INTERNATIONAL CIVIL AVIATION ORGANIZATION

THE MIDDLE EAST AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (MIDANPIRG)

REPORT OF THE SIXTH MEETING OF AIR TRAFFIC SERVICES ROUTE NETWORK TASK FORCE

ARN TF/6

(Cairo, Egypt, 22 – 24 April 2013)

The views expressed in this Report should be taken as those of the MIDANPIRG ARN Task-Force and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report.

Approved by the Meeting and published by authority of the Secretary General
The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontier or boundaries.
# TABLE OF CONTENTS

## PART I - HISTORY OF THE MEETING

1. Place and Duration ......................................................................................................... 1
2. Opening .......................................................................................................................... 1
3. Attendance ..................................................................................................................... 1
4. Officers and Secretariat .............................................................................................. 2
5. Language ...................................................................................................................... 2
6. Agenda .......................................................................................................................... 2
7. Conclusions and Decisions - Definition ....................................................................... 2
8. List of Draft Conclusions and Draft Decisions ............................................................. 2

## PART II - REPORT ON AGENDA ITEMS

- Report on Agenda Item 1 ............................................................................................ 1-1
- Report on Agenda Item 2 ............................................................................................ 2-1
- Appendices 2A
- Report on Agenda Item 3 ............................................................................................ 3-1/3-5
- Appendices 3A – 3D
- Report on Agenda Item 4 ............................................................................................ 4-1
- Appendices 4A & 4B
- Report on Agenda Item 5 ............................................................................................ 5-1
- Appendix 5A & 5B
- Report on Agenda Item 6 ............................................................................................ 6-1
- List of Participants ...................................................................................................... Attachment A

---
PART I – HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The sixth meeting of Air Traffic Services Route Network Task force (ARN TF/6) was held at the Meeting Room of the ICAO Middle East Regional Office in Cairo, Egypt, from 22 to 24 April 2013.

2. OPENING

2.1 The Meeting was opened by Mr. Mohamed R. M. Khonji, ICAO Regional Director, Middle East Office, Cairo, who welcomed the participants to Cairo and wished them a successful and fruitful meeting. He highlighted that the continuing growth of traffic in the MID Region places increased demand on airspace capacity and emphasizes the need for the optimum utilization of the available airspace and airports. In this regard, the ARN Task Force responsibility amongst other activities is to ensure the accommodation of the traffic growth in a safe, expeditious and orderly manner. Accordingly, the ARN TF/6 meeting will review and update the Table 1 (ATS routes) of the MID Region Basic Air Navigation Plan; in addition to the ATS Route Catalogue which includes 77 route proposals.

2.2 Mr. Khonji re-iterated that Continuous Climb Operation (CCO), Continuous Descent Operation (CDO), PBN implementation and Civil/Military Cooperation are ICAO priorities for the near future. In this regard, he encouraged all the MID Region States to bring along their military people to such meetings; and to enhance the coordination process with their military authorities in order to apply the Flexible Use of Airspace concept, which will contribute in the implementation of many postponed ATS Routes due military restrictions. Mr. Khonji recommended that further coordination is to be conducted between the Military authorities of neighbouring States which will allow a seamless path through the several airspaces within the Region and will assist in many issues for the airspace users, air navigation service providers, and the regulator which will also have a good impact on the environment.

2.3 Mr. Khonji outlined that the meeting will also discuss the agenda items as per the invitation letter, particular attention will be given to the need for improvement of the ATS route network and the follow up on the Contingency Planning in the MID Region. He also applauded the States and International Organisations that have produced working papers and presentations for this meeting. He encouraged the MID States to actively participate in the meetings by sharing their development experiences through the presentation of working and/ or information papers.

2.4 In closing, Mr. Khonji emphasized that an extensive exchange of views, in a constructive spirit, should strengthen the safe and timely implementation of the ATS routes in the MID Region. In this regard, the continued commitment and collaboration from all concerned, will improve the ATS route structure of the region.

3. ATTENDANCE

3.1 The meeting was attended by a total of Thirty Six (36) participants, including experts from ten (10) States (Bahrain, Egypt, Iran, Iraq, Jordan, Oman, Qatar, Saudi Arabia, Sudan and United Arab Emirates) and (4) four International Organizations/Industries (CANSO, Eurocontrol, IATA and MIDRMA). The list of participants is at the Attachment A to the Report.
4. **OFFICERS AND SECRETARIAT**

4.1 The meeting was chaired by Mr. Nayef Al-Marshoud, ATM Director, Civil Aviation Regulatory Commission (CARC), Jordan. Mr. Elie El Khoury, Regional Officer ATM/SAR was the Secretary of the meeting.

5. **LANGUAGE**

5.1 Discussions were conducted in English and documentation was issued in English.

6. **AGENDA**

6.1 The following Agenda was adopted:

- **Agenda Item 1:** Adoption of the Provisional Agenda
- **Agenda Item 2:** Follow-up on MIDANPIRG Conclusions and Decisions relevant to ATS Route Network
- **Agenda Item 3:** Review ATS Route Network
- **Agenda Item 4:** Contingency Planning
- **Agenda Item 5:** Future Work Programme
- **Agenda Item 6:** Any other business

7. **CONCLUSIONS AND DECISIONS – DEFINITION**

7.1 All MIDANPIRG Sub-Groups and Task Forces record their actions in the form of Conclusions and Decisions with the following significance:

a) **Conclusions** deal with the matters which, in accordance with the Group’s terms of reference, merit directly the attention of States on which further action will be initiated by ICAO in accordance with established procedures; and

b) **Decisions** deal with matters of concern only to the MIDANPIRG and its contributory bodies.

8. **LIST OF CONCLUSIONS AND DECISIONS**

- **Draft Conclusion 6/1:** Proposal for Amendment to the MID Basic ANP ATS-1 Table
- **Draft Conclusion 6/2:** Prioritization of the ATS Routes that are not economically structured within the MID Region
- **Draft Conclusion 6/3:** Special Baghdad FIR Coordination Meeting
- **Draft Conclusion 6/4:** MID Regional Contingency Plan
PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA

1.1 The meeting reviewed and adopted the Provisional Agenda as at Para 6 of the History of the Meeting.
2.1 The meeting noted the status of relevant MIDANPIRG/13 Conclusions and Decisions related to the work programme of the ARN TF and the follow-up actions taken by States, the secretariat and other parties concerned as at Appendix 2A to the Report on Agenda Item 2.

2.2 The meeting agreed in its deliberation to review the Conclusions and Decisions which are still current under the relevant Agenda Item.
### MIDANPIRG Conclusions and Decisions pertinent to the work of the ARN Task Force for consideration by the ARN TF/6 meeting

<table>
<thead>
<tr>
<th>CONCLUSIONS AND DECISIONS</th>
<th>FOLLOW-UP</th>
<th>TO BE INITIATED BY</th>
<th>DELIVERABLE</th>
<th>TARGET DATE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONCLUSION 13/3: IMPROVEMENT OF THE ATS ROUTE STRUCTURE IN THE MID REGION</strong></td>
<td>Implement the Conclusion</td>
<td>ICAO States Users</td>
<td>State Letter</td>
<td>Sep. 2012</td>
<td>On going</td>
</tr>
<tr>
<td>That, as a first step towards the rationalization of the ATS route network in the MID Region:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AN 6/5.8 - 12/164 dated 12 June 2012</td>
</tr>
<tr>
<td>a) States be urged to;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) identify those ATS Routes that are not economically structured within their airspaces;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) coordinate and agree with appropriate authorities on the priority of action to replace the identified routes with more economical routes based on the definition of City Pairs, the PBN and FUA concepts;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Users to;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) identify those ATS Routes that are not economically structured in the MID Region;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) provide priority of action; and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) States and Users; provide feedback to the ARN TF/6 meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONCLUSION 13/4: MIDRAR PROJECT</strong></td>
<td>Implement the Conclusion</td>
<td>ICAO States</td>
<td>State Letter</td>
<td>30 Aug. 2012</td>
<td>On going</td>
</tr>
<tr>
<td>That States, be invited to support the MIDRAR Project and assign Focal Points to provide necessary information to the MIDRAR Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AN 6/5.8.3 – 12/167 dated 12 June 2012</td>
</tr>
<tr>
<td><strong>CONCLUSION 13/5: IMPLEMENTATION OF REDUCED RADAR LONGITUDINAL SEPARATION IN THE MID REGION</strong></td>
<td>Implement the Conclusion</td>
<td>ICAO States</td>
<td>State Letter</td>
<td>30 Aug. 2012</td>
<td>Ongoing</td>
</tr>
<tr>
<td>That,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AN 6/3 – 12/165 dated 12 June 2012</td>
</tr>
<tr>
<td>a) States, that have not yet done so;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Feedback</td>
</tr>
<tr>
<td>i) be urged to implement the 20 NM radar longitudinal separation;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### CONCLUSIONS AND DECISIONS

| ii) be encouraged to further reduce the radar longitudinal separation within the MID Region to 10 NM, where appropriate; and  
iii) be invited to agree with their neighbouring FIRs/States on the date of implementation and updating of the LoAs;  
b) the ATM Regional PFFs be updated to include the reduced radar longitudinal separation as an ATM objective for the MID Region. |

| CONCLUSION 13/9: MID REGIONAL CONTINGENCY PLAN |
| That, States and users be urged to review the MID Regional Contingency Plan and the revised version of the CRAME-03 at Appendices 4.2E and 4.2F to the Report on Agenda Item 4.2, respectively; and provide updates and comments to the ICAO MID Regional Office before 1 September 2012. |

| CONCLUSION 13/10: POST RVSM IMPLEMENTATION IN THE BAGHDAD FIR |
| That,  
a) Iraq be urged to implement the actions agreed by the BFPR-SCM in an expeditious manner to solve the ATC coordination, communication and surveillance issues between Baghdad ACC and the neighbouring ACCs;  
b) States and all stakeholders be invited to support Iraq in the process of normalization of the Baghdad FIR; and  
c) in case of low progress of implementation of the necessary actions by Iraq before 15 October 2012, the RVSM operations be suspended in the Baghdad FIR. |

<table>
<thead>
<tr>
<th>FOLLOW-UP</th>
<th>TO BE INITIATED BY</th>
<th>DELIVERABLE</th>
<th>TARGET DATE</th>
<th>REMARKS</th>
</tr>
</thead>
</table>
| Implement the Conclusion | States | ICAO | State Letter | Sep. 2012 | Ongoing  
AN 6/1.2.1 – 12/166 dated 12 June 2012  
CRAME III contact list Updated |
| Implement the Conclusion | ICAO | States/Stakeholders | State Letter | 15 Jun. 2012 | AN 6/5.10.15B-12/172 dated 13 June 2012  
AN 6/5.10.15D-12/318 dated 23 Oct. 2012  
Iraq Letter dated 11 Feb 2013  
<p>| Implement the Conclusion | Iraq | | | | |</p>
<table>
<thead>
<tr>
<th>CONCLUSIONS AND DECISIONS</th>
<th>FOLLOW-UP</th>
<th>TO BE INITIATED BY</th>
<th>DELIVERABLE</th>
<th>TARGET DATE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONCLUSION 13/33: STATE ACTION PLANS FOR CO₂ EMISSION</strong></td>
<td>Implement the Conclusion</td>
<td>States</td>
<td>Action Plan</td>
<td>30 Jun. 2012</td>
<td>Ongoing</td>
</tr>
<tr>
<td>That, States, that have not yet done so, be urged to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) send the contact details of their CO₂ emission focal point to the ICAO MID Regional Office; and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) submit their action plan for CO₂ emission to ICAO before 30 June 2012.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DECISION 13/34: ESTABLISHMENT OF THE AIR TRAFFIC MANAGEMENT MEASUREMENT TASK FORCE (ATMM TF)</strong></td>
<td>Convene the ATMM TF/1 meeting</td>
<td>MIDANPIRG/13</td>
<td>ATMM TF established</td>
<td>Apr. 2012</td>
<td>Completed</td>
</tr>
<tr>
<td>That, the ATMM TF be established with Terms of Reference (TOR) as at Appendix4.5J to the Report on Agenda Item 4.5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>First meeting (8-9 September 2013)</td>
</tr>
<tr>
<td>That, in order to allow the Air Traffic Management Measurement Task Force (ATMM TF) and the CNS/ATM/IC SG to follow-up the implementation of the ATM operational improvements and estimate the fuel savings accrued from the corresponding improvements on regional basis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) States be urged to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) use IFSET or a more advanced model/measurement capability available to estimate environment benefits accrued from operational improvements;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) send the IFSET reports/the accrued environmental benefits to ICAO MID Regional office on a bi-annual basis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) IATA to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) encourage users to support the programme; and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) consolidate users’ inputs and report the accrued environmental benefits to ICAO MID Regional office on a bi-annual basis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONCLUSIONS AND DECISIONS</td>
<td>FOLLOW-UP</td>
<td>TO BE INITIATED BY</td>
<td>DELIVERABLE</td>
<td>TARGET DATE</td>
<td>REMARKS</td>
</tr>
<tr>
<td>----------------------------------------------------------------</td>
<td>-------------------</td>
<td>--------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td><strong>CONCLUSION 13/47: MID REGIONAL PBN IMPLEMENTATION STRATEGY AND PLAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>That, the MID Regional PBN Implementation Strategy and Plan be updated as at Appendix 4.5T to the Report on Agenda Item 4.5.</td>
<td>Implement the Strategy MIDANPIRG/13</td>
<td>Strategy</td>
<td>Apr. 2012</td>
<td></td>
<td>Completed</td>
</tr>
<tr>
<td><strong>DECISION 13/48: ESTABLISHMENT OF MID PBN SUPPORT TEAM (MPST)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>That, MPST be established with TOR as at Appendix 4.5U to the Report on Agenda Item 4.5.</td>
<td>Implement Decision MIDANPIRG/13</td>
<td>MPST established</td>
<td>Apr. 2012</td>
<td></td>
<td>Completed</td>
</tr>
<tr>
<td><strong>CONCLUSION 13/49: MID PBN SUPPORT TEAM (MPST)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>That,</td>
<td>Implement the Conclusion ICAO States UAE IATA</td>
<td>State Letter MPST Visit</td>
<td>Sep. 2012</td>
<td>Coordination done via email with IATA and details on MPST was sent to Egypt and Jordan</td>
<td></td>
</tr>
<tr>
<td>a) ICAO MID Regional Office provide the leadership for MPST;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) UAE be the champion for the MPST;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) IATA fully commit and support the MPST; and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) States assign members to MPST and allocate necessary resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONCLUSION 13/50: PBN IMPLEMENTATION PROGRESS REPORT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>That, for future reporting on the status of PBN implementation, States be urged to:</td>
<td>Implement the Conclusion States</td>
<td>Progress Report</td>
<td>Every 6 months</td>
<td>Actioned AN 6/28-12/211 dated 11 Jul. 2012</td>
<td></td>
</tr>
<tr>
<td>a) use the excel sheet as at Appendix 4.5X to the Report on Agenda Item 4.5, and PBN Implementation Progress Report Template as at Appendix 4.5Y to the Report on Agenda Item 4.5; and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) submit progress reports to ICAO MID Regional Office every six months and whenever major progress is achieved.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONCLUSIONS AND DECISIONS</td>
<td>FOLLOW-UP</td>
<td>TO BE INITIATED BY</td>
<td>DELIVERABLE</td>
<td>TARGET DATE</td>
<td>REMARKS</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------</td>
<td>--------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>CONCLUSION 13/61: CENTRALIZED AIR NAVIGATION DEFICIENCY DATABASE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>That, States and international organizations be invited to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) test the centralized air navigation deficiency database on iSTARS platform using the guidance in Appendix 5.1A to the Report on Agenda Item 5.1;</td>
<td>Implement the Conclusion</td>
<td>ICAO</td>
<td>State Letter</td>
<td>30 Jun. 2012</td>
<td>Ongoing</td>
</tr>
<tr>
<td>b) update the data as necessary in coordination with the ICAO MID Regional Office; and</td>
<td></td>
<td>States</td>
<td>Feedback</td>
<td>31 Aug. 2013</td>
<td>AN 2/2 – 12/189 dated 21 Jun. 2012</td>
</tr>
<tr>
<td>c) provide feedback to the ICAO MID Regional Office by 31 August 2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONCLUSION 13/63: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>That, States be urged to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) review their respective lists of identified deficiencies, develop associated Corrective Action Plans and forward them to the ICAO MID Regional Office prior to 15 June 2012; and</td>
<td>Implement the Conclusion</td>
<td>ICAO</td>
<td>State Letter</td>
<td>15 Jun. 2012</td>
<td>Ongoing</td>
</tr>
<tr>
<td>b) use the ICAO MID Air Navigation Deficiency Database (MANDD) for submitting online requests for addition, update, and elimination of air navigation deficiencies, until the official launch of the Centralized Air Navigation Deficiency Database on iSTARS.</td>
<td></td>
<td>States</td>
<td>CAP and necessary updates</td>
<td></td>
<td>AN 2/2 – 12/189 dated 21 June 2012</td>
</tr>
</tbody>
</table>
REPORT ON AGENDA ITEM 3: REVIEW ATS ROUTE NETWORK

3.1 The meeting was apprised of the outcome of the Twelfth Air Navigation Conference (AN-Conf/12), held in Montréal from 19 to 30 November 2012, related to Civil/Military Coordination/Cooperation and Flexible Use of the Airspace (FUA).

3.2 The meeting recalled that the DGCA-MID/1 Meeting recognized the need for rationalization of the ATS routes in the MID Region and that a radical review of the ATS route network had to be carried out based on the definition of City Pairs, Flexible Use of Airspace (FUA) and Performance Based Navigation (PBN) concepts to address Airspace capacity limitation.

3.3 The meeting noted with concern that a number of States are still implementing changes to the Regional ATS Route Network without complying with the established procedures for the amendment of the MID Basic Air Navigation Plan (ANP).

3.4 The meeting reiterated that some MID States did not update their AIPs to change RNP 5 to RNAV 5, in addition the RNAV 5 area in the MID Region is still being implemented with different base Flight Levels (FL150, FL195, FL245, FL280, etc.). Accordingly, the meeting agreed that the ICAO MID Regional Office continue the follow-up with concerned States.

3.5 The meeting noted with appreciation the ongoing process for the implementation of seven (7) RNAV 1 Routes in Bahrain and Emirates Flight Information Regions (FIRs). The main operational enhancements resulting from the implementation of these RNAV1 Routes were highlighted as follows:

a. greater acceptance rate of traffic from the U.A.E. into the Bahrain FIR;

b. greater traffic segregation at the Bahrain/U.A.E. FIR boundary according to the flight planned routes;

c. simplified route clearances issued to aircraft according to the planned route;

d. less requirement for controller intervention to enable aircraft to reach cruising levels as aircraft cross FIR boundaries; and

e. accommodation of the Regional traffic foreseen growth.

3.6 The meeting recognized that enhancing ATM operations requires close coordination and collaboration between States and relevant organisations. Airspace efficiency or inefficiency in a portion of airspace affects the ATM operations in the rest of the region and creates various bottlenecks in other FIRs.

3.7 The meeting reviewed and updated the MID Basic ANP Table ATS 1, as at Appendix 3A to the Report on Agenda Item 3. Accordingly, the meeting agreed that the ICAO MID Regional Office process a proposal for amendment of the MID basic ANP, in accordance with ICAO established amendment procedures.
3.8 Based on the above, the meeting agreed to the following Draft Conclusion:

**DRAFT CONCLUSION 6/1:** PROPOSAL FOR AMENDMENT TO THE MID BASIC ANP TABLE ATS 1

*That, the ICAO MID Regional Office issue a proposal for amendment to the MID Basic ANP (Doc 9708) in order to update the Table ATS 1 as at Appendix 3B to the Report on Agenda Item 3.*

3.9 The meeting reviewed and updated the information contained in the MID ATS Route Catalogue.

3.10 It was highlighted that the ATS Route Catalogue was created to include route proposals that are not included in the MID Basic ANP, requiring further consideration and coordination for their implementation. The process of updating is becoming more and more complicated due to the significant increase of Route Catalogue proposals. In this regard, the meeting recognized the need for the change of the process of maintaining the Catalogue up-to-date. Accordingly, it was underlined that the Catalogue should be a dynamic document, reflecting the inputs from all concerned in a timely manner.

3.11 The importance of the rationalisation of the use of existing like-sounding 5LNCs in close geographical location was highlighted. In this respect, on the ATS route R652, two 5LNCs, with like-sounding were identified, i.e.: OVANO and IVANO. The two 5LNCs are located in Jeddah FIR and Baghdad FIR separated by 367.6 NM. Accordingly, the meeting agreed that the ICAO MID Regional Office follow up with concerned States to alleviate this issue by replacing one of the above mentioned 5LNCs.

3.12 Furthermore, the meeting discussed the possibility of introducing a new approach to improve the ATS route structure in the MID Region in accordance with MIDANPIRG/13 Conclusion 13/3:

**CONCLUSION 13/3:** IMPROVEMENT OF THE ATS ROUTE STRUCTURE IN THE MID REGION

*That, as a first step towards the rationalization of the ATS route network in the MID Region:*

a) States be urged to:

i) identify those ATS Routes that are not economically structured within their airspaces;

ii) coordinate and agree with appropriate authorities on the priority of action to replace the identified routes with more economical routes based on the definition of City Pairs, the PBN and FUA concepts;

b) Users to:

i) identify those ATS Routes that are not economically structured in the MID Region;

ii) provide priority of action; and

c) States and Users; provide feedback to the ARN TF/6 meeting.
3.13 The meeting agreed that as a first step in the implementation of MIDANPIRG/13 Conclusion 13/3, ICAO, States and Users should identify top 20 proposals of ATS Routes extracted from the ATS Route Catalogue. Accordingly, the meeting agreed to the following Draft Conclusion:

**DRAFT CONCLUSION 6/2: PRIORITISATION OF THE ATS ROUTES THAT ARE NOT ECONOMICALLY STRUCTURED WITHIN THE MID REGION**

*That, States and users*

a) define top 20 proposals list of the routes that are not economically structured, extracted from the ATS Route Catalogue; and

b) provide feedback to the ATM/AIM/SAR SG/13 on the priority of action to implement the identified routes taking into consideration the major traffic flows in the MID Region, the definition of City Pairs, the PBN and FUA concepts.

3.14 Based on the above, the meeting agreed that the Catalogue will be split into two Parts. The first Part will contain the Top 20 routes and the second part will contain the rest of the proposed routes. In order to improve the mechanism of updating the catalogue, the meeting agreed that it should be posted on the ICAO MID Regional Office website.

3.15 In the same vein, the meeting noted that further developments are required for additional reduction of flying distance and improvement of flight efficiency within the ICAO MID Region. In this regards the meeting noted with appreciation the contribution of Eurocontrol to the meeting with the notable working paper and the power point presentations. Moreover, the meeting agreed to consider the proposals 1, 2 and 3 presented by Eurocontrol as at Appendix 3C to the Report on Agenda Item 3, to be included in the Top 20 List, as an application of the MIDANPIRG/13 Conclusion 13/3.

3.16 The meeting was apprised of Bahrain proposal to relief the traffic congestion north of Bahrain FIR; it was underlined the efforts of Qatar and Saudi Arabia with their relevant authorities to extend the opening hours of airways UM430 all the way to Doha and UL681 from 1900-0300 to 1500-0300 UTC. Furthermore, the meeting noted with appreciation the cooperation of the military authorities in releasing the area before the published opening time, and requested States to officially publish the new extended time, which will allow users to consider these routes during their flight planning process.

3.17 The meeting also encouraged the concerned States to implement the new RNAV-1 route SALWA-DHA on H24 basis.

3.18 The meeting was apprised of the outcome of the fourth Special Coordination Meeting on the return of Libyan Airspace to Libya (SCM-Libya/4) that was held in Malta, 27 March 2013. It was highlighted the proposal to implement the route segment DBA-AMIBO, in order to accommodate the Europe-Middle East extra flow of traffic resulting from the circumnavigation of the Syrian airspace.

3.19 The meeting was informed that Egypt is planning to implement the following route segments in Cairo FIR:
The meeting was further apprised of the outcome of the Side Meeting on Baghdad FIR Normalization and associated issues; that was held at ICAO MID Regional Office, Cairo, Egypt, 22 April 2013. The meeting noted with appreciation that good progress had been achieved; especially with regards to the Communication, Navigation and Surveillance (CNS) infrastructure in Iraq.

The meeting noted the Iraq concerns regarding the ATS Route UP975, it was highlighted that the aim of implementing the UP975 was to provide an additional southbound route as an alternative to UM688 and to implement two parallel ATS Routes from Ankara through Kuwait to the Gulf. However, due to military restrictions, Kuwait was unable to establish a second entry point north of Kuwait FIR, which forced Iraq to connect the UP975 to UM688 at point UKMUG.

Based on the above, and in order to relieve the congestion in Baghdad FIR, Iraq presented four proposals for the realignment of UP975 for discussion. The meeting considered the proposals number (2) and (3) as feasible and agreed that further evaluations and scenarios/options are required to reach a common agreement with all concerned parties.

The meeting noted with appreciation that Iraq will reduce the traffic restriction over SIDNA and NINVA from 25 to 30 aircraft per hour, by replacing the NOTAM issued earlier, before 29 April 2013.

Based on all of the foregoing, the meeting extended its gratitude to Iraq for their willingness and readiness to continue on the same pace for improving the air navigation system in Baghdad FIR. Accordingly the meeting agreed to the following:

a) UP975 will remain as published in the MID Basic ANP, until an agreement with all concerned is reached for its realignment;

b) Iraq and other concerned states to explore further the scenarios/options for the realignment of UP975 between Baghdad FIR and Kuwait FIR, including the possibility of RNAV 1 implementation.

Based on the above, the meeting agreed to the following Draft Conclusion:

**DRAFT CONCLUSION 6/3: SPECIAL BAGHDAD FIR COORDINATION MEETING**

That, ICAO MID Regional Office coordinates with Iraq, the neighboring States and the concerned organisations, the convening of another Special Baghdad FIR Coordination meeting in the third quarter of 2013.

The meeting was apprised of the progress and activities of the Middle East Regional Airspace Review (MIDRAR) initiative, which was planned in three phases:

- Phase 1 - Review of the existing situation, identification of high level challenges and outlining a framework to overcome the challenges.
- Phase 2 - Implementation of Phase 1 activities.
- Phase 3 - Strategic plan to prepare the region for future challenges.
3.27 Phase 1 identified the key challenges affecting the region. It was expected that specific opportunities would be developed to address individual challenges. However, having identified and prioritised the challenges, it was clear that most were inter-related and that effort to address one would also have an impact on another. As a result, the potential opportunities were combined and developed into a number of MIDRAR initiatives:

- Initiative 1: Capacity initiative ‘Provide capacity south of the Qatar Peninsular’
- Initiative 2: Increased utilization of the ‘Western Gulf’
- Initiative 3: Increase access to North-Eastern FIRs
- Initiative 4: FIR Harmonization
- Initiative 5: Management oversight

3.28 It was highlighted that discussion on MIDRAR phase 2 is currently beyond the prevue of the ARN TF; in particular the establishment of a fulltime Programme Management Office (PMO). The meeting agreed that MIDRAR phase 2 should be addressed to the second meeting of the Directors General of Civil Aviation Middle East Region (DGCA MID/2) that will be held in Saudi Arabia, 20-22 May 2013.

3.29 Besides, in order to support the outcome of the MIDRAR Phase 1, the meeting agreed that the MIDRAR report should be sent to all the participants, for review and comments, and that CANSO will present the results to the DGCA MID/2 meeting and will provide updates on MIDRAR activities to the ARN TF future meetings.

