Report.
- MIDRMA Board/10 Report
- SMR 2010

1. INTRODUCTION

1.1 The Safety Monitoring Report 2011/2012 is issued by the Middle East Regional Monitoring Agency (MIDRMA) for endorsement by the Middle East Air Navigation Planning andImplementation Regional Group (MIDANPIRG). The report presents evidence that, according to thedata and methods used, the key safety objectives as set out in the MID RVSM safety policy inaccordance with ICAO Doc 9574 (2nd Edition) continue to be met in theMiddle East RVSM airspace.

2. DISCUSSION

2.1 Further to the outcome of MIDRMA Board 10 meeting and according to draft conclusion 10/08 it was decided “theflight plan traffic data for the period 1 – 31 January 2011 be used for the development of the MID RVSM Safety Monitoring Report (SMR 2011/2012) and the draft version of the report be ready before 30 September 2011 for review by the ATM/SAR AIS SG/12 meeting.

2.2 Although, this is the fourth SMR developed by the MIDRMA, and member states should have the experience and the knowledge of the data required to be submitted to the MIDRMA for the safety analysis, the MIDRMA still suffer from the same problems reported in the production of previous reports, such as:

1- Late submission of the traffic data.
2- Corrupted traffic data.
3- Missing items from the data submitted (e.g. no registrations or wrong type of aircraft).

2.3 The descriptions of the total trafficdata collected from each MIDRMA member states for the period 1 – 31 January 2011 is reflected in Table A1below, a total of **170,728**flights were gathered for all aircraft operated in the MID RVSMairspace, all these flightswere evaluated and processed very carefully to ensure accurate results according to the datasubmitted.

SN	MID States FIR's	June 2009 **SMR 2010**	Jan 2011 **SMR 2012**	Increased or Decreased (%)
1	Bahrain	24285	30099	19.32
2	Muscat	22520	28224	20.21
3	Jeddah/Riyadh	22422	25499	12.07
4	Cairo	19228	14270	**- 34.74**
5	Emirates	15868	21076	24.71
6	Tehran	10479	10638	1.49
7	Damascus	9774	11719	16.60
8	Amman	8554	10689	19.97
9	Kuwait	3570	10364	65.55
10	Sana'a	3490	4305	18.93
11	Beirut	2949	3845	23.30
	Total =	**143,139**	**170,728**	**+ 19.27%**

Table A1: MID States RVSM Traffic Data used for SMRs 2010 & 2012

2.4 The final conclusions of the data processing have been severely limited by thecontinued NIL reporting of Altitude Deviation Reports (ADRs) and Coordination Failure Reports (CFRs)from some members, it's not realistic to receive NIL reports from some busy FIRs with very complex airway structure!It has been stressed in previous MIDRMA Board, ATM/SAR/AIS SG and MIDANPIRG meetings the importance of submitting these specific reports, butthe level of reporting from some members continued to vary from unsatisfactory to unacceptable.

2.5 Safety Monitoring Report 2011/2012 Results

2.5.1 RVSM Safety Objective 1:

The risk of collision in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of 2.5 x 10^{-9} fatal accidents per flight hour.

The 2011/2012 value computed for technical height risk is **5.08 x 10^{-14}**. This meets RVSM Safety Objective 1.

Technical Risk Values			
Year 2006	Year 2008	Year 2010	Year 2011
2.17x10^{-14}	1.93x10^{-13}	3.96x10^{-15}	**5.08 x 10^{-14}**

2.5.1.1 According to the technical risk values as shown in the above table from the previous SMRs, the TLS value increased from the last SMR but it's very safe comparing to the ICAO TLS**2.5 x 10^{-9}.**

2.5.1.2 Pz(1000) compliance: The Pz(1000) is the probability that two aircraft at adjacent RVSM flight levels will lose vertical separation due to technical height keeping errors. The value of the probability of vertical overlap Pz(1000), based on the actual observed ASE and typical AAD data is estimated to be of **7.83×10^{-10}** . This value meets the Global System Performance Specification that the probability that two aircraft will lose procedural vertical separation of 1000ft should be no greater than **1.7×10^{-8}**.

2.5.1.3 Middle East RVSM Airspace Horizontal Frequency Overlap (HOF):

a. Measuring Amman's FIR Horizontal Overlap Frequency: The Air Navigation Directorate in the Kingdom of Jordan Civil Aviation provided valuable assistant to the MIDRMA team to collect Amman radar traffic data for the purpose of measuring the Horizontal Overlap Frequency within the RVSM airspace in Amman FIR. The mission to Jordan accomplished with great success and the MIDRMA would like to take this opportunity to express their gratitude and thanks to the Air Navigation Directorate in Jordan for the continuous cooperation and support to the MIDRMA team. The HOF was measured by the RADAC system and the parameters were extended to measure the airspace south and south/east of Amman FIR, (south of OTILA and RASLI in Riyadh/Jeddah FIRs) and north of Amman FIR to cover KTN in Damascus FIR, these two locations represents high volume of traffic and they were very essential to include them in the analysis.

b. Measuring Bahrain and Kuwait Horizontal Overlap Frequency :The Air Navigation Directorate in the Kingdom of Bahrain Civil Aviation Affairs appointed a radar engineer to work with the MIDRMA team to facilitate the recording process of both Bahrain and Kuwait radars simultaneously, this task was very complicated because it took place during Bahrain Radar Data Processing System (RDPS) upgrade which was going on during the recording period, the MIDRMA would like to convey their deep gratitude to Bahrain Air Navigation Directorate for the outstanding cooperation and support offered to the MIDRMA team.

c. All recorded radar data analyzed through the RADAC system and the MIDRMA team was able for the first time to merge all the data from the three radars, Amman, Bahrain and Kuwait.

d. The recorded radar data analyzed through the RADAC system and the MIDRMA team was able for the first time to merge all the data from the three radars, Amman, Bahrain and Kuwait, the calculated frequency of horizontal overlap from the three radars is estimated to be **6.49×10^{-5}** per flight hour, the actual measurements were captured from 01st January 2011 until 31st January 2011 for Bahrain and Kuwait radars, and from 15th May 2011 until 31st May 2011 for Amman radar, However the radar data available may not be totally representative of the traffic patterns for the whole Region but as the airspace monitored is considered to be both busy and complex the results are considered to be valid.

Horizontal Overlap Frequency (HOF)			
Year 2006	Year 2008	Year 2010	Year 2011
6.99×10^{-3}	5.1×10^{-11}	2.88×10^{-6}	**6.49×10^{-5}**

e. It was highlighted that, in accordance with the recommendations of the SMR-2010, and following careful evaluation of the MID Region ATS route network and traffic data, it was agreed that the horizontal frequency overlap should be determined in another three locations, namely: Muscat in Oman, HIL in Saudi Arabia, and TAZ in Yemen. Accordingly, Oman, Saudi Arabia, and Yemen are urged to confirm their approval for the provision of radar data to the MIDRMA, for measuring the horizontal frequency overlap in their FIRs.

2.5.1.4 Conclusions on Technical Height-Keeping:

(i) The current computed vertical-collision risk due to technical height-keeping performance meets the ICAO TLS.

(ii) The probability of vertical-overlap estimation satisfies the ICAO global system performance specification.

(iii) The probability of vertical-overlap estimate, Pz(1000), satisfies the global system performance specification.

(iv) Most monitoring groups are complying with technical height-keeping requirements, there are, however, a few groups that do not meet all the requirements. The MIDRMA will continue to coordinate with EUR RMA when problems are identified as they arise and associated corrective actions will be taken.

2.5.1.5 Recommendations for Safety Objective 1:

(i) The MIDRMA shall continue to review the contents and structure of its aircraft monitoring groups.

(ii) The MIDRMA shall use its own software to calculate the technical collision risk module parameters and the risk due to technical height keeping errors in the next SMR.

(iii) The MIDRMA shall coordinate with Iraq's focal point to ensure the receipt of all the requirements of including Iraq's radar in the RADAC System for the purpose of continuous monitoring of the horizontal overlap within Baghdad FIR.

2.5.2 RVSM Safety Objective 2

The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace meets the ICAO overall TLS of 5×10^{-9} fatal accidents per flight hour.

The computed overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace is **1.04×10^{-11}** which meets the ICAO overall TLS of 5×10^{-9} fatal accidents per flight hour, the table below reflects a comparison with the overall risk values calculated for the previous SMRs.

Overall Risk Values			
Year 2006	Year 2008	Year 2010	Year 2011
Not calculated due to the absence of suitable information on atypical errors	$4.19x10^{-13}$	$6.92x10^{-12}$	**$1.04x10^{-11}$**

Table A3: overall Risk Values

2.5.2.1 Altitude Deviation Reports (ADRs) and Coordination Failure Reports (CFRs) from the MIDRMA States have been collected for the period covering from 1st July 2010 until 31st August 2011, an accurate estimation of the total risk is completely reliant on accurate reporting by States. Among the 11 FIRs/UIRs listed in Section 1.1, in the SMR, 8FIRshave provided NIL reports for the reporting period and only 3 FIRs/UIRs have provided actual ADRs.

2.5.2.2 For this reporting period a total of 43 ADRs and other reports have been assessed, from the total number of received reports, only 36 reports out of 43 have been used in the collision-risk estimation as validated by the MIDRMA (this will be updated after the Scrutiny Group evaluate all ADRs), also Coordination Failure Reports (CFRs) submitted by some MIDRMA member States reflected safety concerns which required to be evaluated by the Scrutiny Group. Appendix D in the SMR provides details on the States which provided CFRs for the assessment period.

2.5.2.3 Conclusions on the overall vertical risk:

(i) The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace, estimated from the operational and technical vertical risksmeets the ICAO overall TLS of 5×10^{-9} fatal accidents per flight hour.

(ii) The effect of future traffic growth has also been assessed. The overall risk of collision will continue to meet the TLS at least until 2015.

2.5.2.3.1 Recommendations applicable to this Objective

(i) Launch a new Large Height Deviation (LHD) reporting campaign for the next safety Monitoring Report in order to collect as much data as possible, assess the increasing trend of the operational risk value, identify the factors and further investigate safety improvements to offset the effects.

(ii) Since the operational risk is the most important factor to the overall risk, the MIDRMA will continue to collect operational error data as much as possible from all the MIDRMA member states,this will allow the LHD reporting rates to be updated and provide confidence in the operational risk value.

(iii) The MIDRMA to develop a risk methodology for assessing the safety of implementation of RVSM in the Middle East airspace instead of the European methodology and use its own software in according to the following:

1. Manual on Implementation of a 300 m (1,000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive, International Civil Aviation Organization, Doc 9574, Montreal, March 1992.

2. Review of the General Concept of Separation Panel, Sixth Meeting, Montreal, 28 November – 15 December 1988, ICAO Doc 9536, RGCSP/6, Volumes 1 and 2.

3. Review of the General Concept of Separation Panel, Seventh Meeting, Montreal, 30 October - 20 November 1990, ICAO Doc 9572, RGCSP/7.

2.5.3 **RVSM Safety Objective 3**

Address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.

2.5.3.1 Conclusions for RVSM Safety Objective 3:

(i) Current risk-bearing situations have been identified in the report and actions have been proposed to ensure resolving all violations and information is collected in order to identify operational issues and potential mitigations.

(ii) The MIDRMA will coordinate with all member states to conduct GMU monitoring during 2011/2012 for all airline operators requesting to conduct GMU checks.

Therefore, it is concluded that this Safety Objective is currently met.

2.5.3.2.1 Recommendations for Safety Objective 3:

(i) MIDRMA to continue monitoring RVSM operations in the whole Middle East RVSM airspace over the months by the collection the Large Height Deviation reports from the participating States.

(ii) MIDRMA shall coordinate with all member states to assist their airline operators requesting to conduct GMU monitoring.

(iii) MIDRMA to address the Minimum Monitoring Requirements for all member states.

(iv) Yemen to update the MIDRMA of any case of deviation over the Red Sea area by unknown aircraft.

(v) The MIDRMA will coordinate with the RMACG (Regional Monitoring Agencies Coordination Group) to conduct a global audit of flight plans for the verification of RVSM approvals

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this working paper;

b) approve the MIDRMA intention to use the collision risk model developed for the Middle East RVSM airspace for the purpose of assessing the safety of implementation of RVSM in accordance with the mentioned documents in 2.5.2.4 (iii);

c) urge KSA, Oman, Iraq and Yemen to provide all necessary technical information for including their radar format in the RADAC system; and

d) review and provide comments on the draft SMR 2012 at **Appendix A**.

THE MID RVEM SAFETY MONITORING REPORT 2012

(Draft Version 0.1)

September 2011

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Abstract
This documentconstitutes the RVSM Safety Monitoring Report for the MID RVSM Programme for year 2011/2012 The aim of this document is to highlight by means of argument and supporting evidence that the implementation of RVSM in the Middle East is acceptably safe.

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ACKNOWLEDGMENTS

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DOCUMENTCHANGERECORD

EDITION NUMBER	EDITION DATE	REASON FOR CHANGE
0.1	13.09.2011	Draft version presented to the MIDRMA Board/11 meeting.

EXECUTIVESUMMARY

The Safety Monitoring Report 2011/2012 is issued by the Middle East Regional Monitoring Agency for endorsement by theMiddle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG).

The report presents evidence that according to the data and methods used, the key safety objectives set out in the MID RVSM Safety Policyin accordance with ICAO Doc 9574 (2nd Edition)continue to be met in operational service in the Middle East RVSM airspace .

To conclude on the current safety of RVSM operations, the three key safety objectives endorsed by MIDANPIRG have to be met:

Objective 1 the risk of collision in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of **2.5×10^{-9}** fatal accidents per flight hour.

The 2011 value computed for technical height risk is **5.08×10^{-14}**. This meets RVSM Safety Objective 1.

Objective 2 the overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace meets the ICAO overall TLS of **5×10^{-9}** fatal accidents per flight hour.

The 2011 value computed for overall risk is **1.04×10^{-11}**. This meets RVSM Safety Objective 2.

Objective 3 address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.

Conclusions

(i) The 2011 estimated risk of collision associated with aircraft height- keeping performance is **5.08×10^{-14}** and meets the ICAO TLS of **2.5×10^{-9}** fatal accidents per flight hour (RVSM Safety Objective1).

(ii) The 2011 estimated overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies is **1.04×10^{-11}** and meets the ICAO overall TLS of **5×10^{-9}** fatal accidents per flight hour (RVSM Safety Objective 2).

(iii) Based on currently-available information, there is no evidence available to the RMA to state that the continued operation of RVSM adversely affects the overall vertical risk of collision.

Recommendations

(a) The MIDRMA will coordinate with all MIDRMA focal points to remind their states of the new monitoring requirements in Annex 6 and thereafter it is upon the states to endorse more stringent requirements.

(b) Launch a new Large Height Deviation (LHD) reporting campaign for the next safety Monitoring Report in order to collect as much data as possible, assess the increasing trend of the operational risk value, identify the factors and further investigate safety improvements to offset the effects.

(c) The MIDRMA shall coordinate with Iraq's focal point to ensure the receipt of all the requirements of including Iraq's radar in the RADAC System for the purpose of continuous monitoring of the horizontal overlap within Baghdad FIR.

(d) The MIDRMA will coordinate with the RMACG (Regional Monitoring Agencies Coordination Group) to conduct a global audit of flight plans for the verification of RVSM approvals.

1 INTRODUCTION

1.1 Background

Reduced Vertical Separation Minima (RVSM) was introduced in the Middle East RVSM airspace on 27th November 2003. In compliance with Annex 11 and ICAO Doc. 9574 provisions, a monitoring programme was established by the MIDRMA and a safety monitoring report is presented to each MIDANPIRG meeting. The present document represents the annual Safety Monitoring Report for the year 2011/2012.

1.2 Aim

This Report responds to the official ICAO request to MIDRMA to show by means of argument and supporting evidence that the implementation of RVSM in the Middle East Region satisfies the safety objectives defined in Section 2 of this Report.

The Report is issued for endorsement by MIDANPIRG.

1.3 Scope

The geographic scope of the MID RVSM Safety Monitoring Report covers the MID RVSM Airspace which comprises the following FIRs/UIRs:

Amman	**Bahrain**	**Beirut**	**Cairo**	**Damascus**	**Emirates**
Jeddah	**Kuwait**	**Muscat**	**Sana'a**	**Tehran**	**Baghdad***

T-1: FIRs/UIRs of the Middle East RVSM Airspace

*(*Baghdad FIR is not included in this Safety Monitoring Report - RVSM was successfully implemented on 10th March 2011)*

The Data Sampling periods covered by the SMR 2012 are as displayed in the below table

Report element	Time Period
Vertical Overlap - Traffic Sample Data	01/01/2011– 31/01/2011
Horizontal Overlap -	
Bahrain Radar Data	01/01/2011 – 31/01/2011
Kuwait Radar Data	01/01/2011 – 31/01/2011
Amman Radar Data	15/05/2011 – 31/05/2011
Operational Errors	01/07/2010 – 31/08/2011

T-2: Time period for the reported elements

1.4 Structure of the Document

The Report is constructed using an approach that claims that the risk of collision under MID RVSM will be tolerably low. There are three main safety objectives which collectively represent the conditions to be met for the above claim to be true. This report demonstrates the veracity of the claim by demonstration that these three key safety objectives are met.

- **Section 2** of this document describes the three RVSM safety objectives and the individual components that relate directly to the on-going safety of MID RVSM.
- **Sections 3, 4, 5** details the assessment made against the safety objectives. Each Section contains Conclusion(s) and Recommendation(s) pertinent to the associated safety objective.
- **Section 6**summarises all the Conclusions and Recommendations raised in the previous Sections together with additional Recommendations arising from on-going RMA operations.
- **Appendices A & B:** provide supplementary data to the technical height keeping performance results provided in Section 2.
- **Appendix C:** provides details on Vertical Risk Assessment.
- **Appendix D:** provides information on traffic data submitted by MIDRMA States.

- **Appendix E:** providesinformation on MID RVSM approved ACFT that required monitoring.
- **Appendix F:** provides information on the MID MMR.
- **Appendix G:** includes the MIDRMA duties and responsibilities.
- **Appendix H:** provides definitions and explanations of RVSM terms.
- **Appendix I:** provides Abbreviations.

2 MID RVSM SAFETY OBJECTIVES

A key issue for the assessment of RVSM safety is the satisfaction of a number of safety objectives defined in the Safety Policy for RVSM. The following three safety objectives endorsed by MIDANPIRG are directly relevant to the on-going safety of RVSM:

Objective 1 the risk of collision in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of **2.5×10^{-9}** fatal accidents per flight hour.

Objective 2 the overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace meets the ICAO overall TLS of **5×10^{-9}** fatal accidents per flight hour.

Objective 3 address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.

2.1 Considerations on the RVSM Safety Objectives

When considering the three safety objectives for RVSM, the following considerations should be borne in mind:

1. The assessment of risk against the TLS, both for technical and overall risk estimates, relies on height keeping performance data to assess the risk in the vertical plane and studies of traffic density to calculate the risk in the horizontal plane. There are a number of assumptions that must be verified to satisfy the reliability of the risk assessment. The verification of these assumptions is contained in Section 3 which deals primarily with monitoring aircraft performance issues.
2. The Aircraft performance is assessed by individual airframe and by monitoring group. A monitoring group consists of aircraft that are nominally of the same type with identical performance characteristics that are made technically RVSM compliant using a common compliance method. Monitoring group analysis is necessary to verify that the Minimum Aviation System Performance Standards

(MASPS) for that group is valid. Aircraft that are made RVSM compliant on an individual basis are termed non-group

3. The RVSM Safety Objective 2, dealing with overall risk, takes into account the technical risk presented in Section 3 together with the risk from all other causes. In practice this relates to the human influence and assessment of this parameter relies on adequate reporting of altitude deviations (ADRs), Coordination Failures (CFRs) and the correct interpretation of events for input to the CRM.
4. RVSM Safety Objective 3 requires the RMA to monitor long term trends and to identify potential future safety issues. This Section compares the level of risk bearing incidents for the current reporting period to equivalent periods from previous years. It also highlights issues that should be carried forward as recommendations to be adopted for future reports.

2.2 Vertical-collision risk – general concept

The mathematical model for vertical-collision risk has three key components:

a. First component is the frequency with which aircraft flying at the vertical separation minimum pass directly overhead one another. This is termed the horizontal-overlap frequency.

b. Second component is the probability that aircraft, which are nominally separated by the vertical-separation minimum, are actually, for reasons of error, flying at the same level. This is termed the probability of vertical overlap.

c. Third component is the analysis of validated ADR's and CFR's by the MID RVSM Scrutiny Group

It is the product of these three components which results in the collision risk in the vertical dimension. The data used to estimate each component is dependent on the type of vertical risk being considered, i.e. technical or operational vertical-collision risk

3 TECHNICAL HEIGHT KEEPING PERFORMANCE RISK ASSESSMENT

RVSM Safety Objective 1

the risk of collision in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of **2.5×10^{-9}** fatal accidents per flight hour.

3.1 Direct evidence of compliance with TLS for technical height-keeping error

The resultshows that the risk of collision due to technical height-keeping performance is estimated to be **5.08×10^{-14}** fatal accidents per flight hour, which meets the ICAO TLS of **2.5×10^{-9}**.

3.2 Supporting evidence of compliance with TLS for technical height-keeping performance

To demonstrate that the result is reliable, it is necessary to demonstrate that the following assumptions are true:

(i) The estimated value of the frequency of horizontal overlap, used in the computations of vertical-collision risk, is valid;

(ii) Pz(1000) – the probability of vertical overlap due to technical height-keeping performance, between aircraft flying 1000 ft.separation in MID RVSM airspace is**7.83×10^{-10}** valid and is less than the ICAO requirement of **1.7×10^{-8}**;

(iii) All aircraft flying 1000ft separation in MID RVSM airspace meet the ICAO Global Height Keeping Performance specification for RVSM;

(iv) All aircraft flying 1000ft separation in MID RVSM airspace meet the individual ICAO performance specification for the components of total vertical error (TVE);

(v) The monitoring target for the MID RVSM height-monitoring programme is an on-going process.

(vi) The input data used by the CRM is valid;

(vii) An adequate process is in place to investigate and correct problems in aircraft technical height-keeping performance.

3.2.1 Horizontal Frequency Overlap

According to the analysis of the traffic data submitted by all MIDRMA State members,the airspace to the north of Bahrain continued to be the busiest and complex airspace in the whole MID Region.However the northern and eastern part of Muscat FIR is also complex and getting very busy and required to be evaluated in the next SMR Accordingly, the determination of the horizontal frequency overlap was measured in three different FIRS, Amman, Bahrain and KuwaitFIRs.

3.2.2 Measuring Amman's FIR Horizontal Overlap Frequency (HOF)

The Air Navigation Directorate in the Kingdom of Jordan Civil Aviation provided valuable assistant to the MIDRMA teamto collectAmman radar traffic data for the purpose of measuring the Horizontal Overlap Frequency within the RVSM airspace in Amman FIR.

The mission to Jordan accomplished with great success and the MIDRMA would like to take this opportunity to express their gratitude and thanks to the Air Navigation Directorate in Jordan for thecontinuous cooperation and support to the MIDRMA team.

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The calculated frequency of horizontal overlap from the three radars is estimated to be**6.49×10^{-5}**per flight hour, the actual measurements were captured from 01st January 2011 until 31st January 2011 for Bahrain and Kuwait radars, and from 15th May 2011 until 31st May 2011 for Amman radar, However the radar data available may not be totally representative of the traffic patterns for the whole Region but as the airspace monitored is considered to be both busy and complex the results are considered to be valid.

It was highlighted that, in accordance with the Recommendations of the SMR-2010, and following careful evaluation of the MID Region ATS route network and traffic data, it was agreed that the horizontal frequency overlap should be determined in anotherthree locations, namely: Muscat in Oman, HIL in Saudi Arabia, and TAZ in Yemen. Accordingly, Oman, Saudi Arabia, and Yemen are urged to confirm their approval for the provision of radar data to the MIDRMA, for measuring the horizontal frequency overlap in their FIRs.

Frequency of Horizontal Overlap			
Year 2006	**Year 2008**	**Year 2010**	**Year 2011**
6.99×10^{-3}	**5.1×10^{-11}**	**2.88×10^{-6}**	**6.49×10^{-5}**

T-3: The frequency of HOF values

3.2.4 Pz(1000) compliance

The Pz(1000) is the probability that two aircraft at adjacent RVSM flight levels will lose vertical separation due to technical height keeping errors. The value of the probability of vertical overlap Pz(1000), based on the actual observed ASE and typical AAD data is estimated to be of **7.83×10^{-10}**. This value meets the Global System Performance Specification that the probability that two aircraft will lose procedural vertical separation of 1000ft should be no greater than **1.7×10^{-8}**.

3.2.5 Probability of vertical overlap compliance

Compliance with ICAO TVE component requirements (group requirements), performance requirements for aircraft monitoring groups to be compliant with ICAO TVE component requirements are defined in JAA TGL 6.

Three requirements have to be met:

(i) The mean ASE for any aircraft group shall not exceed ± 25m (± 80ft).

(ii) The sum of the absolute value of the group means ASE and three standard deviations of group ASE shall not exceed 75m (245ft).

(iii) Errors in altitude keeping shall be symmetric about a mean of 0m (0ft), shall have a standard deviation not greater than 13m (43ft) and be such that the error frequency decreases with increasing error magnitude at a rate which is at least exponential.

(i) and (ii) are the performance requirements for group certified aircraft in the basic flight envelope, i.e. the range of operating parameters that the aircraft is most likely to operate in cruising flight within RVSM airspace.

Requirement (iii) sets performance limits on the errors in altitude-keeping exclusive to human factors.

Altitude deviations of greater than 350ft are assumed to be due to human factors and are considered operational errors which contribute to the overall assessment of total vertical risk.

Altitude Deviations of less than 350ft are considered "allowable" altitude deviations within the operational environment and not specifically due to human factors. However these deviations contribute to the overall TLS calculations and are therefore included in the technical-vertical risk assessment.

A total of 73 monitoring groups known to be operating in the Middle East Region, most of the monitoring groups meet the requirements. The following groups fail to meet at least one of the requirements:

- The average group ASE of <80 ft. is not met by :

  GLF3 and T154

- The average group ASE + 3 SD of <245 ft. is not met by:

  BD700 (GL5T), GLF3, H25B – 700, IL76, T154 and T204

- The average group AAD SD < 43 ft. is not met by:

A124 and T154

Of particular concern are the on-going performance problems of the IL76 and VC10. More comprehensive information on aircraft groups not meeting the above requirements is contained in **Appendix A.**

3.3 Evolution of Technical Risk Estimate

Technical Risk Values			
Year 2006	**Year 2008**	**Year 2010**	**Year 2011**
$2.17x10^{-14}$	**$1.93x10^{-13}$**	**$3.96x10^{-15}$**	**5.08×10^{-14}**

T-3: The Technical Risk values

3.3.1 According to the technical risk values as shown in the above table the TLS values is continuously increasing, the MIDRMA issued an updated minimummonitoring requirements (MMR) for each MIDRMA member states according to the latest RVSM approvals received from all members valid until 31st August 2011, these tables are available in Appendix E**.**

3.4 Conclusions on Technical Height-Keeping

(i) The current computed vertical-collision risk due to technical height-keeping performance meets the ICAO TLS.

(ii) The probability of vertical-overlap estimation satisfies the ICAO global system performance specification.

(iii) The probability of vertical-overlap estimate, Pz(1000), satisfies the global system performance specification.

(iv) Most monitoring groups are complying with ICAO TVE component requirements (also known as technical height-keeping group requirements). There are, however, a few monitoring groups that do not comply with those requirements.

(v) Most monitoring groups are complying with technical height-keeping requirements. There are, however, a few groups that do not meet all the requirements. The MIDRMA will continue to coordinate with EUR RMA when problems are identified as they arise and associated corrective actions will be taken.

3.5 Recommendations

a) The MIDRMA shall continue to review the contents and structure of its aircraft monitoring groups.

b) The MIDRMA shall use its own software to calculate the technical collision risk module parameters and the risk due to technical height keeping errors in the next SMR.

c) The MIDRMA shall coordinate with Iraq's focal point to ensure the receipt of all the requirements of including Iraq's radar in the RADAC System for the purpose of continuous monitoring of the horizontal overlap within Baghdad FIR.

d) The MIDRMA shall continue to investigate the implications of Annex 6 minimum monitoring requirements for all RVSM approved aircraft registered in the Middle East region.

4 ASSESSMENT OF OVERALL RISK DUE TO ALL CAUSES AGAINST THE TLS OF 5 X 10^{-9} FATAL ACCIDENTS PER FLIGHT HOUR

RVSM Safety Objective 2

The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace meets the ICAO overall TLS of **5 x 10^{-9}** fatal accidents per flight hour.

The objective of this Section is to set out the arguments and evidence that the overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace. The computed value is **1.04 x 10^{-11}** which meets the ICAO overall TLS of **5 x 10^{-9}** fatal accidents per flight hour.

4.1 Direct and supporting evidence of compliance with overall TLS

The direct and supporting evidence of compliance with overall TLS is considered to be trustworthy if it can be shown that:

(i) The number of Altitude Deviation Reports (ADRs) received is sufficiently representative of the true situation;

(ii) The method of analysing ADRs and CFRs for input to the CRM is valid and the method by which operational errors are modelled in the CRM is valid;

(iii) Expected future traffic growth affecting MID RVSM airspace is fully taken into account in the collision risk analysis.

Altitude Deviation Reports (ADRs) and Coordination Failure Reports (CFRs) from the MIDRMA States have been collected for the period covering from 1st July 2010 until 31st August 2011.

An accurate estimation of the total risk is completely reliant on accurate reporting by States. Among the 11 FIRs/UIRs listed in Section 1.3, 8 FIRs have provided NIL reports for the reporting period and 3 FIRs/UIRs have provided actual ADRs.

For this reporting period a total of 43 ADRs and other reports have been assessed. 36 ADRs from the total number of received reportshave been used in the collision-risk estimation as validated by the MIDRMA(this will be updated after the Scrutiny Group evaluation of all ADRs) . **Appendix D** provides further details on the reports used in the assessment.

Coordination Failure Reports (CFRs) submitted some MIDRMA member States. These CFRs reflected safety concerns which required to be evaluated by the Scrutiny Group. **Appendix D** provides details on the States which provided CFRs for the assessment period.

4.2 Effects of future traffic growth

The effect of future traffic growth on the vertical collision risk can be evaluated on the assumption of a linear relationship between traffic growth and frequency of horizontal overlap, which will directly affect the two components of the risk: the risk due to technical height-keeping performance and due to atypical operational errors.

It is clear that even for the most optimistic forecast range of 13%, the overall risk of collision will continue to meet the TLS at least until 2015. With the current uncertainty over traffic growth this issue will be revisited when the Middle East economic conditions return to more normal growth.

4.3 Evolution of the overall Risk Estimate

Overall Risk Values			
Year 2006	**Year 2008**	**Year 2010**	**Year 2011**
Not calculated due to the absence of suitable information on atypical errors	**4.19×10^{-13}**	**6.92×10^{-12}**	**1.04×10^{-11}**

T-4: The Overall Risk values

4.4 Conclusions on the overall vertical risk

(i) The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace, estimated from the operational and technical vertical risks, meets the ICAO overall TLS of **5×10^{-9}** fatal accidents per flight hour.

(ii) The effect of future traffic growth has also been assessed. The overall risk of collision will continue to meet the TLS at least until 2015.

4.5 Recommendations applicable to this Objective

(i) Launch a new Large Height Deviation (LHD) reporting campaign for the next safety Monitoring Report in order to collect as much data as possible, assess the increasing trend of the operational risk value, identify the factors and further investigate safety improvements to offset the effects.

(ii) Since the operational risk is the most important factor to the overall risk, the MIDRMA will continue to collect operational error data as much as possible from

all the MIDRMA member states. This will allow the LHD reporting rates to be updated and provide confidence in the operational risk value.

(iii) The MIDRMA to adopt a risk methodology for assessing the safety of implementation of RVSM in the Middle East airspace instead of the European methodology according to the following:

(a) Manual on Implementation of a 300 m (1,000 ft) Vertical SeparationMinimum Between FL 290 and FL 410 Inclusive, International Civil Aviation Organization, Doc 9574, Montreal, March 1992.
(b) Review of the General Concept of Separation Panel, Sixth Meeting, Montreal, 28 November – 15 December 1988, ICAO Doc 9536, RGCSP/6, Volumes 1 and 2.
(c) Review of the General Concept of Separation Panel, Seventh Meeting, Montreal, 30 October - 20 November 1990, ICAO Doc 9572, RGCSP/7.

5 ASSESSMENT OF SAFETY-RELATED ISSUES RAISED IN THIS REPORT

RVSM Safety Objective 3

Address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.

5.1 Methodology

The identified safety-related issues are:

(i) Confirmation of the approval status of aircraft filling RVSM flight plan (W in field 10).

(ii) Accuracy contents and quantity of supplied data is detaining the accurate determination of operational risk assessment.

(iii) Identification of operators requiring monitoring and address the minimum monitoring requirements to all MIDRMA member states.

The MIDRMA didn't received any report from Yemen concerning the non-adherence to the Red Sea procedures; although Yemen informed the MIDRMA unofficially of the existence of continuous non adherence to this procedure, so far, Yemen did not send any report to the MIDRMA.

Reference (iii), the recommended practice in this case is addressing all operators in the Middle East region which required conducting height monitoring**;**the MIDRMA published a new MMR for all member states. **Appendix-E** shows all operators requiring height monitoring in the MID Region.

5.2 Conclusions

(i) Current risk-bearing situations have been identified in the Report and actions have been proposed to ensure resolving all violations and information is collected in order to identify operational issues and potential mitigations.

(ii) The MIDRMA will coordinate with all member states to conduct GMU monitoring during 2012/2013 for all airline operators requesting to conduct GMU checks.

Therefore, it is concluded that this Safety Objective is currently met.

5.3 Recommendations Applicable To Safety Objective 3

(i) MIDRMA to continue monitoring RVSM operations in the whole Middle East RVSM airspace over the months by the collection theLarge HeightDeviation reportsfrom the participating States in accordance with the new MIDRMA requirements as detailed in the MIDRMA manual

(ii) MIDRMA shall coordinate with all member states to assist their airline operators requesting to conduct GMU monitoring.

(iii) MIDRMA to address the Minimum Monitoring Requirements for all member states.

(iv) Yemen to update the MIDRMA of any case of deviation over the Red Sea area by unknown aircraft.

(v) The MIDRMA will coordinate with the RMACG (Regional Monitoring Agencies Coordination Group) to conduct a global audit of flight plans for the verification of RVSM approvals.

6 Conclusions and Recommendations

This Section is intended to summarise all the Conclusions and Recommendations drawn in Sections 3 to 5 of the 2012 Safety Monitoring Report:

6.1 Conclusions

1. The current computed vertical-collision risk due to technical height-keeping performance meets the ICAO TLS.
2. The probability of vertical-overlap estimate, Pz(1000), satisfies the global system performance specification.
3. The probability of vertical-overlap estimate, Pz(1000), satisfies the global system performance specification.
4. Most monitoring groups are complying with ICAO TVE component requirements (also known as technical height-keeping group requirements). There are, however, a few monitoring groups that do not comply with those requirements.
5. Most monitoring groups are complying with technical height-keeping requirements. There are, however, a few groups that do not meet all the requirements. The MIDRMA will continue to coordinate with EUR RMA when problems are identified as they arise and associated corrective actions will be taken.
6. The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace, estimated from the operational and technical vertical risks, meets the ICAO overall TLS of **5×10^{-9}** fatal accidents per flight hour.
7. The effect of future traffic growth has also been assessed. The overall risk of collision will continue to meet the TLS at least until 2015.
8. Current risk-bearing situations have been identified in the Report and actions have been proposed to ensure resolving all violations and information is collected in order to identify operational issues and potential mitigations.
9. The MIDRMA will coordinate with all member states to conduct GMU monitoring during 2012/2013 for all airline operators requesting to conduct GMU checks.

6.2 Recommendations

The following recommendations relate to actions proposed in various sections in this Report

1. The MIDRMA shall continue to review the content and structure of its aircraft monitoring groups.
2. The MIDRMA shall use its own software to calculate the technical collision risk module parameters and the risk due to technical height keeping errors in the next SMR.
3. The MIDRMA shall coordinate with Iraq's focal point to ensure the receipt of all the requirements of including Iraq's radar in the RADAC System for the purpose of continuous monitoring of the horizontal overlap within Baghdad FIR.

4. The MIDRMA shall continue to investigate the implications of Annex 6 minimum monitoring requirements for all RVSM approved aircraft registered in the Middle East region.

5. Launch a new Large Height Deviation (LHD) reporting campaign for the next safety Monitoring Report in order to collect as much data as possible, assess the increasing trend of the operational risk value, identify the factors and further investigate safety improvements to offset the effects.

6. Since the operational risk is the most important factor to the overall risk, the MIDRMA will continue to collect operational error data as much as possible from all the MIDRMA member states. This will allow the LHD reporting rates to be updated and provide confidence in the operational risk value.

7. The MIDRMA to adopt a risk methodology for assessing the safety of implementation of RVSM in the Middle East airspace instead of the European methodology in accordance according to the following:

   (a) Manual on Implementation of a 300 m (1,000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive, International Civil Aviation Organization, Doc 9574, Montreal, March 1992.
   (b) Review of the General Concept of Separation Panel, Sixth Meeting, Montreal, 28 November – 15 December 1988, ICAO Doc 9536, RGCSP/6, Volumes 1 and 2.
   (c) Review of the General Concept of Separation Panel, Seventh Meeting, Montreal, 30 October - 20 November 1990, ICAO Doc 9572, RGCSP/7.

8. MIDRMA to continue monitoring RVSM operations in the whole Middle East RVSM airspace over the months by the collection the Large Height Deviation reports from the participating States in accordance with the new MIDRMA requirements as detailed in the MIDRMA manual.

9. MIDRMAshall coordinate with all member states to assist their airline operators requesting to conduct GMU monitoring.

10. MIDRMA to address the Minimum Monitoring Requirements for all member states.

11. Yemento update the MIDRMA of any case of deviation over the Red Sea area by unknown aircraft.

12. TheMIDRMA will coordinate with the RMACG (Regional Monitoring Agencies Coordination Group) to conduct a global audit of flight plans for the verification of RVSM approvals.

7 APPENDICES

7.1 Appendix A - Technical Height-Keeping Performance

A.1. Introduction

ICAO Document 9574 requires a height-monitoring programme to be conducted in order to demonstrate that the prescribed level of safety is being achieved. In particular, it requires the height-monitoring programme to provide:

a) Confidence that the ICAO technical TLS of **2.5×10^{-9}** fatal accidents per aircraft flight hour will be met when RVSM is implemented and will continue to be met thereafter;

b) Guidance on the efficacy of MASPS and the effectiveness of altimetry system modifications; and

c) Evidence of altimetry system error (ASE) stability.

To meet these requirements, the MID RVSM Programme has established a height-monitoring programme, based on ICAO requirements and with the support of EUROCONTROL.

The RVSM height-monitoring programme is currently based on data provided by the European height monitoring infrastructure reinforced with individual aircraft performance results produced by on-board GPS Monitoring Units.

The quality and reliability of the monitoring infrastructure and its output data have been ensured through the specification of the systems and through verification of performance during flight testing.

A.2. Scope

Confidence in meeting requirement (a) related to the ICAO technical TLS is provided in the EUROCONTROL Collision Risk Model is applied to the monitoring data to estimate the vertical risk due to technical height-keeping performance in the Middle East RVSM airspace.

Requirement (c) is subject to investigations by various national and international bodies and involves evaluation of many years of height monitoring data to determine the accuracy and stability of ASE over time. These investigations are not within the scope of individual RMA safety reporting. EUROCONTROL is involved in evaluation of ASE stability and will report any findings to the MIDRMA.

This **Appendix** focuses on the technical height-keeping performance of operators that use Middle East RVSM airspace, in relation to ICAO requirement (b). in particular it:

i. summarises the current results of the MID RVSM operators concerning compliance with the MASPS for the overall aircraft population; and

ii. summarises the current results concerning compliance with expected performance for individual airframes.

iii. concludes with a summary of recommendations to address non-compliances in the future.

The results contained herein are based solely on data as described in the following Section. It should be noted that the calculations of the collision risk included in **Appendix C** of this Report are also based on this information.

A.3. Data used in the Technical-Height Keeping Performance Assessment

All results presented in this **Appendix** are based on height-measurement data that was;

i. recorded by the European HMU's between **01 January 2009 and 14 August 2011**; and

ii. recorded by the Linz, Nattenheim, Geneva and Strumble HMUs as well as the different GMUs from all Regions; and

iii. fully correlated to an identified airframe.

Number of Measurements by Regions	
EUR	Other Regions (NAT,NAM)
747,356	**60,521**

A-1: Total number of measurements by Region

A.4. Verification of the aircraft Height-Keeping Performance Requirements

Monitoring groups for aircraft operating in the MID Region extracted from flight plans have been assessed against the performance requirements in JAA TGL 6.

Most of the MID aircraft group is satisfy the required RVSM performance based on MIDRMA MMR table, except those ACFT that are shown in table **A-2** below are still under EUR RMA investigation procedure.

No. airframes monitored	Av ASE + 3 SD(<245 ft)	Av ASE (<80 ft)	Monitored Group
4	**245.14**	60.78	BD700
4	**258.15**	**- 118.30**	GLF3
2	**288.89**	76.32	H25B-700
37	**270.13**	60.40	IL76
11	**312.63**	29.28	T204
5	**272.43**	**83.61**	T154

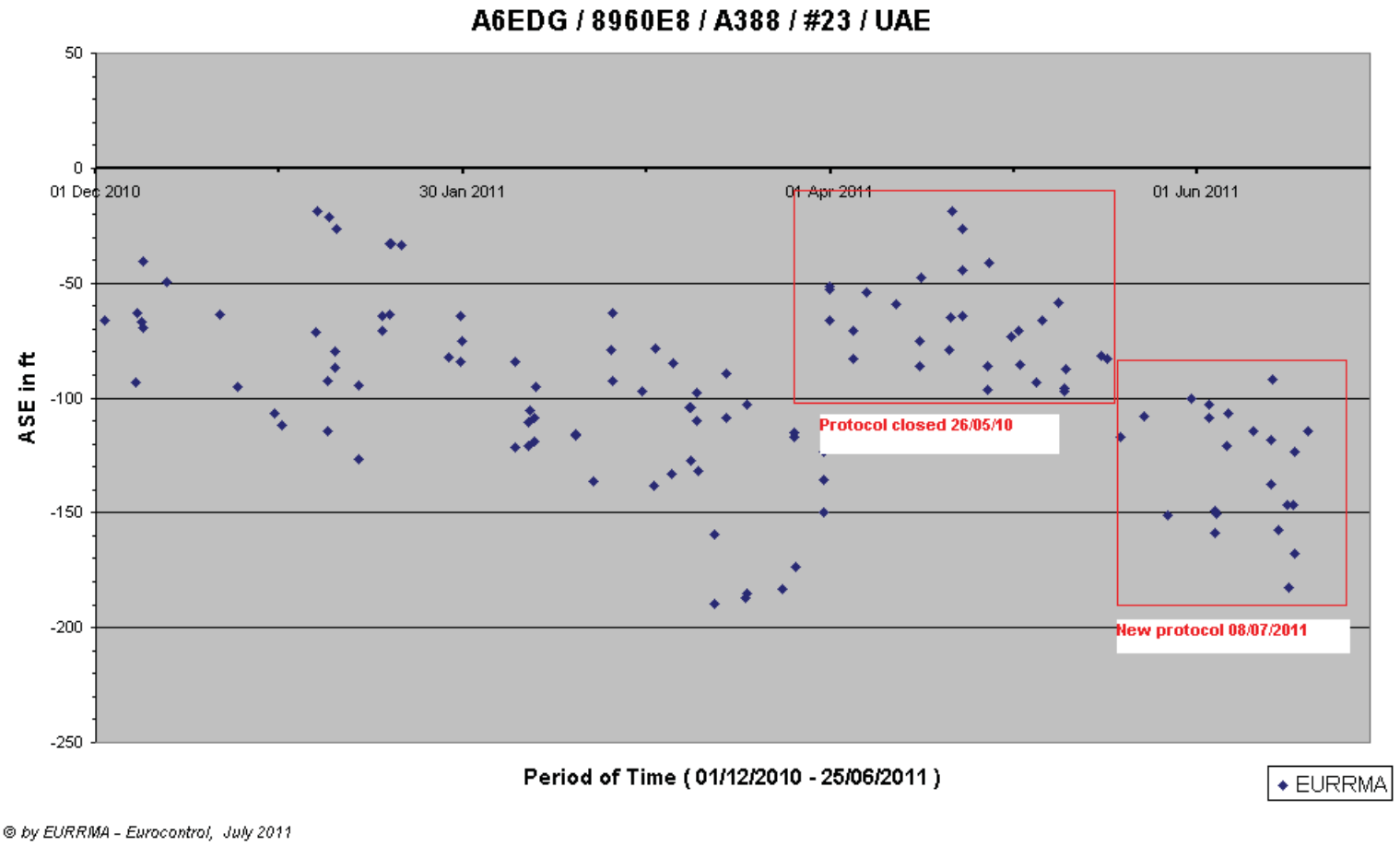
A-2 ASE Performance by Monitoring Groups

A.4.1. Aircraft Monitoring Groups With Insufficient Data

There were insufficient monitoring results to assess the following groups due to the lack of height monitoring results, action will be taken to ensure that GMU monitoring is carried out.

B727	B732
BE20	BE30
C17	HA4T
LJ55	P180
YK42	-

A-3 Aircraft Monitoring Groups with insufficient Data



A-G1 Sample of anAltimetry System Error

7.2 Appendix B – Operator Monitoring Compliance

B.1 MID States RVSM Aircraft MMR Status:

Although the long term aim of all RMAs is to ensure sufficient aircraft are monitored to meet individual operator monitoring targets, a first step is to advise all MID States of all their RVSM approved aircraft which require height monitoring.**Appendix E** provides details on MID States RVSM registered ACFT required monitoring, the table below summarise the latest MID states RVSM MMR as of August 2011, total 456 aircraft not monitored or covered for monitoring which represents 40% of the total RVSM approved aircraft registered in the region.

MID. STATES - RVSM ACFT MINIMUM MONITORING REQUIREMENTES
AS OF AUGUST 2011

Seq. #	MID STATES	RVSM ACFTs	HAVE HMU OR GMU	NOT Covered	NOT Covered in %	ACFT MMR	Required MON in %	REMARKS
1	BAHRAIN	58	31	27	47%	9	16%	
2	EGYPT	128	89	39	30%	9	7%	
3	IRAN	123	42	81	66%	24	20%	11 added
4	IRAQ	14	0	14	100%	7	16%	
5	KSA	260	109	151	58%	42	7%	
6	KUWAIT	36	22	14	39%	3	20%	
7	LEBANON	33	29	4	12%	3	9%	
8	OMAN	30	10	20	67%	6	16%	
9	QATAR	107	80	27	25%	4	8%	
10	SYRIAN	9	8	1	11%	1	9%	
11	UAE	328	257	71	22%	14	20%	
12	YEMEN	12	5	7	58%	4	4%	
	TOTAL	1138	682	456	40%	126	11%	

Long Term Monitoring

For the purposes of height monitoring, aircraft are assigned to a monitoring group. A monitoring group can consist of one or more aircraft types, or may alternatively be a subset of a type that has had specific alterations affecting the height keeping performance.

As a result of harmonisation between the different Regional Monitoring Agencies (RMAs) around the world, an initial set of aircraft monitoring groups was established and documented in the ICAO RMA handbook (see the latest MMR tables in Appendix- F). Since the first production of this document it has been necessary to amend these groups as new aircraft types have come on line and other groups have been modified against Supplementary Type Certificates, (STC) that have altered the height keeping performance.

Each monitoring group is assigned a monitoring target that specifies the minimum number, or percentage, of aircraft for each group that each operator should have monitored.

EUROCONTROL hassupplied all results for Middle East registered ACFT that are flying over the European HMUs. Forall Middle East registered ACFT the State of registry is responsible to instruct each ACFT operator to conduct GMU monitoring in accordance with ICAO ACFT grouping categories (MMR).

7.3 Appendix C – Vertical Collision Risk Assessment

C.1 Initial Assumptions

The safety estimations that address the above objectives are based on the two following assumptions:

- that the European mathematical collision risk model (CRM), as detailed in the European RVSM Mathematical Supplement and after suitable adjustments, can be applied to the Middle East RVSM airspace; and
- that the Altimetry System Error (ASE) for Middle East RVSM-approved aircraft is stable over time.

C.1.1 Vertical - Collision Risk – General Concept

The European mathematical model for vertical-collision risk has two key components:

- one component is the frequency with which aircraft flying at the vertical separation minimum pass directly overhead one another. This is termed the horizontal-overlap frequency.
- the other component is the probability that aircraft, which are nominally separated by the vertical-separation minimum, are actually, for reasons of error, flying at the same level. This is termed the probability of vertical overlap.

It is the product of these two components which results in the collision risk in the vertical dimension. The data used to estimate each component is dependent on the type of vertical risk being considered, i.e. technical or operational vertical-collision risk.

C 2 Technical Vertical-Risk Estimation

C 2.1 Frequency of horizontal overlap

Methodology

The estimate of the frequency of horizontal overlap is obtained from the combination of two parameters based on the number of proximate events. A proximate event is defined as the occurrence of two aircraft passing within a horizontal distance R whilst separated by the vertical separation minimum (1000ft). This frequency of proximity is estimated from the number of proximate events divided by the overall number of flight hours recorded in the PFS files. The other parameter is the kinematic factors which is a function of aircraft dimensions and relative velocities on the range of different geometries (pairs of aircraft in crossing, parallel and opposite direction).