3.30 The meeting emphasized that for the time being the MIDRAR is still considered as a regional initiative until the DGCA MID/2 meeting support the project.

3.31 The meeting was presented by IATA the possibility to introduce in the MID Region the concept of dynamic and flexible Air Traffic Management (ATM), which states that routes need not be fixed to pre-determined waypoints, except where required for control purposes. It is aimed at organizing the airspace in a collaborative manner involving all stakeholders so that airspace is managed to accommodate user-defined flexible routings. Accordingly, the meeting agreed to defer the discussion to future meetings.

3.32 The meeting reviewed and updated the deficiencies in the ATS route network as at Appendix 3D to the Report on Agenda Item 3.
### Accommodation 3A to the Report on Agenda Item 3

**TABLE ATS 1 – ATS ROUTES**

TABLEAU ATS 1 – ROUTES ATS

TABLA ATS 1 – RUTAS ATS

**EXPLANATION OF THE TABLE**

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Designator of ATS route.</td>
</tr>
<tr>
<td>2</td>
<td>Significant points defining the ATS routes. Only prominent locations have been listed. Additional points where facilities are provided to complete navigational guidance along a route, but not otherwise marking significant characteristics of the route (change of heading of centre line, intersection with other routes, etc.) have normally not been included. Locations shown in parentheses indicate significant points outside the Region.</td>
</tr>
</tbody>
</table>

**Note 1.** Not representing the operator's requirements. Operator's required route and/or navaids are shown in square brackets ([ ]).

**Note 2.** Subject to further study. Including the associated navigation aid coverage.

**Note 3** Subject to military agreement.

**Note 4.** Not acceptable at present.

**Note 5.** At present, implementation possible only during specific periods (e.g. weekends, nights, etc., as published).

**Note 6.** At present, implementation of the RNAV route only possible above FL 300, or as published.

**Note 7.** Unidirectional use.

**Note 8.** For ATS route or part thereof is RNAV 1

Whenever reference to name States is made in Table ATS 1 in connection with the above notes, the following abbreviations, based on those indicated in Location Indicators (Doc 7910), are used:

<table>
<thead>
<tr>
<th>Code</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>HE</td>
<td>Egypt</td>
</tr>
<tr>
<td>HL</td>
<td>Libyan Arab Jamahiriya</td>
</tr>
<tr>
<td>HS</td>
<td>Sudan</td>
</tr>
<tr>
<td>OB</td>
<td>Bahrain</td>
</tr>
<tr>
<td>OE</td>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>OI</td>
<td>Iran, Islamic Republic of</td>
</tr>
<tr>
<td>OJ</td>
<td>Jordan</td>
</tr>
<tr>
<td>OK</td>
<td>Kuwait</td>
</tr>
<tr>
<td>OL</td>
<td>Lebanon</td>
</tr>
<tr>
<td>OM</td>
<td>United Arab Emirates</td>
</tr>
<tr>
<td>OO</td>
<td>Oman</td>
</tr>
<tr>
<td>OR</td>
<td>Iraq</td>
</tr>
<tr>
<td>OS</td>
<td>Syrian Arab Republic</td>
</tr>
<tr>
<td>OT</td>
<td>Qatar</td>
</tr>
<tr>
<td>OY</td>
<td>Yemen</td>
</tr>
<tr>
<td>A1</td>
<td>METRU 340000N 0250900E</td>
</tr>
<tr>
<td>------</td>
<td>------------------------</td>
</tr>
<tr>
<td></td>
<td>KATEX 320701N 0282436E</td>
</tr>
<tr>
<td></td>
<td>ALEXANDRIA (AXD NOZ) 311113N 0295701E</td>
</tr>
<tr>
<td></td>
<td>CAIRO (CVO) 300532N 0312318E</td>
</tr>
<tr>
<td>A16</td>
<td>RASDA 330600N 0305700E</td>
</tr>
<tr>
<td></td>
<td>BALTIM (BLT) 313144N 0311035E</td>
</tr>
<tr>
<td></td>
<td>CAIRO (CVO) 300532N 0312318E</td>
</tr>
<tr>
<td>A408</td>
<td>(ADDIS ABABA) GWZ SALEH 140000N 0420000E</td>
</tr>
<tr>
<td></td>
<td>HODEIDAH 1446.4N 04259.2E</td>
</tr>
<tr>
<td>A411</td>
<td>BNINA (BNA) 3207.528N 0201513E</td>
</tr>
<tr>
<td></td>
<td>LOSUL 314100N 250800E</td>
</tr>
<tr>
<td>A412</td>
<td>TANF (TAN) ZELAF 325656N 0371121E</td>
</tr>
<tr>
<td></td>
<td>ASLON 321211N 0365111E</td>
</tr>
<tr>
<td></td>
<td>KUPRI 320825N 0364530E</td>
</tr>
<tr>
<td></td>
<td>QAA 314423N 0360926E</td>
</tr>
<tr>
<td>A416</td>
<td>TABRIZ (TBZ) ARDABIL (ARB)</td>
</tr>
<tr>
<td></td>
<td>RASMSAR (RSR) NOSHAHR (NSR)</td>
</tr>
<tr>
<td></td>
<td>SABZEHAD (SBD) SOKAM 331316N 0603754E</td>
</tr>
<tr>
<td>A418</td>
<td>KUMUN 254000N 0555151E</td>
</tr>
<tr>
<td></td>
<td>* Note 7 Segment KUMUN-PAPAR (OI and OM) SHIRAZ (SYZ)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>A422</td>
<td>UROMIYEH (UMH)</td>
</tr>
</tbody>
</table>

*Note 7: Segment KUMUN-PAPAR (OI and OM) SHIRAZ (SYZ)*
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A-3</td>
<td></td>
<td>A424</td>
<td>LOVEK 32208N 04440 01E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LOTAN 2959.7N 04338.8E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RAFHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HAIL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MADINAH (PMA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ASTOL 2255.0N 03935.2E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>KING ABDULAZIZ (JDW)</td>
</tr>
<tr>
<td>A453</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PIRAN 2934.1N 06128E</td>
</tr>
<tr>
<td></td>
<td>ZAHEDAN (ZDN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BANDAR ABBAS (BND)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GHESHM (KHM)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BANDAR LENGEH (LEN)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>KISH (KIS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MIDS 2641.7N05152E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>* Note 7 (MIDS-KHM)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*Note 8 (MIDS-KUMBO)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TOBIT 262134N0512301E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OTATA 261843N0510052E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BOTOB 263350N 0514505E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SOLOB 262241N 0513132E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BAHRAIN (BAH) DVORDME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>261551N 0503856E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RANLI 262509N 0503219E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>* Note 7 (OB, OP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PEBOS 262722N0503043E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RULEX 264529N05051745E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ALVUN 271028N04944455E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SOLEM 275229N0491136E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>KUMBO 281705N0495526E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GESAK 283430N 0484453E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DEBTI 2844.1N 04829.4E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>KUWAIT (KUA) 2913.1N 04759.1E</td>
</tr>
<tr>
<td>A454</td>
<td></td>
<td></td>
<td>(KC) 2454.6N 06710.6E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BEGIM 2443.0N 06700.0E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>* Note 7 (OO, OP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MELOM 2505.0N 06632.0E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PUNEL 2520.0N 06523.0E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PARET 2527.2N 06451.5E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TAPDO 242400N 0612000E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>VUSET 235540N 0590812E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PASOV 23841N 0565037E</td>
</tr>
<tr>
<td>A727</td>
<td></td>
<td></td>
<td>(PAXIS 3357.1N 02720.0E</td>
</tr>
<tr>
<td></td>
<td>OTIKO 3134.3N 02936.6E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ALEXANDRIA (AXDNOZ)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Version: 24 April 2013
<table>
<thead>
<tr>
<th>City</th>
<th>Longitude</th>
<th>Latitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENKU</td>
<td>3105.5N</td>
<td>03018.1E</td>
</tr>
<tr>
<td>CAIRO (CVO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUXOR (LXR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABU SIMBLE (SML)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUBAR 220000N</td>
<td>03118.1E</td>
<td></td>
</tr>
<tr>
<td>MEROWE (MRW)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KARTOUM (KTM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KENANA (KNA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LODWAR (LOV)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAKURU (NAK)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAIROBI (NV)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KILIMANJARO (KV)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UA775</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REXOD</td>
<td>211230N</td>
<td>0613830E</td>
</tr>
<tr>
<td>TUMET</td>
<td>222307N</td>
<td>0595702E</td>
</tr>
<tr>
<td>IMDEK</td>
<td>224647N</td>
<td>0592217E</td>
</tr>
<tr>
<td>OBTIN</td>
<td>230216N</td>
<td>0585920E</td>
</tr>
<tr>
<td>KUSRA</td>
<td>231726N</td>
<td>0585102E</td>
</tr>
<tr>
<td>A777</td>
<td>TONVO 250500N</td>
<td>0563200E</td>
</tr>
<tr>
<td>BUBAS</td>
<td>245938N</td>
<td>05700 03E</td>
</tr>
<tr>
<td>NADSO</td>
<td>244957N</td>
<td>0574926E</td>
</tr>
<tr>
<td>MUNGA</td>
<td>242516N</td>
<td>0584533E</td>
</tr>
<tr>
<td>MIXOL</td>
<td>240618N</td>
<td>0592739E</td>
</tr>
<tr>
<td>VAXIM</td>
<td>231900N</td>
<td>0611100E</td>
</tr>
<tr>
<td>A788</td>
<td>HALAIFAH</td>
<td></td>
</tr>
<tr>
<td>HAIL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HAFL AL BATIN (HFR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WAFRA</td>
<td>2837.3N</td>
<td>04757.5E</td>
</tr>
<tr>
<td>PATIR</td>
<td>285606N</td>
<td>0492923E</td>
</tr>
<tr>
<td>KHARK (KHG)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHIRAZ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A788</td>
<td>HALAIFAH</td>
<td></td>
</tr>
<tr>
<td>HAIL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HAFL AL BATIN (HFR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WAFRA</td>
<td>2837.3N</td>
<td>04757.5E</td>
</tr>
<tr>
<td>PATIR</td>
<td>285606N</td>
<td>0492923E</td>
</tr>
<tr>
<td>KHARK (KHG)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHIRAZ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B12</td>
<td>TANS</td>
<td>340000N</td>
</tr>
<tr>
<td>SOKAL</td>
<td>323601N</td>
<td>0273706E</td>
</tr>
<tr>
<td>EL DABA (DBA)</td>
<td>310041N</td>
<td>0282801E</td>
</tr>
<tr>
<td>KATAB</td>
<td>292501N</td>
<td>0290506E</td>
</tr>
<tr>
<td>BOPO</td>
<td>264318N</td>
<td>0300722E</td>
</tr>
<tr>
<td>DEPO</td>
<td>262438N</td>
<td>0301413E</td>
</tr>
<tr>
<td>EL KHARGA (KHG)</td>
<td>252654N</td>
<td>0303527E</td>
</tr>
<tr>
<td>ABU SIMBEL (SML)</td>
<td>222118N</td>
<td>0313719E</td>
</tr>
<tr>
<td>B12</td>
<td>TANS</td>
<td>340000N</td>
</tr>
<tr>
<td>SOKAL</td>
<td>323601N</td>
<td>0273706E</td>
</tr>
<tr>
<td>EL DABA (DBA)</td>
<td>310041N</td>
<td>0282801E</td>
</tr>
<tr>
<td>KATAB</td>
<td>292501N</td>
<td>0290506E</td>
</tr>
<tr>
<td>BOPO</td>
<td>264318N</td>
<td>0300722E</td>
</tr>
<tr>
<td>DEPO</td>
<td>262438N</td>
<td>0301413E</td>
</tr>
<tr>
<td>EL KHARGA (KHG)</td>
<td>252654N</td>
<td>0303527E</td>
</tr>
<tr>
<td>ABU SIMBEL (SML)</td>
<td>222118N</td>
<td>0313719E</td>
</tr>
<tr>
<td>B121</td>
<td>RUDESHUR (RUS)</td>
<td></td>
</tr>
<tr>
<td>RASHT (RST)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAGRI</td>
<td>385408N</td>
<td>0462300E</td>
</tr>
<tr>
<td>B121</td>
<td>RUDESHUR (RUS)</td>
<td></td>
</tr>
<tr>
<td>RASHT (RST)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAGRI</td>
<td>385408N</td>
<td>0462300E</td>
</tr>
<tr>
<td>B400</td>
<td>MUSCAT (MCT)</td>
<td></td>
</tr>
<tr>
<td>B400</td>
<td>MUSCAT (MCT)</td>
<td></td>
</tr>
</tbody>
</table>
ITURA 232351N 0580720E
IZKI (IZK)
HAIMA (HAI)
ASTUN 180832N0551040E
DAXAM 171612N 0544715E
MUTVA 165325N 0543201E
IMKAD 155245N 0535147E
NODMA 152603N 0533358E
RIGAM 143932N 0530414E
RAPDO 132317N 0521532E
VEDET 120134N 0512410E
(MOGADISHU)

UB403
MANDERA
BOMIX 121002N 0502757E
ODBN 123747N 0505648E
KAVAN 133250N 0515431E
RIGAM 143932N 0530414E

B404
HARGA (HARGEISA)
DEMG0 120258N 0483040E
PURKA 131208N 0503042E
GESIX 134440N 0512823E
RIGAM 143932N 0530414E

B407
KING ABDULAZIZ (JDW)
KAROX 205717N 0381547E
MAHDI 2026.0N 03739.3E
(PORT SUDAN) PSD

B411
METS 2930.0N 03500.0E
AL SHIGAR (ASH)
ARAR (AAR)
MURIB 311337N 0415136E
LOVEK 3222.1N 04440.0E
NOLDO 3249.5N 04521.5E
PAXAT 332056N 0460519E
ILAM (ILM)
KERMANSHAH (KMS)
SAVEH (SAV)
[TEHRAN] (TRN)
* Note 1
DEHNAMAK (DHN)
SABZEVAR (SBZ)
MASHHAD (MSD)

B412
HALAIFA (HLF)
RABIGH (RBG)
[KING ABDULAZIZ ] (JDW)

B413
LADEN 1853.7N 03805.1E
DANAK 1608.0N 04129.0E
HODEIDAH
TAIZ

Version: 24 April 2013
ADEN
ZIZAN 1151.6N 04539.2E
AVIMO 0332.9N 05052.6E

B415 DOHA (DOH)
* Note 8 (DOH-BUNDU)
AFNAN 2508.9N 05155.9E
BUNDU 2500.4N 05229.4E
* Note 7 (BUNDU-ADV)
GADVO 2441.4N 05343.0E
KUNGU 2437.9N 05356.4E
ABU DHABI
ADV 2425.1N 05440.4E

UB415 DOHA (DOH)
* Note 8 (DOH-BUNDU)
AFNAN 2508.9N 05155.9E
BUNDU 2500.4N 05229.4E
* Note 7 (BUNDU-ADV)
GADVO 2441.4N 05343.0E
KUNGU 2437.9N 05356.4E
ABU DHABI
ADV 2425.1N 05440.4E

B416 KUWAIT (KUA)
AMBIK 283222N 0492025E
*Note 8 (AMBIK-KUVER)
TESSO 282852N 0492723E
GEVAL 283625N 0492722E
GOGMA 281421N 0495612E
KUVER 280924N 0509600E
IMDAT 2741.0N 05111.0E
ORSAR 2604.5N 05357.5E
PEBAT 2551.9N 05423.9E
DESDI 2536.0N 05442.5E

UB416 KUWAIT (KUA)
AMBIK 283222N 0492025E
*Note 8 (AMBIK-KUVER)
TESSO 282852N 0492723E
GEVAL 283625N 0492722E
GOGMA 281421N 0495612E
KUVER 280924N 0509600E
IMDAT 2741.0N 05111.0E
ORSAR 2604.5N 05357.5E
PEBAT 2551.9N 05423.9E
DESDI 2536.0N 05442.5E

B417 MAHSHAHR (MAH)
TULAX 2938 53N 04903 01E
DESUL 2928.0N 04901.8E
ALVIX 2919.3N04824.2E
KUWAIT (KUA)
*See Note 3
HAFR AL BATIN (HFR)
KMC
GASSIM (GAS)
BIR-DARB (BDB)
TAGNA 231652N 0403851E
KING ABDULAZIZ (JDW)

UB417 MAHSHAHR (MAH)
TULAX 2938 53N 04903 01E
DESUL 2928.0N 04901.8E
ALVIX 2919.3N04824.2E
KUWAIT (KUA)
*See Note 3
HAFR AL BATIN (HFR)
KMC
GASSIM (GAS)
BIR-DARB (BDB)
TAGNA 231652N 0403851E
KING ABDULAZIZ (JDW)

B419 (DHA) 261538N 0500824E
*Note 8 (DHA-RAMSI)
KING FAHD (KFA)
*Note 7 (KFA-RAMSI)
ASTOM 265552N 0500408E
RAMSI 270249N 0500714E

UB419 (DHA) 261538N 0500824E
*Note 8 (DHA-RAMSI)
KING FAHD (KFA)
*Note 7 (KFA-RAMSI)
ASTOM 265552N 0500408E
RAMSI 270249N 0500714E

B424 ITOLI 152825N 0450927E
SABEL 185200N 05203.7E
OTISA 201000N 0554556E
GISKA 213503N 0574014E

UB424 ITOLI 152825N 0450927E
SABEL 185200N 05203.7E
OTISA 201000N 0554556E
GISKA 213503N 0574014E

Version: 24 April 2013
<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Code</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>B441</td>
<td>MASHHAD (MSD)</td>
<td>UB441</td>
<td>MASHHAD (MSD)</td>
</tr>
<tr>
<td></td>
<td>OTRUZ 363108N 0610956E</td>
<td></td>
<td>OTRUZ 363108N 0610956E</td>
</tr>
<tr>
<td></td>
<td>MARAD 3637.6N 06127.8E</td>
<td></td>
<td>MARAD 3637.6N 06127.8E</td>
</tr>
<tr>
<td>B451</td>
<td>DEHNAMAK (DHN)</td>
<td>UB451</td>
<td>DEHNAMAK (DHN)</td>
</tr>
<tr>
<td></td>
<td>BOJNORD (BRD)</td>
<td></td>
<td>BOJNORD (BRD)</td>
</tr>
<tr>
<td></td>
<td>DOLOS 375006N 0580200E</td>
<td></td>
<td>DOLOS 375006N 0580200E</td>
</tr>
<tr>
<td></td>
<td>(ASHGABAT) (ASB)</td>
<td></td>
<td>(ASHGABAT) (ASB)</td>
</tr>
<tr>
<td>B457</td>
<td>ELOSA 254850N 0514233E</td>
<td>UB457</td>
<td>ELOSA 254850N 0514233E</td>
</tr>
<tr>
<td></td>
<td>EMISA 254658N 0514207E</td>
<td></td>
<td>EMISA 254658N 0514207E</td>
</tr>
<tr>
<td></td>
<td>*Note 8 (EMISA-COPPI)</td>
<td></td>
<td>*Note 8 (EMISA-COPPI)</td>
</tr>
<tr>
<td></td>
<td>PATOM 255821N 0511836E</td>
<td></td>
<td>PATOM 255821N 0511836E</td>
</tr>
<tr>
<td></td>
<td>ASNIX 260452N 0510509E</td>
<td></td>
<td>ASNIX 260452N 0510509E</td>
</tr>
<tr>
<td></td>
<td>BAHRAIN DVORDME(BAH)</td>
<td></td>
<td>BAHRAIN DVORDME(BAH)</td>
</tr>
<tr>
<td></td>
<td>KING FAHAD DVORTAC(KFA)</td>
<td></td>
<td>KING FAHAD DVORTAC(KFA)</td>
</tr>
<tr>
<td></td>
<td>KODAG 270317N 0492023E</td>
<td></td>
<td>KODAG 270317N 0492023E</td>
</tr>
<tr>
<td></td>
<td>DUSTA 271255N 0491337E</td>
<td></td>
<td>DUSTA 271255N 0491337E</td>
</tr>
<tr>
<td></td>
<td>TORSI 272335N 0490606E</td>
<td></td>
<td>TORSI 272335N 0490606E</td>
</tr>
<tr>
<td></td>
<td>*Note 7</td>
<td></td>
<td>*Note 7</td>
</tr>
<tr>
<td></td>
<td>COPPI 275033.0N 0474359.0E</td>
<td></td>
<td>COPPI 275033.0N 0474359.0E</td>
</tr>
<tr>
<td></td>
<td>*Note 7</td>
<td></td>
<td>*Note 7</td>
</tr>
<tr>
<td>B505</td>
<td>LALDO 251806N 0563600E</td>
<td></td>
<td>NADSO 244957N 0574926E</td>
</tr>
<tr>
<td></td>
<td>* Note 7/8 (OO)</td>
<td></td>
<td>ITLOB 244325N 0590701E</td>
</tr>
<tr>
<td></td>
<td>NADSO 244957N 0574926E</td>
<td></td>
<td>EGTAL 2434 58N 06037 24E</td>
</tr>
<tr>
<td></td>
<td>ITLOB 244325N 0590701E</td>
<td></td>
<td>APELO 2434.9N 0612000E</td>
</tr>
<tr>
<td></td>
<td>EGTAL 2434 58N 06037 24E</td>
<td></td>
<td>PASNI (PI) 2517.3N 06320.9E</td>
</tr>
<tr>
<td>B524</td>
<td>NADSO 244957N 0574926E</td>
<td></td>
<td>DAMUM 243236N 0591307E</td>
</tr>
<tr>
<td></td>
<td>* Note 7</td>
<td></td>
<td>VEKAN 241235N 0604454E</td>
</tr>
<tr>
<td></td>
<td>DAMUM 243236N 0591307E</td>
<td></td>
<td>ALPOR 2404 42N 06120E</td>
</tr>
<tr>
<td></td>
<td>VEKAN 241235N 0604454E</td>
<td></td>
<td>ALPOR 2404 42N 06120E</td>
</tr>
<tr>
<td>B526</td>
<td>(ASMARA) ASM</td>
<td>UB526</td>
<td>(ASMARA) ASM</td>
</tr>
<tr>
<td></td>
<td>HODEIDAH (HDH)</td>
<td></td>
<td>HODEIDAH (HDH)</td>
</tr>
<tr>
<td></td>
<td>MUKALLA (RIN)</td>
<td></td>
<td>MUKALLA (RIN)</td>
</tr>
<tr>
<td></td>
<td>RIGAM 143932N 0530414E</td>
<td></td>
<td>RIGAM 143932N 0530414E</td>
</tr>
<tr>
<td>B535</td>
<td>(DJIBOUTI) DTI</td>
<td>UB535</td>
<td>(DJIBOUTI) DTI</td>
</tr>
<tr>
<td></td>
<td>ADEN (KRA)</td>
<td></td>
<td>ADEN (KRA)</td>
</tr>
<tr>
<td></td>
<td>MUKALLA (RIN)</td>
<td></td>
<td>MUKALLA (RIN)</td>
</tr>
<tr>
<td></td>
<td>KAPET 1633 22N 0530614E</td>
<td></td>
<td>KAPET 1633 22N 0530614E</td>
</tr>
<tr>
<td></td>
<td>SALALAH (SLL)</td>
<td></td>
<td>SALALAH (SLL)</td>
</tr>
<tr>
<td></td>
<td>ASTUN 180832N0551040E</td>
<td></td>
<td>ASTUN 180832N0551040E</td>
</tr>
<tr>
<td>B538</td>
<td>ALEPPO</td>
<td>UB538</td>
<td>ALEPPO</td>
</tr>
<tr>
<td></td>
<td>KARIATAIN</td>
<td></td>
<td>KARIATAIN</td>
</tr>
<tr>
<td>B540</td>
<td>GERAR 240600N 0573616</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Version: 24 April 2013
<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Code</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>PASOV</td>
<td>243841N 0565037E</td>
<td>UB544</td>
<td>(GAZIANTEP) GAZ</td>
</tr>
<tr>
<td>KUPMA</td>
<td>245148N 0562648E</td>
<td></td>
<td>ALEPPO (ALE)</td>
</tr>
<tr>
<td>BUBIN</td>
<td>245742N 0560642E</td>
<td></td>
<td>TANF (TAN)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B544</td>
<td>TURAF (TRF)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>AL SHIGAR (ASH)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HALAIFA (HLF)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MADINAH (PMA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RABIGH (RBG)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>KING ABDULAZIZ (JDW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>QUNFIDAH (QUN)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ABHA (ABH)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NOBSU</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>KRA</td>
</tr>
<tr>
<td>B549</td>
<td>THAMUD 171700N 0495500E</td>
<td>Ub549</td>
<td>THAMUD 171700N 0495500E</td>
</tr>
<tr>
<td></td>
<td>ITELI 171310N 0502605E</td>
<td></td>
<td>ITELI 171310N 0502605E</td>
</tr>
<tr>
<td></td>
<td>GOGRI 170752N 0510857E</td>
<td></td>
<td>GOGRI 170752N 0510857E</td>
</tr>
<tr>
<td></td>
<td>TONRO 165850N 0522235E</td>
<td></td>
<td>TONRO 165850N 0522235E</td>
</tr>
<tr>
<td></td>
<td>PUTRA 165432N 0525631E</td>
<td></td>
<td>PUTRA 165432N 0525631E</td>
</tr>
<tr>
<td></td>
<td>LADAR 165324N 0534655E</td>
<td></td>
<td>LADAR 165324N 0534655E</td>
</tr>
<tr>
<td></td>
<td>MUTVA 165325N 0543201E</td>
<td></td>
<td>MUTVA 165325N 0543201E</td>
</tr>
<tr>
<td></td>
<td>KIVEL 165306N 0553633E</td>
<td></td>
<td>KIVEL 165306N 0553633E</td>
</tr>
<tr>
<td>G183</td>
<td>(KAROL 3252.0N 03229.0E)</td>
<td></td>
<td>EL ARISH (ARH)</td>
</tr>
<tr>
<td></td>
<td>PASOS</td>
<td></td>
<td>TABA (TBA)</td>
</tr>
<tr>
<td>G202</td>
<td>(VELOX 3349.0N 03405.0E)</td>
<td>UG202</td>
<td>(VELOX 3349.0N 03405.0E)</td>
</tr>
<tr>
<td></td>
<td>SILKO 3347.9N 03435.0E</td>
<td></td>
<td>SILKO 3347.9N 03435.0E</td>
</tr>
<tr>
<td></td>
<td>KHALDEH (KAD)</td>
<td></td>
<td>KHALDEH (KAD)</td>
</tr>
<tr>
<td></td>
<td>* Note 4 (OS)</td>
<td></td>
<td>* Note 4 (OS)</td>
</tr>
<tr>
<td></td>
<td>DAKWE 3338.9N 03555.0E</td>
<td></td>
<td>DAKWE 3338.9N 03555.0E</td>
</tr>
<tr>
<td></td>
<td>DAMASCUS (DAM)</td>
<td></td>
<td>DAMASCUS (DAM)</td>
</tr>
<tr>
<td></td>
<td>TANF (TAN)</td>
<td></td>
<td>TANF (TAN)</td>
</tr>
<tr>
<td></td>
<td>MODIK 3328.1N 03901.0E</td>
<td></td>
<td>MODIK 3328.1N 03901.0E</td>
</tr>
<tr>
<td></td>
<td>RAPLU 3323.0N 04145.5E</td>
<td></td>
<td>RAPLU 3323.0N 04145.5E</td>
</tr>
<tr>
<td></td>
<td>PUSTO 3321.0N 04245.0E</td>
<td></td>
<td>PUSTO 3321.0N 04245.0E</td>
</tr>
<tr>
<td></td>
<td>DELMI 331918.31N 0431327.59E</td>
<td></td>
<td>DELMI 331918.31N 0431327.59E</td>
</tr>
<tr>
<td></td>
<td>LAGLO 331538N 0441457E</td>
<td></td>
<td>LAGLO 331538N 0441457E</td>
</tr>
<tr>
<td></td>
<td>ITOVA 331950.91N 0444128.97E</td>
<td>ITOVA 331950.91N 0444128.97E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ILAM (ILM)</td>
<td></td>
<td>ILAM (ILM)</td>
</tr>
<tr>
<td></td>
<td>KHIRAM ABAD (KRD)</td>
<td></td>
<td>KHIRAM ABAD (KRD)</td>
</tr>
<tr>
<td></td>
<td>ESFAHAN (ISN)</td>
<td></td>
<td>ESFAHAN (ISN)</td>
</tr>
<tr>
<td></td>
<td>NODLA</td>
<td></td>
<td>NODLA</td>
</tr>
<tr>
<td></td>
<td>BIRJAND (BJD)</td>
<td></td>
<td>BIRJAND (BJD)</td>
</tr>
<tr>
<td></td>
<td>(KAMAR 3239.0N 06044.0E)</td>
<td></td>
<td>(KAMAR 3239.0N 06044.0E)</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
KEBUD 2735.9N 06250.4E
ZAHELAN (ZDN)
DARBAND (DAR)
NODLA 325330N 0545850E
ANARAK (ANK)
TEHRAN (TRN)
ZANJAN (ZAJ)
UROMIYEH (UMH)
ALRAM 3743.0N 04437.0E
(SIIRT)