C 2.2 Probability of Vertical Overlap Due to Technical Height Deviations

Methodology

The applied methodology is based on two distributions: the overall ASE (Altimetry System Error) and the 'typical' AAD (Assigned Altitude Deviation) distributions. The combination of these two distributions provides the probability of vertical overlap due to technical height-keeping performance.

The overall ASE distribution is obtained from the combination of ASE distributions for each aircraft monitoring group, weighted by the proportion of the number of measurements in the dataset made by that group.

A monitoring group's ASE distribution is made up of two different types of density distributions: a within-airframe ASE distribution and a between-airframe ASE distribution. The most suitable distribution curves to those types of distributions are to be found in order to fit the obtained HMU ASE measurements for each monitoring group.

'Typical' AAD performance has been taken to be that which is not greater than 350ft in magnitude. Any AAD greater than this value should be considered 'atypical' and then modelled as a contribution to the total vertical risk.

Data

The probability of vertical overlap has been derived from the European monitoring database analysis results for operators and ICAO types in the Middle East for the period **01 January 2009 and 14August 2011**.

C 2.3Results for Technical Vertical Risk

Combining the probability of vertical overlap with the horizontal overlap frequency gives an estimated vertical risk due to technical height-keeping performance for Middle East RVSM airspace of **7.46×10^{-12}**

The ICAO TLS of **2.5×10^{-9}** fatal accidents per flight hour for the vertical-collision risk due to technical causes is therefore met.

C.3 Vertical Risk Estimation Due to Atypical Errors

Methodology

In assessing the total risk posed by all causes, the risk posed by technical height-keeping performance must be combined with the risk posed by all other sources of deviation from the assigned altitude. Such deviations are referred to as atypical.

The risk posed by all atypical errors is obtained by the combination of two parameters: the probability of vertical overlap due to atypical errors and the frequency of horizontal overlap.

The estimation for frequency of horizontal overlap was already obtained in section **C.2.1.**

For the estimation of the probability of vertical overlap due to atypical errors, information has to be gathered from the participating States in form of Altitude Deviation Reports (ADRs) describing the nature, duration and length of the altitude deviation of any event within the RVSM airspace and coordination failure reports describing the nature of coordination failures between ATC units (CFRs) . A scrutiny group of experts has then to be created to ensure that altitude deviations and coordination failures are used for the estimation. The duration of those deviations are then compared to the overall flight time for the airspace under assessment to derive the overall AAD operational error parameter.

C.3.1 Results for Probability of Vertical Overlap Due to a Typical Error

C.3.1.1 Scrutiny Group Meeting

The Scrutiny group consisting of ATM experts from Bahrain, Egypt, KSA, Oman, the I.R. of Iran, UAE, ICAO MID secretariat and MIDRMA met on 25th September 2011one day before the MIDRMA Board 11 meeting which was held in Cairo - Egypt(26 - 28September 2011) and discussed, evaluated and reviewed all Altitude Deviation Reports (ADRs) and some Coordination Failure Reports (CFRs) for the past 13 months which were received from all MIDRMA State members.

The ADRs and CFRs occurrences in the MID Region airspace are summarized as follows:

1- Total number of ADRs received was 43.
2- Total number of CFRs received was (figure will be updated after the validation of all CFR by the Scrutiny Group).

C.3.1.2 Scrutiny Group Technical Observations:

(The outcome of the MID RVSM SG2 meeting which will take place on 25th September 2011 will be inserted here)

C 4 TheEffect of Future Traffic Growth

The effect of future traffic growth on the technical vertical-collision risk was estimated on the basis of a linear relationship between traffic growth and frequency of horizontal overlap from the year 2006 up to 2012.

Under that basis and considering an average traffic growth of 8% per year for the Middle East RVSM airspace, the technical vertical-collision risk estimation will continue to meet the technical TLS until 2015 or even more depending on many factors.

It is important to note that the vertical-risk estimation due to atypical errors has been demonstrated to be the major contributor in the overall risk estimation for the MID RVSM airspace.

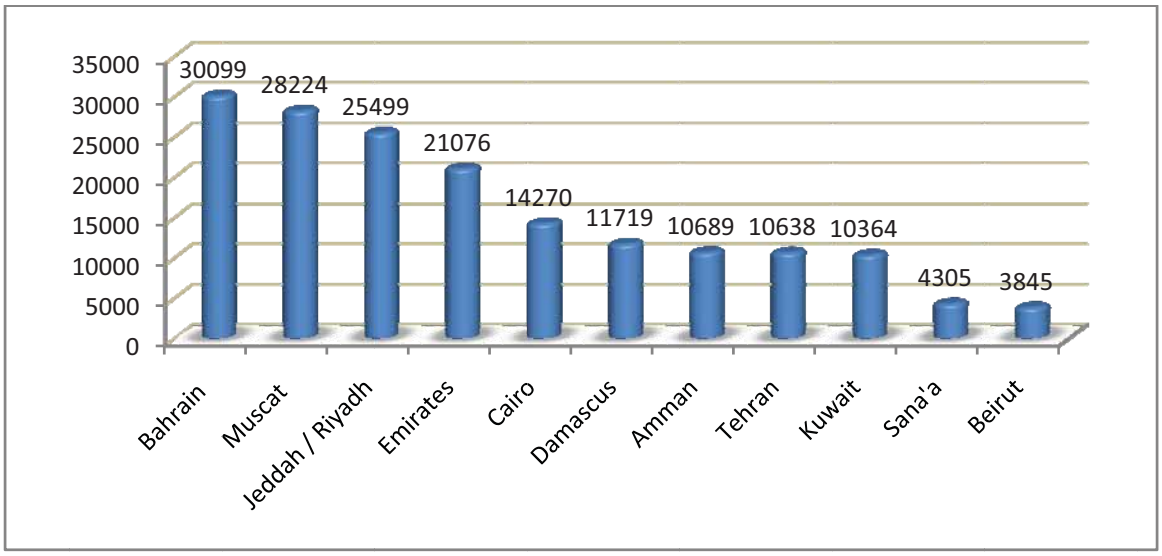
In that respect, although at the current time the operational situation may not be critical, the estimated forecast increase of 8% traffic growth per year in the Middle East RVSM airspace –this in practice means thatthe frequency of horizontal overlap estimation will be doubled in 7 years –which may contribute to a scenario where the overall ICAO vertical TLS might be exceeded.

7.4 Appendix D – Member States Traffic Data Analysis:

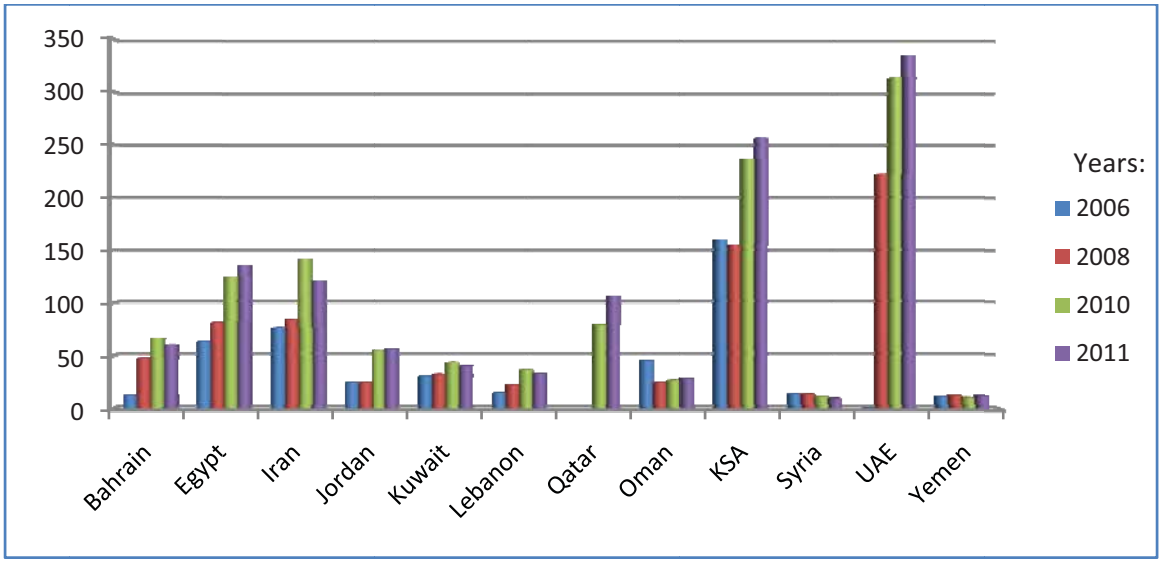
The quality of the SMR traffic data received from all State members varies from oneState to another.The MIDRMA monitoring team spent a considerable time to correct the contents and fill all missing fields, especially the registration which is considered as a unique key field used to find the related height keeping monitoring results for each ACFT, from the European HMU database. Below some of the MID data samples processed for this report.

MID States Actual Traffic Movement				
SN	MID States FIR's	June 2009	Jan 2011	Increases or Decreases (%)
1	Bahrain	24285	30099	19.32
2	Muscat	22520	28224	20.21
3	Jeddah/Riyadh	22422	25499	12.07
4	Cairo	19228	14270	**-34.74**
5	Emirates	15868	21076	24.71
6	Tehran	10479	10638	1.49
7	Damascus	9774	11719	16.60
8	Amman	8554	10689	19.97
9	Kuwait	3570	10364	65.55
10	Sana'a	3490	4305	18.93
11	Beirut	2949	3845	23.30

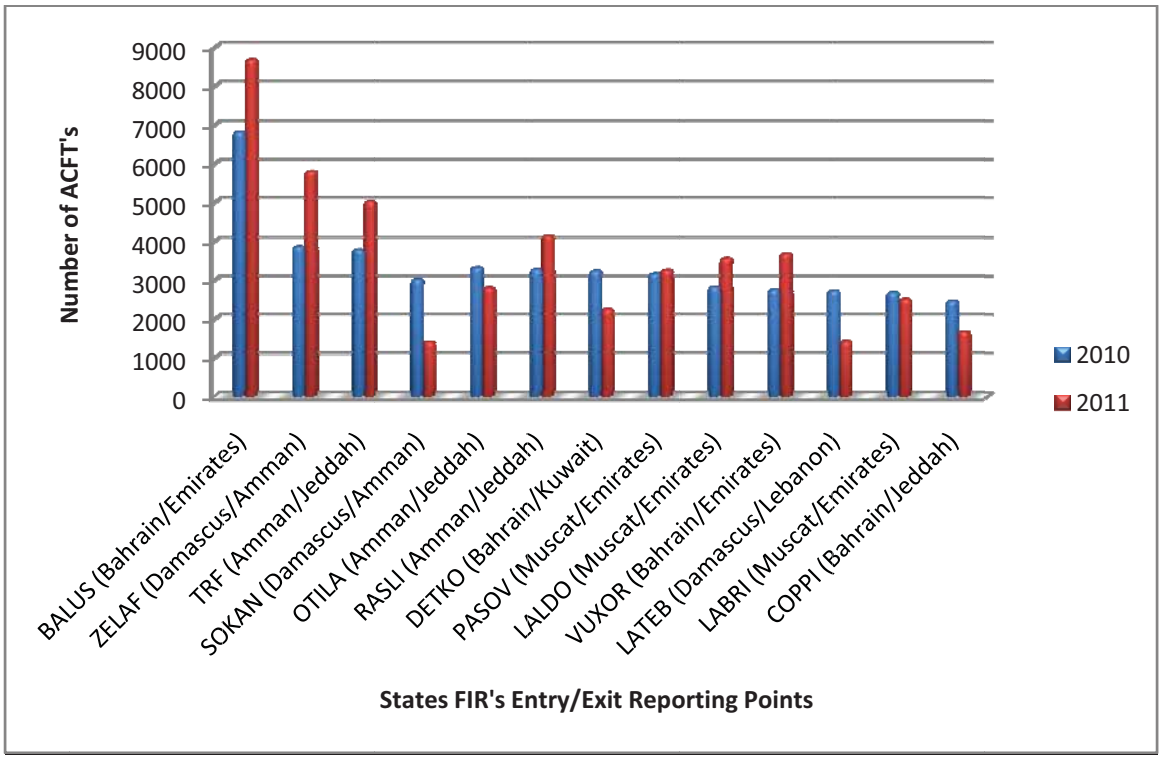
D-1: MID States traffic data for June 2009 & Jan 2011



G-1: MID States FIRs Total Flights Number for January 2011



G-1.1: MID States RVSM Approvals Since 2006



G-1.3: The Busiest States FIR's Entry/Exit Reporting Points (2010 – 2011)

The following Tables present the status of provision of ADRs, CFRs and RVSM Approvals by States for the period July 2010 – August 2011

D-2 (1/2):MID States ADR, CFR &RVSM status reports

	Months	July			Aug			Sep			Oct			Nov			Dec		
	2010	ADR	CFR	RVSM	ADR	CFR	RVSM	ADR	CFR	RVSM	ADR	CFR	RVSM	ADR	CFR	RVSM	ADR	CFR	RVSM
1	Bahrain	NIL	82	*10/07	NIL	105	*02/08	NIL	13	*05/09	1	95	*10/10	NIL	75	*02/11	1	69	*12/12
2	Egypt	NIL	2	*19/07	NIL	2	*16/08	NIL	1	*03/09	NIL	NIL	*10/10	1	22	*12/11	NIL	2	*07/12
3	Iran	NIL	9	-	NIL	2	-	NIL	4	*12/09	NIL	4	*22/10	NIL	12	-	NIL	5	-
4	Iraq	NIL	178	-	NIL	50	-	NIL	126	-	NIL	130	-	NIL	141	-	NIL	73	*14/12
5	Jordan	NIL	03	*03/08	NIL	5	*06/09	NIL	NIL	NoCh	NIL	4	*05/10	NIL	3	*02/11	NIL	5	*02/12
6	Kuwait	NIL	NIL	*17/07	NIL	NIL	*04/08	NIL	NIL	*06/09	NIL	16	-	-	18	-	-	9	*12/12
7	Lebanon	-	-	-	-	-	*10/08	NIL	NIL	*26	-	-	*24/09	-	-	-	-	-	*02/12
8	Oman	NIL	4	*13/07	-	5	*05/08	-	-	-	-	-	-	-	1	-	-	2	-
9	Qatar	-	-	*04/07	-	-	*23/08	-	-	*2/09	-	-	*04/10	-	-	*04/12	-	-	*03/01
10	KSA	NIL	3	*05/08	NIL	NIL	*29/08	NIL	NIL	*05/09	NIL	7	-	NIL	8	-	NIL	3	-
11	Syria	NIL	NIL	NoCh	NIL	NIL	NoCh	NIL	NIL	*3 /10	NIL	NIL	*28/10	NIL	NIL	NoCh	NIL	NIL	*14/12
12	UAE	8	4	*8	10	6	-	4	4	*30/09	1	5	*19/10	2	5	-	1	6	*1/12
13	Yemen	NIL	NIL	*1/01	NIL	2	*1/01	NIL	2	*1/01	NIL	NIL	*1/01	NIL	NIL	*1/10	NIL	2	*7/01

D-2 (2/2):MID States ADR, CFR & RVSM status reports

	Months	JAN			FEB			MAR			APR			MAY			JUNE		
	2011	ADR	CFR	RVSM	ADR	CFR	RVSM	ADR	CFR	RVSM	ADR	CFR	RVSM	ADR	CFR	RVSM	ADR	CFR	RVSM
1	Bahrain	NIL	165	*05/01	-	4	*06/02	-	69	*06/03	-	82	*19/04	-	99	*07/06	-	53	*29/06
2	Egypt	1	3	*02/01	NIL	2	*16/02	NIL	NIL	-	NIL	NIL	*11/04	NIL	NIL	-	NIL	NIL	13/06
3	Iran	NIL	1	-	NIL	NIL	-	NIL	3	*21/03	NIL	5	*06/04	NIL	2	*17/05	NIL	NIL	*19/06
4	Iraq	-	-	-			*17/02	-	-	-	-	-	-	-	-	-	-	-	-
5	Jordan	NIL	4	NoCh	NIL	5	NoCh	NIL	3	NoCh	NIL	3	*09/05	NIL	2	NoCh	NIL	1	NoCh
6	Kuwait	-	8	*10/01	-	-	-	-	-	-	-	5	*24/04	-	5	*09/05	NIL	11	NoCh
7	Lebanon	NIL	NIL	NoCh	NIL	NIL	NoCh	NIL	NIL	NoCh	NIL	NIL	NoCh	NIL	NIL	NoCh	NIL	NIL	*06/6
8	Oman	-	-	-	-	-	-	-	-	*21/03	-	-	*13/04	-	-	-	-	-	-
9	Qatar	N/A	N/A	*18/01	N/A	N/A	-	N/A	N/A	*21/03	N/A	N/A	*3/04	N/A	N/A	*19/05	N/A	N/A	27/06
10	KSA	NIL	3	*02/02	NIL	NIL	NoCh	NIL	NIL	NoCh	NIL	NIL	NoCh	NIL	2	*25/05	NIL	3	-
11	Syria	NIL	NIL	*03/02	NIL	NIL	*02/03	NIL	NIL	*06/03	NIL	NIL	*04/04	NIL	NIL	*02/05	NIL	NIL	*04/06
12	UAE	NIL	11	*09/02	1	4	-	1	6	-	1	4	*12/05	NIL	5	*04/06	3	5	*02/07
13	Yemen	NIL	NIL	*21/02	NIL	NIL	*08/03	NIL	NIL	*08/03	NIL	NIL	*15/05	NIL	NIL	*15/05	NIL	NIL	03/07

D-3: MID States ADR, CFR & RVSM status report

	Months	JULY			AUG			SEP			OCT			NOV			DEC		
	2011	**ADR**	**CFR**	**RVSM**	**ADR**	**CFR**	**RVSM**	**ADR**	**CFR**	**RVSM**	**ADR**	**CFR**	**RVSM**	**ADR**	**CFR**	**RVSM**	**ADR**	**CFR**	**RVSM**
1	**Bahrain**	-	47	*28/07															
2	**Egypt**	NIL	NIL	*10/08			10/08												
3	**Iran**	NIL	5	*20/07	NIL	1	*17/08												
4	**Iraq**	-	-	-	-	-	*04/08												
5	**Jordan**	NIL	3	NocH	NIL	2	NocH												
6	**Kuwait**	-	-	-	-	-													
7	**Lebanon**	-	-	-	-	-	-												
8	**Oman**																		
9	**Qatar**	N/A	N/A	*19/07	N/A	N/A	*11/08												
10	**KSA**	NIL	NIL	-	NIL	2	*21/08												
11	**Syria**	NIL	NIL	*04/07	NIL	NIL	*07/08												
12	**UAE**	7	9	*02/08	-	-	*09/08												
13	**Yemen**	NIL	NIL	*20/08	-	-	-												

7.5 Appendix E – MID States Registered ACFT Required Monitoring

The following tables show all Middle East registered ACFT requiringeither HMU or GMU monitoring due to the absence of monitoring results during the period of data analysis.

Table 1 of 3

BAHRAIN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. A9C-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	29	Bahrain Air	A9CBAX	A319		17/11/2010	16/11/2012			
2	30	Bahrain Air	A9CBAW	A319						
3	36	Bahrain Air	A9CBAV	A320		18/11/2010	17/11/2012			
4	39	Bahrain Air	A9CBAU	A320						
5	58	Bahrain Air	A9CBAO	A320				No	1	New
							RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. A9C-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	1	Bahrain Royal Flight	A9CBA	B722	29/07/2011		28/07/2013			
2	2	Bahrain Royal Flight	A9CBAH	GLF4	14/08/2011		13/08/2013			
3	3	Bahrain Royal Flight	A9CHMK	B744	02/07/2011		01/07/2013			
4	4	Bahrain Royal Flight	A9CHAK	B74S	28/07/2011		27/07/2013			
5	6	Bahrain Royal Flight	A9CHWR	RJ85	28/06/2010		27/07/2013			
6	37	Bahrain Royal Flight	A9CBHR	GLF4	03/04/2011		02/04/2013			
7	43	Bahrain Royal Flight	A9CBRN	GLF5	15/06/2011		14/06/2013			
							RVSM Minimum Monitoring Requirements (ACFT):		*0*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. A9C-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	7	Bexair	A9CBXB	CL60	19/10/2009		18/10/2011	No		Any One
2	10	Bexair	A9CBXH	CL60				No	1	
3	9	Bexair	A9CBXG	CL60	21/04/2011		20/04/2013			
4	56	Bexair	A9CBXK	LJ60				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		*2*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. A9C-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	42	Delmun Aviation Services	A9CDAA	B732				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. A9C-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	26	A9CEV	Gulf Air	A319				Yes		
2	27	A9CEU	Gulf Air	A319				Yes		
3	12	A9CEE	Gulf Air	A320				Yes		
4	35	A9CAA	Gulf Air	A320		22/05/2011	21/05/2013	Yes		

Table 2 of 3

BAHRAIN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

5	38	A9CAB	Gulf Air	A320						Yes			
6	40	A9CAC	Gulf Air	A320						Yes			
7	41	A9CAD	Gulf Air	A320						Yes			
8	44	A9CAE	Gulf Air	A320						Yes			
9	45	A9CAF	Gulf Air	A320						Yes			
10	49	A9CAH	Gulf Air	A320						Yes			
11	51	A9CAI	Gulf Air	A320						Yes			
12	60	A9CAL	Gulf Air	A320						No	1	New	
13	61	A9CAM	Gulf Air	A320						No	1	New	
14	54	A9CAJ	Gulf Air	A320						Yes			
15	55	A9CAK	Gulf Air	A320						Yes			
16	46	A9CAG	Gulf Air	A321			21/05/2011	20/05/2013		Yes			
17	13	A9CKA	Gulf Air	A332	14/08/2011			13/08/2013		Yes			
18	14	A9CKB	Gulf Air	A332	14/08/2011			13/08/2013		Yes			
19	15	A9CKC	Gulf Air	A332	14/08/2011			13/08/2013		Yes			
20	16	A9CKD	Gulf Air	A332	10/08/2011			09/08/2013		Yes			
21	17	A9CKE	Gulf Air	A332	12/08/2011			11/08/2013		Yes			
22	18	A9CKF	Gulf Air	A332	09/08/2011			08/08/2013		Yes			
23	31	A9CKJ	Gulf Air	A332						Yes			
24	32	A9CKG	Gulf Air	A332	27/03/2011			26/03/2013		Yes			
25	33	A9CKH	Gulf Air	A332	03/04/2011			02/04/2013		Yes			
26	34	A9CKI	Gulf Air	A332	31/03/2011			30/03/2013		Yes			
27	19	A9CLG	Gulf Air	A343	05/04/2011			04/04/2013		Yes			
28	20	A9CLH	Gulf Air	A343	12/06/2011			11/06/2013		Yes			
29	21	A9CLI	Gulf Air	A343	14/08/2011			13/08/2013		Yes			
30	22	A9CLJ	Gulf Air	A343	13/08/2011			12/08/2013		Yes			
31	47	A9CMA	Gulf Air	E170			12/11/2010	11/11/2013		Yes			
32	48	A9CMB	Gulf Air	E170						Yes			
33	53	A9CMD	Gulf Air	E190						Yes			
34	52	A9CMC	Gulf Air	E190			13/11/2010	12/11/2013		Yes			
							RVSM Minimum Monitoring Requirements (ACFT):				2		

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #		A9C-	Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	59	MAE Aircraft Management	A9CJNC	B733				No	1	
2	57	MAE Aircraft Management	A9CJWC	B733		10/05/2011	09/05/2013	Yes		
3	11	MAE Aircraft Management	A9CMTC	E315	20/05/2011		19/05/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			1	

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BAHRAIN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. A9C-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	5	Royal Bahraini Air Force	A9CBDF	RJ85	02/07/2011		01/07/2013	Yes		
2	23	Royal Bahraini Air Force	A9CAWL	RJ1H				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. A9C-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	28	Swift Air	A9CSWA	B722				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. A9C-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	50	TAG	A9CACE	CL60	09/08/2011		08/08/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		*0*	

Total No. of Bahrain RVSM ACFT MMR as of August 2011 is = *9*

Table 1 of 6

EGYPT - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	1	AIR CAIRO	SU-BPU	A320	14/08/2011		13/08/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	115	AIR ARABIA Egypt	SU-NMA	A320	29/01/2011		28/01/2013	Yes		
2	114	AIR ARABIA Egypt	SU-AAB	A320		25/12/2010	24/12/2012	Yes		
3	113	AIR ARABIA Egypt	SU-AAA	A320		26/12/2010	25/12/2012	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	2	AIR CAIRO	SU-BPV	A320	13/08/2011		12/08/2013	Yes		
2	3	AIR CAIRO	SU-BPW	A320	13/08/2011		12/08/2013	Yes		
3	4	AIR CAIRO	SU-BPX	A320	14/08/2011		13/08/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	5	AIR MEMPHIS	SU-PBG	A320	23/02/2011		22/02/2013			
2	6	AIR MEMPHIS	SU-PBH	A320	28/05/2011		27/05/2013			
3	7	AIR MEMPHIS	SU-BME	MD83				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	8	ALEXANDRIA AIRLINES	SU-KHM	B735				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	83	Alkan Air	SU-MAN	H25B	14/06/2011		13/06/2013			
2	96	Alkan Air	SU-MMN	H25B				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			1	

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EGYPT - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	9	AMC	SU-BPG	B738				Yes		
2	10	AMC	SU-BPH	B738				Yes		
3	12	AMC	SU-BPZ	B738	02/08/2011		01/08/2013	Yes		
4	11	AMC	SU-BQA	B738	31/01/2011		30/01/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	14	CAIRO AVIATION	SU-EAF	T204	10/04/2010		09/04/2012	Yes		
2	13	CAIRO AVIATION	SU-EAI	T204	11/04/2010		10/04/2012	Yes		
3	15	CAIRO AVIATION	SU-EAG	T204				Yes		
4	16	CAIRO AVIATION	SU-EAJ	T204				Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	30	EGYPTAIR AIRLINES	SU-GBA	A320	12/07/2011		11/07/2013	Yes		
2	31	EGYPTAIR AIRLINES	SU-GBB	A320	12/05/2011		11/05/2013	Yes		
3	32	EGYPTAIR AIRLINES	SU-GBC	A320	01/05/2011		30/04/2013	Yes		
4	33	EGYPTAIR AIRLINES	SU-GBD	A320				Yes		
5	34	EGYPTAIR AIRLINES	SU-GBE	A320	15/01/2011		14/01/2013	Yes		
6	35	EGYPTAIR AIRLINES	SU-GBF	A320	21/03/2011		20/03/2013	Yes		
7	36	EGYPTAIR AIRLINES	SU-GBG	A320	14/01/2011		13/01/2013	Yes		
8	38	EGYPTAIR AIRLINES	SU-GBZ	A320	18/01/2011		17/01/2013	Yes		
9	39	EGYPTAIR AIRLINES	SU-GCA	A320	09/07/2011		08/07/2013	Yes		
10	40	EGYPTAIR AIRLINES	SU-GCB	A320	12/08/2011		11/08/2013	Yes		
11	41	EGYPTAIR AIRLINES	SU-GCC	A320	14/08/2011		13/08/2013	Yes		
12	42	EGYPTAIR AIRLINES	SU-GCD	A320	22/04/2011		21/04/2013	Yes		
13	37	EGYPTAIR AIRLINES	SU-GCL	A320				Yes		
14	43	EGYPTAIR AIRLINES	SU-GBT	A321	13/08/2011		12/08/2013	Yes		
15	44	EGYPTAIR AIRLINES	SU-GBU	A321	09/08/2011		08/08/2013	Yes		
16	46	EGYPTAIR AIRLINES	SU-GBV	A321	13/08/2011		12/08/2013	Yes		
17	45	EGYPTAIR AIRLINES	SU-GBW	A321	11/08/2011		10/08/2013	Yes		
18	47	EGYPTAIR AIRLINES	SU-GCE	A330	14/08/2011		13/08/2013	Yes		
19	48	EGYPTAIR AIRLINES	SU-GCF	A330	10/07/2011		09/07/2013	Yes		
20	49	EGYPTAIR AIRLINES	SU-GCG	A330	31/07/2011		30/07/2013	Yes		
21	51	EGYPTAIR AIRLINES	SU-GCH	A330	28/07/2011		27/07/2013	Yes		
22	50	EGYPTAIR AIRLINES	SU-GCI	A330	07/08/2011		06/08/2013	Yes		
23	52	EGYPTAIR AIRLINES	SU-GCJ	A330	05/08/2011		04/08/2013	Yes		
24	53	EGYPTAIR AIRLINES	SU-GCK	A330	06/08/2011		05/08/2013	Yes		
25	55	EGYPTAIR AIRLINES	SU-GBM	A340	17/09/2009		17/09/2011	Yes		

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EGYPT - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

26	56	EGYPTAIR AIRLINES	SU-GBN	A340					Yes			
27	57	EGYPTAIR AIRLINES	SU-GBO	A340	02/01/2010			02/01/2012	Yes			
28	54	EGYPTAIR AIRLINES	SU-GGG	A340	29/08/2010			28/08/2012	Yes			
29	58	EGYPTAIR AIRLINES	SU-GBH	B735					No	1		
30	60	EGYPTAIR AIRLINES	SU-GBJ	B735					No		ANY TWO	
31	61	EGYPTAIR AIRLINES	SU-GBK	B735					No			
32	59	EGYPTAIR AIRLINES	SU-GBL	B735					No	1		
33	62	EGYPTAIR AIRLINES	SU-GCM	B738	05/06/2011			04/06/2013	Yes			
34	63	EGYPTAIR AIRLINES	SU-GCN	B738	22/04/2011			21/04/2013	Yes			
35	65	EGYPTAIR AIRLINES	SU-GCO	B738	27/07/2011			26/07/2013	Yes			
36	66	EGYPTAIR AIRLINES	SU-GCP	B738	01/08/2011			31/07/2013	Yes			
37	80	EGYPTAIR AIRLINES	SU-GCR	B738	03/06/2011			02/06/2013	Yes			
38	64	EGYPTAIR AIRLINES	SU-GCS	B738	25/07/2011			24/07/2013	Yes			
39	77	EGYPTAIR AIRLINES	SU-GCZ	B738	10/08/2011			09/08/2013	Yes			
40	91	EGYPTAIR AIRLINES	SU-GDA	B738	08/08/2011			07/08/2013	Yes			
41	90	EGYPTAIR AIRLINES	SU-GDB	B738	27/07/2011			26/07/2013	Yes			
42	93	EGYPTAIR AIRLINES	SU-GDC	B738	08/08/2011			07/08/2013	Yes			
43	94	EGYPTAIR AIRLINES	SU-GDD	B738	06/07/2011			05/07/2013	Yes			
44	92	EGYPTAIR AIRLINES	SU-GDE	B738	09/08/2011			08/08/2013	Yes			
45	119	EGYPTAIR AIRLINES	SU-GDX	B738	10/08/2011			09/08/2013	Yes			
46	121	EGYPTAIR AIRLINES	SU-GDY	B738	12/08/2011			11/08/2013	Yes			
47	122	EGYPTAIR AIRLINES	SU-GDZ	B738	08/08/2011			07/08/2013	Yes			
48	124	EGYPTAIR AIRLINES	SU-GEA	B738	01/08/2011			31/07/2013	Yes			
49	128	EGYPTAIR AIRLINES	SU-GEB	B738					Yes			
50	125	EGYPTAIR AIRLINES	SU-MWF	B738	24/07/2011			23/07/2013	Yes			
51	67	EGYPTAIR AIRLINES	SU-GBP	B772	09/10/2010			08/10/2012	Yes			
52	68	EGYPTAIR AIRLINES	SU-GBR	B772	28/02/2011			27/02/2013	Yes			
53	69	EGYPTAIR AIRLINES	SU-GBS	B772	01/02/2011			31/01/2013	Yes			
54	70	EGYPTAIR AIRLINES	SU-GBX	B772	01/01/2011			31/12/2012	Yes			
55	71	EGYPTAIR AIRLINES	SU-GBY	B772	29/10/2010			28/10/2012	Yes			
56	112	EGYPTAIR AIRLINES	SU-GDL	B772	07/08/2011			06/08/2013	Yes			
57	120	EGYPTAIR AIRLINES	SU-GDN	B772	14/08/2011			13/08/2013	Yes			
58	123	EGYPTAIR AIRLINES	SU-GDO	B772	14/08/2011			13/08/2013	Yes			
59	127	EGYPTAIR AIRLINES	SU-GDR	B772	14/08/2011			13/08/2013	Yes			
60	111	EGYPTAIR AIRLINES	SU-GDM	B772	13/08/2011			12/08/2013	Yes			
								RVSM Minimum Monitoring Requirements (ACFT):		2		

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EGYPT - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	28	EGYPTAIR CARGO	SU-BDG	A30B	04/09/2010		03/09/2012	Yes		
2	29	EGYPTAIR CARGO	SU-GAC	A30B	11/08/2011		10/08/2013	Yes		
3	26	EGYPTAIR CARGO	SU-GAS	A306	11/08/2011		10/08/2013	Yes		
4	27	EGYPTAIR CARGO	SU-GAY	A306	12/08/2011		11/08/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	19	EGYPTAIR EXPRESS	SU-GCT	E170				Yes		
2	23	EGYPTAIR EXPRESS	SU-GCU	E170				Yes		
3	18	EGYPTAIR EXPRESS	SU-GCV	E170				Yes		
4	17	EGYPTAIR EXPRESS	SU-GCW	E170				Yes		
5	21	EGYPTAIR EXPRESS	SU-GCX	E170				Yes		
6	22	EGYPTAIR EXPRESS	SU-GCY	E170				Yes		
7	20	EGYPTAIR EXPRESS	SU-GDF	E170				Yes		
8	78	EGYPTAIR EXPRESS	SU-GDG	E170				Yes		
9	86	EGYPTAIR EXPRESS	SU-GDH	E170	29/04/2011		28/04/2013	Yes		
10	79	EGYPTAIR EXPRESS	SU-GDI	E170				Yes		
11	85	EGYPTAIR EXPRESS	SU-GDJ	E170				Yes		
12	88	EGYPTAIR EXPRESS	SU-GDK	E170	24/04/2011		23/04/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	108	EGYPTIAN AIR FORCE	SU-AXN	FA20	19/08/2010		18/08/2012	Yes		
2	110	EGYPTIAN AIR FORCE	SU-AYD	FA20	25/12/2010		24/12/2012	Yes		
3	109	EGYPTIAN AIR FORCE	SU-AZJ	FA20	27/05/2011		26/05/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

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EGYPT - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	99	EGYPTIAN AIR FORCE	SU-BGM	GLF3	24/02/2011		23/02/2013	Yes		
2	106	EGYPTIAN AIR FORCE	SU-BGU	GLF3				Yes		
3	107	EGYPTIAN AIR FORCE	SU-BGV	GLF3	03/07/2011		02/07/2013	Yes		
4	100	EGYPTIAN AIR FORCE	SU-BNC	GLF4	26/12/2009		26/12/2011	Yes		
5	101	EGYPTIAN AIR FORCE	SU-BND	GLF4	20/03/2011		19/03/2013	Yes		
6	102	EGYPTIAN AIR FORCE	SU-BNO	GLF4	03/10/2010		02/10/2012	Yes		
7	103	EGYPTIAN AIR FORCE	SU-BNP	GLF4	17/09/2009		17/09/2011	Yes		
8	104	EGYPTIAN AIR FORCE	SU-BPE	GLF4	11/07/2011		10/07/2013	Yes		
9	105	EGYPTIAN AIR FORCE	SU-BPF	GLF4	03/04/2011		02/04/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	81	EL MASRIA AIR	SU-TCA	A320				No	1	
2	82	EL MASRIA AIR	SU-TCB	A320				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			2	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	24	EXECUTIVE WINGS AVIATION	SU-EWD	C680	19/11/2010		18/11/2012	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	89	KORAL BLUE AIRLINES	SU-KBC	A320	20/01/2011		19/01/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	25	LOTUS AIR	SU-LBJ	A320				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	118	MIDWEST AIRLINES	SU-GDS	A333	12/08/2011		11/08/2013	Yes		
2	87	MIDWEST AIRLINES	SU-MWD	B738	13/08/2011		12/08/2013	Yes		
3	126	MIDWEST AIRLINES	SU-GDP	B773	11/08/2011		10/08/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

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EGYPT - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	116	Nesma Airlines	SU-NMB	A320	29/05/2011		28/05/2013	Yes		
2	117	Nesma Airlines	SU-MWE	B738	16/07/2011		15/07/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	97	NILE AIR	SU-BQB	A320	08/10/2010		07/10/2012	Yes		
2	98	NILE AIR	SU-BQC	A320	19/10/2010		18/10/2012	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	72	ORASCOM AVIATION	SU-ZBB	BE40					1	
							RVSM Minimum Monitoring Requirements (ACFT):		1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	75	SMART AVIATION	SU-SMA	C680	01/02/2011		31/01/2013	Yes		
2	73	SMART AVIATION	SU-SMB	C680	29/05/2011		28/05/2013	Yes		
3	74	SMART AVIATION	SU-SMC	C680	18/04/2011		17/04/2013	Yes		
4	84	SMART AVIATION	SU-SMD	C680	02/07/2011		01/07/2013	Yes		
5	95	SMART AVIATION	SU-SME	C680	12/05/2010		11/05/2012	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	76	TRI STAR	SU-BMZ	A30B	16/11/2010		15/11/2012	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		0	

Total No. of Egypt RVSM ACFT MMR as of August 2011 is = 9

REPUBLIC OF IRAN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

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Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU		MMR Covered	No. OF ACFT	Remarks
	Ref. #		EP-	Type	EUR Monitoring Date	Monitoring Date	Compliant	Expire Date	By ACFT Group	Required Monitoring	
1	10	Iran Air	IBA	A306	19/07/2011			18/07/2013	Yes		
2	11	Iran Air	IBB	A306	12/08/2011			11/08/2013	Yes		
3	12	Iran Air	IBC	A306	13/08/2011			12/08/2013	Yes		
4	13	Iran Air	IBD	A306	11/08/2011			10/08/2013	Yes		
5	14	Iran Air	IBK	A306	13/08/2011			12/08/2013	Yes		
6	15	Iran Air	IBL	A306	15/01/2011			14/01/2013	Yes		
7	48	Iran Air	IBG	A30B					Yes		
8	49	Iran Air	IBH	A30B	17/03/2011			16/03/2013	Yes		
9	21	Iran Air	IBI	A30B					Yes		
10	22	Iran Air	IBJ	A30B					Yes		
11	17	Iran Air	IBS	A30B					Yes		
12	18	Iran Air	IBT	A30B					Yes		
13	19	Iran Air	IBV	A30B		31/01/2010	30/01/2012		Yes		
14	20	Iran Air	IBZ	A30B					Yes		
15	23	Iran Air	ICE	A30B	18/03/2011			17/03/2013	Yes		
16	24	Iran Air	ICF	A30B	24/09/2010			23/09/2012	Yes		
17	16	Iran Air	IBP	A310					No	1	
18	53	Iran Air	IBQ	A312					No	1	
19	50	Iran Air	IEB	A320	01/07/2010			30/06/2012	Yes		
20	25	Iran Air	IED	A320	06/06/2010			05/06/2012	Yes		
21	26	Iran Air	IEE	A320	04/07/2010			03/07/2012	Yes		
22	27	Iran Air	IEF	A320					Yes		
23	51	Iran Air	MHJ	A320					Yes		
24	52	Iran Air	IEG	A321					Yes		
25	34	Iran Air	IRR	B722		06/02/2010	05/02/2012		Yes		
26	33	Iran Air	IRS	B722		05/02/2010	04/02/2012		Yes		
27	32	Iran Air	IRT	B722					Yes		
28	47	Iran Air	AGA	B732					No	1	
29	5	Iran Air	IAG	B742	02/04/2010			01/04/2012	Yes		
30	6	Iran Air	IAH	B742	29/04/2010			28/04/2012	Yes		
31	8	Iran Air	IAI	B742					Yes		
32	7	Iran Air	IAM	B742	18/05/2010			17/05/2012	Yes		
33	9	Iran Air	ICD	B742	05/07/2010			04/07/2012	Yes		
34	1	Iran Air	IAA	B74S	07/01/2010			06/01/2012	Yes		
35	2	Iran Air	IAB	B74S	25/05/2010			24/05/2012	Yes		
36	3	Iran Air	IAC	B74S	22/06/2010			21/06/2012	Yes		
37	4	Iran Air	IAD	B74S	01/06/2010			30/05/2012	Yes		
38	35	Iran Air	CFD	F100					Yes		
39	36	Iran Air	CFE	F100					Yes		
40	37	Iran Air	CFH	F100		31/01/2010	30/01/2012		Yes		
41	43	Iran Air	CFI	F100		06/02/2010	05/02/2012		Yes		
42	40	Iran Air	CFJ	F100					Yes		
43	38	Iran Air	CFK	F100					Yes		
44	39	Iran Air	CFL	F100					Yes		
45	41	Iran Air	CFM	F100					Yes		
46	44	Iran Air	CFO	F100					Yes		
47	45	Iran Air	CFP	F100					Yes		

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REPUBLIC OF IRAN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

48	42	Iran Air	CFQ	F100						Yes		
49	46	Iran Air	CFR	F100						Yes		
50	28	Iran Air	IDA	F100						Yes		
51	29	Iran Air	IDD	F100						Yes		
52	30	Iran Air	IDF	F100		02/02/2010		01/02/2012		Yes		
53	31	Iran Air	IDG	F100						Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		3			

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. EP-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant	Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Mode S known to USC
1	54	Iran Aseman Airlines	ASA	B722					Yes		
2	55	Iran Aseman Airlines	ASB	B722					Yes		
3	56	Iran Aseman Airlines	ASC	B722		05/02/2010	04/02/2012		Yes		
4	57	Iran Aseman Airlines	ASD	B722		04/02/2010	03/02/2012		Yes		
5	58	Iran Aseman Airlines	ASG	F100					Yes		
6	59	Iran Aseman Airlines	ASH	F100					Yes		
7	65	Iran Aseman Airlines	ASI	F100					Yes		
8	60	Iran Aseman Airlines	ASJ	F100		04/02/2010	03/02/2012		Yes		
9	66	Iran Aseman Airlines	ASK	F100					Yes		
10	62	Iran Aseman Airlines	ASM	F100					Yes		
11	68	Iran Aseman Airlines	ASO	F100					Yes		
12	63	Iran Aseman Airlines	ASP	F100					Yes		
13	61	Iran Aseman Airlines	ASQ	F100					Yes		
14	64	Iran Aseman Airlines	ASR	F100					Yes		
15	67	Iran Aseman Airlines	AST	F100					Yes		
16	69	Iran Aseman Airlines	ASU	F100		04/02/2010	03/02/2012		Yes		
17	70	Iran Aseman Airlines	ASX	F100					Yes		
18	71	Iran Aseman Airlines	ASZ	F100					Yes		
19	72	Iran Aseman Airlines	ATB	F100					Yes		
20	73	Iran Aseman Airlines	ATC	F100					Yes		
21	74	Iran Aseman Airlines	ATD	F100					Yes		
22	75	Iran Aseman Airlines	ATE	F100					Yes		
23	76	Iran Aseman Airlines	ATF	F100					Yes		
24	77	Iran Aseman Airlines	ATG	F100					Yes		
						RVSM Minimum Monitoring Requirements (ACFT):				0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. EP-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant	Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Mode S known to USC
1	105	Mahan Air	MNQ	A306	29/07/2010		28/07/2012		Yes		
2	88	Mahan Air	MNR	A306	01/08/2010		31/07/2012		Yes		
3	87	Mahan Air	MNS	A306					Yes		
4	89	Mahan Air	MNT	A306					Yes		
5	90	Mahan Air	MNU	A306	01/05/2011		30/04/2013		Yes		
6	82	Mahan Air	MHA	A30B					Yes		
7	80	Mahan Air	MHF	A30B					Yes		
8	79	Mahan Air	MHG	A30B					Yes		
9	81	Mahan Air	MHL	A30B					Yes		
10	86	Mahan Air	MHM	A30B					Yes		

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REPUBLIC OF IRAN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

11	83	Mahan Air	MHP	A30B						Yes			
12	106	Mahan Air	MNG	A30B						Yes			
13	96	Mahan Air	MNH	A30B						Yes			
14	97	Mahan Air	MNI	A30B						Yes			
15	98	Mahan Air	MNJ	A30B						Yes			
16	99	Mahan Air	MNK	A30B	29/04/2011			28/04/2013		Yes			Any Two
17	100	Mahan Air	MNL	A30B	23/01/2011			22/01/2013		Yes			
18	101	Mahan Air	MNM	A30B	24/04/2011			23/04/2013		Yes			
19	102	Mahan Air	MNN	A30B						Yes			
20	84	Mahan Air	MHO	A310	14/04/2011			13/04/2013		Yes			
21	85	Mahan Air	MNX	A310						Yes			
22	103	Mahan Air	MNO	A313	19/05/2011			18/05/2013		Yes			
23	104	Mahan Air	MNP	A313						Yes			
24	78	Mahan Air	AGB	A321						Yes			
25	94	Mahan Air	MND	B743						No	1		
26	95	Mahan Air	MNE	B743						No			
27	91	Mahan Air	MNA	B744						No			
28	92	Mahan Air	MNB	B744						No	1		
29	93	Mahan Air	MNC	B744						No			
							RVSM Minimum Monitoring Requirements (ACFT):				2		

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Mode S
	Ref. #		EP-	Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	known to USC
1	113	Iranian Air Transport Company	AWZ	F100				No	1	Any Two
2	115	Iranian Air Transport Company	MIS	F100				No		
3	114	Iranian Air Transport Company	OPI	F100				No		
4	116	Iranian Air Transport Company	SUS	F100				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		2	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Mode S
	Ref. #		EP-	Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	known to USC
1	120	Kish Air	LCI	MD82		30/01/2010	29/01/2012	Yes		Any one
2	121	Kish Air	LCJ	MD82				No	1	
3	123	Kish Air	LCK	MD82				No		
4	122	Kish Air	LCL	MD82				No		
							RVSM Minimum Monitoring Requirements (ACFT):		1	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Mode S
	Ref. #		EP-	Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	known to USC
1	117	Meraj AIR	AJC	A322				No	1	
2	118	Meraj AIR	AJD	B703		01/02/2010	30/01/2012	Yes		
3	119	Meraj AIR	AJE	B703		03/02/2010	02/02/2012	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		1	

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REPUBLIC OF IRAN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Mode S
	Ref. #		EP-	Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	known to USC
1	111	Saha Airlines	SHG	B703		28/01/2010	27/01/2012	Yes		
2	112	Saha Airlines	SHV	B703		28/01/2010	27/01/2012	Yes		
3	109	Saha Airlines	SIF	A306				No	1	
4	110	Saha Airlines	SIG	A306				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		2	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Mode S
	Ref. #		EP-	Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	known to USC
1	107	Yas Air	GOL	IL76				No	1	
2	108	Yas Air	GOM	IL76				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		2	

Total No. of IRAN RVSM ACFT MMR as of August 2011 is = ***13***

Table 1 of 1

IRAQ - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	3	Iraqi Airways	YIAQO	B733 300				No	1	Any Two
4	9	Iraqi Airways	YIAQN	B733 300				No		
5	12	Iraqi Airways	YIAQS	B734 400				No	1	
2	1	Iraqi Airways	YIAQK	B737 700				No		
3	2	Iraqi Airways	YIAQL	B737 700				No		
6	11	Iraqi Airways	YIAQQ	B744 400				No	1	
7	10	Iraqi Airways	YIAQM	B763 300				No	1	
8	5	Iraqi Airways	YIAQA	CRJ9 900				No		Any Two
9	6	Iraqi Airways	YIAQB	CRJ9 900				No		
10	7	Iraqi Airways	YIAQC	CRJ9 900				No	1	
11	8	Iraqi Airways	YIAQD	CRJ9 900				No	1	
12	13	Iraqi Airways	YIAQE	CRJ9 900				No		
13	14	Iraqi Airways	YIAQF	CRJ9 900				No		
						RVSM Minimum Monitoring Requirements (ACFT):			6	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	4	Prime Minister of Federal Republic of Iraq	YIAPX	A30B B4					1	
						RVSM Minimum Monitoring Requirements (ACFT):			1	

Total No. of Iraq RVSM ACFT MMR as of August 2011 is = 7

Table 1 of 3

JORDAN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. JY-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	53	Arab Wings	AWD	Hawker				No	1	
2	51	Arab Wings	AWE	Hawker	07/08/2011		06/08/2013	Yes		
3	52	Arab Wings	AWH	680	10/02/2011		09/02/2013	Yes		
4	55	Arab Wings	CMC	EMB	04/08/2011		03/08/2013	Yes		
5	54	Arab Wings	KME	EMB	27/06/2011		26/06/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. JY-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	36	Jordan Aviation	JAH	A310				No	1	
2	37	Jordan Aviation	JAV	A310	01/02/2011		31/01/2013	Yes		
3	43	Jordan Aviation	JAC	A320				No	1	
4	34	Jordan Aviation	JAB	B737				No	1	
5	35	Jordan Aviation	JAD	B737	12/06/2010		11/06/2012	Yes		
6	38	Jordan Aviation	JAN	B737				No		
7	45	Jordan Aviation	JAO	B737				No		Any one other than JY-JAD
8	44	Jordan Aviation	JAP	B737				No		
9	47	Jordan Aviation	JAQ	B737				No		
10	39	Jordan Aviation	JAX	B737				No		
11	46	Jordan Aviation	JAY	B737				No		
12	41	Jordan Aviation	JAG	B767	04/02/2011		03/02/2013	Yes		
13	40	Jordan Aviation	JAI	B767	01/01/2011		31/12/2012	Yes		
14	42	Jordan Aviation	JAL	B767	02/06/2011		01/06/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			3	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. JY-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	56	Petra Airlines	PTA	A320				No	1	
2	57	Petra Airlines	PTB	A320				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			2	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. JY-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	60	Prestige Jet	IMK	CL60				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. JY-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	58	Raya Jet	RYA	CL60				No	1	
2	59	Raya Jet	RYN	CL60				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			2	