G216  LAKLU 232235N 0570401E
*Note 7 (OO/OP)
Muscat (MCT)
ITILA 234055N 058417E
SODEB 234747N 0593023E
DORAB 235033N 0594746E
ALPOR 240441N 0612000E
LATEM
(KC)

UG216  LAKLU 232235N 0570401E
*Note 7 (OO/OP)
Muscat (MCT)
ITILA 234055N 058417E
SODEB 234747N 0593023E
DORAB 235033N 0594746E
ALPOR 240441N 0612000E
LATEM
(KC)

G452  SHIRAZ (SYZ)
KERMAN (KER)
ZAHELAN (ZDN)
DERBO 2925.7N 06117.0E
(RAHIMYAR KHAN) RK

UG452  SHIRAZ (SYZ)
KERMAN (KER)
ZAHELAN (ZDN)
DERBO 2925.7N 06117.0E
(RAHIMYAR KHAN) RK

G462  *Note 7 between ROVOS and BALUS
BALUS 2545.9N 05304.4E
ROVOS 241825N 0552143E
*Note 7 to ITROK
NIBAX 245748N 0541437E
RAGTA 250850N 0553840E
ALSOK 252607N 0533904E
ITROK 253575N 0532751E
TUMAK 255031N 0531108E

UG462  *Note 7 between ROVOS and BALUS
BALUS 2545.9N 05304.4E
ROVOS 241825N 0552143E
*Note 7 to ITROK
NIBAX 245748N 0541437E
RAGTA 250850N 0553840E
ALSOK 252607N 0533904E
ITROK 253575N 0532751E
TUMAK 255031N 0531108E

G650  KING ABDULAZIZ (JDW)
RASKA 190732N 0390329E
ASMARA (ASM)

UG650  KING ABDULAZIZ (JDW)
RASKA 190732N 0390329E
ASMARA (ASM)

G652  ADEN (KRA)
IMPOS 183136N 0511848E
DUDRI 190000N 0520000E
*Note 8 (DUDRI-TOKRA)
TOKRA 220925N 0553350E
TAPDO 2424N 06120 E

UG652  ADEN (KRA)
IMPOS 183136N 0511848E
DUDRI 190000N 0520000E
*Note 8 (DUDRI-TOKRA)
TOKRA 220925N 0553350E
TAPDO 2424N 06120 E

G660  (PORT SUDAN) PSD
BOGUM 2006.6N 03803.0E
MIPOI 203322N 0382145E
KING ABDULAZIZ (JDW)

UG660  (PORT SUDAN) PSD
BOGUM 2006.6N 03803.0E
MIPOI 203322N 0382145E
KING ABDULAZIZ (JDW)
| G662 | BUSRA 322000N 0363700E |
|      | KUPRI 320825.87N 0364530.21E |
|      | ALKOT 313254.22N 0371121.51E |
|      | GRY 3124.8N 3717.2E |
|      | AL SHIGAR (ASH) |
|      | HAIL (HIL) |
|      | GASSIM (GAS) |
|      | KING KHALID (KIA) |

| UG662 | BUSRA 322000N 0363700E |
|       | KUPRI 320825.87N 0364530.21E |
|       | ALKOT 313254.22N 0371121.51E |
|       | GRY 3124.8N 3717.2E |
|       | AL SHIGAR (ASH) |
|       | HAIL (HIL) |
|       | GASSIM (GAS) |
|       | KING KHALID (KIA) |

| G663 | KING KHALID (KIA) |
|      | *Note 7 (KIA-KFA) |
|      | GIBUS 255724N 0472829E |
|      | *Note 8 (GIBUS-ALSER) |
|      | SILNO 2640.4N 04757.7E |
|      | KING FAHD (KFA) |
|      | ALSER 2710.8 05049.5E |
|      | SHIRAZ (SYZ) |
|      | YAZD (YZD) |
|      | NODLA 3253.3N 05458.8E |
|      | TABAS (TBS) |
|      | MASHAD (MSD) |

| UG663 | KING KHALID (KIA) |
|       | *Note 7 (KIA-KFA) |
|       | GIBUS 255724N 0472829E |
|       | *Note 8 (GIBUS-ALSER) |
|       | SILNO 2640.4N 04757.7E |
|       | KING FAHD (KFA) |
|       | ALSER 2710.8 05049.5E |
|       | SHIRAZ (SYZ) |
|       | YAZD (YZD) |
|       | NODLA 3253.3N 05458.8E |
|       | TABAS (TBS) |
|       | MASHAD (MSD) |

| G665 | ARAR (AAR) |
|      | ABADAN (ABD) |
|      | SHIRAZ (SYZ) |
|      | * Note 5 (OI) |
|      | NABOD 2816.1N 05825.8E |
|      | LOXOL 2745.9N 06045.6E |
|      | ASVIB 265724N 0631812E (PANJGUR) PG |

| UG665 | ARAR (AAR) |
|       | ABADAN (ABD) |
|       | SHIRAZ (SYZ) |
|       | * Note 5 (OI) |
|       | NABOD 2816.1N 05825.8E |
|       | LOXOL 2745.9N 06045.6E |
|       | ASVIB 265724N 0631812E (PANJGUR) PG |

| G666 | SHIRAZ (SYZ) |
|      | LAMERD (LAM) |
|      | LAVAN (LVA) |
|      | * Note 7 (OI) |
|      | ORSAR 2604.5N 05357.5E |
|      | ITITA 254410N 0541839E |
|      | SINBI 250842N 0543741E |
|      | ABU DHABI (ADV) |

| UG666 | SHIRAZ (SYZ) |
|       | LAMERD (LAM) |
|       | LAVAN (LVA) |
|       | * Note 7 (OI) |
|       | ORSAR 2604.5N 05357.5E |
|       | ITITA 254410N 0541839E |
|       | SINBI 250842N 0543741E |
|       | ABU DHABI (ADV) |

| G667 | PUTMA 3748.0N 05157.6E |
|      | NOSHAHR (NSR) |
|      | TEHRAN (TRN) |
|      | SAVEH (SAV) |
|      | MIS |
|      | AHWAZ (AWZ) |
|      | ABADAN (ABD) |
|      | ALSAN 295707N 0481456E |
|      | FALKA |
|      | KUWAIT (KUA) |
|      | WAFRA (KFR) |
|      | *Note 7 (KFR-MGA) |

| UG667 | PUTMA 3748.0N 05157.6E |
|       | NOSHAHR (NSR) |
|       | TEHRAN (TRN) |
|       | SAVEH (SAV) |
|       | MIS |
|       | AHWAZ (AWZ) |
|       | ABADAN (ABD) |
|       | ALSAN 295707N 0481456E |
|       | FALKA |
|       | KUWAIT (KUA) |
|       | WAFRA (KFR) |
|       | *Note 7 (KFR-MGA) |

Version: 24 April 2013
COPPI 275033.0N  0474359.0E
*Note 8 (COPPI-AVOBO)
EMENI 273232N  0473849E
MUSKO 272640N  0473708E
ALSAT 270611N  0473118E
LUGAL 264533N  0472528E
MAGALA (MGA)
AVOBO 260334N  0470719E
KING KHALID (KIA)
WADI AL DAWASIR (WDR)
NEJRAN (NEJ)
SANA'A (SAA)
PARIM 123143N  0432712E
DJIBOUTI (DTI)

G669 AL SHIGAR (ASH)
AL JOU (AJF)
RAFHA (RAF)
NISER 2930.5N  04418.4E
*Note 3 (OK)
SOLAT 290942N  0463810E
KUWAIT (KUA)
SESRA 290803N  0485453E
NANPI 290457N  0493157E
KHARK(KHG)
SHIRAZ (SYZ)

G670 RASHT (RST)
LALDA 3817.1N  04943.0E
(BAKU) GYD

G674 MADINAH (PMA)
GASSIM (GAS) 2617.9N  04346.8E
BOPAN (BPN)

G775 (ASHGHABAT) (ASB)
ORPAB 3742N  05834.5E
MASHHAD (MSD)
[BIRJAND] (BJD)
* Note 1
ZAHELAN (ZDN)

G781 (VAN)
BONAM 3802.9N  04418.0E
UROMIYEH (UMH)
ROVON 3716 01N  0455322E
ZANJAN (ZAJ)
NOSHAHR(NSR)

Version: 24 April 2013
G782  KING ABDULAZIZ (JDW)  
DAFINAH (DFN)  
RAGA/HBA (RGB)  
KING KHALID (KIA)  
MAGALA (MGA)  
*Note 7 (MGA-KFR)  
LUGAL 264533N 0472528E  
WAFRA (KFR) 283715N 0475729E  
KUWAIT (KUA)  

UG782  KING ABDULAZIZ (JDW)  
DAFINAH (DFN)  
RAGA/HBA (RGB)  
KING KHALID (KIA)  
MAGALA (MGA)  
*Note 7 (MGA-KFR)  
LUGAL 264533N 0472528E  
WAFRA (KFR) 283715N 0475729E  
KUWAIT (KUA)  

G783  PURDA 210805N 0510329E  
TANSU 224136N 0542828E  
RIGIL 230146N 0551430E  
ELUDA 235107N 0552905E  
ALN 241535N 0553623E  
GIDIS 243600N 055600E  
BUBIN 245742N 0560642E  

UG783  PURDA 210805N 0510329E  
TANSU 224136N 0542828E  
RIGIL 230146N 0551430E  
ELUDA 235107N 0552905E  
ALN 241535N 0553623E  
GIDIS 243600N 055600E  
BUBIN 245742N 0560642E  

G792  BODKA 3939.0N 05130.0E  
GIRUN 3806.2N 05620.3E  
BOJNORD (BRD)  
MASHAD (MSD)  

UG792  BODKA 3939.0N 05130.0E  
GIRUN 3806.2N 05620.3E  
BOJNORD (BRD)  
MASHAD (MSD)  

G795  FALKA 2926.2N 04818.3E  
TASMI 300120N 0475505E  
BSR 303132.4N 0472112E  
RAFHA (RAF)  

UG795  FALKA 2926.2N 04818.3E  
TASMI 300120N 0475505E  
BSR 303132.4N 0472112E  
RAFHA (RAF)  

G799  PMA  
DAFINAH (DFN)  

UG799  PMA  
DAFINAH (DFN)  

UL124  (VAN)  
BONAM  
URUMIYEH (UMH)  
ZANJAN (ZAJ)  
SAVEH (SAV)  
DISEL 332904N 0510118E  
YAZD (YZD) (R654)  
KERMAN (KER)  
KEBUD 273558N 0625028E  
(PANJGUR) PG  

UL125  DULAV 3857N 04537.9E  
TABRIZ (TBR)  
ZANJAN (ZAJ)  
PAROT 360940N 0495756E  
TEHRAN (TRN)  
ANARAK (ANK)  
DARBAND (DAR)  
ZAHEGAN (ZDN)  
DANIB 290706N 0611717E  
KEBUD 273558N 0625028E  

UL126  PUSTO 3321.0N 04245.0E  
L126  PUSTO 3321.0N 04245.0E  

Version: 24 April 2013
ARN TF/6-REPORT
APPENDIX 3A

3A-13

L200 AMMAN
LOXER 320256N 362500E
LUDAN 320256N 0363713 E
KUPRI 320825N 0364530 E
ASLON 321211N 0365111E
NADEK 322728N 0371429E
DAXEN 324444N 0374105E
KAREM 325110N 0380324 E
KUMLO 325811N 0382807 E
DAPUK 330139N 0384026 E
PASIP 330600N 0385600E
GIBUX 330715N 0411625E
SIGBI 330200N 0422000E
SILBO 325900N 0432900E

L223 SIRRI (SIR)
NALTA 250242N 0553955E
* Note 7 (OI-OM-OO)
TARDI 243418N 0560915E
LAKLU 232235N 0570401E

L300 LUXOR (LXR)
MEMPO 252518N 0335457E
GIBAL2437.2N03634.7E
YENBO (YEN) 2408.8N 03803.9E

L301 RASKI 230330N 0635200E
VAXIM 231900N 0611100E
RAGMA 232301N 0603846E

L305 DOHA (DOH)
*Note 7 (DOH-ITITA)
*Note 8 (DOH-ASTOG)
ASTOG 252822N 0525025E
ITITA 2544.2N 05418.7E

L306 TOKRA 220925N 0553350E
* Note- 7 (OO)
DEMKI 224941N 0562308E
LAKLU 232235N 0570401E
L308  EGNOV 270301N 0474713E  UL308  EGNOV 270301N 0474713E
*Note 7 (EGNOV- SERSA)  *Note 7 (EGNOV- SERSA)
*Note 8 (EGNOV- OBNET)  *Note 8 (EGNOV- OBNET)
  (JBL) 270220N 0492427E  (JBL) 270220N 0492427E
  RAMSI 270249N 0500714E  RAMSI 270249N 0500714E
  GASSI 2702.9N 05022.5E  GASSI 2702.9N 05022.5E
  UMAMA 2658.5N 05046.8E  UMAMA 2658.5N 05046.8E
  LOTIT 2648.9N 05112.6E  LOTIT 2648.9N 05112.6E
  NADAM 255854N 0533933E  NADAM 255854N 0533933E
  TOSDA 270005N 0505629E  TOSDA 270005N 0505629E
  TORBO 265223N 0511024E  TORBO 265223N 0511024E
  SOGAN 263915N 0515408E  SOGAN 263915N 0515408E
  DEGSO 261054N 0531946E  DEGSO 261054N 0531946E
  OBNET 260032N 0534514E  OBNET 260032N 0534514E
  ITITA 254410N 0541839E  ITITA 254410N 0541839E
  DESDI 253603N 0544230E  DESDI 253603N 0544230E
  RAGOL 252743N 0550739E  RAGOL 252743N 0550739E
  SERSA 251945N 0553118E  SERSA 251945N 0553118E
  TUKLA 251936N 0554010E  TUKLA 251936N 0554010E
  NADNI 251915N 0555658E  NADNI 251915N 0555658E
  LALDO 251806N 0563600E  LALDO 251806N 0563600E
  SHARJAH(SHJ) 2519.7N 05531.3E  SHARJAH(SHJ) 2519.7N 05531.3E
  IMLOT 2517.1N 05708.1E  IMLOT 2517.1N 05708.1E
  KATUS 2515.9N 05747.0E  KATUS 2515.9N 05747.0E
  DIVAB 2510.7N 05952.1E  DIVAB 2510.7N 05952.1E
  EGPIC 2508.6N 06029.5E  EGPIC 2508.6N 06029.5E
  (JIWANI)  LATEM 2431.7N 06449.7E  (JIWANI)  LATEM 2431.7N 06449.7E

L310  BOXAK 244536N 0540032E  UL310  BOXAK 244536N 0540032E
*Note 7 & 8 to LALDO  *Note 7 & 8 to LALDO
  SIGBO 2455.4N 05456.9E  SIGBO 2455.4N 05456.9E
  NALTA 2502.7N 05539.8E  NALTA 2502.7N 05539.8E
  AVAMI 2505.9N 05556.8E  AVAMI 2505.9N 05556.8E
  LALDO 251806N 0563600E  LALDO 251806N 0563600E

L314  NABAN 163124N 0430148E  UL314  NABAN 163124N 0430148E
  GOMRI 131816N 0443224E  GOMRI 131816N 0443224E

L315  CAIRO(CVO)  UL315  CAIRO(CVO)
  HURGHADA (HGD)  HURGHADA (HGD)
  GIBAL 2437.2N 03634.7E  GIBAL 2437.2N 03634.7E

L321  KATAB 292501N 0290506E  UL321  KATAB 292501N 0290506E
  KUNKI 290726N 0291949E  KUNKI 290726N 0291949E
  KUNAK 2527.7N 03041.2E  KUNAK 2527.7N 03041.2E
  LUGAV 224205N 0313722E  LUGAV 224205N 0313722E
  SML 222118N 0313719E  SML 222118N 0313719E

UL322  MUMBAI (BBB)

Version: 24 April 2013
SUGID 1933.1N 06921.0E  
BOLIS 2033.5N 065 00.00E  
REXOD 2112.5N 06138.5E  

UL333  
DASIS  
TABRIZ (TBZ)  
RASHT (RST)  
GIBAB 3537.0N 05439.9E  
ALRAS 3511.3N 05541.6E  
TASLU 342632N 057424E  
SOKAM 331316N 0603752E  

L417  
VUSEB 361637N 0434800E  
UMESA 351741N 0434307E  
MUTAG 343003N 0433834 E  
LAGLO 3515.6 04414.0E  
ELOSI 330800N 0441800E  
LOVEK 3222.1N 04440.0E  
ELIBA 320915N 0444645E  
NADOX 310505N 0451851E  

UL417  
VUSEB 361637N 0434800E  
UMESA 351741N 0434307E  
MUTAG 343003N 0433834 E  
LAGLO 3515.6 04414.0E  
ELOSI 330800N 0441800E  
LOVEK 3222.1N 04440.0E  
ELIBA 320915N 0444645E  
NADOX 310505N 0451851E  

UL425  
KING ABDULAZIZ (JDW)  
TONBO 205502N 0394911E  
AL BAHA (BHA)  
BISHA (BSH)  
WADI AL DAWASIR (WDR)  
EGREN 202236N 0464422E  
ASTIN 200410N 0495320E  
DIRAS 195235N 0513704E  
GOBRO 193622N 0534741E  
NOVNO 193313N 0535858E  
ITUVO 190315N 055328E  
DEDSO 185811N 0560041E  
BOVOS 182230N 0575844E  
ASPUX 174406N 060006E  
(TRIVANDRUM)  

L430  
VAXIM 231900N 0611100E  
MESPO 244936N 0593411E  
MELMI 264625N 0572300E  
TAVNO 281112N 0563252E  
ASMET 284827N 0560806E  
SRJ 2933.4N 05539.6E  

UL430  
VAXIM 231900N 0611100E  
MESPO 244936N 0593411E  
MELMI 264625N 0572300E  
TAVNO 281112N 0563252E  
ASMET 284827N 0560806E  
SRJ 2933.4N 05539.6E  

L440  
KANIP 2410.7N 05520.7E  
*Note 7  
RETAS 235754N 0553423E  

UL440  
KANIP 2410.7N 05520.7E  
*Note 7  
RETAS 235754N 0553423E  

L443  
BAHRAIN DVORDME(BAH)  
*Note 8 (BAH-COPPI)  
RANLI 262509N 0503219E  

UL443  
BAHRAIN DVORDME(BAH)  
*Note 8 (BAH-COPPI)  
RANLI 262509N 0503219E  

Version: 24 April 2013
<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>L444</td>
<td>KIPOLE 230410N 0612903E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Note 7 (RANLI-COPPI)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RULEX 264529N 0501745E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RAMSI 270249N 0500714E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ALVUN 271028N 0494455E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TORSI 272335N 0490606E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COPPI 275033N 0474359E</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>L513</td>
<td>MURAK 3459.4N 03642.1E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LEBOR 3415.9N 03635.0E</td>
<td>DAMASCUS (DAM)</td>
</tr>
<tr>
<td></td>
<td>* Note 3 (OS)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BUSRA 3220.0 N 03637.0 E</td>
<td>QUEEN ALIA (QAA)</td>
</tr>
<tr>
<td></td>
<td>QATRANEH (QTR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MAZAR 3048.0N 03610.0E</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>L519</td>
<td>ABU DHABI (ADV)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Note 7 (OM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NAMSI 2437.5N 05456.8E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EMERU 244829N 0550303</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LUDER 2457.5N 05505.2E</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>L551</td>
<td>ANTAR 334800N 0281600E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EL DABA (DBA) 310041N 0282801E</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>L555</td>
<td>TOTOX 215030N 0622230E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TUMET 222307N 0595702E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOLDA 224008N 0583624E</td>
<td></td>
</tr>
</tbody>
</table>

Version: 24 April 2013
UL556

EGREN 202236N 0464422E
NONGA 205048N 0492014E
PURDA 210805N 0510329E
Note:- 7 (OO, OB)
IMDAM 202416N 0550801E
OTISA 201000N 0554556E
HAIMA (HAI) 195813N 0561651E
GIVNO 195011N 0563059E
KUTVI 184306N 0582642E

UL560

ARDABIL (ARB) 3819.9N 04824.9E
* Note 3&4 (OI)
SEVAN (SVN) 4032.0N 04456.9E

L564

DOHA (DOH)
*Note 8 (DOH-PURDA)
NAJMA 250346N 0513908E
BATHA (BAT) 241257N 0512707E
MIGMA 225035N 0512749E
PURDA 210805N 0510329E
ASTIN 200410N 0495320E
SHARURAH (SHA)
ATBOT 171418N 0464706E
RAGNI 163454N 0454815E
LOPAD 161651N 0453738E
ITOLI 152825N 0450927E
OBNAV 144541N 0444448E
GEVEL 141229N 0442547E
NOPVO 135436N 0441536E
TAZ 134149N 0440818E
PARIM 123142N 0432712E

UL564

DOHA (DOH)
*Note 8 (DOH-PURDA)
NAJMA 250346N 0513908E
BATHA (BAT) 241257N 0512707E
MIGMA 225035N 0512749E
PURDA 210805N 0510329E
ASTIN 200410N 0495320E
SHARURAH (SHA)
ATBOT 171418N 0464706E
RAGNI 163454N 0454815E
LOPAD 161651N 0453738E
ITOLI 152825N 0450927E
OBNAV 144541N 0444448E
GEVEL 141229N 0442547E
NOPVO 135436N 0441536E
TAZ 134149N 0440818E
PARIM 123142N 0432712E

UL566

ASMAK 162327N 0524634E
UKNE 160542N 0522012E
PURUG 151204N 0510142E
KUSOL 144009N 0501534E
NOTBO 142609N 0495530E
EMABI 141627N 0494139E
SOKEM 134235N 0485329E
DATEG 123549N 0471627E

UL572

KAMISHLY (KML)
LESRI 3704.3N 04113.8E
HASSAKEH (HAS) 3629N 04045.3E
DIER ZZOR (DRZ)
TANF (TAN)

UL573

DAFINAH (DFN) 231658N 0414310E
PMA
WEJH (WEJ) 261045N 0362917E

UL601

BAGLUM (BAG) 04004.2N03248.6E
* Note 7
L602

*Note 7 & 8 to DAVUS
TUMAK 255031N 0531108E
ALTOM 262230N 0515639E
DASOS 262430N 0515043E
RAKAK 265221N 0502618E
RAMSI 270249N 0500714E
IVONI 275911N 0492131E
DAVUS 282346N 0490622E

UL602

BAHRAIN (BAH)
*Note 7 to DELMI
*Note 8 (TUMAK-DAVUS)
PEBOS 262722N 0503043E
RULEX 264529N 0501745E
TUMAK 255031N 0531108E
ALTOM 262230N 0515639E
DASOS 262430N 0515043E
RAKAK 265221N 0502618E
RAMSI 270249N 0500714E
IVONI 275911N 0492131E
DAVUS 282346N 0490622E
DAVUS 282346N 0490622E
DARVA 284814N 0484734E
ALVIX 2919.3N 04824.2E
FRALKa 292611N 0481819E
TASMI 300120N 0475505E
LOVEk 322206N 0444000E
DELMI 331911N 0431731E
*Note 3 (OS)
ELEXI 344237N 0411054E
DRZ 351724N 0401124E
KUkJ 364508N 0374910E
GAZ 365701N 0372824E

L604

PLH 3513.7N 02340.9E
SALUN 340000N 0242700E *
BRN 3134.5N 02600.3E
KHG 2526.9N 03035.4E
LUXOR (LXR) 254458 N 0324607E
IMRAD 260500N 0354400E
WEJH 2610.8N 03629.3E
HLF 262600N 03916.1E
GASSIM (GAS) 2617.9N 04346.8E
*Note 7 (GAS-KFA)
PUSLA 261758N 0461706E
*Note 8 to TOSNA
MGA 2617.3N 04712.4E
ALMAL 2615.9N 04821.1E
KING FAHD (KFA) 2621.9N 04949.2E
BAHRAIN (BAH)
ASNIx 260452N 0510509E
PATOM 255821N 0511836E
EMISA 254658N 0514207E
KAPAX 254218N 0515118E
ORSIS 252801N 0521636E
ENANO 252348N 0522559E
TOSNA 251612N 0524116E

UL604

PLH 3513.7N 02340.9E
SALUN 340000N 0242700E *
BRN 3134.5N 02600.3E
KHG 2526.9N 03035.4E
LUXOR (LXR) 254458 N 0324607E
IMRAD 260500N 0354400E
WEJH 2610.8N 03629.3E
HLF 262600N 03916.1E
GASSIM (GAS) 2617.9N 04346.8E
*Note 7 (GAS-KFA)
PUSLA 261758N 0461706E
*Note 8 to TOSNA
MGA 2617.3N 04712.4E
ALMAL 2615.9N 04821.1E
KING FAHD 2621.9N 04949.2E
BAHRAIN (BAH)
ASNIx 260452N 0510509E
PATOM 255821N 0511836E
EMISA 254658N 0514207E
KAPAX 254218N 0515118E
ORSIS 252801N 0521636E
ENANO 252348N 0522559E
TOSNA 251612N 0524116E

Version: 24 April 2013
L612  KUMBI  334250N  0284500E
LABNA  321956N  0301612E
BALTIM (BLT)  313144N  0310721E

L617  ALEXANDRIA-AXD NOZ
IMRUT  313259N 0293346E
ASNIR  323849N 0282144E
TANSA  340000N 0264900E

L620  BALMA  342856N  0350302E
KAD  334827N  0352910E

L631  TOTOX  215030N0622230E
IVOMA  223408N 0605430E
* Note 7 (OO)
MIBSA  225400N 0601338E
AMBOS  230324N 0595405E
ELIGO  232458N 0590848E
KARAR  233042N 0585438E
MCT  233528.01N 0581536.47