Table 2 of 3

JORDAN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. JY-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	49	Royal Falcon Air Services	JRD	B767				No	1	
2	50	Royal Falcon Air Services	JRE	A319				No	1	
3	48	Royal Falcon Air Services	RFF	B737				No	1	
								RVSM Minimum Monitoring Requirements (ACFT):	3	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. JY-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	3	Royal Jordanian	AGM	A310	02/11/2010		01/11/2012	Yes		
2	4	Royal Jordanian	AGN	A310	14/08/2011		13/08/2013	Yes		
3	1	Royal Jordanian	AGO	A310	12/10/2010		11/10/2012	Yes		
4	2	Royal Jordanian	AGR	A310	10/08/2011		09/08/2013	Yes		
5	18	Royal Jordanian	AYL	A319	31/07/2011		30/07/2013	Yes		
6	23	Royal Jordanian	AYM	A319	13/08/2011		12/08/2013	Yes		
7	24	Royal Jordanian	AYN	A319	14/08/2011		13/08/2013	Yes		
8	25	Royal Jordanian	AYP	A319	14/08/2011		13/08/2013	Yes		
9	5	Royal Jordanian	AYD	A320	10/08/2011		09/08/2013	Yes		
10	6	Royal Jordanian	AYF	A320	07/08/2011		06/08/2013	Yes		
11	32	Royal Jordanian	AYQ	A320	12/08/2011		11/08/2013	Yes		
12	26	Royal Jordanian	HGV	A320				Yes		
13	27	Royal Jordanian	HGX	A320				Yes		
14	11	Royal Jordanian	AYG	A321	09/08/2011		08/08/2013	Yes		
15	12	Royal Jordanian	AYH	A321	04/08/2011		03/08/2013	Yes		
16	19	Royal Jordanian	AYJ	A321	28/07/2011		27/07/2013	Yes		
17	20	Royal Jordanian	AYK	A321	13/08/2011		12/08/2013	Yes		
18	28	Royal Jordanian	AIE	A330	11/08/2011		10/08/2013	Yes		
19	29	Royal Jordanian	AIF	A330	13/08/2011		12/08/2013	Yes		
20	30	Royal Jordanian	AIG	A330				Yes		
21	7	Royal Jordanian	AIA	A340	05/12/2010		04/12/2012	Yes		
22	8	Royal Jordanian	AIB	A340	15/12/2010		14/12/2012	Yes		
23	9	Royal Jordanian	AIC	A340	16/12/2010		15/12/2012	Yes		
24	10	Royal Jordanian	AID	A340	27/12/2010		26/12/2012	Yes		
25	21	Royal Jordanian	EMC	ERJ 170				No	1	Any Two
26	22	Royal Jordanian	EMD	ERJ 170				No		
27	31	Royal Jordanian	EMH	ERJ 170				No		
28	16	Royal Jordanian	EMA	ERJ 190				No		
29	17	Royal Jordanian	EMB	ERJ 190				No	1	
30	13	Royal Jordanian	EME	ERJ 190				No		
31	14	Royal Jordanian	EMF	ERJ 190				No		
32	15	Royal Jordanian	EMG	ERJ 190				No		
								RVSM Minimum Monitoring Requirements (ACFT):	2	

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JORDAN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg. JY-	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	33	Royal Wings	AYI	A320	01/05/2011		30/04/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Total No. of Jordan RVSM ACFT MMR as of August 2011 is = *14*

Table 1 of 2

KUWAIT - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	28	JAZEERA AIRWAYS	9K-CAA	A320	214				Yes		
	29	JAZEERA AIRWAYS	9K-CAC	A320	214				Yes		
	30	JAZEERA AIRWAYS	9K-CAD	A320	214		06/11/2010	05/06/2012	Yes		
	31	JAZEERA AIRWAYS	9K-CAI	A320	214		07/11/2010	06/11/2012	Yes		
	32	JAZEERA AIRWAYS	9K-CAJ	A320	214				Yes		
	33	JAZEERA AIRWAYS	9K-CAK	A320	214				Yes		
								RVSM Minimum Monitoring Requirements (ACFT):		*0*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	9	KUWAIT AIRWAYS	9K-AHI	A306	620	28/07/2010		27/07/2012	Yes		
	4	KUWAIT AIRWAYS	9K-AMA	A306	605R				Yes		
	5	KUWAIT AIRWAYS	9K-AMB	A306	605R	14/08/2011		13/08/2013	Yes		
	6	KUWAIT AIRWAYS	9K-AMC	A306	605R	13/08/2011		12/08/2013	Yes		
	7	KUWAIT AIRWAYS	9K-AMD	A306	605R	10/08/2011		09/08/2013	Yes		
	8	KUWAIT AIRWAYS	9K-AME	A306	605R	09/08/2011		08/08/2013	Yes		
	10	KUWAIT AIRWAYS	9K-ALA	A310	308	04/02/2010		04/02/2012	Yes		
	11	KUWAIT AIRWAYS	9K-ALB	A310	308	08/02/2010		08/02/2012	Yes		
	12	KUWAIT AIRWAYS	9K-ALC	A310	308				Yes		
	13	KUWAIT AIRWAYS	9K-ALD	A310	308				Yes		
	26	KUWAIT AIRWAYS	9K-GEA	A319	115	25/05/2011		24/05/2013	Yes		
	14	KUWAIT AIRWAYS	9K-AKA	A320	212				Yes		
	15	KUWAIT AIRWAYS	9K-AKB	A320	212				Yes		
	16	KUWAIT AIRWAYS	9K-AKC	A320	212				Yes		
	17	KUWAIT AIRWAYS	9K-AKD	A320	212	04/08/2011		03/08/2013	Yes		
	18	KUWAIT AIRWAYS	9K-ANA	A343	313	13/08/2011		12/08/2013	Yes		
	19	KUWAIT AIRWAYS	9K-ANB	A343	313	14/08/2011		13/08/2013	Yes		
	20	KUWAIT AIRWAYS	9K-ANC	A343	313	14/08/2011		13/08/2013	Yes		
	21	KUWAIT AIRWAYS	9K-AND	A343	313	12/08/2011		11/08/2013	Yes		
	27	KUWAIT AIRWAYS	9K-GCC	B739	9BQ				No	1	
	1	KUWAIT AIRWAYS	9K-ADE	B747	469C	03/10/2010		02/10/2012	Yes		
	2	KUWAIT AIRWAYS	9K-AOA	B772	269IGW	13/08/2011		12/08/2013	Yes		
	3	KUWAIT AIRWAYS	9K-AOB	B772	269IGW	14/08/2011		13/08/2013	Yes		
	22	KUWAIT AIRWAYS	9K-AJD	GLF4	V	07/09/2010		06/09/2012	Yes		
	23	KUWAIT AIRWAYS	9K-AJE	GLF4	V	24/02/2011		23/02/2013	Yes		
	24	KUWAIT AIRWAYS	9K-AJF	GLF4	V	25/07/2011		24/07/2013	Yes		
	25	KUWAIT AIRWAYS	9K-GFA	GLF5	G550	13/06/2011		12/06/2013	Yes		
								RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Table 2 of 2

KUWAIT - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	34	KUWAIT NATIONAL AIRWAYS	9K-EAA	A320	214						Any Two
	35	KUWAIT NATIONAL AIRWAYS	9K-EAB	A320	214					1	
	37	KUWAIT NATIONAL AIRWAYS	9K-EAD	A320	214						
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Total No. of Kuwait RVSM ACFT MMR as of August 2011 is= 2

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LEBANON - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

9	14	Middle East Airlines	FORMG	A321	231	06/08/2011		05/08/2013	Yes				
10	15	Middle East Airlines	ODRMH	A321	231	06/08/2011		05/08/2013	Yes				
11	16	Middle East Airlines	ODRMI	A321	231	13/08/2011		12/08/2013	Yes				
12	17	Middle East Airlines	ODRMJ	A321	231	10/08/2011		09/08/2013	Yes				
13	11	Middle East Airlines	FORMA	A330	243	01/08/2011		31/07/2013	Yes				
14	18	Middle East Airlines	ODMEA	A330	243	13/08/2011		12/08/2013	Yes				
15	19	Middle East Airlines	ODMEB	A330	243	12/08/2011		11/08/2013	Yes				
16	20	Middle East Airlines	ODMEC	A330	243	14/08/2011		13/08/2013	Yes				
								RVSM Minimum Monitoring Requirements (ACFT):				0	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Series	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type		EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	28	Open Sky	N510SA	C510	510SA	25/09/2010		24/09/2012	Yes		
2	29	Open Sky	ODMIG	H25B	900XP	04/06/2011		03/06/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):				0

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Series	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type		EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	30	Platinum Jet	N850EM	C525	525	14/07/2011		13/07/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):				0

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Series	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type		EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	32	Skylounge Services	ODBOY	H25B	700B	04/02/2011		03/02/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):				0

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Series	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type		EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	31	Trans Mediterrean Airways	ODTMA	A306	F4-622R	14/08/2011		13/08/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):				0

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Series	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type		EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	33	Wings of Lebanon	ODHAJ	B733	3Q8	02/11/2009		02/11/2011	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):				0

Total No. of Lebanon RVSM ACFT MMR as of August 2011 is = 3

Table 1 of 2

LEBANON - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	1	Corporate Jet	N78NT	FT2H	2000				No	1	
2	2	Corporate Jet	ODMIK	F900	900	30/06/2011		29/06/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	9	Echo Holdings	MMMAS	GL5T	BD-700	14/06/2011		13/06/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	7	Emerald Jets	ODDTW	BE40		17/09/2010		16/09/2012	Yes		
2	6	Emerald Jets	ODSTW	BE40		10/12/2009		10/12/2011	Yes		
3	8	Emerald Jets	ODTAL	CL60					No	1	
4	5	Emerald Jets	ODTSW	H25B		30/01/2011		29/01/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	4	Executive Aircraft Services s.a.l	ODEAS	H25B	800XP	09/08/2011		08/08/2013	Yes		
2	3	Executive Aircraft Services s.a.l	ODMAS	H25B	700A				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	10	Kassar - AAK	MAKAK	E135	135BJ	26/06/2011		25/06/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	27	Med Airways	ODAMR	CRJ2		30/08/2010		29/08/2012	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	24	Middle East Airlines	FOMRN	A320	232	27/07/2011		26/07/2013	Yes		
2	23	Middle East Airlines	FOMRO	A320	232	14/08/2011		13/08/2013	Yes		
3	25	Middle East Airlines	ODMRM	A320	232				Yes		
4	21	Middle East Airlines	ODMRR	A320	232	14/08/2011		13/08/2013	Yes		
5	22	Middle East Airlines	ODMRS	A320	232	01/08/2011		31/07/2013	Yes		
6	26	Middle East Airlines	ODMRT	A320	232	12/08/2011		11/08/2013	Yes		
7	12	Middle East Airlines	FORME	A321	231	14/08/2011		13/08/2013	Yes		
8	13	Middle East Airlines	FORMF	A321	231	11/08/2011		10/08/2013	Yes		

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QATAR - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	79	QATAR AMIRI FLIGHT	A7AAG	A322	232	05/08/2011		04/08/2013			
	84	QATAR AMIRI FLIGHT	A7AAH	A343	300	31/07/2011		30/07/2013			
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	7	QATAR AIRWAYS COMPANY	A7ABX	A306	622R	26/07/2011		25/07/2013	Yes		
	8	QATAR AIRWAYS COMPANY	A7ABY	A306	622R	07/09/2010		06/09/2012	Yes		
	6	QATAR AIRWAYS COMPANY	A7AFB	A306	622R	29/07/2011		28/07/2013	Yes		
	9	QATAR AIRWAYS COMPANY	A7CJA	A319	133	14/08/2011		13/08/2013	Yes		
	10	QATAR AIRWAYS COMPANY	A7CJB	A319	133	08/08/2011		07/08/2013	Yes		
	11	QATAR AIRWAYS COMPANY	A7ADA	A322	232				Yes		
	12	QATAR AIRWAYS COMPANY	A7ADB	A322	232				Yes		
	13	QATAR AIRWAYS COMPANY	A7ADC	A322	232				Yes		
	14	QATAR AIRWAYS COMPANY	A7ADD	A322	232				Yes		
	15	QATAR AIRWAYS COMPANY	A7ADE	A322	232				Yes		
	16	QATAR AIRWAYS COMPANY	A7ADF	A322	232				Yes		
	17	QATAR AIRWAYS COMPANY	A7ADG	A322	232				Yes		
	18	QATAR AIRWAYS COMPANY	A7ADH	A322	232				Yes		
	19	QATAR AIRWAYS COMPANY	A7ADI	A322	232				Yes		
	20	QATAR AIRWAYS COMPANY	A7ADJ	A322	232				Yes		
	26	QATAR AIRWAYS COMPANY	A7ADK	A322	231	24/04/2010		23/04/2012	Yes		
	22	QATAR AIRWAYS COMPANY	A7ADS	A322	231				Yes		
	23	QATAR AIRWAYS COMPANY	A7ADT	A322	231				Yes		
	21	QATAR AIRWAYS COMPANY	A7ADU	A322	200				Yes		
	27	QATAR AIRWAYS COMPANY	A7ADV	A322	231				Yes		
	24	QATAR AIRWAYS COMPANY	A7ADW	A322	200				Yes		
	25	QATAR AIRWAYS COMPANY	A7ADX	A322	200				Yes		
	28	QATAR AIRWAYS COMPANY	A7ADY	A322	200				Yes		
	29	QATAR AIRWAYS COMPANY	A7ADZ	A322	231				Yes		
	92	QATAR AIRWAYS COMPANY	A7AHD	A322	232				Yes		
	96	QATAR AIRWAYS COMPANY	A7AHE	A322	232	03/11/2010		02/11/2012	Yes		
	98	QATAR AIRWAYS COMPANY	A7AHF	A322	232	03/04/2011		02/04/2013	Yes		
	99	QATAR AIRWAYS COMPANY	A7AHG	A322	232	08/07/2011		07/07/2013	Yes		
	104	QATAR AIRWAYS COMPANY	A7AHH	A322	232				Yes		
	105	QATAR AIRWAYS COMPANY	A7AHI	A322	232	12/07/2011		11/07/2013	Yes		
	107	QATAR AIRWAYS COMPANY	A7AHJ	A322	232				Yes		
	5	QATAR AIRWAYS COMPANY	A7AIB	A322	231				Yes		

QATAR - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

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	90	QATAR AIRWAYS COMPANY	A7AIC	A322	231				08/12/2012	Yes		
	97	QATAR AIRWAYS COMPANY	A7AID	A322	231	09/12/2010			08/08/2013	Yes		
	30	QATAR AIRWAYS COMPANY	A7ACA	A332	202	09/08/2011			08/08/2013	Yes		
	31	QATAR AIRWAYS COMPANY	A7ACB	A332	202	11/08/2011			10/08/2013	Yes		
	32	QATAR AIRWAYS COMPANY	A7ACC	A332	202	14/08/2011			13/08/2013	Yes		
	33	QATAR AIRWAYS COMPANY	A7ACD	A332	202	22/06/2011			21/06/2013	Yes		
	43	QATAR AIRWAYS COMPANY	A7ACE	A332	202	13/08/2011			12/08/2013	Yes		
	44	QATAR AIRWAYS COMPANY	A7ACF	A332	202	14/08/2011			13/08/2013	Yes		
	39	QATAR AIRWAYS COMPANY	A7ACG	A332	200	11/08/2011			10/08/2013	Yes		
	45	QATAR AIRWAYS COMPANY	A7ACH	A332	202	21/07/2011			20/07/2013	Yes		
	38	QATAR AIRWAYS COMPANY	A7ACI	A332	200	09/08/2011			08/08/2013	Yes		
	37	QATAR AIRWAYS COMPANY	A7ACJ	A332	200	14/08/2011			13/08/2013	Yes		
	35	QATAR AIRWAYS COMPANY	A7ACK	A332	200	02/07/2011			01/07/2013	Yes		
	34	QATAR AIRWAYS COMPANY	A7ACL	A332	200	12/08/2011			11/08/2013	Yes		
	58	QATAR AIRWAYS COMPANY	A7ACM	A332	200	03/07/2011			02/07/2013	Yes		
	50	QATAR AIRWAYS COMPANY	A7AEA	A332	202	14/08/2011			13/08/2013	Yes		
	49	QATAR AIRWAYS COMPANY	A7AEB	A332	202	14/08/2011			13/08/2013	Yes		
	51	QATAR AIRWAYS COMPANY	A7AEC	A332	202	11/08/2011			10/08/2013	Yes		
	52	QATAR AIRWAYS COMPANY	A7AED	A332	202	21/06/2011			20/06/2013	Yes		
	42	QATAR AIRWAYS COMPANY	A7AEE	A332	200	30/06/2011			29/06/2013	Yes		
	41	QATAR AIRWAYS COMPANY	A7AEF	A332	200	13/07/2011			12/07/2013	Yes		
	40	QATAR AIRWAYS COMPANY	A7AEG	A332	200	20/04/2011			19/04/2013	Yes		
	46	QATAR AIRWAYS COMPANY	A7AFL	A332	202	01/08/2011			31/07/2013	Yes		
	48	QATAR AIRWAYS COMPANY	A7AFM	A332	202	13/08/2011			12/08/2013	Yes		
	47	QATAR AIRWAYS COMPANY	A7AFP	A332	202	14/08/2011			13/08/2013	Yes		
	36	QATAR AIRWAYS COMPANY	A7AEH	A333	300	08/08/2011			07/08/2013	Yes		
	53	QATAR AIRWAYS COMPANY	A7AEI	A333	302	15/06/2011			14/06/2013	Yes		
	57	QATAR AIRWAYS COMPANY	A7AEJ	A333	300	08/06/2011			07/06/2013	Yes		
	55	QATAR AIRWAYS COMPANY	A7AEM	A333	300	16/06/2011			15/06/2013	Yes		
	54	QATAR AIRWAYS COMPANY	A7AEN	A333	300	12/07/2011			11/07/2013	Yes		
	56	QATAR AIRWAYS COMPANY	A7AEO	A333	300	01/07/2011			30/06/2013	Yes		
	61	QATAR AIRWAYS COMPANY	A7AGA	A346	600	13/08/2011			12/08/2013	Yes		
	60	QATAR AIRWAYS COMPANY	A7AGB	A346	600	13/08/2011			12/08/2013	Yes		
	59	QATAR AIRWAYS COMPANY	A7AGC	A346	600	14/08/2011			13/08/2013	Yes		
	62	QATAR AIRWAYS COMPANY	A7AGD	A346	600	14/08/2011			13/08/2013	Yes		
	66	QATAR AIRWAYS COMPANY	A7BBA	B772	200LR	06/08/2011			05/08/2013	Yes		
	65	QATAR AIRWAYS COMPANY	A7BBB	B772	200LR	11/08/2011			10/08/2013	Yes		
	3	QATAR AIRWAYS COMPANY	A7BBG	B772	200LR	28/07/2011			27/07/2013	Yes		
	4	QATAR AIRWAYS COMPANY	A7BBH	B772	200LR	06/08/2011			05/08/2013	Yes		
	70	QATAR AIRWAYS COMPANY	A7BAA	B773	300ER	05/08/2011			04/08/2013	Yes		
	71	QATAR AIRWAYS COMPANY	A7BAB	B773	300ER	14/08/2011			13/08/2013	Yes		

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QATAR - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

	69	QATAR AIRWAYS COMPANY	A7BAC	B773	300ER	27/07/2011		26/07/2013	Yes		
	64	QATAR AIRWAYS COMPANY	A7BAE	B773	300ER	30/07/2011		29/07/2013	Yes		
	63	QATAR AIRWAYS COMPANY	A7BAF	B773	300ER	13/08/2011		12/08/2013	Yes		
	68	QATAR AIRWAYS COMPANY	A7BAI	B773	300ER	14/08/2011		13/08/2013	Yes		
	73	QATAR AIRWAYS COMPANY	A7BAK	B773	300ER	21/07/2011		20/07/2013	Yes		
	91	QATAR AIRWAYS COMPANY	A7BAL	B773	300ER	14/08/2011		13/08/2013	Yes		
	100	QATAR AIRWAYS COMPANY	A7BAM	B773	300ER	12/08/2011		11/08/2013	Yes		
	101	QATAR AIRWAYS COMPANY	A7BAN	B773	300ER	12/08/2011		11/08/2013	Yes		
	67	QATAR AIRWAYS COMPANY	A7BAO	B773	300ER	09/08/2011		08/08/2013	Yes		
	1	QATAR AIRWAYS COMPANY	A7BAQ	B773	300ER	31/07/2011		30/07/2013	Yes		
	72	QATAR AIRWAYS COMPANY	A7BFB	B777	F	06/08/2011		05/08/2013	Yes		
	76	QATAR AIRWAYS COMPANY	A7CEA	CL60	605	16/04/2011		15/04/2013	Yes		
	75	QATAR AIRWAYS COMPANY	A7CEB	CL60	605	15/07/2011		14/07/2013	Yes		
	2	QATAR AIRWAYS COMPANY	A7AAN	CL30	1A10				No	1	
	74	QATAR AIRWAYS COMPANY	A7CEC	CL30	1A10				No	1	
	106	QATAR AIRWAYS COMPANY	A7CEG	CL60	2B16	28/07/2011		27/07/2013	Yes		
	93	QATAR AIRWAYS COMPANY	A7CED	GL5T	1A11	01/04/2011		31/03/2013	Yes		
	102	QATAR AIRWAYS COMPANY	A7CEF	GL5T	1A10	10/07/2011		09/07/2013	Yes		
								RVSM Minimum Monitoring Requirements (ACFT):		2	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	85	QATAR AMIRI FLIGHT	A7AAM	GL5T	1A10	30/07/2011		29/07/2013	Yes		
	77	QATAR AMIRI FLIGHT	A7AFE	A313	300	14/08/2011		13/08/2013	Yes		
	83	QATAR AMIRI FLIGHT	A7HHH	A345	541	14/08/2011		13/08/2013	Yes		
	78	QATAR AMIRI FLIGHT	A7HHJ	A319	133	02/08/2011		01/08/2013	Yes		
	82	QATAR AMIRI FLIGHT	A7HHK	A342	211	02/08/2011		01/08/2013	Yes		
	81	QATAR AMIRI FLIGHT	A7HHM	A332	202	18/07/2011		17/07/2013	Yes		
	80	QATAR AMIRI FLIGHT	A7HJJ	A332	202	27/07/2011		26/07/2013	Yes		
	95	QATAR AMIRI FLIGHT	A7MBK	A322	232	06/07/2011		05/07/2013	Yes		
	94	QATAR AMIRI FLIGHT	A7MED	A319	133	01/08/2011		31/07/2013	Yes		
	103	QATAR AMIRI FLIGHT	A7MHH	A319	115	11/08/2011		10/08/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	86	QATAR PRIVATE JET COMPANY	A7CGK	CL60	CE 650					1	
							RVSM Minimum Monitoring Requirements (ACFT):			1	

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QATAR - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Dare	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	87	RIZON GROUP HOLDINGS	A7RZC	CL60	605	29/07/2011		28/07/2013			
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Dare	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	88	SH. A. BIN ABDULLA	A7CJI	C525	525					1	
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Series	Last Successful EUR Monitoring Dare	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	89	SK. ABDULLA	A7ASA	C501	501	16/08/2009		16/08/2011			
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Total No. of Bahrain RVSM ACFT MMR as of August 2011 is = 4