L677  (CAIRO)  3005.5N 03123.3E
MENLI  2947.0N 03152.1E
KAPIT  2917.0N 03236.1E
SHARM EL SHEIKH
PASAM  2730.8N 03455.7E
*Note 7(OE)
WEJH  2610.8N 03629.3E
MUVAT  2537.9N 03654.8E
YEN  2409.0N 03802.3E
JDW  2140.7N 03910.0E
QUN  1922.2N 04104.5E
TALIB  1838.9N 04131.2E
GIZ  1654.5N 04234.7E
NABAN  1631.4N 04301.8E
IMSL  1557.6N 04413.2E
SAA  1530.0N 04413.2E

L681  EGNOV  270301N 0474713E
* Note 5 & 7 & 8 to SALWA
GEPAK  2633.0N 04843.5E
RADMA  2623.0N 04857.5E

Version: 24 April 2013
ARN TF/6-REPORT
APPENDIX 3A

3A-20

DELMU 2618.9N 04903.4E
ROSEM 2607.7N 04919.0E
SALWA 251538N 0503048E

L695 PAROK 231030N 0590245E
*Note 7 (OO)
ITURA 232351N 0580720E

L764 MUSCAT (MCT)
ALMOG 233524N 0574940E
IVETO 233520N 0570704E
PAXIM 240245N 0561631E

L768 ALPOB 254218N 0530055E
* Note 7 & 8 to COPPI
ROTAG 255353N 0523621E
SOLEG 260159N 0521756E
RAMKI 261138N 0515625E
RABLA 262241N 0513132E
MEDMA 263421N 0505454E
TOTLA 263806N 0504301E
COPPI 2750.6N 04744.0E

UL695 PAROK 231030N 0590245E
*Note 7 (OO)
ITURA 232351N 0580720E

UL764 MUSCAT (MCT)
ALMOG 233524N 0574940E
IVETO 233520N 0570704E
PAXIM 240245N 0561631E

UL768 BALUS 254454N 0530424E
ELAXI 260000N 0522500E
IMTAS 281800N 0515700E
DAXAS 26213N 0515000E

* Note 7 to FIRAS
* Note 8 (ALPOB-COPPI)
ROTAG 255353N 0523621E
SOLEG 260159N 0521756E
RAMKI 261138N 0515625E
RABLA 262241N 0513132E
MEDMA 263421N 0505454E
TOTLA 263806N 0504301E
COPPI 2750.6N 04744.0E
HFR
VATIM 2851.6N 04444.7E
RAFHA (RAF)
ARAR (AAR)
OVANO 3148.0N 03909.9E
OTILA 3201.5N 03901.9E
MODAD 3235.7N 03841.6E
SOKAN 3308.1N 03822.1E
RAFIF 3312.8N 03819.3E
SULAF 3327.3N 03810.4E
FIRAS 3352.3N 03755.2E

UL883 REXOD 211230N 0613830E
GADM A 211439N 0609383E
TAVKO 211519N 0593147E
UMILA 211555N 0584738E
MEVLI 211632N 0565606E
KUROV 211627N 0561853E
ALNUN 211625N 0561041E
SITOL 211604N 0552514E
PURDA 210805N 0510329E

Version: 24 April 2013
ALRIK 220631N 0482535E
UMRAN 2315.1N 04520.4E
TUKVU 2346.4N 04353.3E
BIR DARB (BDB)
PMA N243251N 0394219E

UL894 KITAL 2003.0N 06018.0E
(MALE (MLE)
(SUNAN 0028.7N 07800.0E)
(DADAR 0200.0S 07927.1E)
(PERTH (PH)

M203 PUSTO 3321.0N 04245.0E
LOVEK 3222.1N 04440.0E
ILMAP 312133N 0465702E

UM203 PUSTO 3321.0N 04245.0E
LOVEK 3222.1N 04440.0E
ILMAP 312133N 0465702E

M300 LOTAV 2037N 0605700E
EMURU 221535N 0584950E

UM300 (CALICUT) CLC
LOTAV 2037N 0605700E
EMURU 221535N 0584950E

M301 PURAD 145500N 0415354E
SANA’A (SAA)
ITOLI 152825N 0450927E
ASMAK162327N 0524634E

M301 PURAD 145500N 0415354E
SANA’A (SAA)
ITOLI 152825N 0450927E
ASMAK162327N 0524634E

M303 MCT 233528N 0581536E
*Note 7 (OO)
SEVLA 233321N 0591122E
KIPOL230410N 0612903E

M303 MCT 233528N 0581536E
*Note 7 (OO)
SEVLA 233321N 0591122E
KIPOL230410N 0612903E

M305 BRN 3134.5N 02600.3E
ATMUL 200000N 2905.4E
*Note 3 (HE)

M305 BRN 3134.5N 02600.3E
ATMUL 200000N 2905.4E
*Note 3 (HE)

M312 DBA 3100.7N 02828.0E
AMIBO 3456.7N 2136.4E
*Note 3 (HE)

M312 DBA 3100.7N 02828.0E
AMIBO 3456.7N 2136.4E
*Note 3 (HE)

M316 KANAS 251552N 0574700E
GOKSO 265542N 0604012E

M316 KANAS 251552N 0574700E
GOKSO 265542N 0604012E

*Note 7 (OO)
*Note 3 (HE)
*Note 3 (HE)

Version: 24 April 2013
<table>
<thead>
<tr>
<th>M318</th>
<th>DARAX 260942N 0555300E</th>
<th>UM318</th>
<th>DARAX 260942N 0555300E</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Note 8 (DARAX-MUXIT)</td>
<td></td>
<td>*Note 8 (DARAX-MUXIT)</td>
</tr>
<tr>
<td></td>
<td>SERSA 251945N 0553118E</td>
<td></td>
<td>SERSA 251945N 0553118E</td>
</tr>
<tr>
<td></td>
<td>MIADA 245112N 0545736E</td>
<td></td>
<td>MIADA 245112N 0545736E</td>
</tr>
<tr>
<td></td>
<td>ABU DHABI (ADV) 242508N 0544023E</td>
<td></td>
<td>ABU DHABI (ADV) 242508N 0544023E</td>
</tr>
<tr>
<td></td>
<td>ATUDO 241708N 0543532E</td>
<td></td>
<td>ATUDO 241708N 0543532E</td>
</tr>
<tr>
<td></td>
<td>MUSEN 241429N 0543336E</td>
<td></td>
<td>MUSEN 241429N 0543336E</td>
</tr>
<tr>
<td></td>
<td>GOLGU 231151N 0523109E</td>
<td></td>
<td>GOLGU 231151N 0523109E</td>
</tr>
<tr>
<td></td>
<td>MUXIT 230230N 0523024E</td>
<td></td>
<td>MUXIT 230230N 0523024E</td>
</tr>
<tr>
<td></td>
<td>KITAP 224928N 0522923E</td>
<td></td>
<td>KITAP 224928N 0522923E</td>
</tr>
<tr>
<td></td>
<td>PURDA 210805N 0510329E</td>
<td></td>
<td>PURDA 210805N 0510329E</td>
</tr>
<tr>
<td></td>
<td>SHARURAH (SHA)</td>
<td></td>
<td>SHARURAH (SHA)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M320</th>
<th>KING FAHD (KFA)</th>
<th>UM320</th>
<th>KING FAHD (KFA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>KODAG 2703.3N 04920.4E</td>
<td></td>
<td>KODAG 2703.3N 04920.4E</td>
</tr>
<tr>
<td></td>
<td>RAS</td>
<td></td>
<td>RAS</td>
</tr>
<tr>
<td></td>
<td>ASVIR 283220N 0482220E</td>
<td></td>
<td>ASVIR 283220N 0482220E</td>
</tr>
<tr>
<td></td>
<td>KUWAIT (KUA)</td>
<td></td>
<td>KUWAIT (KUA)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M321</th>
<th>HALAIFA 262602N 0391609E (HLF)</th>
<th>UM321</th>
<th>HALAIFA 262602N 0391609E (HLF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROSUL 2539.7N 04215.3E</td>
<td></td>
<td>ROSUL 2539.7N 04215.3E</td>
</tr>
<tr>
<td></td>
<td>OVEKU 2509.9 04457.0E</td>
<td></td>
<td>OVEKU 2509.9 04457.0E</td>
</tr>
<tr>
<td></td>
<td>KING KHALED (KIA)</td>
<td></td>
<td>KING KHALED (KIA)</td>
</tr>
<tr>
<td></td>
<td>RESAL 240649N 0470427E</td>
<td></td>
<td>RESAL 240649N 0470427E</td>
</tr>
<tr>
<td></td>
<td>AMBAG 230529N 0474611E</td>
<td></td>
<td>AMBAG 230529N 0474611E</td>
</tr>
<tr>
<td></td>
<td>ALRIK 220631N 0482525E</td>
<td></td>
<td>ALRIK 220631N 0482525E</td>
</tr>
<tr>
<td></td>
<td>NONGA 205048N 0492014E</td>
<td></td>
<td>NONGA 205048N 0492014E</td>
</tr>
<tr>
<td></td>
<td>ASTIN 200410N 0495320E</td>
<td></td>
<td>ASTIN 200410N 0495320E</td>
</tr>
<tr>
<td></td>
<td>SILPA 184953N 0510158E</td>
<td></td>
<td>SILPA 184953N 0510158E</td>
</tr>
<tr>
<td></td>
<td>IMPOS 183136N 0511848E</td>
<td></td>
<td>IMPOS 183136N 0511848E</td>
</tr>
<tr>
<td></td>
<td>LOTEL 180926N 0514103E</td>
<td></td>
<td>LOTEL 180926N 0514103E</td>
</tr>
<tr>
<td></td>
<td>PUTRA 165432N 0525631E</td>
<td></td>
<td>PUTRA 165432N 0525631E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M425</th>
<th>SILKO 3347.9N 03435.0E</th>
<th>UM425</th>
<th>SILKO 3347.9N 03435.0E</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAK</td>
<td></td>
<td>CAK</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M428</th>
<th>RIKET 251859N 0560200E</th>
<th>UM428</th>
<th>RIKET 251859N 0560200E</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Note 7/8 (OO/OM)</td>
<td></td>
<td>*Note 7/8 (OO/OM)</td>
</tr>
<tr>
<td></td>
<td>GOMTA 251115N 0563447E</td>
<td></td>
<td>GOMTA 251115N 0563447E</td>
</tr>
<tr>
<td></td>
<td>TARBO 244351N 0574637E</td>
<td></td>
<td>TARBO 244351N 0574637E</td>
</tr>
<tr>
<td></td>
<td>MUNGA 242516N 0584533E</td>
<td></td>
<td>MUNGA 242516N 0584533E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M430</th>
<th>*Note 5 (KIA-DOH)</th>
<th>UM430</th>
<th>*Note 5 (KIA-DOH)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>KING KHALID (KIA)</td>
<td></td>
<td>KING KHALID (KIA)</td>
</tr>
<tr>
<td></td>
<td>KOBX 250716N 0475046E</td>
<td></td>
<td>KOBX 250716N 0475046E</td>
</tr>
<tr>
<td></td>
<td>KIRE 251447.0N 0490724.0E</td>
<td></td>
<td>KIRE 251447.0N 0490724.0E</td>
</tr>
<tr>
<td></td>
<td>*Note 8 (KIRE-TOSNA)</td>
<td></td>
<td>*Note 8 (KIRE-TOSNA)</td>
</tr>
<tr>
<td></td>
<td>HAS 2516.7N 04929E</td>
<td></td>
<td>HAS 2516.7N 04929E</td>
</tr>
<tr>
<td></td>
<td>LAGNO 251613N 0511518E</td>
<td></td>
<td>LAGNO 251613N 0511518E</td>
</tr>
<tr>
<td></td>
<td>DOHA (DOH)</td>
<td></td>
<td>DOHA (DOH)</td>
</tr>
<tr>
<td></td>
<td>*Note 7 (DOH-KISAG)</td>
<td></td>
<td>*Note 7 (DOH-KISAG)</td>
</tr>
<tr>
<td></td>
<td>TOSNA 251612N 0524116E</td>
<td></td>
<td>TOSNA 251612N 0524116E</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
### Note 5 (OE, OB)

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>M434</td>
<td>UMESA</td>
<td>351741N</td>
<td>0434307E</td>
</tr>
<tr>
<td></td>
<td>OTALO</td>
<td>351700N</td>
<td>0441900E</td>
</tr>
<tr>
<td></td>
<td>IVANO</td>
<td>351724N</td>
<td>0451235E</td>
</tr>
<tr>
<td></td>
<td>BOXIX</td>
<td>351724N</td>
<td>0469021E</td>
</tr>
<tr>
<td></td>
<td>ALSAX</td>
<td>351607N</td>
<td>0463118E</td>
</tr>
<tr>
<td></td>
<td>SANANDAJ (SNJ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HAMDAN (HAM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAVEH (SAV)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM434</td>
<td>UMESA</td>
<td>351741N</td>
<td>0434307E</td>
</tr>
<tr>
<td></td>
<td>OTALO</td>
<td>351700N</td>
<td>0441900E</td>
</tr>
<tr>
<td></td>
<td>IVANO</td>
<td>351724N</td>
<td>0451235E</td>
</tr>
<tr>
<td></td>
<td>BOXIX</td>
<td>351724N</td>
<td>0469021E</td>
</tr>
<tr>
<td></td>
<td>ALSAX</td>
<td>351607N</td>
<td>0463118E</td>
</tr>
<tr>
<td></td>
<td>SANANDAJ (SNJ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HAMDAN (HAM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAVEH (SAV)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Note 7 (OM) *Note & 8 to MIDSI (OM)

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>M449</td>
<td>BUSRA</td>
<td>322000N</td>
<td>0363700E</td>
</tr>
<tr>
<td></td>
<td>MAZAR</td>
<td>3048.0N</td>
<td>03610.0E</td>
</tr>
<tr>
<td></td>
<td>GIBET</td>
<td>2926.3N</td>
<td>03625.0E</td>
</tr>
<tr>
<td></td>
<td>TABUK</td>
<td>171612N</td>
<td>0554715E</td>
</tr>
<tr>
<td></td>
<td>WEJH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM449</td>
<td>BUSRA</td>
<td>322000N</td>
<td>0363700E</td>
</tr>
<tr>
<td></td>
<td>MAZAR</td>
<td>3048.0N</td>
<td>03610.0E</td>
</tr>
<tr>
<td></td>
<td>GIBET</td>
<td>2926.3N</td>
<td>03625.0E</td>
</tr>
<tr>
<td></td>
<td>TABUK</td>
<td>171612N</td>
<td>0554715E</td>
</tr>
<tr>
<td></td>
<td>WEJH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Note 7 (OM) *Note & 8 to MIDSI (OM)

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>M551</td>
<td>KIVEL</td>
<td>165306N</td>
<td>0553633E</td>
</tr>
<tr>
<td></td>
<td>DAXAM</td>
<td>171612N</td>
<td>0544715E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM551</td>
<td>KIVEL</td>
<td>165306N</td>
<td>0553633E</td>
</tr>
<tr>
<td></td>
<td>DAXAM</td>
<td>171612N</td>
<td>0544715E</td>
</tr>
</tbody>
</table>

### Note 7 (OM) *Note & 8 to MIDSI (OM)

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>M557</td>
<td>ATBOR</td>
<td>251007N</td>
<td>0551947E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM557</td>
<td>ATBOR</td>
<td>251007N</td>
<td>0551947E</td>
</tr>
</tbody>
</table>

### Note 7 (OM) *Note & 8 to MIDSI (OM)

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>M559</td>
<td>LABNI</td>
<td>165620N</td>
<td>0410921E</td>
</tr>
<tr>
<td></td>
<td>NISMI</td>
<td>162415N</td>
<td>0421838E</td>
</tr>
<tr>
<td></td>
<td>ITOLI</td>
<td>152825N</td>
<td>0450927E</td>
</tr>
<tr>
<td></td>
<td>MUKALLA (RIN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VEDET</td>
<td>120134N</td>
<td>0512410E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM559</td>
<td>LABNI</td>
<td>165620N</td>
<td>0410921E</td>
</tr>
<tr>
<td></td>
<td>NISMI</td>
<td>162415N</td>
<td>0421838E</td>
</tr>
<tr>
<td></td>
<td>ITOLI</td>
<td>152825N</td>
<td>0450927E</td>
</tr>
<tr>
<td></td>
<td>MUKALLA (RIN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VEDET</td>
<td>120134N</td>
<td>0512410E</td>
</tr>
</tbody>
</table>

### Note 6 (OE, OB)

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>M561</td>
<td>KISH</td>
<td>2645.3N</td>
<td>05609.8E</td>
</tr>
<tr>
<td></td>
<td>MOBET</td>
<td>265724N</td>
<td>0631812E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM561</td>
<td>KISH</td>
<td>2645.3N</td>
<td>05609.8E</td>
</tr>
<tr>
<td></td>
<td>MOBET</td>
<td>265724N</td>
<td>0631812E</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
<table>
<thead>
<tr>
<th>PANJGUR (PG)</th>
<th>PANJGUR (PG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM573</td>
<td>UM749</td>
</tr>
<tr>
<td>TEHERAN (TRN)</td>
<td>MALE) (MLE)</td>
</tr>
<tr>
<td>TABRIZ (TBZ)</td>
<td>(POPET) 0713.7N06813.6E</td>
</tr>
<tr>
<td></td>
<td>NABIL 1222.0E0600.0E</td>
</tr>
<tr>
<td></td>
<td>RIGAM 143932N 0530414E</td>
</tr>
<tr>
<td></td>
<td>NOBSU 171554N 0431318E</td>
</tr>
</tbody>
</table>

M600

<table>
<thead>
<tr>
<th>PANJGUR (PG)</th>
<th>PANJGUR (PG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RANBI 251908N 0544500E</td>
<td>RANBI 251908N 0544500E</td>
</tr>
<tr>
<td>KISAG 251834N 0541408E</td>
<td>KISAG 251834N 0541408E</td>
</tr>
<tr>
<td>SINGU 253706N 052570E</td>
<td>SINGU 253706N 052570E</td>
</tr>
<tr>
<td>NOBLA 255111N 0522740E</td>
<td>NOBLA 255111N 0522740E</td>
</tr>
<tr>
<td>TOLBI 262134N 0512301E</td>
<td>TOLBI 262134N 0512301E</td>
</tr>
<tr>
<td>RULEX 264529N 0501745E</td>
<td>RULEX 264529N 0501745E</td>
</tr>
<tr>
<td>TUMAK 255031N 0531108E</td>
<td>TUMAK 255031N 0531108E</td>
</tr>
</tbody>
</table>

*Note 7 & 8 to KUMBO

<table>
<thead>
<tr>
<th>PANJGUR (PG)</th>
<th>PANJGUR (PG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEDOM 260109N 0524456E</td>
<td>VEDOM 260109N 0524456E</td>
</tr>
<tr>
<td>VELAK 261307N 0521821E</td>
<td>VELAK 261307N 0521821E</td>
</tr>
<tr>
<td>ALTOM 262230N 0515639E</td>
<td>ALTOM 262230N 0515639E</td>
</tr>
<tr>
<td>DASOS 262430N 0515043E</td>
<td>DASOS 262430N 0515043E</td>
</tr>
<tr>
<td>ALMOK 262832N 0513840E</td>
<td>ALMOK 262832N 0513840E</td>
</tr>
<tr>
<td>VEDOS 264106N 0510045E</td>
<td>VEDOS 264106N 0510045E</td>
</tr>
<tr>
<td>MEMKO 264611N 0504427E</td>
<td>MEMKO 264611N 0504427E</td>
</tr>
<tr>
<td>RAKAK 265221N 0502618E</td>
<td>RAKAK 265221N 0502618E</td>
</tr>
<tr>
<td>RAMSI 270249N 0500714E</td>
<td>RAMSI 270249N 0500714E</td>
</tr>
<tr>
<td>ALVUN 271028N 0494455E</td>
<td>ALVUN 271028N 0494455E</td>
</tr>
<tr>
<td>SOLEM 275229N 0491136E</td>
<td>SOLEM 275229N 0491136E</td>
</tr>
<tr>
<td>KUMBO 281705N 0485526E</td>
<td>KUMBO 281705N 0485526E</td>
</tr>
</tbody>
</table>

M628

<table>
<thead>
<tr>
<th>PANJGUR (PG)</th>
<th>PANJGUR (PG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUDID 230227N 0551800E</td>
<td>LUDID 230227N 0551800E</td>
</tr>
<tr>
<td>LABSA 230153N 0555505E</td>
<td>LABSA 230153N 0555505E</td>
</tr>
<tr>
<td>EGVAN 230127N 0561907E</td>
<td>EGVAN 230127N 0561907E</td>
</tr>
<tr>
<td>TULBU 230005N 0571827E</td>
<td>TULBU 230005N 0571827E</td>
</tr>
<tr>
<td>IZK 225318.60N 0574542.73E</td>
<td>IZK 225318.60N 0574542.73E</td>
</tr>
<tr>
<td>TOLDA 224008N 0583624E</td>
<td>TOLDA 224008N 0583624E</td>
</tr>
<tr>
<td>LOXOP 223722N 0594548E</td>
<td>LOXOP 223722N 0594548E</td>
</tr>
<tr>
<td>LADAP 223513N 0603238E</td>
<td>LADAP 223513N 0603238E</td>
</tr>
<tr>
<td>IVOMA 223408N 0605430E</td>
<td>IVOMA 223408N 0605430E</td>
</tr>
<tr>
<td>PARAR 222630N 0630700E</td>
<td>PARAR 222630N 0630700E</td>
</tr>
</tbody>
</table>

M634

<table>
<thead>
<tr>
<th>PANJGUR (PG)</th>
<th>PANJGUR (PG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANGAL 161406N 0600006E</td>
<td>ANGAL 161406N 0600006E</td>
</tr>
<tr>
<td>VEDET 120134N 0512410E</td>
<td>VEDET 120134N 0512410E</td>
</tr>
<tr>
<td>DAROT 0911.4N 04721.2E</td>
<td>DAROT 0911.4N 04721.2E</td>
</tr>
</tbody>
</table>