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	215	Aeromedical Evacuation	HZMS3	GLF3	29/05/2010		28/05/2012	Yes		
2	216	Aeromedical Evacuation	HZMS4	GLF4	10/08/2011		09/08/2013	Yes		
3	217	Aeromedical Evacuation	HZMS5A	GLF4	16/07/2011		15/07/2013	Yes		
4	218	Aeromedical Evacuation	HZMS5B	GLF5				No	1	
5	219	Aeromedical Evacuation	HZMS71	BE30				No	1	Any Two
6	220	Aeromedical Evacuation	HZMS72	BE30				No	1	
7	221	Aeromedical Evacuation	HZMS73	BE30				No		
8	222	Aeromedical Evacuation	HZMS74	BE30				No		
9	223	Aeromedical Evacuation	HZMS75	BE30				No		
10	213	Aeromedical Evacuation	HZMS1A	LJ60				No	1	
11	214	Aeromedical Evacuation	HZMS1B	LJ60				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			5	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	124	Air Atlanta Icelandic	TFAAB	B742	12/08/2011		11/08/2013	Yes		
2	128	Air Atlanta Icelandic	TFARP	B742				No	1	
3	127	Air Atlanta Icelandic	TFAMJ	B743	12/07/2010		11/07/2012	Yes		
4	125	Air Atlanta Icelandic	TFARU	B743	21/01/2011		20/01/2013	Yes		
5	126	Air Atlanta Icelandic	TFATJ	B743				Yes		
6	119	Air Atlanta Icelandic	TFAMI	B744	13/08/2011		12/08/2013	Yes		
7	120	Air Atlanta Icelandic	TFAMS	B744	25/04/2010		24/04/2012	Yes		
8	122	Air Atlanta Icelandic	TFAMU	B744	14/08/2011		13/08/2013	Yes		
9	123	Air Atlanta Icelandic	TFAMV	B744	20/03/2010		19/03/2012	Yes		
10	121	Air Atlanta Icelandic	TFAMT	B744				Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	246	Al-Anwa Est.	HZAB3	B727	21/07/2011		20/07/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	248	Al-Atheer Est.	HZNSA	A310	29/07/2011		28/07/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	240	Alpha Star	HZA4	A319				No	1	Any Two
2	241	Alpha Star	HZA2	A320				No	1	
3	242	Alpha Star	HZAJ3	A320				No		
						RVSM Minimum Monitoring Requirements (ACFT):			2	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	251	Al-Tameer co. Ltd.	HZSKI	B722	02/06/2011		01/06/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	224	Al-Wafeer Air	HZAWA1	B744				No	1	Any Two
2	225	Al-Wafeer Air	HZAWA2	B744				No	1	
3	226	Al-Wafeer Air	HZAWA3	B744				No		
						RVSM Minimum Monitoring Requirements (ACFT):			2	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	230	ARABASCO	HZDME	F900	10/07/2011		09/07/2013	Yes		
2	229	ARABASCO	HZMIS	B732	01/07/2011		08/08/2012	Yes		
3	227	ARABASCO	P4ASL	B737				No	1	
4	232	ARABASCO	N918TT	BE40				No	1	
5	228	ARABASCO	HZHHT	GLF3	09/08/2010		30/06/2013	Yes		
6	231	ARABASCO	HZRC3	GLF3	12/09/2009		12/09/2011	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			2	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	258	Arabian Jets	HZPM2	BE40				No	1	
2	259	Arabian Jets	HZPM3	BE40				No	1	
						RVSM Minimum Monitoring Requirements (ACFT):			1	

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	131	Atlasjet Airlines	TCETK	A332	21/07/2011		20/07/2013	Yes		
2	132	Atlasjet Airlines	TCETL	A332	30/04/2011		29/04/2013	Yes		
3	133	Atlasjet Airlines	TCETP	A332	18/07/2010		17/07/2012	Yes		
4	129	Atlasjet Airlines	TCOGS	B752				No	1	
5	130	Atlasjet Airlines	TCOGT	B752				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	260	Aviation Horizons	HZNGN	LJ60				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	254	Harth Trading Est.	HZHA1	GLF2	27/03/2011		26/03/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		*0*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	257	Hashim Said Hashim	HZHSH	CL60				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	253	International Jet Club	HZARK	GLF4	31/07/2011		30/07/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		*0*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	252	Joannou & Paraskevaides	HZSJP3	CL60				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	243	Kingdom Holding Co.	HZWBT5	H25B	09/08/2011		08/08/2013	Yes		
2	244	Kingdom Holding Co.	HZWBT7	B744	20/07/2011		19/07/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		*0*	

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	255	Mid East Jet Charter	HZRCA	A318	29/07/2011		28/07/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		0	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	211	NAS/NJME	N162NS	FA20	24/06/2011		23/06/2013	Yes		
2	212	NAS/NJME	N609LS	FA20	02/08/2011		01/08/2013	Yes		
3	205	NAS/NJME	N797HT	FA20	30/04/2011		29/04/2013	Yes		
4	196	NAS/NJME	HZ-KSDC	FA20				Yes		
5	199	NAS/NJME	N129NS	GLF4	01/08/2011		31/07/2013	Yes		
6	200	NAS/NJME	N396NS	GLF4	14/08/2011		13/08/2013	Yes		
7	201	NAS/NJME	N407NS	GLF4	14/08/2011		13/08/2013	Yes		
8	202	NAS/NJME	N437GA	GLF4	02/08/2011		01/08/2013	Yes		
9	203	NAS/NJME	N451NS	GLF4	30/07/2011		29/07/2013	Yes		
10	204	NAS/NJME	N452NS	GLF4	31/07/2011		30/07/2013	Yes		
11	195	NAS/NJME	HZ-KSGA	GLF4				Yes		
12	194	NAS/NJME	HZ-ALFA	GLF5				Yes		
13	208	NAS/NJME	N751NS	H25B - 750	26/12/2009		26/12/2011	Yes		
14	209	NAS/NJME	N752NS	H25B - 750	19/03/2011		18/03/2013	Yes		
15	210	NAS/NJME	N753NS	H25B - 750	23/04/2011		22/04/2013	Yes		
16	206	NAS/NJME	N828NS	H25B - 800	05/07/2010		04/07/2012	Yes		
17	207	NAS/NJME	N829NS	H25B - 800	15/11/2010		14/11/2012	Yes		
18	197	NAS/NJME	HZ-KSRC	H25B - 800				Yes		
19	198	NAS/NJME	HZ-KSRD	H25B - 750				Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		0	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	181	National Air Services	VPCKS	A318	21/06/2011		20/06/2013	Yes		
2	180	National Air Services	VPCKH	A318				Yes		
3	179	National Air Services	VPCAN	A319				Yes		
4	178	National Air Services	HZXY7	A320	26/07/2011		25/07/2013	Yes		
5	186	National Air Services	VPCXR	A320				Yes		
6	187	National Air Services	VPCXS	A320				Yes		
7	188	National Air Services	VPCXT	A320				Yes		
8	189	National Air Services	VPCXU	A320				Yes		

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

9	190	National Air Services	VPCXW	A320					Yes					
10	191	National Air Services	VPCXX	A320					Yes					
11	192	National Air Services	VPCXY	A320					Yes					
12	193	National Air Services	VPCXZ	A320					Yes					
13	162	National Air Services	HZ101	B737	11/08/2011		10/08/2013		Yes					
14	173	National Air Services	HZMF1	B737	17/02/2011		16/02/2013		Yes					
15	174	National Air Services	HZMF2	B737	01/08/2011		31/07/2013		Yes					
16	163	National Air Services	HZ102	B738	07/07/2011		06/07/2013		Yes					
17	169	National Air Services	HZ133	C550					No	1				
18	170	National Air Services	HZ134	C550					No		Any Two			
19	171	National Air Services	HZ135	C550					No	1				
20	172	National Air Services	HZ136	C550					No					
21	182	National Air Services	VPCQW	E190					No					
22	183	National Air Services	VPCQX	E190					No	1	Any Two			
23	184	National Air Services	VPCQY	E190					No					
24	185	National Air Services	VPCQZ	E190					No	1				
25	175	National Air Services	HZMF3	GLF4	01/07/2011		30/06/2013		Yes					
26	176	National Air Services	HZMF4	GLF4	12/03/2011		11/03/2013		Yes					
27	177	National Air Services	HZMF5	GLF4	23/06/2011		22/06/2013		Yes					
28	164	National Air Services	HZ103	GLF4					Yes					
29	165	National Air Services	HZ105	H25B	13/07/2011		12/07/2013		Yes					
30	166	National Air Services	HZ109	H25B	08/11/2010		07/11/2012		Yes					
31	168	National Air Services	HZ130	H25B	05/03/2011		04/03/2013		Yes					
32	167	National Air Services	HZ110	H25B					Yes					
								RVSM Minimum Monitoring Requirements (ACFT):		4				

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	250	Olayan Finance co.	HZOFC6	FA7X	29/07/2011		28/07/2013	Yes		
2	249	Olayan Finance co.	HZOFC5	F900				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		1	

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU		MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant	Expire Date	By ACFT Group	Required Monitoring	
1	141	Onur Air	TCOCB	A333					No		Any Two
2	142	Onur Air	TCOCC	A333					No	1	
3	143	Onur Air	TCOCD	A333					No		
4	140	Onur Air	TCOCA	A333	11/07/2010			10/07/2012	Yes		
5	134	Onur Air	TCOAA	A306					No	1	Any-Two
6	135	Onur Air	TCOAB	A306					No		
7	136	Onur Air	TCOAG	A306					No		
8	137	Onur Air	TCOAH	A306					No	1	
9	138	Onur Air	TCOAO	A306					No		
10	139	Onur Air	TCOAZ	A306					No		
									RVSM Minimum Monitoring Requirements (ACFT):	3	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU		MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant	Expire Date	By ACFT Group	Required Monitoring	
1	145	Phuket Airlines	HSVAC	B743						1	
2	146	Phuket Airlines	HSVAN	B743						1	
									RVSM Minimum Monitoring Requirements (ACFT):	2	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU		MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant	Expire Date	By ACFT Group	Required Monitoring	
1	247	Resa	HZ124	A342						1	
									RVSM Minimum Monitoring Requirements (ACFT):	1	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU		MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant	Expire Date	By ACFT Group	Required Monitoring	
1	6	Royal Flight Operation	HZHMS2	A342					No	1	
2	3	Royal Flight Operation	HZAIJ	B741	10/08/2011			09/08/2013	Yes		
3	1	Royal Flight Operation	HZHMIA	B743					No		Any Two
4	5	Royal Flight Operation	HZHM1	B744					No	1	
5	2	Royal Flight Operation	HZHM1B	B74S					No		
6	4	Royal Flight Operation	HZHMED	B752	22/11/2010			21/11/2012	Yes		
									RVSM Minimum Monitoring Requirements (ACFT):	2	

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	236	Salem Aviation	HZBL1	C525	30/04/2011		29/04/2013	Yes		
2	238	Salem Aviation	N373AB	C750	29/07/2011		28/07/2013	Yes		
3	239	Salem Aviation	VPCCR	CL60	27/06/2011		26/06/2013	Yes		
4	237	Salem Aviation	HZBIN	H25B	22/03/2011		21/03/2013	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU	MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant Expire Date	By ACFT Group	Required Monitoring	
1	99	Saudi Arabian Airlines	HZAS23	A320	22/12/2010		21/12/2012	Yes		
2	100	Saudi Arabian Airlines	HZAS31	A320	15/10/2010		14/10/2012	Yes		
3	102	Saudi Arabian Airlines	HZAS33	A320	10/02/2011		09/02/2013	Yes		
4	103	Saudi Arabian Airlines	HZAS34	A320	03/05/2011		02/05/2013	Yes		
5	112	Saudi Arabian Airlines	HZASE	A320	14/08/2011		13/08/2013	Yes		
6	87	Saudi Arabian Airlines	HZAS11	A320				Yes		
7	88	Saudi Arabian Airlines	HZAS12	A320				Yes		
8	89	Saudi Arabian Airlines	HZAS13	A320				Yes		
9	90	Saudi Arabian Airlines	HZAS14	A320				Yes		
10	91	Saudi Arabian Airlines	HZAS15	A320				Yes		
11	92	Saudi Arabian Airlines	HZAS16	A320				Yes		
12	93	Saudi Arabian Airlines	HZAS17	A320				Yes		
13	94	Saudi Arabian Airlines	HZAS18	A320				Yes		
14	95	Saudi Arabian Airlines	HZAS19	A320				Yes		
15	96	Saudi Arabian Airlines	HZAS20	A320				Yes		
16	97	Saudi Arabian Airlines	HZAS21	A320				Yes		
17	98	Saudi Arabian Airlines	HZAS22	A320				Yes		
18	101	Saudi Arabian Airlines	HZAS32	A320				Yes		
19	104	Saudi Arabian Airlines	HZAS35	A320				Yes		
20	105	Saudi Arabian Airlines	HZAS36	A320				Yes		
21	106	Saudi Arabian Airlines	HZAS37	A320				Yes		
22	107	Saudi Arabian Airlines	HZAS38	A320				Yes		
23	108	Saudi Arabian Airlines	HZAS40	A320				Yes		
24	109	Saudi Arabian Airlines	HZAS42	A320				Yes		
25	110	Saudi Arabian Airlines	HZAS43	A320				Yes		
26	111	Saudi Arabian Airlines	HZASI	A321				Yes		
27	113	Saudi Arabian Airlines	HZASJ	A321				Yes		
28	114	Saudi Arabian Airlines	HZAQA	A333	28/07/2011		27/07/2013	Yes		

KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

29	115	Saudi Arabian Airlines	HZAQE	A333	23/07/2011		22/07/2013	Yes			
30	116	Saudi Arabian Airlines	HZAQF	A333	31/07/2011		30/07/2013	Yes			
31	118	Saudi Arabian Airlines	HZAQH	A333	20/07/2011		19/07/2013	Yes			
32	117	Saudi Arabian Airlines	HZAQG	A333				Yes			
33	22	Saudi Arabian Airlines	HZAIF	B74S	31/07/2011		30/07/2013	Yes			
34	23	Saudi Arabian Airlines	HZAIK	B743	31/07/2011		30/07/2013	Yes			
35	24	Saudi Arabian Airlines	HZAIL	B743	30/07/2011		29/07/2013	Yes			
36	26	Saudi Arabian Airlines	HZAIN	B743	01/07/2011		30/06/2013	Yes			
37	27	Saudi Arabian Airlines	HZAIP	B743	30/07/2011		29/07/2013	Yes			
38	29	Saudi Arabian Airlines	HZAIR	B743				Yes			
39	25	Saudi Arabian Airlines	HZAIM	B743				Yes			
40	28	Saudi Arabian Airlines	HZAIQ	B743				Yes			
41	30	Saudi Arabian Airlines	HZAIS	B743				Yes			
42	31	Saudi Arabian Airlines	HZAIV	B744	21/12/2010		20/12/2012	Yes			
43	32	Saudi Arabian Airlines	HZAIW	B744	24/07/2011		23/07/2013	Yes			
44	33	Saudi Arabian Airlines	HZAIX	B744	21/08/2009		21/08/2011	Yes			
45	34	Saudi Arabian Airlines	HZAIY	B744	31/07/2011		30/07/2013	Yes			
46	35	Saudi Arabian Airlines	HZAKA	B772	13/08/2011		12/08/2013	Yes			
47	36	Saudi Arabian Airlines	HZAKB	B772	14/08/2011		13/08/2013	Yes			
48	37	Saudi Arabian Airlines	HZAKC	B772	14/08/2011		13/08/2013	Yes			
49	38	Saudi Arabian Airlines	HZAKD	B772	14/08/2011		13/08/2013	Yes			
50	39	Saudi Arabian Airlines	HZAKE	B772	09/08/2011		08/08/2013	Yes			
51	40	Saudi Arabian Airlines	HZAKF	B772	29/07/2011		28/07/2013	Yes			
52	41	Saudi Arabian Airlines	HZAKG	B772	04/08/2011		03/08/2013	Yes			
53	42	Saudi Arabian Airlines	HZAKH	B772	12/08/2011		11/08/2013	Yes			
54	43	Saudi Arabian Airlines	HZAKI	B772	11/08/2011		10/08/2013	Yes			
55	44	Saudi Arabian Airlines	HZAKJ	B772	02/08/2011		01/08/2013	Yes			
56	45	Saudi Arabian Airlines	HZAKK	B772	18/12/2010		17/12/2012	Yes			
57	47	Saudi Arabian Airlines	HZAKM	B772	14/04/2010		13/04/2012	Yes			
58	48	Saudi Arabian Airlines	HZAKN	B772	13/08/2010		12/08/2012	Yes			
59	49	Saudi Arabian Airlines	HZAKO	B772	07/08/2011		06/08/2013	Yes			
60	50	Saudi Arabian Airlines	HZAKP	B772	29/01/2011		28/01/2013	Yes			
61	52	Saudi Arabian Airlines	HZAKR	B772				Yes			
62	53	Saudi Arabian Airlines	HZAKS	B772	25/06/2010		24/06/2012	Yes			
63	55	Saudi Arabian Airlines	HZAKU	B772	19/09/2009		19/09/2011	Yes			
64	56	Saudi Arabian Airlines	HZAKV	B772	01/12/2010		30/11/2012	Yes			
65	57	Saudi Arabian Airlines	HZAKW	B772	25/12/2010		24/12/2012	Yes			
66	46	Saudi Arabian Airlines	HZAKL	B772				Yes			
67	51	Saudi Arabian Airlines	HZAKQ	B772				Yes			

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

68	54	Saudi Arabian Airlines	HZ-AKT	B772				Yes		Any Two	
69	7	Saudi Arabian Airlines	HZAEA	E170				No	1		
70	8	Saudi Arabian Airlines	HZAEB	E170				No			
71	9	Saudi Arabian Airlines	HZAEC	E170				No			
72	10	Saudi Arabian Airlines	HZAED	E170				No			
73	11	Saudi Arabian Airlines	HZAEE	E170				No			
74	12	Saudi Arabian Airlines	HZAEF	E170				No			
75	13	Saudi Arabian Airlines	HZAEG	E170				No			
76	14	Saudi Arabian Airlines	HZAEH	E170				No			
77	15	Saudi Arabian Airlines	HZAEI	E170				No	1		
78	16	Saudi Arabian Airlines	HZAEJ	E170				No			
79	17	Saudi Arabian Airlines	HZAEK	E170				No			
80	18	Saudi Arabian Airlines	HZAEL	E170				No			
81	19	Saudi Arabian Airlines	HZAEM	E170				No			
82	20	Saudi Arabian Airlines	HZAEN	E170				No			
83	21	Saudi Arabian Airlines	HZAEO	E170				No			
84	58	Saudi Arabian Airlines	HZANA	MD11	24/07/2011		23/07/2013	Yes			
85	59	Saudi Arabian Airlines	HZANB	MD11	14/08/2011		13/08/2013	Yes			
86	60	Saudi Arabian Airlines	HZANC	MD11	13/08/2011		12/08/2013	Yes			
87	61	Saudi Arabian Airlines	HZAND	MD11	13/08/2011		12/08/2013	Yes			
88	70	Saudi Arabian Airlines	HZAPF	MD90	28/07/2011		27/07/2013	Yes			
89	63	Saudi Arabian Airlines	HZAP4	MD90						Any One	
90	62	Saudi Arabian Airlines	HZAP3	MD90							
91	64	Saudi Arabian Airlines	HZAP7	MD90					1		
92	65	Saudi Arabian Airlines	HZAPA	MD90							
93	66	Saudi Arabian Airlines	HZAPB	MD90							
94	67	Saudi Arabian Airlines	HZAPC	MD90							
95	68	Saudi Arabian Airlines	HZAPD	MD90							
96	69	Saudi Arabian Airlines	HZAPE	MD90							
97	71	Saudi Arabian Airlines	HZAPH	MD90							
98	72	Saudi Arabian Airlines	HZAPI	MD90							
99	73	Saudi Arabian Airlines	HZAPJ	MD90							
100	74	Saudi Arabian Airlines	HZAPK	MD90							
101	75	Saudi Arabian Airlines	HZAPL	MD90							
102	76	Saudi Arabian Airlines	HZAPM	MD90							
103	77	Saudi Arabian Airlines	HZAPN	MD90							
104	78	Saudi Arabian Airlines	HZAPO	MD90							
105	79	Saudi Arabian Airlines	HZAPP	MD90							
106	80	Saudi Arabian Airlines	HZAPQ	MD90							

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

107	81	Saudi Arabian Airlines	HZAPR	MD90									
108	82	Saudi Arabian Airlines	HZAPS	MD90									
109	83	Saudi Arabian Airlines	HZAPT	MD90									
110	84	Saudi Arabian Airlines	HZAPV	MD90									
111	85	Saudi Arabian Airlines	HZAPX	MD90									
112	86	Saudi Arabian Airlines	HZAPY	MD90									
										RVSM Minimum Monitoring Requirements (ACFT):		3	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU		MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant	Expire Date	By ACFT Group	Required Monitoring	
1	256	Saudi Binladin Group	HZIBN	E55B						1	
								RVSM Minimum Monitoring Requirements (ACFT):		1	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU		MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant	Expire Date	By ACFT Group	Required Monitoring	
1	157	Saudi Private Aviation Maint.	HZSPAA	BE40					No	1	
2	159	Saudi Private Aviation Maint.	HZSPAD	BE40					No	1	
3	149	Saudi Private Aviation Maint.	HZAFT	F900	10/08/2010			09/08/2012	Yes		
4	155	Saudi Private Aviation Maint.	HZAFZ	F900					No	1	
5	160	Saudi Private Aviation Maint.	HZSPAH	FA7X	31/07/2011			30/07/2013	Yes		
6	158	Saudi Private Aviation Maint.	HZSPAG	FA7X					No	1	Any One
7	161	Saudi Private Aviation Maint.	HZSPAI	FA7X					No		
8	147	Saudi Private Aviation Maint.	HZAFN	GLF3					No	1	
9	148	Saudi Private Aviation Maint.	HZAFR	GLF3					No	1	
10	150	Saudi Private Aviation Maint.	HZAFU	GLF4	13/07/2010			12/07/2012	Yes		
11	151	Saudi Private Aviation Maint.	HZAFV	GLF4	19/07/2011			18/07/2013	Yes		
12	153	Saudi Private Aviation Maint.	HZAFX	GLF4	30/11/2010			29/11/2012	Yes		
13	154	Saudi Private Aviation Maint.	HZAFY	GLF4	14/08/2011			13/08/2013	Yes		
14	156	Saudi Private Aviation Maint.	HZMFL	GLF4	02/08/2011			01/08/2013	Yes		
15	152	Saudi Private Aviation Maint.	HZAFW	GLF4					Yes		
								RVSM Minimum Monitoring Requirements (ACFT):		6	

Seq.#	RVSM List	Operator	ACFT Reg.	ACFT	Last Successful	MIDRMA GMU	HMU or GMU		MMR Covered	No. OF ACFT	Remarks
	Ref. #			Type	EUR Monitoring Date	Monitoring Date	Compliant	Expire Date	By ACFT Group	Required Monitoring	
	233	SNAS Aviation	HZSNA	B722						1	Any Two
	234	SNAS Aviation	HZSNC	B722						1	
	235	SNAS Aviation	HZSNF	B722							
								RVSM Minimum Monitoring Requirements (ACFT):		2	

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KSA - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	144	ULS Airlines	TCSGM	A310	17/09/2010		16/09/2012	Yes		
						RVSM Minimum Monitoring Requirements (ACFT):			0	

Total No. of KSA RVSM ACFT MMR as of August 2011 is = 42

SYRIAN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Table 1 of 1

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Mcnitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	1	Syrian Air	YKAKA	A320	232	14/08/2011		13/08/2013	Yes		
2	2	Syrian Air	YKAKF	A320	232	13/08/2011		12/08/2013	Yes		
3	3	Syrian Air	YKAKE	A320	232	14/08/2011		13/08/2013	Yes		
4	4	Syrian Air	YKAKD	A320	232	09/08/2011		08/08/2013	Yes		
5	5	Syrian Air	YKAKC	A320	232	13/08/2011		12/08/2013	Yes		
6	6	Syrian Air	YKAKB	A320	232	11/08/2011		10/08/2013	Yes		
7	7	Syrian Air	YKASC	F900	F900				No	1	
8	8	Syrian Air	YKATA	IL76	T	14/12/2009		14/12/2011	Yes		
9	9	Syrian Air	YKAYE	T134	B	14/03/2011		13/03/2013	Yes		
								RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Total No. of Syrain RVSM ACFT MMR as of August 2011 is = *1*

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	1	Air Arabia	A6ABA	A320	214				Yes		
2	2	Air Arabia	A6ABC	A320	214				Yes		
3	3	Air Arabia	A6ABD	A320	214				Yes		
4	4	Air Arabia	A6ABE	A320	214		07/11/2010	06/11/2012	Yes		
5	5	Air Arabia	A6ABG	A320	214				Yes		
6	6	Air Arabia	A6ABH	A320	214				Yes		
7	8	Air Arabia	A6ABI	A320	214				Yes		
8	7	Air Arabia	A6ABJ	A320	200				Yes		
9	10	Air Arabia	A6ABK	A320	200				Yes		
10	11	Air Arabia	A6ABL	A320	200				Yes		
11	9	Air Arabia	A6ABO	A320	200				Yes		
12	12	Air Arabia	A6ABP	A320	200				Yes		
13	13	Air Arabia	A6ABQ	A320	200				Yes		
14	253	Air Arabia	A6ABR	A320	200		05/11/2010	04/11/2012	Yes		
15	259	Air Arabia	A6ABS	A320	214				Yes		
16	283	Air Arabia	A6ABT	A320	214				Yes		
17	294	Air Arabia	A6ANA	A320	214	22/10/2010		21/10/2012	Yes		
18	303	Air Arabia	A6ANB	A320	214				Yes		
19	321	Air Arabia	A6ANC	A320	214	06/01/2011		05/01/2013	Yes		
20	322	Air Arabia	A6AND	A320	214	31/01/2011			Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	14	Al Jaber Aviation	A6AJA	E135	BJ	07/08/2011		06/08/2013	Yes		
2	269	Al Jaber Aviation	A6AJH	E190		01/07/2011		30/06/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	23	AVE.COM	A6PHG	B737	3Q8	23/05/2011		22/05/2013	Yes		
2	22	AVE.COM	A6PHH	B737	300	16/05/2011		15/05/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	26	DANA Executives	A6AAM	A318	112	30/04/2011		29/04/2013	Yes		
2	24	DANA Executives	A6MAA	BA25	800A	04/05/2011		03/05/2013	Yes		
3	27	DANA Executives	A6ASQ	C604		16/03/2011			No	1	
4	25	DANA Executives	A6DEJ	GLF5	GV	23/07/2011			No	1	
							RVSM Minimum Monitoring Requirements (ACFT):			2	