M651

<table>
<thead>
<tr>
<th>PANJGUR (PG)</th>
<th>PANJGUR (PG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATBOT 171418N 0464706E</td>
<td>ATBOT 171418N 0464706E</td>
</tr>
<tr>
<td>ADEN (KRA)</td>
<td>ADEN (KRA)</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
<table>
<thead>
<tr>
<th>Component</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>M677</td>
<td>SESRA 2908.0N 04854.9E</td>
</tr>
<tr>
<td></td>
<td>*Note 7 to OBNET</td>
</tr>
<tr>
<td></td>
<td>RABAP 283625N 0492722E</td>
</tr>
<tr>
<td></td>
<td>*Note 8 (RABAP-OBNET)</td>
</tr>
<tr>
<td></td>
<td>GEVAL 282101N 0494300E</td>
</tr>
<tr>
<td></td>
<td>UMAMA 265831N 0504648E</td>
</tr>
<tr>
<td></td>
<td>GOGMA 281421N 0495612E</td>
</tr>
<tr>
<td></td>
<td>VEDOR 270855N 0504630E</td>
</tr>
<tr>
<td></td>
<td>TOSDA 270005N 0505629E</td>
</tr>
<tr>
<td></td>
<td>TORBO 265223N 0511024E</td>
</tr>
<tr>
<td></td>
<td>SOGAN 263915N 0515408E</td>
</tr>
<tr>
<td></td>
<td>DEGSO 261054N 0531946E</td>
</tr>
<tr>
<td></td>
<td>OBNET 260032N 0534514E</td>
</tr>
<tr>
<td>M681</td>
<td>TARBO 244351N 0574637E</td>
</tr>
<tr>
<td></td>
<td>*Note 7/8 (OO)</td>
</tr>
<tr>
<td></td>
<td>DAMUM 243236N 0591307E</td>
</tr>
<tr>
<td>M686</td>
<td>LUXOR (LXR)</td>
</tr>
<tr>
<td>MEMPO</td>
<td>252518N 0335457E</td>
</tr>
<tr>
<td>GIBAL</td>
<td>243712N 0363442E</td>
</tr>
<tr>
<td>KING</td>
<td>ABDULAZIZ (JDW)</td>
</tr>
<tr>
<td>UM688</td>
<td>CRM</td>
</tr>
<tr>
<td>GULRA</td>
<td></td>
</tr>
<tr>
<td>ERN</td>
<td></td>
</tr>
<tr>
<td>EVSAS</td>
<td></td>
</tr>
<tr>
<td>BAYIR</td>
<td>383541N 0412414E</td>
</tr>
<tr>
<td>ULTED</td>
<td></td>
</tr>
<tr>
<td>OTKEP</td>
<td></td>
</tr>
<tr>
<td>NINVA</td>
<td>372100N 0431300E</td>
</tr>
<tr>
<td>ROXOP</td>
<td>364917N 0433100E</td>
</tr>
<tr>
<td>VUSEB</td>
<td>361637N 0434800E</td>
</tr>
<tr>
<td>OTALO</td>
<td>351700N 0441900E</td>
</tr>
<tr>
<td>RIDIP</td>
<td>343012N 0444027E</td>
</tr>
<tr>
<td>UKMUG</td>
<td>334300N 0450329E</td>
</tr>
<tr>
<td>VAXEN</td>
<td>331800N 0451000E</td>
</tr>
<tr>
<td>PAPUS</td>
<td>325334N 0452706E</td>
</tr>
<tr>
<td>DENKI</td>
<td>322228N 0455121E</td>
</tr>
<tr>
<td>ILMAP</td>
<td>312133N 0465702E</td>
</tr>
<tr>
<td>PEBAD</td>
<td>305023N 0472958E</td>
</tr>
<tr>
<td>SIDAD</td>
<td>295231N 0482944E</td>
</tr>
<tr>
<td>UM690</td>
<td>ZELAF 325656N 0371121E</td>
</tr>
<tr>
<td>DESLI</td>
<td>314921N 0365909E</td>
</tr>
<tr>
<td>ELOXI</td>
<td>313359N 0364536E</td>
</tr>
<tr>
<td>KULDI</td>
<td>311847N 0363148E</td>
</tr>
<tr>
<td>MAZAR</td>
<td>3048.0N 3610.0E</td>
</tr>
<tr>
<td>METSA</td>
<td>2927.0N 3459.0E</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Code</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>M691</td>
<td>DEDAS 2630.2N 05014.4E</td>
<td>UM691</td>
<td>DEDAS 2630.2N 05014.4E</td>
</tr>
<tr>
<td></td>
<td>KING FAHAD</td>
<td></td>
<td>KING FAHAD</td>
</tr>
<tr>
<td></td>
<td>KUSAR 264741N 0490218E</td>
<td></td>
<td>KUSAR 264741N 0490218E</td>
</tr>
<tr>
<td></td>
<td>KEDAT 2721.8N 04759.0E</td>
<td></td>
<td>KEDAT 2721.8N 04759.0E</td>
</tr>
<tr>
<td></td>
<td>ITIXI 275031N 0470435E</td>
<td></td>
<td>ITIXI 275031N 0470435E</td>
</tr>
<tr>
<td>M762</td>
<td>REXOD 211230N 0613830E</td>
<td></td>
<td>REXOD 211230N 0613830E</td>
</tr>
<tr>
<td></td>
<td>SUR 223159N 0592829E</td>
<td></td>
<td>SUR 223159N 0592829E</td>
</tr>
<tr>
<td></td>
<td>ITURA 232351N 0580720E</td>
<td></td>
<td>ITURA 232351N 0580720E</td>
</tr>
<tr>
<td></td>
<td>ALMOG 233524N 0574940E</td>
<td></td>
<td>ALMOG 233524N 0574940E</td>
</tr>
<tr>
<td></td>
<td>TAPRA 242607N 0563803E</td>
<td></td>
<td>TAPRA 242607N 0563803E</td>
</tr>
<tr>
<td></td>
<td>VAXAS 244308N 0561807E</td>
<td></td>
<td>VAXAS 244308N 0561807E</td>
</tr>
<tr>
<td></td>
<td>* Note 7 (OM, OO)</td>
<td></td>
<td>* Note 7 (OM, OO)</td>
</tr>
<tr>
<td></td>
<td>BUBIN 245742N 0560642E</td>
<td></td>
<td>BUBIN 245742N 0560642E</td>
</tr>
<tr>
<td>M860</td>
<td>KUGOS 4246.8N 03405.3E</td>
<td>UM860</td>
<td>KUGOS 4246.8N 03405.3E</td>
</tr>
<tr>
<td></td>
<td>SINOP (SIN)</td>
<td></td>
<td>SINOP (SIN)</td>
</tr>
<tr>
<td></td>
<td>CARSAMBA (CRM)</td>
<td></td>
<td>CARSAMBA (CRM)</td>
</tr>
<tr>
<td></td>
<td>SRT 3754.6N 04152.9E</td>
<td></td>
<td>SRT 3754.6N 04152.9E</td>
</tr>
<tr>
<td></td>
<td>KABAN 371456N 0423859E</td>
<td></td>
<td>KABAN 371456N 0423859E</td>
</tr>
<tr>
<td></td>
<td>EMIDO 364411N 0425600E</td>
<td></td>
<td>EMIDO 364411N 0425600E</td>
</tr>
<tr>
<td></td>
<td>SEVKU 360548N 0431716E</td>
<td></td>
<td>SEVKU 360548N 0431716E</td>
</tr>
<tr>
<td></td>
<td>UMESLA 351741N 0434307E</td>
<td></td>
<td>UMESLA 351741N 0434307E</td>
</tr>
<tr>
<td></td>
<td>TAGRU 342959N 0440817E</td>
<td></td>
<td>TAGRU 342959N 0440817E</td>
</tr>
<tr>
<td></td>
<td>PUTSI 333200N 0443700E</td>
<td></td>
<td>PUTSI 333200N 0443700E</td>
</tr>
<tr>
<td></td>
<td>ITOVA 331951N 044429E</td>
<td></td>
<td>ITOVA 331951N 044429E</td>
</tr>
<tr>
<td></td>
<td>SEPTU 331300N 0444400E</td>
<td></td>
<td>SEPTU 331300N 0444400E</td>
</tr>
<tr>
<td></td>
<td>LONOR 323839N 0450458E</td>
<td></td>
<td>LONOR 323839N 0450458E</td>
</tr>
<tr>
<td></td>
<td>ULIMA 321500N 0451600E</td>
<td></td>
<td>ULIMA 321500N 0451600E</td>
</tr>
<tr>
<td></td>
<td>ITBIT 314735N 0452917E</td>
<td></td>
<td>ITBIT 314735N 0452917E</td>
</tr>
<tr>
<td></td>
<td>RUGIR 303219N 0460618E</td>
<td></td>
<td>RUGIR 303219N 0460618E</td>
</tr>
<tr>
<td></td>
<td>MOBIS 295109N 0470457E</td>
<td></td>
<td>MOBIS 295109N 0470457E</td>
</tr>
<tr>
<td>M863</td>
<td>KING ABDULAZIZ (JDW)</td>
<td>UM863</td>
<td>KING ABDUL AZIZ (JDW)</td>
</tr>
<tr>
<td></td>
<td>214237N 0390948E</td>
<td></td>
<td>214237N 0390948E</td>
</tr>
<tr>
<td></td>
<td>GIBAP 212218N 0380931E</td>
<td></td>
<td>GIBAP 212218N 0380931E</td>
</tr>
<tr>
<td></td>
<td>TOMRU 204411N 0361950E</td>
<td></td>
<td>TOMRU 204411N 0361950E</td>
</tr>
<tr>
<td></td>
<td>ASKOL 1548.9N 02400.1E</td>
<td></td>
<td>ASKOL 1548.9N 02400.1E</td>
</tr>
<tr>
<td></td>
<td>KITOB 1521.7N 02258.8E</td>
<td></td>
<td>KITOB 1521.7N 02258.8E</td>
</tr>
<tr>
<td></td>
<td>IPONO 150621N 0222436E</td>
<td></td>
<td>IPONO 150621N 0222436E</td>
</tr>
<tr>
<td></td>
<td>N’DJAMENA (FL) 1208.5N 01502.3E</td>
<td></td>
<td>N’DJAMENA (FL) 1208.5N 01502.3E</td>
</tr>
<tr>
<td>M872</td>
<td>PLH 3513.7N 02340.9E</td>
<td>UM872</td>
<td>PLH 3513.7N 02340.9E</td>
</tr>
<tr>
<td></td>
<td>*Note 7 (PLH-DBA)</td>
<td></td>
<td>*Note 7 (PLH-DBA)</td>
</tr>
<tr>
<td></td>
<td>METRU 340000N 0250900E</td>
<td></td>
<td>METRU 340000N 0250900E</td>
</tr>
<tr>
<td></td>
<td>KANAR 322727N 0265330E</td>
<td>�</td>
<td>KANAR 322727N 0265330E</td>
</tr>
<tr>
<td></td>
<td>EL DABA (DBA) 310041N 0282801E</td>
<td></td>
<td>EL DABA (DBA) 310041N 0282801E</td>
</tr>
<tr>
<td></td>
<td>FYM 2923.8N 03023.6E</td>
<td></td>
<td>FYM 2923.8N 03023.6E</td>
</tr>
<tr>
<td></td>
<td>*Note 7 (FYM-SEMIRU)</td>
<td></td>
<td>*Note 7 (FYM-SEMIRU)</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
SEMRU 280200N 0320306E
HURGHADA (HGD)
*Note 7 (HGD-WEJ)
SILKA 263400N 0352900E
WEJH (WEJ) 261046N 0362917E
KODIN 2517.9N 03836.2E
MADINAH (PMA)
*Note 7 (PMA-MIDSI)
BIR DARAB (BDB)
AL DAWADMI (DAW)
KING KHALID (KIA)
AKRAM 255036N 0475133E
*Note 8 to MIDSI
ALMAL 261553N 0482108E
DAVRI 264936N 0505732E
LOTIT 264856N 0511237E
MIDSI 264142N 0515442E

UM877 VUSET 235540N 0590812E
ITILA 234015N 0584817E
KUSRA 232426N 0582611E

M999 GS
DITAR 265903N 0250000E
KHG
KUNAK (LUXOR) LXR
DEDLI 2242 32N 03737 19E
IMLER 221706N 0381653E
KING ABDULAZIZ (JDW)
TOKTO 194421N 00395945E
DANAK 1608.0N 04129.0E (ASSAB) SB

N300 DOH 2514N 05134.6E
*Note 7 & 8 to TONVO
NAMLA 2505.5N 05233.3E
*Note 7/8 (OM)
BOXAK 244536N 0540032E
MIADA 245112N 0545736E
TONVO 250500N 0563200E

N302 SIDAD 295231N 0482944E
ALVIX 291915N 0482944E

N303 (HARGEISA) HARGA
PARIM 1231.7N 04327.2E
RIBOK1547N 04152.5E
LABNI 1656.3N 04109.4E

N307 MILADMELDO 320201N 0310406E
LAKTO 323800N 0320500E

Version: 24 April 2013
| N310 | BALMA 342856N 0350302E  
     | CAK 341802N 0354200E  
     | LATEB 3401.9N 03624.1E  
     | BASEM 3333.6N 03739.1E  |
| UN310 | BALMA 342856N 0350302E  
      | CAK 341802N 0354200E  
      | LATEB 3401.9N 03624.1E  
      | BASEM 3333.6N 03739.1E  |
| UN315 | ASPUX 174406N 0600006E  
      | KUTVI 184306N 0582642E  
      | Note: 7 (OO/OB)  
      | SITOL 211604N 0552514E  
      | LOTSOS 220000N 0503912E  
      | RAPMA 232256N 0482028E  
      | RESAL 240649N 0470427E  
      | KING KHALED (KIA) |
| UN316 | HALAIFA (HLF) 262603N 0391609E  
      | PASAM 273045N 0345542E |
| N318 | QAA 314423N 0360926E  
      | ALNOR 313955N 0362507E  
      | KINUR 313626N 0363714E  
      | ELOXI 313359N 0364536E  
      | GENEX 3129.6N 03700.9E  
      | ORKAS 3047.4N 03846.3E  
      | NEVOL 3024.7N 03938.6E  
      | VELAL2946.0N 04038.4E  
      | TAMRO 2838.6N 04240.8E  
      | * Note 7 (OE, OB, OM, OO)  
      | MOGON 2738.8N 04445.9E  
      | TAGSO 272744N 0454510E  
      | *Note 8 (OB, OO)  
      | EGNOV 270301N 0474713E  
      | KUSAR 264741N 0490218E  
      | ASPAN 263255N 0494903E  
      | MEMBO 262425N 0504732E  
      | DEDAS 263011N 0501427E  
      | ASTAD 261812N 0505646E  
      | VUTAN 2655016N 0515218E  
      | RESAR 253707N 0522328E  
      | UMABA 252703N 0524322E  
      | OVONA 252433N 0524739E  
      | VATEL 255520N 0515352E  
      | * Note 7 (OM/OO)  
      | (segment LOXAT - REXOD)  
      | KATIK 2517.1N 05315.2E  
      | KANIP 2410.7N 05520.7E  
      | LABRI 240344N 0553842E  
      | * Note 8 (OO)  
      | EGROK 235253N 0560126E  
      | LAKLU 232235N 0570401E  
      | GEVED 230105N 0575111E  
      | TOLDA 223720N 0583503E  
      | REXOD 211230N 0613830E  
      | * Note 7 (OM/OO)  
      | (segment LOXAT-REXOD)  
      | KATIK 2517.1N 05315.2E  
      | KANIP 2410.7N 05520.7E  
      | LABRI 240344N 0553842E  
      | * Note 8 (OO)  
      | EGROK 235253N 0560126E  
      | LAKLU 232235N 0570401E  
      | GEVED 230105N 0575111E  
      | TOLDA 223720N 0583503E  
      | REXOD 211230N 0613830E  

**Version:** 24 April 2013
<table>
<thead>
<tr>
<th>UN319</th>
<th>ZAHEDAN (ZDN) TABAS (TBS) DASHT-E-NAZ (DNZ) ULDUS- 3800.0N 05101.0E LUSAL 4035.0N 04757.0E ADEKI 4117.8N 04645.0E TBLIS (TBS) MUKHARANI (DF) ALI (BT) LOBIN 4210.9N 04306.4E IBERI 4209.6N 04143.3E</th>
</tr>
</thead>
<tbody>
<tr>
<td>N324</td>
<td>PURDA 210805N 0510329E GOBRO 193622N 0534741E ASTUN 180832N 0551040E</td>
</tr>
<tr>
<td>UN324</td>
<td>PURDA 210805N 0510329E GOBRO 193622N 0534741E ASTUN 180832N 0551040E</td>
</tr>
<tr>
<td>N430</td>
<td>TARBO 244351N 0574637E *Note 7/8 (OO) ITLOB 244325N 0590701E</td>
</tr>
<tr>
<td>UN430</td>
<td>TARBO 244351N 0574637E *Note 7/8 (OO) ITLOB 244325N 0590701E</td>
</tr>
<tr>
<td>N438</td>
<td>LITAN 333456N 0343758E KAD 334827N 0352910E CAK 341802N 0354200E RA 343510N 0360010E</td>
</tr>
<tr>
<td>UN438</td>
<td>LITAN 333456N 0343758E KAD 334827N 0352910E CAK 341802N 0354200E RA 343510N 0360010E</td>
</tr>
<tr>
<td>N440</td>
<td>MOBON 274414N 0552513E DARAX 260916N 0555307E</td>
</tr>
<tr>
<td>UN440</td>
<td>MOBON 274414N 0552513E DARAX 260916N 0555307E</td>
</tr>
<tr>
<td>N563</td>
<td>REXOD 211230N 0613830E *Note 8 (OB, OM) EMURU 221357N 0585338E TULBU 230005N 0571827E MEKNA 223309N 0560815E</td>
</tr>
<tr>
<td>UN563</td>
<td>REXOD 211230N 0613830E *Note 8 (OB, OM) EMURU 221357N 0585338E TULBU 230005N 0571827E MEKNA 223309N 0560815E</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
<table>
<thead>
<tr>
<th>Code</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>RULEX</td>
<td>26°45'29&quot;N</td>
<td>05°01'45&quot;E</td>
</tr>
<tr>
<td>SILNO</td>
<td>26°40'26&quot;N</td>
<td>04°57'45&quot;E</td>
</tr>
<tr>
<td>GIBUS</td>
<td>25°57'24&quot;N</td>
<td>04°47'28&quot;E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>RULEX</td>
<td>26°45'29&quot;N</td>
<td>05°01'45&quot;E</td>
</tr>
<tr>
<td>SILNO</td>
<td>26°40'26&quot;N</td>
<td>04°57'45&quot;E</td>
</tr>
<tr>
<td>GIBUS</td>
<td>25°57'24&quot;N</td>
<td>04°47'28&quot;E</td>
</tr>
</tbody>
</table>

**Note:** 7 & 8 (OB, OM, OO)

---

**MENSA 24°57'50"N 05°36'24"E**

**AVAMI 25°05'54"N 05°55'64"E**

**ATBOR 25°10'07"N 05°51'94"E**

**MUFLA 25°17'16"N 05°44'50"E**

**SENTO 25°19'08"N 05°44'50"E**

**ELUKU 25°29'10"N 05°35'61"E**

**ITROK 25°35'57"N 05°32'75"E**

**ALPOB 25°42'18"N 05°30'05"E**

**MEDMA 26°34'12"N 05°05'45"E**

**TOTLA 26°38'06"N 05°04'30"E**

**RULEX 26°45'29"N 05°01'45"E**

**SILNO 26°40'26"N 04°57'45"E**

**KUTEM 26°43'59"N 04°37'52"E**

**BOPAN VORMDE(BPN) 27°03'14"N 04°52'64"E**

**VAVIL 25°39'06"N 05°34'42"E**

**BALUS 25°45'54"N 05°30'42"E**
<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Coordinates</th>
<th>Code</th>
<th>Location</th>
<th>Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>N629</td>
<td>TARDI</td>
<td>243418N 0560915E</td>
<td>UN629</td>
<td>TARDI</td>
<td>243418N 0560915E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Note 7 (OO)</td>
<td></td>
<td></td>
<td>*Note 7 (OO)</td>
</tr>
<tr>
<td></td>
<td>NOSMI</td>
<td>241757N 0563002E</td>
<td></td>
<td>NOSMI</td>
<td>241757N 0563002E</td>
</tr>
<tr>
<td></td>
<td>MUSUK</td>
<td>234320N 0572148E</td>
<td></td>
<td>MUSUK</td>
<td>234320N 0572148E</td>
</tr>
<tr>
<td></td>
<td>GEPOT</td>
<td>231446N 0580053E</td>
<td></td>
<td>GEPOT</td>
<td>231446N 0580053E</td>
</tr>
<tr>
<td></td>
<td>GIDAN</td>
<td>230104N 0582232E</td>
<td></td>
<td>GIDAN</td>
<td>230104N 0582232E</td>
</tr>
<tr>
<td></td>
<td>TOTOX</td>
<td>215030N 0622230E</td>
<td></td>
<td>TOTOX</td>
<td>215030N 0622230E</td>
</tr>
<tr>
<td>N638</td>
<td>KING KHALED (KIA)</td>
<td>OVEKU 250955N 0445701E MADINAH (PMA)</td>
<td>UN638</td>
<td>KING KHALED (KIA)</td>
<td>OVEKU 250955N 0445701E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N685</td>
<td>TAGSO</td>
<td>272744N 0454510E</td>
<td>UN685</td>
<td>TAGSO</td>
<td>272744N 0454510E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Note 7 (TAGSO-KUSAR)</td>
<td></td>
<td></td>
<td>*Note 7 (TAGSO-KUSAR)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Note 8 (TAGSO-TOSNA)</td>
<td></td>
<td></td>
<td>*Note 8 (TAGSO-TOSNA)</td>
</tr>
<tr>
<td></td>
<td>DEBOL</td>
<td>272116N 0461843E</td>
<td></td>
<td>DEBOL</td>
<td>272116N 0461843E</td>
</tr>
<tr>
<td></td>
<td>TORTA</td>
<td>271906N 0462911E</td>
<td></td>
<td>TORTA</td>
<td>271906N 0462911E</td>
</tr>
<tr>
<td></td>
<td>ALSAT</td>
<td>270611N 0473118E</td>
<td></td>
<td>ALSAT</td>
<td>270611N 0473118E</td>
</tr>
<tr>
<td></td>
<td>EGNOV</td>
<td>270301N 0474713E</td>
<td></td>
<td>EGNOV</td>
<td>270301N 0474713E</td>
</tr>
<tr>
<td></td>
<td>KUSAR</td>
<td>264741N 0490218E</td>
<td></td>
<td>KUSAR</td>
<td>264741N 0490218E</td>
</tr>
<tr>
<td></td>
<td>KING FAHAD (KFA)</td>
<td>BAHRAIN (BAH) 261551N 0503856E</td>
<td></td>
<td>KING FAHAD (KFA)</td>
<td>BAHRAIN (BAH) 261551N 0503856E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASNIX 260452N 0510509E</td>
<td></td>
<td></td>
<td>ASNIX 260452N 0510509E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PATOM 255821N 0511836E</td>
<td></td>
<td></td>
<td>PATOM 255821N 0511836E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EMISA 254658N 0514207E</td>
<td></td>
<td></td>
<td>EMISA 254658N 0514207E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Note 7 to LAKLU</td>
<td></td>
<td></td>
<td>*Note 7 to LAKLU</td>
</tr>
<tr>
<td></td>
<td>KAPAX</td>
<td>254218N 0515118E</td>
<td></td>
<td>KAPAX</td>
<td>254218N 0515118E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LOXAT 252140N 0524523E</td>
<td></td>
<td></td>
<td>LOXAT 252140N 0524523E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ORSIS 252801N 0521636E</td>
<td></td>
<td></td>
<td>ORSIS 252801N 0521636E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOSNA 251612N 0524116E</td>
<td></td>
<td></td>
<td>TOSNA 251612N 0524116E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOPSI 250910N 0531200E</td>
<td></td>
<td></td>
<td>TOPSI 250910N 0531200E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BOXAK 244536N 0540032E</td>
<td></td>
<td></td>
<td>BOXAK 244536N 0540032E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ADV 242508N 0544024</td>
<td></td>
<td></td>
<td>ADV 242508N 0544024</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Note 7/8 (OO/OM)</td>
<td></td>
<td></td>
<td>*Note 7/8 (OO/OM)</td>
</tr>
<tr>
<td></td>
<td>RETAS</td>
<td>235754N 0553423E</td>
<td></td>
<td>RETAS</td>
<td>235754N 0553423E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Note 8 (OO)</td>
<td></td>
<td></td>
<td>*Note 8 (OO)</td>
</tr>
<tr>
<td></td>
<td>PUTSO</td>
<td>232037N 0565322E</td>
<td></td>
<td>PUTSO</td>
<td>232037N 0565322E</td>
</tr>
<tr>
<td></td>
<td>LAKLU</td>
<td>232235N 0570401E</td>
<td></td>
<td>LAKLU</td>
<td>232235N 0570401E</td>
</tr>
<tr>
<td>N687</td>
<td>KING KHALID (KIA)</td>
<td>KINIB 254108N 0482317E</td>
<td>UN687</td>
<td>KING KHALID (KIA)</td>
<td>KINIB 254108N 0482317E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Note 5 &amp; 7 &amp; 8</td>
<td></td>
<td></td>
<td>*Note 5 &amp; 7 &amp; 8</td>
</tr>
<tr>
<td></td>
<td>KING FAHAD (KFA)</td>
<td>MUTAR 263611N 0500627E</td>
<td></td>
<td>KING FAHAD (KFA)</td>
<td>MUTAR 263611N 0500627E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MEMKO 264611N 0504427E</td>
<td></td>
<td></td>
<td>MEMKO 264611N 0504427E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DAVRI 264936N 0505732E</td>
<td></td>
<td></td>
<td>DAVRI 264936N 0505732E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TORBO 265223N 0511024E</td>
<td></td>
<td></td>
<td>TORBO 265223N 0511024E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Notes5</td>
<td></td>
<td></td>
<td>Notes5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note 7 above FL250</td>
<td></td>
<td></td>
<td>Note 7 above FL250</td>
</tr>
<tr>
<td>N694</td>
<td>KING KHALD (KIA)</td>
<td>TORKI 261400N 0463103E</td>
<td>UN694</td>
<td>KING KHALD (KIA)</td>
<td>TORKI 261400N 0463103E</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
ARN TF/6-REPORT
APPENDIX 3A

SIBLI 265459N 0462334E
AKODI 275012N 0461320E
HAFR AL BATIN 281949N 0460746E

N697
MENLI 2947.0N 03152.1E
SISIK 2936.0N 03241.0E
NUWEIBAA (NWB)
* Note 7 (NWB-KITOT below FL350)
KITOT 2902.1N 03450.8E
*Note 7 (OE)
SOBAS 2756.0N 03904.9E
HAIL (HIL)
*Note 7 (HIL–KFA)
BPN 2703.2N 04526.7E
*Note 8 (BPN-TORBO)
KING FAHD (KFA)
BAHRAIN (BAH)
*Note 7-Bahrain-
LOTIT 264856N0511237E
TORBO 265223N 0511024E

SIBLI 265459N 0462334E
AKODI 275012N 0461320E
HAFR AL BATIN 281949N 0460746E

UN6897
MENLI 2947.0N 03152.1E
SISIK 2936.0N 03241.0E
NUWEIBAA (NWB)
* Note 7 (NWB-KITOT below FL350)
KITOT 2902.1N 03450.8E
*Note 7 (OE)
SOBAS 2756.0N 03904.9E
HAIL (HIL)
*Note 7 (HIL–KFA)
BPN 2703.2N 04526.7E
*Note 8 (BPN-TORBO)
KING FAHD (KFA)
BAHRAIN (BAH)
*Note 7-Bahrain-
LOTIT 264856N0511237E
TORBO 265223N 0511024E

N764
NOBSU 171554N 0431318E
MUKALLAH (RIN) 144015N 0492329E
SOCOTRA (SOC) 123749N 0535429E
SUHIL 120000N 0550000E
NABAM 101112N 0581424E

UN764
NOBSU 171554N 0431318E
MUKALLAH (RIN) 144015N 0492329E
SOCOTRA (SOC) 123749N 0535429E
SUHIL 120000N 0550000E
NABAM 101112N 0581424E

N767
PARAR 222630N 0630700E
VUSIN 225940N 0605510E
* Note 7 (OO)
ATBED 230352N 0603752E
ELIGO 232458N 0590848

UN767
PARAR 222630N 0630700E
VUSIN 225940N 0605510E
* Note 7 (OO)
ATBED 230352N 0603752E
ELIGO 232458N 0590848

UN881
RASKI 230330N 0635200E
SETSI 230412N 0614410E
KIPO 30410N 0612903E
ATBED 230352N 0603752E
AMBOS 230324N 0595405
MUSRU 230256N 0592223E
*Note 7 (OO)
OBTIN 230216N 0585920E
GIDAN 230104N 0582232E
GEVED 230105N 0575111E
TULBU 230005N 0571827E

Version: 24 April 2013
ARN TF/6-REPORT
APPENDIX 3A

N929  BALUS 254554N 0530424E
       NOBLA 255111N 0522740E
       BOSIX 260633N 05155554E
       TOBLI 262134N 0512301E
       SIKTA 263232N 0505552E
       RULEX 264529N 0501745E
       DASLO 254537N 0523029E
          *Note 7 & 8 to GIBUS
       NAGOG 255214N 0521615E
       BONAN 260201N 0515505E
       VEDED 260558N 051628E
       SOGAT 262029N 0511443E
       TOSTA 262746N 0504913E
       DANAG 264438N 0494856E
       NADNA 264245N 0485309E
       SILNO 264026N 0475745E
       ASKOK 26263N 0474809E
       MUSRI 261647.0N 0474137.0E
       GIBUS 255724.0N 0472829.0E

UN929  BALUS 254554N 0530424E
       NOBLA 255111N 0522740E
       BOSIX 260633N 05155554E
       TOBLI 262134N 0512301E
       SIKTA 263232N 0505552E
       RULEX 264529N 0501745E
       DASLO 254537N 0523029E
          *Note 7 & 8 to GIBUS
       NAGOG 255214N 0521615E
       BONAN 260201N 0515505E
       VEDED 260558N 0514628E
       SOGAT 262029N 0511443E
       TOSTA 262746N 0504913E
       DANAG 264438N 0494856E
       NADNA 264245N 0485309E
       SILNO 264026N 0475745E
       ASKOK 26263N 0474809E
       MUSRI 261647.0N 0474137.0E
       GIBUS 255724.0N 0472829.0E

P300  KAD 334827N 0352910E
       LATEB 3401.9N 03624.1E

P304  EGROK 235253N 0560126E
          *Note 7 (OO)
       MEKNA 233309N 0560815E
       EGVAN 230127N 0561907E
       DEMKI 224941N 0562308E
       NAMVA 223309N 0562232E
       TOPSO 215653N 0562043E
       KUROV 211627N 0561853E
       VELIK 203322N 0561656E

P307  (SHJ) 251944.9N 0553118.1E
          Note 7 (OM,OO)
       TONVO 250500N 0563200E
       PURNI 243804N 0574354E
          *Note 8 (OO)
       KUNUS 241927N 0583226E
       ALSAS 240054N 0591955E
       DORAB DERTO 235033N 0594746E
       VAXIM 231900N 0611100E
       SETSI 230412N 0614410E
       PARAR 222630N 0630700E

P312  MUKALLA (RIN)
       PAKER 1155.0N0463500E
          (HARGEISA) HARGA

UP146  RASHT (RST)
       AGINA 3919.4N 04405.2E
          (AGRI) (ARI)
       (YAVUZ 4002.7N 04226.0E)
       (TRABZON (TBN))

UP300  KAD 334827N 0352910E
       LATEB 3401.9N 03624.1E

UP304  EGROK 235253N 0560126E
          *Note 7 (OO)
       MEKNA 233309N 0560815E
       EGVAN 230127N 0561907E
       DEMKI 224941N 0562308E
       NAMVA 223309N 0562232E
       TOPSO 215653N 0562043E
       KUROV 211627N 0561853E
       VELIK 203322N 0561656E

UP307  (SHJ) 251944.9N 0553118.1E
          Note 7 (OM,OO)
       TONVO 250500N 0563200E
       PURNI 243804N 0574354E
          *Note 8 (OO)
       KUNUS 241927N 0583226E
       ALSAS 240054N 0591955E
       DORAB DERTO 235033N 0594746E
       VAXIM 231900N 0611100E
       SETSI 230412N 0614410E
       PARAR 222630N 0630700E

UP312  MUKALLA (RIN)
       PAKER 1155.0N0463500E
          (HARGEISA) HARGA

Version: 24 April 2013
**3A-34**

**ARN TF/6-REPORT**

**APPENDIX 3A**

---

**P316**

SALALLAH (SLL)

* Note 7 (OO)

DAXAM 171612N 0544715E
GAGLA 180505N 0552410E
GIVNO 195011N 0563059E
MOBAB 201032N 0564415E
GISKA 213503N 0574014E
RADAX 220809N 0580230E
MUSCAT (MCT)

---

**UP316**

SALALLAH (SLL)

* Note 7 (OO)

DAXAM 171612N 0544715E
GAGLA 180505N 0552410E
GIVNO 195011N 0563059E
MOBAB 201032N 0564415E
GISKA 213503N 0574014E
RADAX 220809N 0580230E
MUSCAT (MCT)

---

**P425**

DAHRAN (DHA)

*Note 8 to ALSER

BAHRAIN (BAH)

TORNA 263336N 0504212E
ALSER 271100N 0504900E

---

**UP425**

DAHRAN (DHA)

*Note 8 to ALSER

BAHRAIN (BAH)

TORNA 263336N 0504212E
ALSER 271100N 0504900E

---

**P430**

DOHA (DOH)

*Note 8 to MIDSI

BAYAN 252926N 0514849E
*Note 7 to MIDSI

KAPAX 254218N 0515118E
VUTAN 255016N 0515218E
BONAN 260201N 0515505E
RAMKI 261138N 0515625E
ALTOM 262230N 0515639E
TOXEL 263020N 0515553E
MIDSI 264142N 05155442E

---

**UP430**

DOHA (DOH)

*Note 8 to MIDSI

BAYAN 252926N 0514849E
*Note 7 to MIDSI

KAPAX 254218N 0515118E
VUTAN 255016N 0515218E
BONAN 260201N 0515505E
RAMKI 261138N 0515625E
ALTOM 262230N 0515639E
TOXEL 263020N 0515553E
MIDSI 264142N 05155442E

---

**P513**

BUBAS 245938N 0570003E
GERAR 240600N 0573616E
MIDSI MIXAM 234139N 0575523E
* Note 7 (OO)

MUSCAT (MCT)

---

**UP517**

WAFRA (KFR)
GOVAL
KMC

---

**UP552**

DATEG 123549N 0471627E
ULAXI 141524N 0482317E
GINBO 160349N 0494017E
IMPOS 183137N 0511848E

---

**P557**

NUBAR 220000N 0313806E
* See Note 6 & 7

MISUK 290507N 0290621E
KATAB 292501N 0290506E

---

**UP557**

NUBAR 220000N 0313806E
* See Note 6 & 7

MISUK 290507N 0290621E
KATAB 292501N 0290506E

---

*Version: 24 April 2013*
<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>P559</td>
<td>TURAIF (TRF)</td>
<td>*Note 7 to DESDI</td>
</tr>
<tr>
<td></td>
<td>KAVID 3035.9N 04011.8E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOKLU 2942.1N 04202.4E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RASMO 2857.2N 04331.3E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KMC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ULOVO 274830N 0455420E</td>
<td>*Note 8 (ULOVO-NAPLO)</td>
</tr>
<tr>
<td></td>
<td>MUSKO 2726.7N 04737.1E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KEDAT 2721.8N 04759.0E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JUBAIL (JBL)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GASSI 2702.9N 05022.5E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UMAMA 2658.5N 05046.8E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOTIT 2648.9N 05142.6E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VUXOR 2553.7N 05322.0E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SODAK 264634N 0510530E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ASPAK 262115N 0522257E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOMSO 260611N 0530214E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NALPO 255602N 0532945E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RAPSA 253700N 0541700E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DESDI 253603N 0544230E</td>
<td></td>
</tr>
<tr>
<td>UP559</td>
<td>TURAIF (TRF)</td>
<td>*Note 7 to DESDI</td>
</tr>
<tr>
<td></td>
<td>KAVID 3035.9N 04011.8E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOKLU 2942.1N 04202.4E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RASMO 2857.2N 04331.3E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KMC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ULOVO 274830N 0455420E</td>
<td>*Note 8 (ULOVO-NAPLO)</td>
</tr>
<tr>
<td></td>
<td>MUSKO 2726.7N 04737.1E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KEDAT 2721.8N 04759.0E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JUBAIL (JBL)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GASSI 2702.9N 05022.5E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UMAMA 2658.5N 05046.8E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOTIT 2648.9N 05142.6E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VUXOR 2553.7N 05322.0E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SODAK 264634N 0510530E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ASPAK 262115N 0522257E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOMSO 260611N 0530214E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NALPO 255602N 0532945E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RAPSA 253700N 0541700E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DESDI 253603N 0544230E</td>
<td></td>
</tr>
<tr>
<td>UP567</td>
<td>BIRJAND (BJD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ODKAT 3540.6N 05457.2E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DASHT-E-NAZ (DNZ) 3638.7N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ULDUS -3800.0N 05101.0E)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NETON 3945.7N 04811.7E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BARUS 4154.2N 04250.5E</td>
<td></td>
</tr>
<tr>
<td>P570</td>
<td>KITAL 2003N 06018E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIBSI MIXAM 234139N 0575523E</td>
<td></td>
</tr>
<tr>
<td>UP570</td>
<td>TRIVENDRUM (TVM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>POMAN 1156.1N 07200.0E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LATEB 1717.1N 06422.0E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KITAL 2003N 06018E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIBSI MIXAM 234139N 0575523E</td>
<td></td>
</tr>
<tr>
<td>UP574</td>
<td>(BELGAUM) BBM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(BISET- 1823.4N 06918.1E)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTOX 215030N 0622230E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Note 7 (OM, OO)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KUSRA 231726N 0585102E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIBSI MIXAM 234138N 0575525E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SOLUD 243223N 0564421E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GISMO 244473N 0562236E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BUBIN 245742N 0560642E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TUKLA 2519.6N 05540.2E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KUMUN 254000N 0551512E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Note 7 (KUMUN-PAPAR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PAPAR 264000N 0542700E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SHIRAZ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAVEH (SAV)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ULDUS</td>
<td></td>
</tr>
</tbody>
</table>

Version: 24 April 2013
UP634
LALDO 251806N 0563600E
*Note 7
ATBOR 251007N 0551947E

UP699
ATBOR 251007N 0551947E
*Note 7 (OM ATBOR-BAH)
SITAT 251105N 0544500E
KISAG 251834N 0541408E
ITMUS 252322N 0535429E
ALSOK 252607N 0533904E
ALSOK 252607N 0533904E
RUBAL 252957N 0531723E
ORMID 253354N 0525434E
*Note 8 (ORMID-KFA)
SOGAT 262029N 0511443E
ASTAD 261812N 0505646E
BAHRAIN (BAH) 261551N 0503856E
KING FHAD (KFA) 262153N 0494910E
LOPOM 252941N 0532817E
BALUS 254554N 0530424E

P751
AMIBO 3456.7N 2136.4E
BRN 3134.5N 02600.3E
KATAB 2925.0N 2905.1E
AST 2701.9N 03101.9E
LUXOR (LXR)
ALEBA 2200.0N 03527.0E
PORT SUDAN
[ASMARA] * Note 1
TOKAR ASSAB 1304.0N 04238.8E
PARIM 1231.7N 04327.2E
ADEN (KRA)
ANGAL 1614.0N 06000.0E
(MUMBAI) (BBB)

UP751
AMIBO 3456.7N 2136.4E
BRN 3134.5N 02600.3E
KATAB 2925.0N 2905.1E
AST 2701.9N 03101.9E
LUXOR (LXR)
ALEBA 2200.0N 03527.0E
PORT SUDAN
[ASMARA] * Note 1
TOKAR ASSAB 1304.0N 04238.8E
PARIM 1231.7N 04327.2E
ADEN (KRA)
ANGAL 1614.0N 06000.0E
(MUMBAI) (BBB)

P891
MAGALA (MGA)
*Note 7 to KUA
KUTEM 264359N 0473521E
EGNOV
EMILU
KUNRU 283220N 0481050E
KUWAIT (KUA)

UP891
MAGALA (MGA)
*Note 7 to KUA
KUTEM 264359N 0473521E
EGNOV
EMILU
KUNRU 283220N 0481050E
KUWAIT (KUA)

P899
MIBSI MIXAM 234139N 0575523E
*Note 7 to KUPSA

UP899
MIBSI MIXAM 234139N 0575523E
*Note 7 to KUPSA

Version: 24 April 2013
PAXIM 240245N 05617631E
ITRAX 241248N 0554749E
AL AIN (ALN)
ABU DHABI
DASLA N2437.8 E05332.8
VEBAT N2448.5 E05251.0
MEKMA N245430 E0522506
*Note 8 (OB)
KUPSA N250445 E0521151

P975 NOLDO 324932N 0452129E
*Knote 8 to ASTAD
KATUT 323737N 0453439E
DENKI 322228N 0455122E
ILMAP 312133N 0465702E
PEBAD 305023N 0472958E
SIDAD 295231N 0482944E
LOVAR 2924.4N 04846.1E
SESRA 2908000N 004854.9E
DANAL 2851.5N 04904.8E
IMDOX 2834.9N 04914.6E
LONOS 283027N 0491713E

UP975 (ELAZIG) EZS
*Note 7 to ASTAD
(DEY) 384225N 0391328E
LESRI 370420N 0411348E
SIDNA 3634.0N 04141.0E
TUBEN 351724N 0425434E
MUTAG 343033N 0433834E
SOGUM 341212N 0435454E
SINKA 332137N 0444753E
NOLDO 324932N 0452129E
KATUT 323737N 0453439E
DENKI 322228N 0455122E
IMDOX 312133N 0465702E
PEBAD 305023N 0472958E
SIDAD 295231N 0482944E
LOVAR 2924.4N 04846.1E
SESRA 2908000N 004854.9E
DANAL 2851.5N 04904.8E
IMDOX 2834.9N 04914.6E
LONOS 283027N 0491713E

R2 ATMUL 220000N 0290527E
TULOP 252209N 0262226E
DITAR 265903N 0250000E

UR2 ATMUL 220000N 0290527E
TULOP 252209N 0262226E
DITAR 265903N 0250000E

R205 ANARAK (ANK)
BIRJAND (BJD)

UR205 ANARAK (ANK)
BIRJAND (BJD)

R219 KUKLA 3414.6N 03444.8E
KALDE (KAD)

UR219 KUKLA 3414.6N 03444.8E
KALDE (KAD)

R401 AMPEX 08 10.0N 055 00.0E
SUHIL 1200.0N 05500.0E
DAPAP 151115N 0552354E
KIVEL 165306N 0553633E
ERDAX 175903N 0554458E

UR401 AMPEX 08 10.0N 055 00.0E
SUHIL 1200.0N 05500.0E
DAPAP 151115N 0552354E
KIVEL 165306N 0553633E
ERDAX 175903N 0554458E

Version: 24 April 2013
ARN TF/6-REPORT
APPENDIX 3A

HAIMA (HAI)
DEMKI 224941N 0562308E
MUSAP 241754N 0555245E
*Note 7 (MUSAP-GIDIS)
*Note 8 (MUSAP-DARAX)
GIDIS 243600N 0555600E
RAS AL KHAIMAH (RAK)
DARAX
GHESHM (KHM)

MUSAP 241754N 0555245E
*Note 7 (MUSAP-GIDIS)
*Note 8 (MUSAP-DARAX)

R402 LAKLU 232235N 0570401E
*Note 7 (OO)
HAIMA (HAI)

UR402 LAKLU 232235N 0570401E
*Note 7 (OO)
HAIMA (HAI)

R462 (JIWANI) JI
DENDA 2442.5N 06054.8E
VUSET 235540N 0590812E
*Note 7 (OO)
MIBSI MIXAM 234139N 0575523E

UR462 (JIWANI) JI
DENDA 2442.5N 06054.8E
VUSET 235540N 0590812E
*Note 7 (OO)
MIBSI MIXAM 234139N 0575523E

R650 ASRAB 2547.4N 03306.3E
HURGHADA (HGD)
SHARM EL SHEIKH (SHM)
NUWEIBAA (NWB)
NALSO 2932.0N 03453.0E

UR650 ASRAB 2547.4N 03306.3E
HURGHADA (HGD)
SHARM EL SHEI
KH (SHM)
NUWEIBAA (NWB)
NALSO 2932.0N 03453.0E

R652 METSA 2930.0N 03500.0E
QATRANAEH (QTR)
GURIAT (GRY)
*Note 7(0E)
TURAF (TRF)
OVANO 3148.0N 03909.8E
DAXAN 320512N 0393719E
GIBUX 330500N 0411100E
RAPLU 332300N 0414530E
GEPAP 334906N 0422851E
MUTAG 343003N 0433834E
IVANO 351724N 0451235E

UR652 METSA 2930.0N 03500.0E
QATRANAEH (QTR)
GURIAT (GRY)
*Note 7(0E)
TURAF (TRF)
OVANO 3148.0N 03909.8E

R654 ZANJAN (ZAJ)
SAVEH (SAV)
ESFAHAN (ISN)
YAZD (YZD)
KERMAN (KER)
NABOD 2816.1N 05825.3E
CHAH BAHAR (CBH)
EGPIC 2508.6N 06029.5E

UR654 MAGRI 385408N 0462300E
ZANJAN (ZAJ)
SAVEH (SAV)
ESFAHAN (ISN)
YAZD (YZD)
KERMAN (KER)
NABOD 2816.1N 05825.3E
CHAH BAHAR (CBH)
EGPIC 2508.6N 06029.5E

R655 (LARNACA) LCA

UR655 (LARNACA)

Version: 24 April 2013
CHEKA (CAK)  
KARIATAIN (KTN)  

R659  
TEHRAN (TRN)  
*Note 7 (ISN-TRN)  
BOXAM 343749N 0515147E  
DAPOG 333744N 0522331E  
*Note 3 (DAPOG-SYZ)  
SHIRAZ (SYZ)  
MIDSI 264142N 0515442E  
*Note 8 (MIDSI-DOH)  
*Note 7 (MIDSI-VELAM)  
SOGAN 263129N 0515220E  
ROSAN 262430N 0515043E  
DASOS 261506N 0514834E  
RABLA 260558N 0514628E  
VELED 255426N 0514347E  
EMISA 254626N 0514207E  
DOHA (DOH)  

UR659  
TEHRAN (TRN)  
*Note 7 (ISN-TRN)  
BOXAM 343749N 0515147E  
DAPOG 333744N 0522331E  
*Note 3 (DAPOG-SYZ)  
SHIRAZ (SYZ)  
MIDSI 264142N 0515442E  
*Note 8 (MIDSI-DOH)  
*Note 7 (MIDSI-VELAM)  
SOGAN 263129N 0515220E  
ROSAN 262430N 0515043E  
DASOS 261506N 0514834E  
RABLA 260558N 0514628E  
VELED 255426N 0514347E  
EMISA 254626N 0514207E  
DOHA (DOH)  

R660  
(ERZURUM) (ERZ)  
DASIS 38 54.5N 044 12.5E  
TABRIZ (TBZ)  
RASHT (RST)  
TEHRAN (TRN)  

UR660  
(ERZURUM) (ERZ)  
RASHT (RST)  
TEHRAN (TRN)  

R661  
DULAV 3857.0N 04537.9E  
TABRIZ (TBZ)  
ZANJAN (ZAI)  
RUDESHUR (RUS)  
VARAMIN (VR)  
DEHNAMAK (DHN)  

UR661  
DULAV 3857.0N 04537.9E  
TABRIZ (TBZ)  
ZANJAN (ZAI)  
RUDESHUR (RUS)  
VARAMIN (VR)  
DEHNAMAK (DHN)  

UR674  
SABEL 185158N 0520339E  
LOTEL 180926N 0514103E  
PASUL 180341N 0513803E  
GOGRI 170752N 0510857E  
OBTAS 164633N 0505756E  
RARBA 161021N 0503920E  
UKORA 152407N 0501547E  
NAKAD 150056N 0494020E  
DANAN 144010N 0495334E  
XABIL 142924N 0494809E  
EMABI 141627N 0494139E  
PAXED 135027N 0492759E  
DEMGO 120258N 0483040E  

R777  
DANAK 1608.0N 04129.0E  
SANAA  
TAIZ  
ARABO 1238.8N 04404.0E  
TORBA 1210.6N 04402.1E  

UR777  
DANAK 1608.0N 04129.0E  
SANAA  
TAIZ  
ARABO 1238.8N 04404.0E  
TORBA 1210.6N 04402.1E  

Version: 24 April 2013
<table>
<thead>
<tr>
<th>R784</th>
<th>SHARJAH (SHJ)</th>
<th>UR784</th>
<th>SHARJAH (SHJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ORSAR 2604.5N 05357.5E</td>
<td></td>
<td>ORSAR 2604.5N 05357.5E</td>
</tr>
<tr>
<td></td>
<td>*Note 8 (OM)</td>
<td></td>
<td>*Note 8 (OM)</td>
</tr>
<tr>
<td></td>
<td>DURSI 2712.3N 05201.7 E</td>
<td></td>
<td>DURSI 2712.3N 05201.7 E</td>
</tr>
<tr>
<td></td>
<td>IMDAT 2740.0N 05113.0E</td>
<td></td>
<td>IMDAT 2740.0N 05113.0E</td>
</tr>
<tr>
<td></td>
<td>ALNIN 2840.9N 05001.6E</td>
<td></td>
<td>ALNIN 2840.9N 05001.6E</td>
</tr>
<tr>
<td></td>
<td>NANPI 290457N 0493157E</td>
<td></td>
<td>NANPI 290457N 0493157E</td>
</tr>
<tr>
<td></td>
<td>SIDAD 295231N 0482944E</td>
<td></td>
<td>SIDAD 295231N 0482944E</td>
</tr>
<tr>
<td>R785</td>
<td>TURAIF (TRF)</td>
<td>UR785</td>
<td>TURAIF (TRF)</td>
</tr>
<tr>
<td></td>
<td>ZELAF 3257.0N 03800.0E</td>
<td></td>
<td>ZELAF 3257.0N 03800.0E</td>
</tr>
<tr>
<td></td>
<td>KARIATAIN (KTN)</td>
<td></td>
<td>KARIATAIN (KTN)</td>
</tr>
<tr>
<td></td>
<td>BANIAS (BAN)</td>
<td></td>
<td>BANIAS (BAN)</td>
</tr>
<tr>
<td></td>
<td>NIKAS 3511.6N 03543.0E</td>
<td></td>
<td>NIKAS 3511.6N 03543.0E</td>
</tr>
<tr>
<td>R794</td>
<td>ULDUS 3810.0N 05020.0E</td>
<td>UR794</td>
<td>ULDUS 3810.0N 05020.0E</td>
</tr>
<tr>
<td></td>
<td>NOSHAHR (NSR)</td>
<td></td>
<td>NOSHAHR (NSR)</td>
</tr>
<tr>
<td></td>
<td>DEHNAMAK (DHN)</td>
<td></td>
<td>DEHNAMAK (DHN)</td>
</tr>
<tr>
<td></td>
<td>TABAS (TBS)</td>
<td></td>
<td>TABAS (TBS)</td>
</tr>
<tr>
<td></td>
<td>BIRJAND (BJD) * Note 5 (OI)</td>
<td></td>
<td>BIRJAND (BJD) * Note 5 (OI)</td>
</tr>
<tr>
<td>R799</td>
<td>IMPOS 183136N 0511848 E</td>
<td>UR799</td>
<td>IMPOS 183136N 0511848 E</td>
</tr>
<tr>
<td></td>
<td>PASUL 180341N 0513803E</td>
<td></td>
<td>PASUL 180341N 0513803E</td>
</tr>
<tr>
<td></td>
<td>TONRO 165850N 0522235E</td>
<td></td>
<td>TONRO 165850N 0522235E</td>
</tr>
<tr>
<td></td>
<td>ASMAK 162327N 0524634E</td>
<td></td>
<td>ASMAK 162327N 0524634E</td>
</tr>
<tr>
<td></td>
<td>ENADO 153333N 0532015E</td>
<td></td>
<td>ENADO 153333N 0532015E</td>
</tr>
</tbody>
</table>

Version: 24 April 2013
Appendix 3B to the Report on Agenda Item 3

PROPOSAL FOR AMENDMENT OF THE ICAO MID AIR NAVIGATION PLAN (DOC 9708), VOLUME I BASIC ANP

(Serial No. MID Basic ANP 13/02 - ATM)

a) Plan: MID Basic Air Navigation Plan

b) Proposed amendment: Editorial note: Amendments are arranged to show “deleted text” using strikeout (text to be deleted), and “added text” with grey shading (text to be inserted)


A1  METRU 340000N 0250900E   UA1  METRU 340000N 0250900E
     SOKAL 323601N 0273706E   KATEX 323601N 0273706E
     BOPED 312939N 0292655E   ALEXANDRIA (AXD NOZ) 311113N
     MENKU 310531N 0301806E   CAIRO (CVO) 300532N 0312318E

A411  BNINA (BNA) 3207-528N 0201513E
     NASER 3151.2N 2355.3E
     LOSUL 314100N 250800E
     SIDI BARANI (BRN) 3135324.5N 260020.3E

A727  (PAXIS 3357.1N 02720.0E
     OTIKO 3134.3N 02936.6E
     ALEXANDRIA (AXD NOZ)
     MENKU 3105.5N 03018.1E
     CAIRO (CVO)
     LUXOR (LXR)
     ABU SIMBLE (SML)
     NUBAR 220000N 03118.1E
     MEROWE (MRW)
     KHARTOUM (KTM)
     KENANA (KNA)
     LODWAR (LOV)
     NAKURU (NAK)
     NAIROBI (NV)
     KILIMANJARO (KV)

B411  METSA 2930.0N 03500.0E
     AL SHIGAR (ASH)
     ARAR (AAR)
     MURIB 311337N 0415136E
     LOVEK 3222.1N 04440.0E
     NOLDO 3249.5N 04521.5E
     PAXAT 332056N 0460519E
     ILAM (ILM)

     METSA 2930.0N 03500.0E
     AL SHIGAR (ASH)
     ARAR (AAR)
     MURIB 311337N 0415136E
     LOVEK 3222.1N 04440.0E
     NOLDO 3249.5N 04521.5E
     PAXAT 332056N 0460519E
     ILAM (ILM)
KERMANSHAH (KMS)
SAVEH (SAV)
[TEHRAN] (TRN)
* Note 1
DEHNAMAK (DHN)
SABZEVAR (SBZ)
MASHHAD (MSD)

B415  DOHA (DOH)  UB415  DOHA (DOH)
* Note 8 (DOH-BUNDU)
AFNAN 2508.9N 05155.9E
BUNDU 2500.4N 05229.4E
* Note 7 (BUNDU-ADV)
GADV 2441.4N 05343.0E
KUNGU 2437.9N 05356.4E
ABU DABI
ADV 2425.1N 05440.4E

B416  KUWAIT (KUA)  UB416  KUWAIT (KUA)
* Note 8 (AMBBIK-ADV)
TESSO 282852N 0429723E
GEVAL 283625N 0492722E
GOAGA 281421N 0495612E
KUVER 280924N 0506060E
IMDAT 2741.0N 05111.0E
ORSAR 2604.5N 05357.5E
PEBAT 2551.9N 05423.9E
DESDI 2536.0N 05442.5E

B419  (DHA) 261538N 0500824E
* Note 8 (DHA-RAMSI)
KING FAHD (KFA)
* Note 7 (KFA-RAMSI)
ASTOM 265552N 0500408E
RAMSI 270249N 050714E

G652  ADEN (KRA)  UB652  ADEN (KRA)
IMPOS 183136N 0511848E
DUDRI 190000N 0520000E
* Note 8 (DUDRI-TOKRA)
TOKRA 220925N 0553350E
TAPDO 242424N 06120 E

G663  KING KHALID (KIA)
* Note 7 (KIA-KFA)
GIBUS 255724N 0472829E
* Note 8 (GIBUS-ALSER)
SILNO 2640.4N 04757.7E
KING FAHD (KFA)
ALSER 2710.8 05409.5E

B419  (DHA) 261538N 0500824E
* Note 8 (DHA-RAMSI)
KING FAHD (KFA)
* Note 7 (KFA-RAMSI)
ASTOM 265552N 0500408E
RAMSI 270249N 0500714E

G652  ADEN (KRA)
IMPOS 183136N 0511848E
DUDRI 190000N 0520000E
* Note 8 (DUDRI-TOKRA)
TOKRA 220925N 0553350E
TAPDO 242424N 06120 E

G663  KING KHALID (KIA)
* Note 7 (KIA-KFA)
GIBUS 255724N 0472829E
* Note 8 (GIBUS-ALSER)
SILNO 2640.4N 04757.7E
KING FAHD (KFA)
ALSER 2710.8 05409.5E
SHIRAZ (SYZ)  SHIRAZ (SYZ)
YAZD (YZD)  YAZD (YZD)
NODLA 3253.3N 05458.8E  NODLA 3253.3N 05458.8E
TABAS (TBS)  TABAS (TBS)
MASHAD (MSD)  MASHAD (MSD)

G667 PUTMA 3748.0N 05157.6E  UG667 PUTMA 3748.0N 05157.6E
NOISHAN (NSR)  NOISHAN (NSR)
TEHRAN (TRN)  TEHRAN (TRN)
SAVEH (SAV)  SAVEH (SAV)
MIS  MIS
AHWAZ (AWZ)  AHWAZ (AWZ)
ABADAN (ABD)  ABADAN (ABD)
ALSAN 295707N 0481456E  ALSAN 295707N 0481456E
FALKA  FALKA
KUWAIT (KUA)  KUWAIT (KUA)
WAFFRA (KFR)  WAFFRA (KFR)
*Note 7 (KFR-MGA)  *Note 7 (KFR-MGA)
COPPI 275033N 0474359E  COPPI 275033N 0474359E
*Note 8 (COPPI-AVOBO)  *Note 8 (COPPI-AVOBO)
EMENI 273232N 0473849E  EMENI 273232N 0473849E
MUSKO 272640N 0473708E  MUSKO 272640N 0473708E
ALSAT 270611N 0473118E  ALSAT 270611N 0473118E
LUGAL 264533N 0472528E  LUGAL 264533N 0472528E
MAGALA (MGA)  MAGALA (MGA)
AVOBO 260334N 0470719E  AVOBO 260334N 0470719E
KING KHALID (KIA)  KING KHALID (KIA)
WADI AL DAWASIR (WDR)  WADI AL DAWASIR (WDR)
NEJRAN (NEJ)  NEJRAN (NEJ)
SANA'A (SAA)  SANA'A (SAA)
PARIM 123143N 0432712E  PARIM 123143N 0432712E
DIJIBOUTI (DTI)  DIJIBOUTI (DTI)

G782 KING ABDULAZIZ (JDW)  UG782 KING ABDULAZIZ (JDW)
DAFINAH (DFN)  DAFINAH (DFN)
RAGA'JBA (RGB)  RAGA'JBA (RGB)
KING KHALID (KIA)  KING KHALID (KIA)
MAGALA (MGA)  MAGALA (MGA)
*Note 7 (MGA-KFR)  *Note 7 (MGA-KFR)
LUGAL 264533N 0472528E  LUGAL 264533N 0472528E
WAFFRA (KFR) 283715N 0475729E  WAFFRA (KFR) 283715N 0475729E
KUWAIT (KUA)  KUWAIT (KUA)

L305 DOHA (DOH)  L308 EGNOV 270301N 0474713E
*Note 7 (DOH-ITITA)  *Note 7 (EGNOW - SERSA)
*Note 8 (DOH-ASTOG)  *Note 8 (EGNOW-OBNET)
ASTOG 252822N 0525025E  (JBL) 270220N 0492427E
ITITA 2544.2N 05012.5E  RAMSI 270249N 0500714E