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	29	Dubai Air Wing	A6HRS	B737	700IG	30/07/2011		29/07/2013	Yes		
2	28	Dubai Air Wing	A6HEH	B738	800BBJ	29/07/2011		28/07/2013	Yes		
3	30	Dubai Air Wing	A6MRM	B738	800BBJ	31/07/2011		30/07/2013	Yes		
4	35	Dubai Air Wing	A6MRS	B738	800	02/08/2011		01/08/2013	Yes		
5	34	Dubai Air Wing	A6COM	B744	400	10/08/2011		09/08/2013	Yes		
6	280	Dubai Air Wing	A6GGP	B744	400	09/08/2011		08/08/2013	Yes		
7	31	Dubai Air Wing	A6MMM	B744	422	12/08/2011		11/08/2013	Yes		
8	32	Dubai Air Wing	A6HHH	GLF4	GIV	07/08/2011		06/08/2013	Yes		
9	33	Dubai Air Wing	A6RJ2	RJ85		08/07/2010		07/07/2012	Yes		
10	258	Dubai Air Wing	A6RJ1	RJ85					No	1	
								RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	319	Eastern Sky Jets	A6ESE	B737	400	10/09/2010		09/09/2012			
2	290	Eastern Sky Jets	A6ESF	B737	400	25/08/2010		24/08/2012			
3	36	Eastern Sky Jets	A6ESA	DC9	51					1	
								RVSM Minimum Monitoring Requirements (ACFT):		*1*	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	39	Emirates	A6EAA	A330	243	26/11/2010		25/11/2012	Yes		
2	59	Emirates	A6EAB	A330	243	24/11/2010		23/11/2012	Yes		
3	60	Emirates	A6EAC	A330	243	23/11/2010		22/11/2012	Yes		
4	40	Emirates	A6EAD	A330	243	05/08/2011		04/08/2013	Yes		
5	41	Emirates	A6EAE	A330	243	10/07/2011		09/07/2013	Yes		
6	42	Emirates	A6EAF	A330	243	11/08/2011		10/08/2013	Yes		
7	61	Emirates	A6EAG	A330	243	13/08/2011		12/08/2013	Yes		
8	43	Emirates	A6EAH	A330	243	27/06/2011		26/06/2013	Yes		
9	44	Emirates	A6EAI	A330	243	12/08/2011		11/08/2013	Yes		
10	45	Emirates	A6EAJ	A330	243	08/06/2011		07/06/2013	Yes		
11	62	Emirates	A6EAK	A330	243	28/11/2010		27/11/2012	Yes		
12	46	Emirates	A6EAL	A330	243				Yes		
13	47	Emirates	A6EAM	A330	243	10/08/2011		09/08/2013	Yes		
14	48	Emirates	A6EAN	A330	243	04/07/2011		03/07/2013	Yes		
15	63	Emirates	A6EAO	A330	243	04/08/2011		03/08/2013	Yes		
16	64	Emirates	A6EAP	A330	243	11/08/2011		10/08/2013	Yes		
17	65	Emirates	A6EAQ	A330	243	29/11/2010		28/11/2012	Yes		
18	66	Emirates	A6EAR	A330	243	24/07/2011		23/07/2013	Yes		
19	67	Emirates	A6EAS	A330	243	22/11/2010		21/11/2012	Yes		
20	49	Emirates	A6EKQ	A330	243	15/06/2011		14/06/2013	Yes		
21	50	Emirates	A6EKR	A330	243	27/11/2010		26/11/2012	Yes		

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

22	51	Emirates	A6EKS	A330	243	09/08/2011			08/08/2013	Yes			
23	52	Emirates	A6EKT	A330	243	28/07/2011			27/07/2013	Yes			
24	53	Emirates	A6EKU	A330	243	17/07/2011			16/07/2013	Yes			
25	54	Emirates	A6EKV	A330	243	14/08/2011			13/08/2013	Yes			
26	55	Emirates	A6EKW	A330	243	05/08/2011			04/08/2013	Yes			
27	56	Emirates	A6EKX	A330	243	14/08/2011			13/08/2013	Yes			
28	57	Emirates	A6EKY	A330	243	27/06/2011			26/06/2013	Yes			
29	58	Emirates	A6EKZ	A330	243					Yes			
30	69	Emirates	A6ERM	A343	313	29/04/2011			28/04/2013	Yes			
31	68	Emirates	A6ERN	A343	313	08/05/2011			07/05/2013	Yes			
32	72	Emirates	A6ERO	A343	313	23/05/2011			22/05/2013	Yes			
33	71	Emirates	A6ERP	A343	313	26/05/2011			25/05/2013	Yes			
34	70	Emirates	A6ERQ	A343	313	06/08/2011			05/08/2013	Yes			
35	73	Emirates	A6ERR	A343	313	21/05/2011			20/05/2013	Yes			
36	74	Emirates	A6ERS	A343	300	20/05/2011			19/05/2013	Yes			
37	75	Emirates	A6ERT	A343	300	05/08/2011			04/08/2013	Yes			
38	76	Emirates	A6ERA	A345	500	03/01/2010			03/01/2012	Yes			
39	77	Emirates	A6ERC	A345	500					Yes			
40	78	Emirates	A6ERD	A345	500					Yes			
41	79	Emirates	A6ERE	A345	500	14/05/2010			13/05/2012	Yes			
42	80	Emirates	A6ERF	A345	500	07/11/2009			07/11/2011	Yes			
43	81	Emirates	A6ERG	A345	500	11/10/2010			10/10/2012	Yes			
44	82	Emirates	A6ERH	A345	500					Yes			
45	83	Emirates	A6ERI	A345	500					Yes			
46	133	Emirates	A6ERJ	A345	500					Yes			
47	164	Emirates	A6EDA	A380		10/08/2011			09/08/2013	Yes			
48	165	Emirates	A6EDB	A380	800	13/08/2011			12/08/2013	Yes			
49	163	Emirates	A6EDC	A380		11/08/2011			10/08/2013	Yes			
50	166	Emirates	A6EDD	A380	800	04/08/2011			03/08/2013	Yes			
51	250	Emirates	A6EDE	A380	800	06/08/2011			05/08/2013	Yes			
52	261	Emirates	A6EDF	A380	800	11/08/2011			10/08/2013	Yes			
53	262	Emirates	A6EDG	A380	800	13/08/2011			12/08/2013	Yes			
54	263	Emirates	A6EDH	A380	800	11/08/2011			10/08/2013	Yes			
55	284	Emirates	A6EDI	A380	800	14/08/2011			13/08/2013	Yes			
56	287	Emirates	A6EDJ	A380	800	06/08/2011			05/08/2013	Yes			
57	286	Emirates	A6EDK	A380	800	14/08/2011			13/08/2013	Yes			
58	289	Emirates	A6EDL	A380	800	14/08/2011			13/08/2013	Yes			
59	292	Emirates	A6EDM	A380	800	14/08/2011			13/08/2013	Yes			
60	298	Emirates	A6EDN	A380	800	11/08/2011			10/08/2013	Yes			
61	299	Emirates	A6EDO	A380	800	12/08/2011			11/08/2013	Yes			
62	138	Emirates	A6EFD	B772	200LRF	05/02/2011			04/02/2013	Yes			
63	139	Emirates	A6EFE	B772	200LRF	13/02/2011			12/02/2013	Yes			
64	149	Emirates	A6EGA	B772	300ER	02/08/2011			01/08/2013	Yes			
65	150	Emirates	A6EGB	B772	300ER	28/07/2011			27/07/2013	Yes			
66	99	Emirates	A6EMD	B772	200	05/08/2011			04/08/2013	Yes			
67	84	Emirates	A6EME	B772	200	12/07/2011			11/07/2013	Yes			

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

68	85	Emirates	A6EMF	B772	200	10/08/2011			09/08/2013	Yes			
69	86	Emirates	A6EMG	B772	21H	09/08/2011			08/08/2013	Yes			
70	101	Emirates	A6EMH	B772	21H	22/07/2011			21/07/2013	Yes			
71	87	Emirates	A6EMI	B772	200IGW	24/07/2011			23/07/2013	Yes			
72	88	Emirates	A6EMJ	B772	21H	07/08/2011			06/08/2013	Yes			
73	100	Emirates	A6EMK	B772	21H	19/07/2011			18/07/2013	Yes			
74	89	Emirates	A6EML	B772	21H	15/07/2011			14/07/2013	Yes			
75	134	Emirates	A6EWB	B772	200LR	12/08/2011			11/08/2013	Yes			
76	135	Emirates	A6EWC	B772	200LR	14/08/2011			13/08/2013	Yes			
77	140	Emirates	A6EWD	B772	21HLR	04/08/2011			03/08/2013	Yes			
78	141	Emirates	A6EWE	B772	21HLR	05/08/2011			04/08/2013	Yes			
79	136	Emirates	A6EWF	B772	200LR	14/08/2011			13/08/2013	Yes			
80	142	Emirates	A6EWG	B772	21HLR	25/07/2011			24/07/2013	Yes			
81	143	Emirates	A6EWH	B772	21HLR	22/07/2011			21/07/2013	Yes			
82	144	Emirates	A6EWI	B772	21HLR	11/08/2011			10/08/2013	Yes			
83	137	Emirates	A6EWJ	B772	200LR	14/07/2011			13/07/2013	Yes			
84	108	Emirates	A6EBA	B773	300ER	12/08/2011			11/08/2013	Yes			
85	109	Emirates	A6EBB	B773	300ER	13/08/2011			12/08/2013	Yes			
86	96	Emirates	A6EBC	B773	300ER	13/08/2011			12/08/2013	Yes			
87	110	Emirates	A6EBD	B773	300ER	14/08/2011			13/08/2013	Yes			
88	97	Emirates	A6EBE	B773	300ER	12/08/2011			11/08/2013	Yes			
89	111	Emirates	A6EBF	B773	300ER	09/08/2011			08/08/2013	Yes			
90	112	Emirates	A6EBG	B773	300ER	04/08/2011			03/08/2013	Yes			
91	113	Emirates	A6EBH	B773	300ER	22/07/2011			21/07/2013	Yes			
92	114	Emirates	A6EBI	B773	300ER	14/08/2011			13/08/2013	Yes			
93	115	Emirates	A6EBJ	B773	300ER	07/08/2011			06/08/2013	Yes			
94	116	Emirates	A6EBK	B773	300ER	14/08/2011			13/08/2013	Yes			
95	117	Emirates	A6EBL	B773	300ER	27/07/2011			26/07/2013	Yes			
96	118	Emirates	A6EBM	B773	300ER	08/08/2011			07/08/2013	Yes			
97	130	Emirates	A6EBO	B773	300ER	10/08/2011			09/08/2013	Yes			
98	131	Emirates	A6EBP	B773	300ER	12/08/2011			11/08/2013	Yes			
99	132	Emirates	A6EBQ	B773	300ER	13/08/2011			12/08/2013	Yes			
100	119	Emirates	A6EBR	B773	300ER	13/08/2011			12/08/2013	Yes			
101	120	Emirates	A6EBS	B773	300ER	14/08/2011			13/08/2013	Yes			
102	121	Emirates	A6EBT	B773	300ER	29/07/2011			28/07/2013	Yes			
103	98	Emirates	A6EBU	B773	300ER	11/08/2011			10/08/2013	Yes			
104	122	Emirates	A6EBV	B773	300ER	13/08/2011			12/08/2013	Yes			
105	125	Emirates	A6EBW	B773	300ER	14/08/2011			13/08/2013	Yes			
106	126	Emirates	A6EBX	B773	300ER	14/08/2011			13/08/2013	Yes			
107	127	Emirates	A6EBY	B773	300ER	02/08/2011			01/08/2013	Yes			
108	128	Emirates	A6EBZ	B773	300ER	10/08/2011			09/08/2013	Yes			
109	129	Emirates	A6ECA	B773	300ER	14/08/2011			13/08/2013	Yes			
110	123	Emirates	A6ECB	B773	300ER	11/08/2011			10/08/2013	Yes			
111	151	Emirates	A6ECC	B773	300R	04/08/2011			03/08/2013	Yes			
112	145	Emirates	A6ECD	B773	300ER	09/08/2011			08/08/2013	Yes			
113	146	Emirates	A6ECE	B773	300ER	02/08/2011			01/08/2013	Yes			

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

114	147	Emirates	A6ECF	B773	300ER	11/08/2011		10/08/2013	Yes				
115	152	Emirates	A6ECG	B773	300R	12/08/2011		11/08/2013	Yes				
116	153	Emirates	A6ECH	B773	300R	06/08/2011		05/08/2013	Yes				
117	154	Emirates	A6ECI	B773	300R	14/08/2011		13/08/2013	Yes				
118	161	Emirates	A6ECJ	B773	31HER	08/08/2011		07/08/2013	Yes				
119	155	Emirates	A6ECK	B773	300R	02/08/2011		01/08/2013	Yes				
120	156	Emirates	A6ECL	B773	300R	12/08/2011		11/08/2013	Yes				
121	148	Emirates	A6ECM	B773	300ER	13/08/2011		12/08/2013	Yes				
122	157	Emirates	A6ECN	B773	300R	09/08/2011		08/08/2013	Yes				
123	158	Emirates	A6ECO	B773	300R	09/08/2011		08/08/2013	Yes				
124	162	Emirates	A6ECP	B773	36HER	08/08/2011		07/08/2013	Yes				
125	159	Emirates	A6ECQ	B773	300R	08/08/2011		07/08/2013	Yes				
126	160	Emirates	A6ECR	B773	300R	13/08/2011		12/08/2013	Yes				
127	265	Emirates	A6ECS	B773	300R	14/08/2011		13/08/2013	Yes				
128	272	Emirates	A6ECT	B773	300R	10/08/2011		09/08/2013	Yes				
129	266	Emirates	A6ECU	B773	300R	22/07/2011		21/07/2013	Yes				
130	267	Emirates	A6ECV	B773	300R	06/08/2011		05/08/2013	Yes				
131	273	Emirates	A6ECW	B773	300R	06/08/2011		05/08/2013	Yes				
132	268	Emirates	A6ECX	B773	300R	05/08/2011		04/08/2013	Yes				
133	276	Emirates	A6ECY	B773	300R	13/08/2011		12/08/2013	Yes				
134	277	Emirates	A6ECZ	B773	300R	07/08/2011		06/08/2013	Yes				
135	102	Emirates	A6EMM	B773	300	13/08/2011		12/08/2013	Yes				
136	103	Emirates	A6EMN	B773	300	10/08/2011		09/08/2013	Yes				
137	104	Emirates	A6EMO	B773	300	01/08/2011		31/07/2013	Yes				
138	90	Emirates	A6EMP	B773	300	08/08/2011		07/08/2013	Yes				
139	91	Emirates	A6EMQ	B773	300	06/08/2011		05/08/2013	Yes				
140	92	Emirates	A6EMR	B773	300	12/08/2011		11/08/2013	Yes				
141	93	Emirates	A6EMS	B773	300	14/08/2011		13/08/2013	Yes				
142	94	Emirates	A6EMT	B773	300	10/08/2011		09/08/2013	Yes				
143	95	Emirates	A6EMU	B773	300	11/08/2011		10/08/2013	Yes				
144	105	Emirates	A6EMV	B773	300	14/08/2011		13/08/2013	Yes				
145	106	Emirates	A6EMW	B773	300	12/08/2011		11/08/2013	Yes				
146	107	Emirates	A6EMX	B773	300	13/08/2011		12/08/2013	Yes				
147	124	Emirates	A6EWA	B773	300ER	13/08/2011		12/08/2013	Yes				
								RVSM Minimum Monitoring Requirements (ACFT):					*0*

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	256	Empire Aviation	A6SHH	AH4T		25/11/2009		25/11/2011	Expire in 10W	1	
2	288	Empire Aviation	A6BBD	BD70	BD700	22/10/2010		21/10/2012	Yes		
3	168	Empire Aviation	A6MBH	C604	604	24/06/2011		23/06/2013	Yes		
4	224	Empire Aviation	A6NKL	E135	BJ	10/03/2011		09/03/2013	Yes		
5	237	Empire Aviation	A6NLA	E135	BJ	12/11/2010		11/11/2012	Yes		
6	171	Empire Aviation	A6SSV	E135	BJ	13/08/2011		12/08/2013	Yes		
7	222	Empire Aviation	A6SUN	E135	BJ	17/07/2011		16/07/2013	Yes		

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

8	307	Empire Aviation	A6MAF	FA7X		22/07/2011		21/07/2013	Yes		
9	271	Empire Aviation	A6AUJ	H25B	850XP	09/07/2011		08/07/2013	Yes		
10	285	Empire Aviation	A6PHS	H25B	H800XP				Yes		
11	252	Empire Aviation	A6TBF	H25B	850XP	17/06/2011		16/06/2013	Yes		
12	169	Empire Aviation	A6HWK	H900	XP	15/07/2011		14/07/2013	Yes		
13	320	Empire Aviation	A6ICU	HS25	850XP				Yes		
14	167	Empire Aviation	A6MAH	HS25	800XP	31/05/2011		30/05/2013	Yes		
15	234	Empire Aviation	A6PJB	HS25	900XP				Yes		
16	170	Empire Aviation	A6ZZZ	HS25	800XP	13/03/2010		12/03/2012	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	194	Etihad	A6EIA	A320					Yes		
2	195	Etihad	A6EIB	A320					Yes		
3	192	Etihad	A6EIC	A320		26/02/2011		25/02/2013	Yes		
4	202	Etihad	A6EID	A320					Yes		
5	203	Etihad	A6EIE	A320					Yes		
6	196	Etihad	A6EIF	A320					Yes		
7	197	Etihad	A6EIG	A320					Yes		
8	198	Etihad	A6EIH	A320					Yes		
9	199	Etihad	A6EII	A320					Yes		
10	200	Etihad	A6EIJ	A320					Yes		
11	201	Etihad	A6EIK	A320			05/11/2010	04/11/2012	Yes		
12	193	Etihad	A6EIZ	A320					Yes		
13	204	Etihad	A6EYO	A330		11/08/2011		10/08/2013	Yes		
14	205	Etihad	A6EYP	A330		09/08/2011		08/08/2013	Yes		
15	206	Etihad	A6EYQ	A330		06/08/2011		05/08/2013	Yes		
16	207	Etihad	A6EYR	A330		02/08/2011		01/08/2013	Yes		
17	208	Etihad	A6EYS	A330		31/07/2011		30/07/2013	Yes		
18	312	Etihad	A6DCA	A332	243	14/08/2011		13/08/2013	Yes		
19	295	Etihad	A6DCB	A332	243	13/08/2011		12/08/2013	Yes		
20	172	Etihad	A6EYD	A332	243	05/08/2011		04/08/2013	Yes		
21	173	Etihad	A6EYE	A332	243	09/08/2011		08/08/2013	Yes		
22	174	Etihad	A6EYF	A332	243	05/08/2011		04/08/2013	Yes		
23	175	Etihad	A6EYG	A332	243	09/08/2011		08/08/2013	Yes		
24	186	Etihad	A6EYH	A332	243	06/08/2011		05/08/2013	Yes		
25	176	Etihad	A6EYI	A332	243	04/08/2011		03/08/2013	Yes		
26	177	Etihad	A6EYJ	A332	243	07/08/2011		06/08/2013	Yes		
27	178	Etihad	A6EYK	A332	243	05/08/2011		04/08/2013	Yes		
28	179	Etihad	A6EYL	A332	243	31/07/2011		30/07/2013	Yes		
29	180	Etihad	A6EYM	A332	243	26/06/2011		25/06/2013	Yes		
30	181	Etihad	A6EYN	A332	243	07/08/2011		06/08/2013	Yes		
31	264	Etihad	A6AFA	A333	300	14/08/2011		13/08/2013	Yes		
32	275	Etihad	A6AFB	A333	300	08/08/2011		07/08/2013	Yes		

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33	309	Etihad	A6AFC	A333	300	09/08/2011			08/08/2013	Yes			
34	325	Etihad	A6AFD	A333	342	13/08/2011			12/08/2013	Yes			
35	310	Etihad	A6AFE	A333	300	12/08/2011			11/08/2013	Yes			
36	209	Etihad	A6EHA	A340		11/08/2011			10/08/2013	Yes			
37	210	Etihad	A6EHF	A340		11/08/2011			10/08/2013	Yes			
38	211	Etihad	A6EHH	A340		13/08/2011			12/08/2013	Yes			
39	212	Etihad	A6EHI	A340		14/08/2011			13/08/2013	Yes			
40	213	Etihad	A6EHJ	A340		12/08/2011			11/08/2013	Yes			
41	187	Etihad	A6EHB	A345	500	14/08/2011			13/08/2013	Yes			
42	182	Etihad	A6EHC	A345	500	14/08/2011			13/08/2013	Yes			
43	188	Etihad	A6EHD	A345	500	14/08/2011			13/08/2013	Yes			
44	191	Etihad	A6ERB	A345	500					Yes			
45	183	Etihad	A6EHE	A346	600	11/08/2011			10/08/2013	Yes			
46	214	Etihad	A6EHK	A346	600	14/08/2011			13/08/2013	Yes			
47	215	Etihad	A6EHL	A346	600	13/08/2011			12/08/2013	Yes			
48	184	Etihad	A6ETA	B773	300ER	13/08/2011			12/08/2013	Yes			
49	185	Etihad	A6ETC	B773	300ER	02/08/2011			01/08/2013	Yes			
50	190	Etihad	A6ETD	B773	300ER	11/08/2011			10/08/2013	Yes			
51	189	Etihad	A6ETE	B773	300ER	12/08/2011			11/08/2013	Yes			
52	282	Etihad	A6ETF	B773	300ER	14/08/2011			13/08/2013	Yes			
53	311	Etihad	A6ETG	B773	300ER					Yes			
								RVSM Minimum Monitoring Requirements (ACFT):			0		

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	270	Execujet	A6MBS	CL60	C605	06/03/2011		05/03/2013	Yes		
2	304	Execujet	A6TLH	CL60	C605	01/08/2011		31/07/2013	Yes		
3	293	Execujet	A6RTS	F900	DX	21/06/2011		20/06/2013	Yes		
4	249	Execujet	A6DHG	G500	5000				No	1	
5	217	Execujet	A6FBQ	G500		15/04/2011		14/04/2013	Yes		
6	38	Execujet	A6AZH	GFL4	4	03/07/2011		02/07/2013	Yes		
7	279	Execujet	A6SKA	H25B	H800XP	24/06/2011		23/06/2013	Yes		
8	216	Execujet	A6CYS	LR60	XR	07/05/2011		06/05/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	218	Falcon Aviation Services	A6FLL	E135	BJ	14/07/2011		13/07/2013	Yes		
2	219	Falcon Aviation Services	A6FLO	E135	BJ	11/06/2011		10/06/2013	Yes		
3	302	Falcon Aviation Services	A6HHS	E190	BJ	26/07/2011		25/07/2013	Yes		
4	251	Falcon Aviation Services	A6FLH	G450		06/07/2011		05/07/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	278	Fly Dubai	A6FDG	B737 800		07/11/2010	06/11/2012	Yes		Any One
2	220	Fly Dubai	A6FDA	B737 800				No	1	
3	221	Fly Dubai	A6FDB	B737 800				No		
4	254	Fly Dubai	A6FDC	B737 800				No		
5	255	Fly Dubai	A6FDD	B737 800				No		
6	257	Fly Dubai	A6FDE	B737 800				No		
7	281	Fly Dubai	A6FDH	B737 800				No		
8	323	Fly Dubai	A6FDI	B737 800				No		
9	296	Fly Dubai	A6FDJ	B737 800				No		
10	297	Fly Dubai	A6FDK	B737 800				No		
11	300	Fly Dubai	A6FDL	B737 800				No		
12	301	Fly Dubai	A6FDM	B737 800				No		
13	305	Fly Dubai	A6FDN	B737 800				No		
14	306	Fly Dubai	A6FDO	B737 800				No		
15	313	Fly Dubai	A6FDP	B737 800				No		
16	314	Fly Dubai	A6FDQ	B737 800				No		
17	317	Fly Dubai	A6FDR	B737 800				No		
18	326	Fly Dubai	A6FDS	B737 800				No		
19	327	Fly Dubai	A6FDT	B737 800				No		
							RVSM Minimum Monitoring Requirements (ACFT):		1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	316	Fujairah Private	A6SMS	FA7X				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	247	Gulf Wings	A6AAH	C604 605	28/08/2010		27/08/2012	Yes		
2	308	Gulf Wings	A6SAJ	CL60 605	29/07/2011		28/07/2013	Yes		
3	318	Gulf Wings	A6AAG	CL60 605				No	1	
							RVSM Minimum Monitoring Requirements (ACFT):		1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	225	Maximus Air Cargo	A6MXA	A300	12/07/2011		11/07/2013	Yes		
2	226	Maximus Air Cargo	A6MXB	A300	07/09/2010		06/09/2012	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):		0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	229	Midex Airlines	A6MDA	A30B B4				No	1	