L308 EGNOV 270301N 0474713E  UL308 EGNOV 270301N 0474713E
*Note 7 (EGNOW - SERSA)  *Note 7 (EGNOW - SERSA)
*Note 8 (EGNOW - OBNET)  *Note 8 (EGNOW-OBNET)
(JBL) 270220N 0492427E  (JBL) 270220N 0492427E
RAMSI 270249N 0500714E  RAMSI 270249N 0500714E
GASSI 2702.9N 05022.5E  GASSI 2702.9N 05022.5E
UMAMA 2658.5N 05046.8E  UMAMA 2658.5N 05046.8E
LOTIT 2644.8N 05112.4E  LOTIT 2644.8N 05112.4E
NADAM 255854N 0532033E  NADAM 255854N 0532033E
TOSDA 270005N 0505629E  TOSDA 270005N 0505629E
TURBO 265223N 0511024E  TURBO 265223N 0511024E
SOGAN 263915N 0515408E  SOGAN 263915N 0515408E
DEGSO 261054N 0531946E  DEGSO 261054N 0531946E
<table>
<thead>
<tr>
<th>Town</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBNET</td>
<td>26°03'32&quot;N</td>
<td>05°34'51&quot;E</td>
</tr>
<tr>
<td>ITITA</td>
<td>25°44'10&quot;N</td>
<td>05°41'83&quot;E</td>
</tr>
<tr>
<td>DESDI</td>
<td>25°36'03&quot;N</td>
<td>05°44'23&quot;E</td>
</tr>
<tr>
<td>RAGOL</td>
<td>25°27'43&quot;N</td>
<td>05°50'73&quot;E</td>
</tr>
<tr>
<td>SERSA</td>
<td>25°19'45&quot;N</td>
<td>05°53'11&quot;E</td>
</tr>
<tr>
<td>TUKLA</td>
<td>25°19'36&quot;N</td>
<td>05°54'01&quot;E</td>
</tr>
<tr>
<td>NADNI</td>
<td>25°19'15&quot;N</td>
<td>05°55'65&quot;E</td>
</tr>
<tr>
<td>LALDO</td>
<td>25°18'06&quot;N</td>
<td>05°56'30&quot;E</td>
</tr>
<tr>
<td>SHARJAH</td>
<td>25°19'7N</td>
<td>05°53'13&quot;E</td>
</tr>
<tr>
<td>IMLOT</td>
<td>25°17'1N</td>
<td>05°57'08&quot;E</td>
</tr>
<tr>
<td>KATUS</td>
<td>25°15'9N</td>
<td>05°57'47&quot;E</td>
</tr>
<tr>
<td>DIVAB</td>
<td>25°10'7N</td>
<td>05°59'52&quot;E</td>
</tr>
<tr>
<td>EGPIC</td>
<td>25°08'6N</td>
<td>06°02'9.5E</td>
</tr>
<tr>
<td>LATEM</td>
<td>24°31'7N</td>
<td>06°44'9.7E</td>
</tr>
</tbody>
</table>

**Note 7 & 8 to LALDO**

<table>
<thead>
<tr>
<th>Town</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOXAK</td>
<td>24°45'36&quot;N</td>
<td>05°40'03&quot;E</td>
</tr>
<tr>
<td>SIGBO</td>
<td>24°55'4N</td>
<td>05°45'6.9E</td>
</tr>
<tr>
<td>NALTA</td>
<td>25°02.7N</td>
<td>05°55'39&quot;E</td>
</tr>
<tr>
<td>AVAMI</td>
<td>25°05.9N</td>
<td>05°55'6.8E</td>
</tr>
<tr>
<td>LALDO</td>
<td>25°18'06&quot;N</td>
<td>05°56'30&quot;E</td>
</tr>
</tbody>
</table>

**Note 7 & 8 to LALDO**

<table>
<thead>
<tr>
<th>Town</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>KANIP</td>
<td>24°10.7N</td>
<td>05°52'0.7E</td>
</tr>
<tr>
<td>RETAS</td>
<td>23°57'54&quot;N</td>
<td>05°53'42&quot;E</td>
</tr>
</tbody>
</table>

**Note 7**

<table>
<thead>
<tr>
<th>Town</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOHA</td>
<td>26°01'04&quot;E</td>
<td>05°13'07&quot;E</td>
</tr>
<tr>
<td>NAJMA</td>
<td>25°34'6N</td>
<td>05°13'09&quot;E</td>
</tr>
<tr>
<td>BATHA</td>
<td>24°12'57&quot;N</td>
<td>05°12'70&quot;E</td>
</tr>
<tr>
<td>MIGMA</td>
<td>22°50'35&quot;N</td>
<td>05°12'74&quot;E</td>
</tr>
<tr>
<td>PURDA</td>
<td>21°08'05&quot;N</td>
<td>05°10'32&quot;E</td>
</tr>
<tr>
<td>ASTIN</td>
<td>20°04'10&quot;N</td>
<td>04°53'52&quot;E</td>
</tr>
<tr>
<td>SHARURAH</td>
<td>20°04'10&quot;N</td>
<td>04°53'52&quot;E</td>
</tr>
<tr>
<td>ATBOT</td>
<td>17°14'18&quot;N</td>
<td>04°46'70&quot;E</td>
</tr>
<tr>
<td>RAGNI</td>
<td>16°34'54&quot;N</td>
<td>04°45'81&quot;E</td>
</tr>
<tr>
<td>LOPAD</td>
<td>16°16'51&quot;N</td>
<td>04°45'73&quot;E</td>
</tr>
<tr>
<td>ITOLI</td>
<td>15°28'25&quot;N</td>
<td>04°09'27&quot;E</td>
</tr>
<tr>
<td>OBNAM</td>
<td>14°44'51&quot;N</td>
<td>04°44'48&quot;E</td>
</tr>
<tr>
<td>GEVEL</td>
<td>14°12'29&quot;N</td>
<td>04°42'54&quot;E</td>
</tr>
<tr>
<td>NOPVO</td>
<td>13°54'36&quot;N</td>
<td>04°45'36&quot;E</td>
</tr>
<tr>
<td>TAZ</td>
<td>13°41'49.53&quot;N</td>
<td>04°40'81.98&quot;E</td>
</tr>
<tr>
<td>PARIM</td>
<td>12°31'42&quot;N</td>
<td>04°32'71&quot;E</td>
</tr>
</tbody>
</table>

**Note 8 to TOSNA**

<table>
<thead>
<tr>
<th>Town</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLH</td>
<td>35°13.7N</td>
<td>02°34.90E</td>
</tr>
<tr>
<td>SALUN</td>
<td>34°00.00N</td>
<td>02°42.700E</td>
</tr>
<tr>
<td>BRN</td>
<td>31°34.5N</td>
<td>02°60.03E</td>
</tr>
<tr>
<td>KHG</td>
<td>25°26.9N</td>
<td>03°03.54E</td>
</tr>
<tr>
<td>LUXOR</td>
<td>25°44'58&quot;N</td>
<td>03°24'60&quot;E</td>
</tr>
<tr>
<td>IMRAD</td>
<td>26°05'00&quot;N</td>
<td>03°54'40&quot;E</td>
</tr>
<tr>
<td>WEJH</td>
<td>26°10.8N</td>
<td>03°62.93E</td>
</tr>
<tr>
<td>HLF</td>
<td>26°26'00&quot;N</td>
<td>03°91.16E</td>
</tr>
<tr>
<td>GASSIM</td>
<td>26°17.9N</td>
<td>04°34.36E</td>
</tr>
<tr>
<td>PUSLA</td>
<td>26°17'58&quot;N</td>
<td>04°16'70&quot;E</td>
</tr>
<tr>
<td>MGA</td>
<td>26°17.3N</td>
<td>04°17.12&quot;E</td>
</tr>
<tr>
<td>ALMAL</td>
<td>26°15.9N</td>
<td>04°21.1E</td>
</tr>
<tr>
<td>KING</td>
<td>26°21.9N</td>
<td>04°49.42&quot;E</td>
</tr>
<tr>
<td>BAHRAIN</td>
<td>26°04'52&quot;N</td>
<td>05°10'509E</td>
</tr>
<tr>
<td>ASNIX</td>
<td>26°04'52&quot;N</td>
<td>05°10'509E</td>
</tr>
</tbody>
</table>

**Note 7 (GAS-KFA)**

**Note 8 to TOSNA**

<table>
<thead>
<tr>
<th>Town</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLH</td>
<td>35°13.7N</td>
<td>02°34.90E</td>
</tr>
<tr>
<td>SALUN</td>
<td>34°00.00N</td>
<td>02°42.700E</td>
</tr>
<tr>
<td>BRN</td>
<td>31°34.5N</td>
<td>02°60.03E</td>
</tr>
<tr>
<td>KHG</td>
<td>25°26.9N</td>
<td>03°03.54E</td>
</tr>
<tr>
<td>LUXOR</td>
<td>25°44'58&quot;N</td>
<td>03°24'60&quot;E</td>
</tr>
<tr>
<td>IMRAD</td>
<td>26°05'00&quot;N</td>
<td>03°54'40&quot;E</td>
</tr>
<tr>
<td>WEJH</td>
<td>26°10.8N</td>
<td>03°62.93E</td>
</tr>
<tr>
<td>HLF</td>
<td>26°26'00&quot;N</td>
<td>03°91.16E</td>
</tr>
<tr>
<td>GASSIM</td>
<td>26°17.9N</td>
<td>04°34.36E</td>
</tr>
<tr>
<td>PUSLA</td>
<td>26°17'58&quot;N</td>
<td>04°16'70&quot;E</td>
</tr>
<tr>
<td>MGA</td>
<td>26°17.3N</td>
<td>04°17.12&quot;E</td>
</tr>
<tr>
<td>ALMAL</td>
<td>26°15.9N</td>
<td>04°21.1E</td>
</tr>
<tr>
<td>KING</td>
<td>26°21.9N</td>
<td>04°49.42&quot;E</td>
</tr>
<tr>
<td>BAHRAIN</td>
<td>26°04'52&quot;N</td>
<td>05°10'509E</td>
</tr>
<tr>
<td>ASNIX</td>
<td>26°04'52&quot;N</td>
<td>05°10'509E</td>
</tr>
</tbody>
</table>
APPENDIX 3B

PATOM 255821N 0511836E
EMISA 254658N 0514207E
KAPAX 254218N 0515118E
ORSIS 252801N 0521636E
ENANO 252348N 0522559E
TOSNA 251612N 0524116E

PATOM 255821N 0511836E
EMISA 254658N 0514207E
KAPAX 254218N 0515118E
ORSIS 252801N 0521636E
ENANO 252348N 0522559E
TOSNA 251612N 0524116E

UL607  SITIA (SIT)
*Note 7
PAXIS 3357.1N02720.0E
OTIKO 3134.4N 029346.E
ALEXANDRIA (AXD NOZ)

L617  ALEXANDRIA-AXD NOZ
IMRUT 313259N 029346E
ASNIR 323849N 028214E
TANSA 340000N 0264900E

L681  EGNOV 270301N 0474713E
*Note 5 & 7 & 8 to SALWA
GEPAK 2633.0N 04843.5E
RADMA 2623.0N 04857.5E
DELMU 2618.9N 04903.4E
ROSEM 2607.7N 04919.0E
SALWA 251538N 0503048E

UL617  ALEXANDRIA-AXD NOZ
IMRUT 313259N 029346E
ASNIR 323849N 028214E
TANSA 340000N 0264900E

UL681  EGNOV 270301N 0474713E
*Note 5 & 7 & 8 to SALWA
GEPAK 2633.0N 04843.5E
RADMA 2623.0N 04857.5E
DELMU 2618.9N 04903.4E
ROSEM 2607.7N 04919.0E
SALWA 251538N 0503048E

UL768  BALUS 254554N 0530424E
ELAXI 260000N 0523500E
IMTAS 281800N 0515700E
DAXAS 262213N 0515000E
ASMOR 26367.7N 0511700E
TOLMO 265504N 0502927E
RAMSI 270249N 0500714E
ALVUN 271028N 0491455E
KISAB 272335N 0490606E
ALPOB 254218N 0530555E
*Note 7 to FIRAS
*Note 8 (ALPOB-COPPI)
RRTAG 255353N 052621E
SOLEG 260159N 0521756E
RAMKI 261138N 051625E
RABLA 261506N 0514834E
SOLOB 262241N 0513132E
MEDMA 263421N 0505454E
TOTLA 263806N 0504301E
COPI 2750.6N04744.0E
HFR

M305  BRN 3134.5N 02600.3E
ATMUL 200000N 2905.4E
*Note 3

UM305  BRN 3134.5N 02600.3E
ATMUL 200000N 2905.4E
*Note 3

M312  DBA 3100.7N 02828.0E
UM312  DBA 3100.7N 02828.0E
AMIBO 3456.7N 2136.4E
*Note 3 (HE)

M430
*Note 5 (KIA-DOH)
KING KHALID (KIA)
KOBOX 250716N 0475046E
KIREN  251447.0N 0490724.0E
*Note 8 (KIREN-TOSNA)
HAS 2516.7N 04929.0E
LAGNO 251613N 0511518E
DOHA (DOH)
*Note 7 (DOH-KISAG)
TOSNA 251612N 0524116E
KISAG 251834N 0541408E

UM430
*Note 5 (KIA-DOH)
KING KHALID (KIA)
KOBOX 250716N 0475046E
KIREN  251447.0N 0490724.0E
*Note 8 (KIREN-TOSNA)
HAS 2516.7N 04929.0E
LAGNO 251613N 0511518E
DOHA (DOH)
*Note 7 (DOH-KISAG)
TOSNA 251612N 0524116E
KISAG 251834N 0541408E

M557
ATBOR 251007N 0551947E
*Note 7 (OM) *Note & 8 to MIDSI
NADIL 252252N 0544717E
NABOP 252607N 0540405E
EMAGO 253456N 0535751E
VUVOK 254408N 0533024E
TUMAK 255031N 0531108E
ALTOM 262230N 0515639E
TOXEL 263020N 0515553E
MIDSI 264142N 0515442E
KUVAX 253223N 0540825E
TUDAX 254440N 0531655E
BALUS 254554N 0530424E

UM557
ATBOR 251007N 0551947E
*Note 7 (OM) *Note 8 to MIDSI
NADIL 252252N 0544717E
NABOP 252607N 0540405E
EMAGO 253456N 0535751E
VUVOK 254408N 0533024E
TUMAK 255031N 0531108E
ALTOM 262230N 0515639E
TOXEL 263020N 0515553E
MIDSI 264142N 0515442E
KUVAX 253223N 0540825E
TUDAX 254440N 0531655E
BALUS 254554N 0530424E

M872
PLH 3513.7N 02340.9E
*Note 7 (PLH-DBA)
METRU 340000N 0250900E
KANAR 322727N 0265330E
EL DABA (DBA) 310041N 0282801E
FYM 2923.8N 03023.6E
*Note 7 (FYM-SEMRU)
SEMRU 280200N 0320306E
HURGHADA (HGD)
SILKA 263400N 0352900E
WEIH (WEJ) 261046N 0362917E
KODIN 2517.9N 03836.2E
MADINAH (PMA)
*Note 7 (PMA-MIDSI)
BIR DARB (BDB)
AL DAWADI (DAW)
KING KHALID (KIA)
AKRAM 255036N 0475313E
*Note 8 to MIDSI
ALMAL 261553N 0482108E
DAVRI 264936N 0505732E
LOTIT 264856N 0511237E
MIDSI 264142N 0515442E

UM872
PLH 3513.7N 02340.9E
*Note 7 (PLH-DBA)
METRU 340000N 0250900E
KANAR 322727N 0265330E
EL DABA (DBA) 310041N 0282801E
FYM 2923.8N 03023.6E
*Note 7 (FYM-SEMRU)
SEMRU 280200N 0320306E
HURGHADA (HGD)
SILKA 263400N 0352900E
WEIH (WEJ) 261046N 0362917E
KODIN 2517.9N 03836.2E
MADINAH (PMA)
*Note 7 (PMA-MIDSI)
BIR DARB (BDB)
AL DAWADI (DAW)
KING KHALID (KIA)
AKRAM 255036N 0475313E
*Note 8 to MIDSI
ALMAL 261553N 0482108E
DAVRI 264936N 0505732E
LOTIT 264856N 0511237E
MIDSI 264142N 0515442E

N300
DOH 2514N 05134.6E
*Note 7 & 8 to TONVO
NAMLA 2505.5N 05233.3E
*Note 7/8 (OM)

UN300
DOH 2514N 05134.6E
*Note 7 & 8 to TONVO
NAMLA 2505.5N 05233.3E
*Note 7/8 (OM)
<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Longitude</th>
<th>Latitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOXAK</td>
<td>244536N 0540032E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIADA</td>
<td>245112N 0545736E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TONVO</td>
<td>250500N 0563200E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N307</td>
<td>MILADMELDO</td>
<td>320201N 0310406E</td>
<td>BOXAK 244536N 0540032E</td>
</tr>
<tr>
<td></td>
<td>LAKTO</td>
<td>323800N 0320500E</td>
<td>MIADA 245112N 0545736E</td>
</tr>
<tr>
<td>N318</td>
<td>QAA 314423N 0360926E</td>
<td>ALNOR 313955N 0362507E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KINUR 313626N 0363714E</td>
<td>ELOXI 313359N 0364536E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GENEX 3129.6N 3700.9E</td>
<td>GURIAT (GRY)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ORKAS 3047.4N 03846.3E</td>
<td>NEVOL 3024.7N 03938.6E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VELAL 2946.0N 04038.4E</td>
<td>TAMRO 2838.6N 04240.8E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MEGON 2738.8N 04445.9E</td>
<td>TAGSO 272744N 0454510E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EGNOV 270301N 0474713E</td>
<td>KUSAR 264741N 0490218E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ASPAN 263255N 0494903E</td>
<td>MEMBO 262425N 0504232E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DEDAS 263011N 0501427E</td>
<td>ASTAD 261812N 0505646E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VUTAN 255016N 0515218E</td>
<td>RESAR 253707N 0522328E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UMABA 252703N 0524322E</td>
<td>OVONA 252443N 0524739E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VATE 255520N 0515333E</td>
<td>LOXAT 252140N 0524523E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EROD 211230N 0613830E</td>
<td>REPOB 211230N 0613830E</td>
<td></td>
</tr>
<tr>
<td>N653</td>
<td>REXOD 211230N 0613830E</td>
<td>BBG 244536N 0540032E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Note 8 (OB, OM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Note 7 (OB, OO, OM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EMURU 221357N 0585338E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TULBU 230005N 0571827E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MEKNA 232309N 0560815E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SODEX 234954N 0553202E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NOBTO 235525N 0551840E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ADV 230105N 0575111E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOLD 223702N 0585303E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>REXOD 211230N 0613830E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Note 8 (OB, OM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Note 7 (OB, OO, OM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MEMBI 243705N 0542631E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ABTE 250739N 0535019E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ITROK 253575N 0532751E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ALPOB 254218N 0530055E</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note 7 (OE, OB, OM, OO)

(segment LOXAT - REXOD)

*Note 7 (QM/OM/OO)

(BANGALORE) BBG

*Note 8 (OB, OM)

*Note 7 (OB, OO, OM)
<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROTAG</td>
<td>255353N 0523621E</td>
<td>ROTAG</td>
<td>255353N 0523621E</td>
</tr>
<tr>
<td>SOLEG</td>
<td>260159N 0521756E</td>
<td>SOLEG</td>
<td>260159N 0521756E</td>
</tr>
<tr>
<td>SOLOB</td>
<td>262241N 0513132E</td>
<td>SOLOB</td>
<td>262241N 0513132E</td>
</tr>
<tr>
<td>MEDMA</td>
<td>263412N 0505454E</td>
<td>MEDMA</td>
<td>263412N 0505454E</td>
</tr>
<tr>
<td>TOTLA</td>
<td>263806N 0504301E</td>
<td>TOTLA</td>
<td>263806N 0504301E</td>
</tr>
<tr>
<td>RULEX</td>
<td>264529N 0501745E</td>
<td>RULEX</td>
<td>264529N 0501745E</td>
</tr>
<tr>
<td>SILNO</td>
<td>264026N 0475745E</td>
<td>SILNO</td>
<td>264026N 0475745E</td>
</tr>
<tr>
<td>GIBUS</td>
<td>255724N 0472829E</td>
<td>GIBUS</td>
<td>255724N 0472829E</td>
</tr>
<tr>
<td>RABTO</td>
<td>221608N 0400326E</td>
<td>LOTOS</td>
<td>7 (OB/OOLOTOS-GOLNI)</td>
</tr>
<tr>
<td>TOKRA</td>
<td>220925N 0553350E</td>
<td>TOPSO</td>
<td>215653N 0562043E</td>
</tr>
<tr>
<td>KEBAS</td>
<td>214330N 0570948E</td>
<td>MOGOK</td>
<td>215057N 0564236E</td>
</tr>
<tr>
<td>GISKA</td>
<td>213507N 0574014E</td>
<td>UMILA</td>
<td>211555N 0584738E</td>
</tr>
<tr>
<td>UMILA</td>
<td>211555N 0584738E</td>
<td>GOLNI</td>
<td>210014N 0594130E</td>
</tr>
<tr>
<td>LOTA V</td>
<td>203700N 0605700E</td>
<td>N571</td>
<td>PARAR 2226.5 N 06307E</td>
</tr>
<tr>
<td>KIPOL</td>
<td>230410N 0612903E</td>
<td>KIROP</td>
<td>243000N 0574700E</td>
</tr>
<tr>
<td>RAGMA</td>
<td>230600N 0610539E</td>
<td>DEBOL</td>
<td>270314N 0452642E</td>
</tr>
<tr>
<td>SODEB</td>
<td>234747N 0593023E</td>
<td>TOSNA</td>
<td>270314N 0452642E</td>
</tr>
<tr>
<td>VUSET</td>
<td>235540N 0590812E</td>
<td>N685</td>
<td>TAGSO 272744N 0454510E</td>
</tr>
<tr>
<td>KIROP</td>
<td>243000N 0574700E</td>
<td>KIPOL</td>
<td>230410N 0612903E</td>
</tr>
<tr>
<td>MENSAN</td>
<td>245750N 0563249E</td>
<td>MUVLA</td>
<td>251716N 0544500E</td>
</tr>
<tr>
<td>AVAMI</td>
<td>250554N 0555647E</td>
<td>ATBOR</td>
<td>251007N 0551947E</td>
</tr>
<tr>
<td>SENTO</td>
<td>251908N 0544500E</td>
<td>ITROK</td>
<td>253557N 0532715E</td>
</tr>
<tr>
<td>ELUKU</td>
<td>252910N 0535610E</td>
<td>MUVLA</td>
<td>251716N 0544500E</td>
</tr>
<tr>
<td>ITROK</td>
<td>253557N 0532715E</td>
<td>SENTO</td>
<td>251908N 0544500E</td>
</tr>
<tr>
<td>ALPOB</td>
<td>254218N 0530055E</td>
<td>MUVLA</td>
<td>251716N 0544500E</td>
</tr>
<tr>
<td>SOLOB</td>
<td>262241N 0513132E</td>
<td>ELUKU</td>
<td>252910N 0535610E</td>
</tr>
<tr>
<td>ALPOB</td>
<td>254218N 0530055E</td>
<td>SOLOB</td>
<td>262241N 0513132E</td>
</tr>
<tr>
<td>MEDMA</td>
<td>263412N 0505454E</td>
<td>MEDMA</td>
<td>263412N 0505454E</td>
</tr>
<tr>
<td>TOTLA</td>
<td>263806N 0504301E</td>
<td>TOTLA</td>
<td>263806N 0504301E</td>
</tr>
<tr>
<td>RULEX</td>
<td>264529N 0501745E</td>
<td>RULEX</td>
<td>264529N 0501745E</td>
</tr>
<tr>
<td>SILNO</td>
<td>264026N 0475745E</td>
<td>SILNO</td>
<td>264026N 0475745E</td>
</tr>
<tr>
<td>GIBUS</td>
<td>255724N 0472829E</td>
<td>GIBUS</td>
<td>255724N 0472829E</td>
</tr>
<tr>
<td>DEBOL</td>
<td>272116N 0461843E</td>
<td>DEBOL</td>
<td>272116N 0461843E</td>
</tr>
<tr>
<td>ALSAT</td>
<td>270611N 0473118E</td>
<td>ALSAT</td>
<td>270611N 0473118E</td>
</tr>
<tr>
<td>EGNOS</td>
<td>270301N 0474713E</td>
<td>EGNOS</td>
<td>270301N 0474713E</td>
</tr>
<tr>
<td>KUSAR</td>
<td>264741N 0490218E</td>
<td>KUSAR</td>
<td>264741N 0490218E</td>
</tr>
<tr>
<td>KING FAHAD (KFA)</td>
<td></td>
<td>KING FAHAD (KFA)</td>
<td></td>
</tr>
</tbody>
</table>
BAHRAIN (BAH) 261551N 0503856E
ASNIX 260452N 0510509E
PATOM 255821N 0511836E
EMISA 254658N 0514207E
*KNote 7 to LAKLU
KAPAX 254218N 0515118E
LOXAT 252140N 0524523E
ORSIS 252801N 0521636E
TOSNA 251612N 0524116E
TOPSI 250910N 0531200E
BOXAK 244536N 0540032E
ADV 242508N 0544024
*Note 7/8 (OO/OM)
RETAS 235754N 0553423E
*Note 8 (OO)
PUTSO 232037N 0565322E
LAKLU 232235N 0570401E

N687 KING KHALID (KIA)  UN687 KING KHALID (KIA)
KINIB 254108N 0482317E  KINIB 254108N 0482317E
*Note 5 & 7 & 8  *Note 5 & 7 & 8
KING FAHAD (KFA)  KING FAHAD (KFA)
MUTAR 263611N 0500627E  MUTAR 263611N 0500627E
MEMKO 264611N 0504427E  MEMKO 264611N 0504427E
DAVRI 264936N 0505732E  DAVRI 264936N 0505732E
TORBO 265223N 0511024E  TORBO 265223N 0511024E
*Note 5
Note 7 above FL250

N697 MENLI 2947.0N 03152.1E  UN697 MENLI 2947.0N 03152.1E
SISIK 2936.0N 03241.E  SISIK 2936.0N 03241.E
NUWEIBAA (NWB)  NUWEIBAA (NWB)
* Note 7 (NWB-KITOT below FL350) * Note 7 (NWB-KITOT below FL350)
KITOT 2902.1N 03450.8E  KITOT 2902.1N 03450.8E
*Note 7 (OE)  *Note 7 (OE)
SOBAS 2756.0N 03904.9E  SOBAS 2756.0N 03904.9E
HAIL (HIL)  HAIL (HIL)
*Note 7 (HIL–KFA)  *Note 7 (HIL–KFA)
BPN 2703.2N 04526.7E  BPN 2703.2N 04526.7E
*Note 8 (BPN-TORBO)  *Note 8 (BPN-TORBO)
KING FAHAD (KFA)  KING FAHAD (KFA)
BAHRAIN (BAH)  BAHRAIN (BAH)
*Note 7 Bahrain  *Note 7 Bahrain
LOTIT 264856N0511237E  LOTIT 264856N0511237E
TORBO 265223N 0511024E  TORBO 265223N 0511024E
N929  BALUS 254554N 0530424E
   NOBLA 255111N 0522740E
   BOSIX 260633N 05155554E
   TOBLI 262134N 0512301E
   SIKTA 263232N 0505552E
   RULEX 264529N 0501745E
   DASLO 254537N 0523029E
   *Note 7 & 8 to GIBUS

UN929  BALUS 254554N 0530424E
   NOBLA 255111N 0522740E
   BOSIX 260633N 05155554E
   TOBLI 262134N 0512301E
   SIKTA 263232N 0505552E
   RULEX 264529N 0501745E
   DASLO 254537N 0523029E
   *Note 7 & 8 to GIBUS

UN929  BALUS 254554N 0530424E
   NOBLA 255111N 0522740E
   BOSIX 260633N 05155554E
   TOBLI 262134N 0512301E
   SIKTA 263232N 0505552E
   RULEX 264529N 0501745E
   DASLO 254537N 0523029E
   *Note 7 & 8 to GIBUS