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

												Any two
2	228	Midex Airlines	A6MDB	A30B	B4					No		
3	230	Midex Airlines	A6MDC	A30B	B4					No		
4	231	Midex Airlines	A6MDD	A30B	B4					No	1	
5	232	Midex Airlines	A6MDE	A30B	B4					No		
6	233	Midex Airlines	A6MDF	A30B	B4					No		
7	227	Midex Airlines	A6MDG	B742	200F	27/09/2010		26/09/2012		Yes		
8	291	Midex Airlines	A6MDH	B742	200F	16/06/2011		15/06/2013		Yes		
9	324	Midex Airlines	A6MDI	B742	200F	09/01/2011		08/01/2013		Yes		
								RVSM Minimum Monitoring Requirements (ACFT):			2	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	21	Presidential Flight	A6DLM	A320		20/07/2011		19/07/2013	Yes		
2	274	Presidential Flight	A6AAB	B461	RJ100	18/03/2011		17/03/2013	Yes		
3	16	Presidential Flight	A6LIW	B461	RJ70	20/04/2011		19/04/2013	Yes		
4	20	Presidential Flight	A6DFR	B737	700	01/01/2010		01/01/2012	Yes		
5	17	Presidential Flight	A6AUH	B738	800BBJ	17/07/2011		16/07/2013	Yes		
6	18	Presidential Flight	A6UAE	B744	400	21/02/2011		20/02/2013	Yes		
7	19	Presidential Flight	A6YAS	B744	400	26/07/2011		25/07/2013	Yes		
8	15	Presidential Flight	A6ALN	B772	200	23/06/2011		22/06/2013	Yes		
9	260	Presidential Flight	A6SIL	B773	300	24/07/2011		23/07/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			0	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
	239	Prestige	A6PJA	C604						1	
2	235	Prestige	A6PJE	E135	BJ	10/07/2011		09/07/2013			
3	236	Prestige	A6UGH	E135	BJ	29/10/2010		28/10/2012			
4	223	Prestige	A6DPW	E135	BJ	09/08/2010		08/08/2012			
5	238	Prestige	A6ARK	E190		21/07/2011		20/07/2013			
6	37	Prestige	A6ELC	H25B	850XP	05/10/2009		05/10/2011			
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	328	RAK Airways	A6RKB	A322	214					1	
							RVSM Minimum Monitoring Requirements (ACFT):			1	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	240	Royal Jet	A6AIN	B737	700	02/08/2011		01/08/2013			
2	241	Royal Jet	A6DAS	B737	700IG	09/08/2011		08/08/2013			
3	245	Royal Jet	A6RJX	B737	700BBJ	24/07/2011		23/07/2013			
4	242	Royal Jet	A6RJY	B737	700IG	30/07/2011		29/07/2013			

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UAE - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

5	243	Royal Jet	A6RJZ	B737	700IG	29/07/2011			28/07/2013				
6	315	Royal Jet	A6KAH	E190								1	
7	244	Royal Jet	A6RJA	G300	300	31/07/2011			30/07/2013				
8	246	Royal Jet	A6RJB	G300		22/07/2011			21/07/2013				
									RVSM Minimum Monitoring Requirements (ACFT):				*1*

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type		Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	248	Rulers Flight Sharjah	A6ESH	A319	133CJ	08/08/2011		07/08/2013	Yes		
							RVSM Minimum Monitoring Requirements (ACFT):			*0*	

Total No. of UAE RVSM ACFT MMR as of August 2011 is = 14

Table 1 of 1

YEMEN - APPROVED RVSM ACFT MINIMUM MONITORING REQUIREMENTS AS OF AUGUST 2011

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	9	Felix Airways	7OFAA	CRJ7					1	
2	10	Felix Airways	7OFAB	CRJ7					1	
							RVSM Minimum Monitoring Requirements (ACFT):		2	

Seq.#	RVSM List Ref. #	Operator	ACFT Reg.	ACFT Type	Last Successful EUR Monitoring Date	MIDRMA GMU Monitoring Date	HMU or GMU Compliant Expire Date	MMR Covered By ACFT Group	No. OF ACFT Required Monitoring	Remarks
1	11	Yemen Airways	7OADW	A310	28/05/2011		27/05/2013	Yes		
2	12	Yemen Airways	7OADV	A310					1	Any One
3	2	Yemen Airways	7OADR	A310						
4	6	Yemen Airways	7OADP	A332	13/08/2011		12/08/2013	Yes		
5	7	Yemen Airways	7OADT	A332	12/08/2011		11/08/2013	Yes		
6	3	Yemen Airways	7OADL	B738				Yes		
7	4	Yemen Airways	7OADM	B738	26/11/2010		25/11/2012	Yes		
8	5	Yemen Airways	70ADN	B738				Yes		
9	8	Yemen Airways	7OADQ	B738	30/06/2011		29/06/2013	Yes		
10	1	Yemen Airways	7OYMN	B74S	13/10/2010		12/10/2012		1	
							RVSM Minimum Monitoring Requirements (ACFT):		2	

Total No. of Yemen RVSM ACFT MMR as of August 2011 is = 4

7.6 Appendix F - RVSM MINIMUM MONITORING REQUIREMENTS (Updated on 29/06/2010)

1. UPDATE OF MONITORING REQUIREMENTS TABLE AND WEBSITE. As significant data is obtained, monitoring requirements for specific aircraft types may change. When Table 1 below, is updated, The MIDRMA will advise all State members. The updated table will be posted on the MIDRMA website.

2. MONITORING PROGRAM. All operators that operate or intend to operate in the Middle East Region airspace where RVSM is applied are required to participate in the regional RVSM monitoring programme. Table 1 addresses requirements for monitoring the height-keeping performance of aircraft in order to meet regional safety objectives. In their application to the appropriate State authority for RVSM approval, operators must show a plan for meeting the applicable monitoring requirements. Initial monitoring should be completed as soon as possible but not later than 6 months after the issue of RVSM approval,the State of Registry that had issued an RVSM approval to an operator would be required to establish a requirement which ensures that a minimum of two aeroplanes of each aircraft type grouping of the operator have their height-keeping performance monitored, at least once every two years or within intervals of 1000 flight hours per aeroplane, whichever period is longer.

3. AIRCRAFT STATUS FOR MONITORING. Aircraft engineering work that is required for the aircraft to receive RVSM airworthiness approval must be completed prior to the aircraft being monitored. Any exception to this rule will be coordinated with the State authority.

4. APPLICABILITY OF MONITORING FROM OTHER REGIONS. Monitoring data obtained in conjunction with RVSM monitoring programmes from other Regions can be used to meet regional monitoring requirements. The RMAs, which are responsible for administering the monitoring programme, have access to monitoring data from other Regions and will coordinate with States and operators to inform them on the status of individual operator monitoring requirements.

5. MONITORING PRIOR TO THE ISSUE OF RVSM OPERATIONAL APPROVAL IS NOT A REQUIREMENT. Operators should submit monitoring plans to the responsible civil aviation authority andto theMIDRMA that show how they intend to meet the requirements specified in Table1. Monitoring will be carried out in accordance with this table.

6. AIRCRAFT GROUPS NOT LISTED IN TABLE 1. Contact the MIDRMA for clarification if an aircraft group is not listed in Table 1 or for clarification of other monitoring related issues. An aircraft group not listed in Table 1 will probably be subject to Category 2 or Category 3 monitoring requirements.

7. TABLE OF MONITORING GROUPS. Table 2 shows the aircraft types and series that are grouped together for operator monitoring purposes.

8. TRAILING CONE DATA. Altimetry System Error estimations developed using Trailing Cone data collected during RVSM certification flights can be used to fulfill monitoring requirements. It must be documented, however, that aircraft RVSM systems were in the approved RVSM configuration for the flight.

9. MONITORING OF AIRFRAMES THAT ARE RVSM COMPLIANT ON DELIVERY. If an operator adds new RVSM compliant airframes of a type for which it already has RVSM operational approval and has completed monitoring requirements for the type in accordance with the attached table, the new airframes are not required to be monitored. If an operator adds new RVSM compliant airframes of an aircraft type for which it has NOT previously received RVSM operational approval, then the operator should complete monitoring in accordance with the attached table.

MONITORING IS REQUIRED IN ACCORDANCE WITH THIS TABLE NOTE: MONITORING PRIOR TO THE ISSUE OF RVSM APPROVAL IS **NOT** A REQUIREMENT			
CATEGORY		**AIRCRAFT GROUP**	**MINIMUM OPERATOR MONITORING FOR EACH AIRCRAFT GROUP**
1	GROUP APPROVED: DATA INDICATES COMPLIANCE WITH THE RVSM MASPS	A124, A300, A306, A310-GE, A310-PW, A318, A320, A330, A340, A345, A346, A3ST, AVRO, B712, B727, B737CL, B737C, B737NX, B747CL, B74S, B744-5, B744-10, B752, B753, B767, B764, B772, B773, BD100, CL600, CL604, CL605, C17, C525, C560, C56X,C650,C680, C750,CARJ, CRJ7, CRJ9, DC10, E135-145, E170-190, F100, F900, FA10, GALX, GLEX, GLF4, GLF5, H25B-800, J328, KC135, LJ40, LJ45, LJ60, MD10, MD11, MD80, MD90, PRM1, T154	Two airframes from each fleet of an operator to be monitored
2	GROUP APPROVED: INSUFFICIENT DATA ON APPROVED AIRCRAFT	Other group aircraft other than those listed above including: A148, A380, AC95, AN72, ASTR, ASTR-SPX, B701, B703, B703-E3, B731, B732, BD700, BE20, BE30, BE40, B744-LCF, B748, C130, C500, C25A, C25B, C25C, C441, C5, C510, C550-552, C550-B, C550-II, C550-SII, D328, DC85, DC86-87, DC93, DC95, E120, E50P, EA50, F2TH, F70, FA20, FA50, FA7X, G150, GLF2, GLF2B, GLF3, H25B-700, H25B-750, H25C, HA4T, IL62, IL76, IL86, IL96, L101, L29B-2, L29B-731, LJ31, LJ35-36, LJ55, MU30, P180, PC12, SB20, SBR1, SBR2, T134, T204, T334, TBM, WW24, YK42	60% of airframes (round up if fractional) from each fleet of an operator **or** individual monitoring
3	Non-Group	Non-group approved aircraft	100% of aircraft shall be monitored

Table 1: MONITORING REQUIREMENTS TABLE

Table 2: MONITORING GROUPS FOR AIRCRAFT CERTIFIED UNDER GROUP APPROVAL REQUIREMENTS (insert the new version)

Monitoring Group	A/C ICAO	A/C Type	A/C Series
A124	A124	AN-124 RUSLAN	ALL SERIES
A148	A148	AN-148	100
A300	A30B	A300	B2-100, B2-200, B4-100, B4-100F, B4-120, B4-200, B4-200F, B4-220, B4-220F, C4-200
A306	A306	A300	600, 600F, 600R, 620, 620R, 620RF
A310-GE	A310	A310	200, 200F, 300, 300F
A310-PW	A310	A310	220, 220F,320
A318	A318	A318	ALL SERIES
A320	A319 A320 A321	A319 A320 A321	CJ , 110, 130 110, 210, 230 110, 130, 210, 230
A330	A332 A333	A330 A330	200, 220, 240 300, 320, 340
A340	A342 A343	A340 A340	210 310
A345	A345	A340	500, 540
A346	A346	A340	600, 640
A380	A388	A380	800, 840, 860
A3ST	A3ST	A300	600R ST BELUGA
AC95	AC95	AERO COMMANDER 695	A
AN72	AN72	AN-72 AN-74	ALL SERIES
ASTR	ASTR	1125 ASTRA	ALL SERIES
ASTR-SPX	ASTR	1125 ASTR SPX, G100	ALL SERIES
AVRO	RJ1H RJ70 RJ85	AVRO AVRO AVRO	RJ100 RJ70 RJ85
B701	B701	B707	100, 120B
B703	B703	B707	320, 320B, 320C
B703-E3	B703	B707	E-3
B712	B712	B717	200
B727	B721 B722	B727 B727	100, 100C, 100F,100QF 200, 200F
B731	B731	B737	100
B732	B732	B737	200, 200C
B737CL	B733 B734 B735	B737 B737 B737	300 400 500

Monitoring Group	A/C ICAO	A/C Type	A/C Series
B737NX	B736 B737 B738 B739	B737 B737 B737 B737	600 700, BBJ 800, BBJ2 900
B737C	B737	B737	700C
B747CL	B741 B742 B743	B747 B747 B747	100, 100B, 100F 200B, 200C, 200F, 200SF 300
B74S	B74S	B747	SR, SP
B744-5	B744	B747	400, 400D, 400F (With 5 inch Probes up to SN 25350)
B744-10	B744	B747	400, 400D, 400F (With 10 inch Probes from SN 25351)
B744-LCF	B744	B747	LCF
B748	B748	B747	8F, 81
B752	B752	B757	200, 200PF, 200SF
B753	B753	B757	300
B767	B762 B763	B767 B767	200, 200EM, 200ER, 200ERM, 300, 300ER, 300ERF
B764	B764	B767	400ER
B772	B772	B777	200, 200ER, 200LR, 200LRF
B773	B773	B777	300, 300ER
BD100	CL30	CHALLENGER 300	ALL SERIES
BD700	GL5T	GLOBAL 5000	ALL SERIES
BE20	BE20	200 KINGAIR	ALL SERIES
BE30	BE30	B300 SUPER KINGAIR B300 SUPER KINGAIR 350	ALL SERIES
BE40	BE40	BEECHJET 400 BEECHJET 400A BEECHJET 400XP HAWKER 400XP	ALL SERIES
C130	C130	HERCULES	H, J
C17	C17	C-17 GLOBEMASTER 3	ALL SERIES
C441	C441	CONQUEST II	ALL SERIES
C5	C5	C5	ALL SERIES
C500	C500	500 CITATION 500 CITATION I 501 CITATION I SINGLE PILOT	ALL SERIES
C510	C510	MUSTANG	ALL SERIES
C525	C525	525 CITATIONJET 525 CITATIONJET I 525 CITATIONJET PLUS	ALL SERIES

Monitoring Group	A/C ICAO	A/C Type	A/C Series
C25A	C25A	525A CITATIONJET II	ALL SERIES
C25B	C25B	CITATIONJET III 525B CITATIONJET III	ALL SERIES
C25C	C25C	525C CITATIONJET IV	ALL SERIES
C550-552	C550	552 CITATION II (USN)	ALL SERIES
C550-B	C550	550 CITATION BRAVO	ALL SERIES
C550-II	C550	550 CITATION II 551 CITATION II SINGLE PILOT	ALL SERIES
C550-SII	C550	S550 CITATION SUPER II	ALL SERIES
C560	C560	560 CITATION V 560 CITATION V ULTRA 560 CITATION V ENCORE	ALL SERIES
C56X	C56X	560 CITATION EXCEL	ALL SERIES
C650	C650	650 CITATION III 650 CITATION VI 650 CITATION VII	ALL SERIES
C680	C680	680 CITATION SOVEREIGN	
C750	C750	750 CITATION X	ALL SERIES
CARJ	CRJ1 CRJ2 CRJ2 CRJ2	REGIONALJET REGIONALJET CHALLENGER 800 CHALLENGER 850	100, 100ER, 200, 200ER, 200LR ALL SERIES ALL SERIES
CRJ7	CRJ7	REGIONALJET	700, 700ER, 700LR
CRJ9	CRJ9	REGIONALJET	900, 900ER, 900LR
CL600	CL60	CL-600 CL-601	CL-600-ALL SERIES CL-601- ALL SERIES,
CL604	CL60	CL-604	CL-604- ALL SERIES
CL605	CL60	CL-605	CL-605- ALL SERIES
DC10	DC10	DC-10	10, 10F, 15, 30, 30F, 40, 40F
D328	D328	328 TURBOPROP	100
DC85	DC85	DC-8	50, 50F
DC86-87	DC86 DC87	DC-8 DC-8	61, 62, 63 71, 72, 73
DC93	DC93	DC-9	30, 30F
DC95	DC95	DC-9	51
E135-145	E135 E145	EMB-135 EMB-145	ALL SERIES
E170-190	E170 E170 E190 E190	EMB-170 EMB-175 EMB-190 EMB-195	ALL SERIES

Monitoring Group	A/C ICAO	A/C Type	A/C Series
E120	E120	EMB-120 BRASILIA	ALL SERIES
E50P	W50P	PHENOM 100	ALL SERIES
EA50	EA50	ECLIPSE	ALL SERIES
F100	F100	FOKKER 100	ALL SERIES
F2TH	F2TH	FALCON 2000 FALCON 2000-EX FALSON 2000LX	ALL SERIES
F70	F70	FOKKER 70	ALL SERIES
F900	F900	FALCON 900 FALCON 900DX FALCON 900EX	ALL SERIES
FA10	FA10	FALCON 10	ALL SERIES
FA20	FA20	FALCON 20 FALCON 200	ALL SERIES
FA50	FA50	FALCON 50 FALCON 50EX	ALL SERIES
FA7X	FA7X	FALCON 7X	ALL SERIES
G150	G150	G150	ALL SERIES
GALX	GALX	1126 GALAXY G200	ALL SERIES
GLEX	GLEX	BD-700 GLOBAL EXPRESS	ALL SERIES
GLF2	GLF2	GULFSTREAM II (G-1159)	ALL SERIES
GLF2B	GLF2	GULFSTREAM IIB (G-1159B)	ALL SERIES
GLF3	GLF3	GULFSTREAM III (G-1159A)	ALL SERIES
GLF4	GLF4	GULFSTREAM IV (G-1159C) G300 G350 G400 G450	ALL SERIES
GLF5	GLF5	GULFSTREAM V (G-1159D) G500 G550	ALL SERIES
H25B-700	H25B	BAE 125 / HS125	700A, 700B
H25B-750	H25B	HAWKER 750	ALL SERIES
H25B-800	H25B	BAE 125 / HS125 HAWKER 800XP HAWKER 800XPI HAWKER 800 HAWKER 850XP HAWKER 900XP	800A, 800B ALL SERIES

Monitoring Group	A/C ICAO	A/C Type	A/C Series
		HAWKER 950XP	
H25C	H25C	HAWKER 1000	ALL SERIES
HA4T	HA4T	HAWKER 4000	ALL SERIES
IL62	IL62	ILYUSHIN-62	ALL SERIES
IL76	IL76	ILYUSHU-76	ALL SERIES
IL86	IL86	ILYUSHIN-86	ALL SERIES
IL96	IL96	ILYUSHIN-96	ALL SERIES
J328	J328	328JET	ALL SERIES
KC135	B703	KC-135	ALL SERIES
L101	L101	L-1011 TRISTAR	ALL SERIES
L29B-2	L29B	L-1329 JETSTAR 2	ALL SERIES
L29B-731	L29B	L-1329 JETSTAR 731	ALL SERIES
LJ31	LJ31	LEARJET 31	ALL SERIES
LJ35-36	LJ35 LJ36	LEARJET 35 LEARJET 36	ALL SERIES ALL SERIES
LJ40	 LJ40	LEARJET 40	ALL SERIES
LJ45	LJ45	LEARJET 45	ALL SERIES
LJ55	LJ55	LEARJET 55	ALL SERIES
LJ60	LJ60	LEARJET 60	ALL SERIES
MD10	MD10	MD-10	ALL SERIES
MD11	MD11	MD-11	COMBI, ER, FREIGHTER, PASSENGER
MD80	MD81 MD82 MD83 MD87 MD88	MD-80 MD-80 MD-80 MD-80 MD-80	81 82 83 87 88
MD90	MD90	MD-90	30, 30ER
MU30	MU30	MU-300 DIAMOND	1A
P180	P180	P-180 AVANTI	ALL SERIES
PC12	PC12	PC-12	ALL SERIES
PRM1	PRM1	PREMIER 1	ALL SERIES
SB20	SB20	SAAB 2000	ALL SERIES
SBR1	SBR1	SABRELINER 40 SABRELINER 60 SABRELINER 65	ALL SERIES
SBR2	SBR2	SABRELINER 80	ALL SERIES
T134	T134	TU-134	A, B
T154	T154	TU-154	A, B, M, S
T204	T204 T224 T234	TU-204 TU-224 TU-234	100, 100C, 120RR 200, 214, C

Monitoring Group	A/C ICAO	A/C Type	A/C Series
T334	T334	TU-334	ALL SERIES
TBM	TBM7 TBM8	TBM-700 TBM-850	ALL SERIES
WW24	WW24	1124 WESTWIND	ALL SERIES
YK42	YK42	YAK-42	ALL SERIES

7.7 Appendix G – MIDRMA Duties and Responsibilities

The Middle East Regional Monitoring Agency (MIDRMA) has the following duties and responsibilities:

1- To establish and maintain a central registry of State RVSM approvals of operators and aircraft using the Middle East Region airspace where RVSM is applied.

2- To initiate checks of the "approval status" of aircraft operating in the relevant RVSM airspace, identify non-approved operators and aircraft using RVSM airspace and notify the appropriate State of Registry/State of the Operator and other RMAs, accordingly.

3- To establish and maintain a database containing the results of height keeping performance monitoring and all altitude deviations of 300 ft or more within Middle East Region airspace, and to include in the database the results of MID RMA requests to operators and States for information explaining the causes of observed large height deviations.

4- Provide timely information on changes of monitoring status of aircraft type classifications to State Authorities and operators.

5- To assume overall responsibility for assessing compliance of operators and aircraft with RVSM height keeping performance requirements in conjunction with RVSM introduction in the Middle East Region.

6- To facilitate the transfer of approval data to and from other RVSM Regional Monitoring Agencies.

7- To establish and maintain a database containing the results of navigation error monitoring.

8- To conduct safety analysis for RVSM operations in the MID Region and prepare RVSM Safety Monitoring Reports (SMR) as instructed by MIDANPIRG and the MIDRMA Board.

9- To conduct readiness and safety assessments to aid decision-making in preparation for RVSM implementation in those FIRs where RVSM is not yet implemented.

10- To carry out post-implementation safety assessments, as appropriate.

11- Based on information provided by States related to planned changes to the ATS routes structure, advise States and MIDANPIRG on the effects of such changes on the safe RVSM operations in the MID Region.

12- To liaise with other Regional Monitoring Agencies and organizations to harmonise implementation strategies.

7.8 Appendix H – Definitions and Explanations of RVSM Terms

Note: The following definitions are taken from ICAO Document 9574 (2nd Edition) **[1]** - Manual on Implementation of a 300m (1000ft) vertical separation minimum between FL290 and FL410 inclusive.

Collision Risk

The expected number of mid-air aircraft accidents in a prescribed volume of airspace for a specific number of flight hours due to loss of planned separation.

Flight technical error (FTE)

The difference between the altitude indicated by the altimeter display being used to control the aircraft and the assigned altitude/flight level.

Height-keeping Performance

The observed performance of an aircraft with respect to adherence to cleared flight level.

Probability of vertical overlap (Pz(1000))

The probability that two aircraft nominally separated by the vertical separation minimum are in fact within a distance of λz of each other, i.e. in vertical overlap. This probability can be calculated from the distribution of total vertical error.

Target level of safety

A generic term representing the level of risk which is considered acceptable in particular circumstances.

Technical height-keeping performance (or error)

That part of the height-keeping performance (or error) which is attributable to the combination of ASE and autopilot performance in the vertical dimension.

Total vertical error (TVE)

The vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level). TVE can be split into two components, altimetry system error (ASE) and flight technical error (FTE). TVE=ASE + FTE.

Vertical-collision risk

That expected number of mid-air aircraft accidents in a prescribed volume of airspace for a specific number of flight hours due to loss of planned vertical separation. Note: one collision is considered to produce two accidents.

7.9 Appendix I – Abbreviations

AAD	Assigned altitude deviation
ACAS	Airborne collision avoidance system
ACC	Area control center
AD	Altitude deviation
ADR	Altitude deviation report
ASE	Altimetry system error
ATC	Air traffic control
ATM	Air traffic management
ATS	Air traffic services
CAA	Civil aviation authority
CFL	Cleared flight level
CFR	Coordination failure report
CRA	Collision risk assessment
CRM	Collision risk model
DE	Double exponential density
FIR	Flight information region
FL	Flight level
FPL	Flight plan
FTE	Flight technical error
GAT	General air traffic
GDE	Gaussian double exponential density
GMU	GPS height-monitoring unit
GPS	Global positioning system
HMU	Height-monitoring unit
HOF	Horizontal overlap frequency
ICAO	International Civil Aviation Organization
JAA	Joint Aviation Authorities
LHD	Large height deviations
MASPS	Minimum aircraft system performance specification
MMR	Minimum Monitoring Requirement
MTCD	Medium term conflict detection
OAT	Operational air traffic
OLDI	On-line data interchange
OVR	Overall vertical risk
PISC	Pre-implementation safety case
PSSA	Preliminary system safety assessment
RMA	Regional Monitoring Agency

RVSM	Reduced vertical separation minimum
SMR	Safety Monitoring Report
TCAS	Traffic Alert and Collision Avoidance System
TLS	Target level of safety
TVE	Total vertical error
TVR	Technical vertical risk
UAC	Upper Area Control Center
UIR	Upper Flight Information Region
VSM	Vertical Separation Minimum

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