NOBLA 254554N 0530424E
   UN929  BALUS 254554N 0530424E
   NOBLA 255111N 0522740E
   BOSIX 260633N 05155554E
   TOBLI 262134N 0512301E
   SIKTA 263232N 0505552E
   RULEX 264529N 0501745E
   DASLO 254537N 0523029E
   *Note 7 & 8 to GIBUS

N929  BALUS 254554N 0530424E
   NOBLA 255111N 0522740E
   BOSIX 260633N 05155554E
   TOBLI 262134N 0512301E
   SIKTA 263232N 0505552E
   RULEX 264529N 0501745E
   DASLO 254537N 0523029E
   *Note 7 & 8 to GIBUS

P307  (SHJ) 251944.9N 0553118.1E
   Note 7 (OM,OO)
   TONVO 250500N 0632000E
   PURNI 243804N 0574354E
   *Note 8 (OO)
   KUNUS 241927N 0583226E
   ALSAS 240054N 0591955E
   DORAB DERTO 235033N 0594746E
   VAXIM 231900N 0611100E
   SETSI 230412N 0614410E
   PARAR 222630N 0630700E
   UP307  (SHJ) 251944.9N 0553118.1E
   Note 7 (OM,OO)
   TONVO 250500N 0563200E
   PURNI 243804N 0574354E
   *Note 8 (OO)
   KUNUS 241927N 0583226E
   ALSAS 240054N 0591955E
   DORAB DERTO 235033N 0594746E
   VAXIM 231900N 0611100E
   SETSI 230412N 0614410E
   PARAR 222630N 0630700E

P425  DAHRAN (DHA)
   *Note 8 to ALSER
   BAHRAIN (BAH)
   TORNA 263336N 0504212E
   ALSER 271100N 0504900E
   UP425  DAHRAN (DHA)
   *Note 8 to ALSER
   BAHRAIN (BAH)
   TORNA 263336N 0504212E
   ALSER 271100N 0504900E

P430  DOHA (DOH)
   *Note 8 to MIDSI
   BAYAN 252926N 0514849E
   *Note 8 to MIDSI
   BAYAN 252926N 0514849E
   *Note 7 to MIDSI
   KAPAX 254218N 0515118E
   VUTAN 255016N 0515218E
   BONAN 260201N 0515505E
   RAMKI 261138N 0515625E
   ALTOM 262230N 0515639E
   TOXEL 263020N 0515553E
   MIDSI 264142N 05155442E

P430  DOHA (DOH)
   *Note 8 to MIDSI
   BAYAN 252926N 0514849E
   *Note 8 to MIDSI
   BAYAN 252926N 0514849E
   *Note 7 to MIDSI
   KAPAX 254218N 0515118E
   VUTAN 255016N 0515218E
   BONAN 260201N 0515505E
   RAMKI 261138N 0515625E
   ALTOM 262230N 0515639E
   TOXEL 263020N 0515553E
   MIDSI 264142N 05155442E
<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
</tr>
</thead>
</table>
| P513 | BUBAS 245938N 0570003E  
GERAR 240600N 0573616E  
MIBSI MIXAM 234139N 0575523E  
* Note 7 (OO)  
MUSCAT (MCT) |
| P559 | TURAIF (TRF)  
*Note 7 to DESDI  
KAVID 3035.9N 04011.8E  
TOKLU 2942.1N 04202.4E  
RASMO 2857.2N 04331.3E  
KMC  
ULOVO 274830N 0455420E  
*Note 8 (ULOVO-NAPLO)  
MUSKO 2726.7N 04737.1E  
KEDAT 2721.8N 04759.0E  
JUBAIL (JBL)  
GASSI 2702.9N 05022.5E  
UMAMA 2658.5N 05046.8E  
LOTIT 2648.9N 05112.6E  
VUXOR 2553.7N 05222.0E  
SODAK 264634N 0510530E  
ASPAK 262115N 0522257E  
TOMSO 260611N 0530214E  
NALPO 255602N 0532945E  
RAPSA 253700N 0541700E  
DESDI 253603N 0544230E  
UP559 | TURAIF (TRF)  
*Note 7 to DESDI  
KAVID 3035.9N 04011.8E  
TOKLU 2942.1N 04202.4E  
RASMO 2857.2N 04331.3E  
KMC  
ULOVO 274830N 0455420E  
*Note 8 (ULOVO-NAPLO)  
MUSKO 2726.7N 04737.1E  
KEDAT 2721.8N 04759.0E  
JUBAIL (JBL)  
GASSI 2702.9N 05022.5E  
UMAMA 2658.5N 05046.8E  
LOTIT 2648.9N 05112.6E  
VUXOR 2553.7N 05222.0E  
SODAK 264634N 0510530E  
ASPAK 262115N 0522257E  
TOMSO 260611N 0530214E  
NALPO 255602N 0532945E  
RAPSA 253700N 0541700E  
DESDI 253603N 0544230E |
| P570 | KITAL 2003N 06018E  
MIBSI MIXAM 234139N 0575523E  
UP570 | TRIVENDRUM (TVM)  
POMAN 1156.1N 07200.0E  
LATEB 1711.1N 06422.0E  
KITAL 2003N 06018E  
MIBSI MIXAM 234139N 0575523E  
UP574 | (BELGAUM) BBM  
(BISET- 1823.4N 06918.1E)  
TOTOX 215030N 0622230E  
* Note 7 (OM, OO)  
KUSRA 231726N 0585102E  
MIBSI MIXAM 234138N 0575525E  
SOLUD 243223N 0564421E  
GISMO 244743N 0562236E  
BUBIN 245742N 0560642E  
TUKLA 2519.6N 05540.2E  
KUMUN 254000N 0551512E  
* Note 7 (KUMUN-PAPAR)  
PAPAR 264000N 0542700E  
SHIRAZ  
SAVEH (SAV)  
ULDUS  
UP634 | LALDO 251806N 0563600E  
*Note 7  
ATBOR 251007N 0551947E  
UP693 | AL AHSA (HSA) 251644N 0492902E  
*Note 8 to BUNDU  
BATHA (BAT) 241257N 0512707E  
BUNDU 250024N 0522924E |
| P699 | ATBOR 251007N 0551947E  
UP699 | ATBOR 251007N 0551947E |
**Note 7 (OM ATBOR-BAH)**

**SITAT** 251105N 0544500E
**KISAG** 251834N 0541408E
**ITMUS** 252322N 0535429E
**ALSOK** 252607N 0533904E
**ALSOK** 252607N 0533904E
**RUBAL** 252957N 0531723E
**ORMID** 253354N 0525434E

**Note 8 (ORMID-KFA)**

**SOGAT** 262029N 0511443E
**ASTAD** 261812N 0505646E
**BAHRAIN (BAH)** 261551N 0503856E
**KING FHAD (KFA)** 262153N 0494910E
**LOPOM** 252941N 0532817E
**BALUS** 254554N 0530424E

**P751** AMIBO 3456.7N 2136.4E
BRN 3134.5N 02600.3E
KATAB 2925.0N 2905.1E
AST 2701.9N 03101.9E
LUXOR (LXR)
ALEBA 2200.0N 03527.0E
PORT SUDAN
[ASMARA] *Note 1
TOKAR ASSAB 1304.0N 04238.8E
PARIM 1231.7N 04327.2E
ADEN (KRA)
ANGAL 1614.0N 06000.0E
(MUMBAY) (BBB)

**R462** (JIWANI) JI
DENDA 2442.5N 06054.8E
VUSET 235540N 0590812E
*Note 7 (OO)
**MIBSI** MIXAM 234139N 0575523E

**R659** TEHRAN (TRN)
*Note 7 (ISN-TRN)
BOXAM 343749N 0515147E
DAPOG 333744N 0522331E

**UP751** AMIBO 3456.7N 2136.4E
BRN 3134.5N 02600.3E
KATAB 2925.0N 2905.1E
AST 2701.9N 03101.9E
LUXOR (LXR)
ALEBA 2200.0N 03527.0E
PORT SUDAN
[ASMARA] *Note 1
TOKAR ASSAB 1304.0N 04238.8E
PARIM 1231.7N 04327.2E
ADEN (KRA)
ANGAL 1614.0N 06000.0E
(MUMBAY) (BBB)

**UP891** MAGALA (MGA)
*Note 7 to KUA
KUTEM 264359N 0473521E
EGNOV
EMILU
KUNRU 283220N 0481050E
KUWAIT (KUA)

**UR462** (JIWANI) JI
DENDA 2442.5N 06054.8E
VUSET 235540N 0590812E
*Note 7 (OO)
**MIBSI** MIXAM 234139N 0575523E

**UR659** TEHRAN (TRN)
*Note 7 (ISN-TRN)
BOXAM 343749N 0515147E
DAPOG 333744N 0522331E
Add requirement for ATS routes: UL305, L768, M318/UM318 and P891 as follows:

** UL305 **

DOHA (DOH)

*Note 7 (DOH-ITITA)

*Note 8 (DOH-ASTOG)

** L768 **

ALPOB 254218N 0530055E

* Note 7 & 8 to COPPI

* Note 8 (ALPOB-COPPI)

ROTAG 255353N 0523621E

SOLEG 260159N 0521756E

RAMKI 261138N 0515625E

RABLA 261506N 0514834E

SOLID 262241N 0513132E

MEDMA 263421N 0505454E

TOTT 263806N 0504301E

COPPI 2750.6N 04744.0E

** M318 **

DARAX 260942N 0555300E

*Note 8 (DARAX-MUXIT)

SERSA 251945N 0553118E

MIADA 245112N 0545736E

ABU DHABI (ADV) 242508N 0544023E

ATUDO 241708N 0543532E

MUSEN 241429N 0543336E

GOLGU 231151N 0523109E

MUXIT 230230N 0523024E

KITAP 224928N 0522923E

PURDA 210805N 0510329E

SHARURAH (SHA)

** UM318 **

DARAX 260942N 0555300E

*Note 8 (DARAX-MUXIT)

SERSA 251945N 0553118E

MIADA 245112N 0545736E

ABU DHABI (ADV) 242508N 0544023E

ATUDO 241708N 0543532E

MUSEN 241429N 0543336E

GOLGU 231151N 0523109E

MUXIT 230230N 0523024E

KITAP 224928N 0522923E

PURDA 210805N 0510329E

SHARURAH (SHA)

** P891 **

MAGALA (MGA)

*Note 7 to KUA

KUTEM 264359N 0473521E

EGNOV

EMILU

KUNRU 283220N 0481050E
### KUWAIT (KUA)

**c) Originated by:** The sixth ATS Route Network Task Force (ARN TF/6) meeting.

**d) Originator’s reasons for amendment:** The ARN TF/6 meeting reviewed and updated the Table ATS 1-ATS Routes of the MID Basic ANP, and endorsed Proposals for Amendments received from Bahrain and UAE.

**e) Intended date of implementation:** As soon as practicable after approval.

**f) Proposal circulated to following States and organizations:**

<table>
<thead>
<tr>
<th>State/Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Egypt</td>
</tr>
<tr>
<td>Islamic Republic of Iran</td>
</tr>
<tr>
<td>Iraq</td>
</tr>
<tr>
<td>Jordan</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Lebanon</td>
</tr>
<tr>
<td>Oman</td>
</tr>
<tr>
<td>Qatar</td>
</tr>
<tr>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>Syrian Arab Republic</td>
</tr>
<tr>
<td>United Arab Emirates</td>
</tr>
<tr>
<td>Yemen</td>
</tr>
<tr>
<td>IACA</td>
</tr>
<tr>
<td>IATA</td>
</tr>
<tr>
<td>IFALPA</td>
</tr>
<tr>
<td>CANSO</td>
</tr>
</tbody>
</table>

**g) Secretariat’s comments:** The changes proposed herein are the result of work undertaken by the MIDANPIRG ARN TF/6; the ICAO MID Regional Office and individual MID States to enhance MID Region ATS route network efficiency. Including the implementation of RNAV1 routes in Bahrain, Emirates and Muscat FIRs.
### Reference

**Proposition 1**

**Objective:** To further improve ATS route network within Cairo FIR.

To implement bi-directional ATS route **TBA - AAAAA - KITOT**.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Objective and Proposal</th>
<th>State(s) concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal 1</td>
<td>Objective: To further improve ATS route network within Cairo FIR. To implement bi-directional ATS route <strong>TBA - AAAAA - KITOT</strong>.</td>
<td>EGY</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Originator</strong> EUROCONTROL</td>
</tr>
</tbody>
</table>

**Notes:**

1. **AAAAA** - crossing point between new TBA - KITOT and existing ATS route W733 allowing connection to/from METSA.
2. Shorter by 9.2NM option compare to existing TBA - NWB - KITOT.
3. Shorter by 28.6NM option compare to existing TBA - NWB - METSA.
Proposal 2

**Objective:** To further improve ATS route network within Cairo FIR.

To change to bi-directional existing westbound ATS route segment N/UN697 / UL550 KITOT - NWB.

**State(s) concerned:** EGY

**Originator:** EUROCONTROL

**Notes:**
1. In accordance with AIP A.R.E. part ENR this ATS route segment is westbound only and KITOT is used only as an entry point for NB TFC overflying Cairo FIR & for TFC LDG HECA, HEBA, HEMM & HEAL.
2. This unidirectional use of KITOT is also reflected in Traffic Orientation for Cairo FIR also part of AIP A.R.E..
3. Eastbound is an important option for traffic circumnavigating Damascus FIR as maximum saving flying distance is around 30NM.
4. The change might cover only ATS route UL550 (FL285 - UNL) as N/UN697 in that segment has lower/upper limits FL255 - FL285.
### Reference and Proposal

<table>
<thead>
<tr>
<th>Reference</th>
<th>Objective and Proposal</th>
<th>State(s) concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal 3</td>
<td><strong>Objective:</strong> To further improve ATS route network between Baghdad FIR and Jeddah FIR. To implement ATS route <strong>HFR - AAAAA - ITBIT - KATUT.</strong></td>
<td>IRQ, SAU</td>
</tr>
</tbody>
</table>

### Notes:

1. **AAAAA** - new boundary point between Jeddah FIR and Baghdad FIR.
2. **HFR - AAAAA - ITBIT** bi-directional.
3. **ITBIT - KATUT** southbound.
4. New shorter option mainly for DEP/ARR OERK.
5. Bi-directional ATS route N/UN864 KIA - HFR exists in Jeddah FIR as well as OERK SID TORKI.
6. For **DEP OERK** shorter by 83.2NM option compare to existing KIA - MGA - KUTEM - ENGOV - KUNRU - KUA - RALK - TASMI - ITBIT.
7. For **ARR OERK** shorter by 78.3NM option compare to existing KATUT - ILMAR - SIDAD - ALVIX - KUA - KFR - LUGAL - MGA - KIA.

---

**Diagram:**

- Map showing the ATS routes and points mentioned in the proposal.
### Deficiencies in the ATM Field

#### EGYPT

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement</td>
<td>Facilities/Services</td>
<td>Description</td>
<td>Date First Reported</td>
</tr>
<tr>
<td>1</td>
<td>Annex 11 Para. 2.30</td>
<td>Development of contingency plan</td>
<td>Nov. 2006</td>
</tr>
<tr>
<td>1</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Egypt/ Libya/ Malta</td>
<td>ATS routes M305/UM305 not implemented</td>
</tr>
<tr>
<td>2</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Egypt/ Libya/ Malta</td>
<td>ATS routes M312/UM312 not implemented</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes
## Deficiencies in the ATM Field

### IRAN

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requirement</strong></td>
<td><strong>Facilities/ Services</strong></td>
<td><strong>Description</strong></td>
<td><strong>Date First Reported</strong></td>
</tr>
<tr>
<td>1</td>
<td>Annex 11 Para. 2.30</td>
<td>Development of contingency plans</td>
<td>Nov, 2006</td>
</tr>
<tr>
<td>3</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Iran / UAE ATS routes A418/UP574 not implemented KUMUN – PAPAR</td>
<td>Dec, 2006</td>
</tr>
<tr>
<td>4</td>
<td>MID ANP Table ATS - 1 Plan of ATS Routes</td>
<td>Iran / Iraq ATS route L126 MIGMI - ILM not implemented</td>
<td>Dec, 2011</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes
### Deficiencies in the ATM Field

**IRAQ**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Description</td>
<td>Remarks/ Rationale for Non-elimination</td>
</tr>
<tr>
<td>1</td>
<td>MID ANP Table ATS-1, Plan of ATS Routes</td>
<td>ATS route G667 not implemented</td>
<td>Iraq has no plan to open the route: Iraq requested that Airway be suspended until adequate radar coverage exists and RVSM has been implemented in the Baghdad (FIR), not supported by Kuwait due Military restrictions</td>
</tr>
<tr>
<td>2</td>
<td>Annex 11 Para. 2.30</td>
<td>Development of contingency plan</td>
<td>-sent to ICAO MID Regional Office</td>
</tr>
<tr>
<td>4</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>ATS route UL602 not implemented in the Baghdad and Damascus FIRs</td>
<td>Coordination between Iraq and Syria, NOTAMs issued opening route in Baghdad FIR</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes
<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Description</td>
<td>Remarks/ Rationale for Non-elimination</td>
</tr>
<tr>
<td>5</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>ATS route G795 Rafha- Basrah segment not implemented</td>
<td>Coordination between Iraq and Saudi Arabia.</td>
</tr>
<tr>
<td>6</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>ATS route A424 LOTAN - LOVEK segment (Baghdad FIR) not implemented</td>
<td>Communication problems between concerned FIRs</td>
</tr>
<tr>
<td>7</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Iraq ATS Route G669 segment Rafha SOLAT not implemented</td>
<td>Airspace restrictions</td>
</tr>
<tr>
<td>9</td>
<td>MID ANP Table ATS - 1 Plan of ATS routes</td>
<td>Iraq/Iran ATS routes L126 not implemented MIGMI – ILM segment not implemented</td>
<td>States to continue negotiations with one another.</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes
<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Remarks/ Rationale for Non-elimination</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Identification</td>
<td>Description</td>
<td>Date First Reported</td>
</tr>
<tr>
<td>10</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Iraq ATS routes M320 implemented with variance to Table ATS 1, Causing a Safety concern due duplication.</td>
<td>Dec, 2011</td>
<td>RUGIR to RAPLU implemented at variance with the Plan, affecting safety due duplication.</td>
</tr>
<tr>
<td></td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Iraq ATS routes R652 GIBUX—IVANO implemented at variance with the ANP Causing a safety concern due duplication</td>
<td>Dec, 2011</td>
<td>GIBUX—IVANO implemented at variance with the Plan. Affecting safety</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination:  “F”= Financial  “H”= Human Resources  “S”= State (Military/political)  “O”= Other unknown causes
### Deficiencies in the ATM Field

**JORDAN**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Description</td>
<td>Remarks/ Rationale for Non-elimination</td>
</tr>
<tr>
<td>1</td>
<td>Annex 11</td>
<td>Development of contingency plan</td>
<td>National Contingency plan developed sent to ICAO MID Regional Office - signed with Egypt and Saudi Arabia</td>
</tr>
<tr>
<td>3</td>
<td>MID ANP Table ATS-1</td>
<td>ATS Route UP559 not implemented</td>
<td>The segments TURAI-TONTU-DAMASCUS-DAKWE-KHALDEH-KUKLA-LARNACA are not implemented. Jordan has no plans to implement</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial  “H”= Human Resources  “S”= State (Military/political)  “O”= Other unknown causes
# Deficiencies in the ATM Field

## KUWAIT

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Facilities/ Services</td>
<td>Description</td>
</tr>
<tr>
<td>2</td>
<td>Annex 11 Para. 2.30</td>
<td>-</td>
<td>Development of contingency plan</td>
</tr>
<tr>
<td>3</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>-</td>
<td>ATS route G669 segment Rafha SOLAT not implemented</td>
</tr>
<tr>
<td>4</td>
<td>MID ANP Table ATS - 1 Plan of ATS Routes</td>
<td>-</td>
<td>ATS Route G667 not implemented Abadan (ABD0 ALSAN)</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes
### Deficiencies in the ATM Field

**LEBANON**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Facilities/</td>
<td>Description</td>
</tr>
<tr>
<td>1</td>
<td>Annex 11 Para. 2.30</td>
<td>-</td>
<td>Development of contingency plan</td>
</tr>
<tr>
<td>3</td>
<td>MID ANP Table ATS-4</td>
<td>-</td>
<td>ATS Route UP559 not implemented</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial  “H”= Human Resources  “S”= State (Military/political)  “O”= Other unknown causes
### Deficiencies in the ATM Field

**OMAN**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Description</td>
<td>Remarks/ Rationale for Non-elimination</td>
</tr>
<tr>
<td>1</td>
<td>Annex 11 Para. 2.30</td>
<td>Development of contingency plans</td>
<td>Nov, 2006</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes
### Deficiencies in the ATM Field

**QATAR**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Description</td>
<td>Remarks/ Rationale for Non-elimination</td>
</tr>
<tr>
<td>1</td>
<td>Annex 11</td>
<td>Development of contingency plan</td>
<td>Work in progress; agreement signed with Bahrain</td>
</tr>
<tr>
<td>2</td>
<td>MID ANP Table ATS</td>
<td>ATS Route L/L443 not implemented</td>
<td>The segment KUPOA AMRAK LAGVA LOPOK TAMRI are not implemented</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes
### Deficiencies in the ATM Field

**SAUDI ARABIA**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Description</td>
<td>Remarks/ Rationale for Non-elimination</td>
</tr>
<tr>
<td>1</td>
<td>Annex 11</td>
<td>Development of contingency plan</td>
<td>Nov, 2006</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial   “H”= Human Resources   “S”= State (Military/political)   “O”= Other unknown causes
## Deficiencies in the ATM Field

### SYRIA

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Description</th>
<th>Date First Reported</th>
<th>Remarks/ Rationale for Non-elimination</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Lebanon Syria ATS route G202 not implemented</td>
<td>Dec, 1997</td>
<td>Not implemented DAKWE - Damascus Economic impact - alternative routes available but longer - Not affecting safety</td>
<td>S ICAO to follow-up -- Syria has no plan to implement the route</td>
</tr>
<tr>
<td>2</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Iraq Syria ATS route UL602 not implemented in the Baghdad and Damascus FIRs</td>
<td>Dec, 2003</td>
<td>Coordination between Iraq and Syria</td>
<td>S States to negotiate with one another and coordinate opening of the routes</td>
</tr>
<tr>
<td>3</td>
<td>Annex 11 Para. 2.30</td>
<td>Development of contingency plans</td>
<td>Nov, 2006</td>
<td>Draft available</td>
<td>H O Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services</td>
</tr>
<tr>
<td>5</td>
<td>MID ANP Table ATS-1</td>
<td>ATS Route UP559 not implemented</td>
<td>Mar, 2007</td>
<td>The segments TURAIK-TONTUL-DAMASCUS-DAKWE-KHALDEH-KUKLA-LARNACA are not implemented</td>
<td>S Syria has no plan to implement the route</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial  “H”= Human Resources  “S”= State (Military/political)  “O”= Other unknown causes
### Deficiencies in the ATM Field

**UAE**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Deficiencies</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Description</td>
<td>Description</td>
</tr>
<tr>
<td></td>
<td>Facilities/ Services</td>
<td>Date First Reported</td>
<td>Remarks/ Rationale for Non-elimination</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Date of Completion</td>
<td>Executing Body</td>
</tr>
<tr>
<td>1</td>
<td>Annex 11 Para. 2.30</td>
<td>Development of contingency plan</td>
<td>Nov, 2006</td>
</tr>
<tr>
<td>2</td>
<td>MID ANP Table ATS-1 Plan of ATS routes</td>
<td>Iran / UAE</td>
<td>Dec, 2006</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes
### Deficiencies in the ATM Field

**YEMEN**

<table>
<thead>
<tr>
<th>Item No</th>
<th>Identification</th>
<th>Description</th>
<th>Date First Reported</th>
<th>Remarks/ Rationale for Non-elimination</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirement</td>
<td>Facilities/ Services</td>
<td></td>
<td></td>
<td>Description</td>
</tr>
<tr>
<td></td>
<td>Annex 11</td>
<td>Development of contingency plan</td>
<td>Nov, 2006</td>
<td>Ongoing - signed with Oman</td>
<td>H O Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services</td>
</tr>
</tbody>
</table>

(1) Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes
Note:*  Priority for action to remedy a deficiency is based on the following safety assessments:

'U' priority = Urgent requirements having a direct impact on safety and requiring immediate corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

'A' priority = Top priority requirements necessary for air navigation safety.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

'B' priority = Intermediate requirements necessary for air navigation regularity and efficiency.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

Definition:

A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

---------------

(1) Rationale for non-elimination:  “F”= Financial  “H”= Human Resources  “S”= State (Military/political)  “O”= Other unknown causes
REPORT ON AGENDA ITEM 4: CONTINGENCY PLANNING

4.1 The meeting noted that MIDANPIRG/13 recalled that one of the challenges contributing to the low pace in implementation of contingency plans was the process of consultation and agreements with adjacent FIRs/States. However, it was noted that progress has been achieved in this regard, since a number of States have signed contingency planning agreements with adjacent FIRs/States, and some agreements are pending signatures.

4.2 Taking into consideration the current events in the MID Region and for ensuring safety and continuity of civil aviation, the meeting reviewed the Contingency Routing Scheme Asia/Middle East/Europe 2003 version(3), and agreed that this plan should be updated in order to include more routes scenarios, namely over Baghdad FIR. Accordingly, the meeting agreed to the following Draft Conclusion:

**DRAFT CONCLUSION 6/4: MID REGIONAL CONTINGENCY PLAN**

That,

a) States and users be urged to review the MID Regional Contingency Plan and the revised version of the CRAME-03 version (3) as at Appendices 4A and 4B to the Report on Agenda Item 4, respectively; and provide updates and comments to the ICAO MID Regional Office before 15 June 2013;

b) ICAO MID Regional Office to coordinate with ICAO EUR/NAT and APAC Regional Offices and ICAO Headquarters the revision and update process of the CRAME-03 version (3).

c) A draft CRAME-03 Version 3 will be reviewed by the ATM/AIM/SAR SG/13 that will be held in Cairo, Egypt, 30 September to 4 October 2013.

4.3 The meeting reviewed and updated the status of implementation of the contingency plans in the MID Region and the focal points contact details as at Appendices 4C and 4D to Report on Agenda Item 4, respectively.
First Edition: 22 May 2011

Published on behalf of the ATS Route Network Task Force (ARN TF) by the MID Regional Office of ICAO
EXCLUSION OF LIABILITY

A printed or electronic copy of this Manual, plus any associated documentation, is provided to the recipient as is and without any warranties as to its description, condition, quality, fitness for purpose or functionality and for use by the recipient solely for guidance only. Any implied conditions terms or warranties as to the description, condition, quality, fitness for purpose or functionality of the software and associated documentation are hereby excluded.

The information published by ICAO on this document is made available without warranty of any kind; the Organization accepts no responsibility or liability whether direct or indirect, as to the currency, accuracy or quality of the information, nor for any consequence of its use.

The designations and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.

First published: 22 May 2011

There is no objection to the reproduction of extracts of information contained in this Document if the source is acknowledged.
TABLE OF CONTENTS

EXCLUSION OF LIABILITY

FOREWORD

RECORD OF AMENDMENTS

ATM CONTINGENCY PLAN FOR FLIGHTS OPERATING WITHIN THE MID REGION

CONTROL AREAS

PART 1 - CONTINGENCY SITUATIONS AFFECTING ATC FACILITIES

SCOPE OF THE PLAN

COMMON PROCEDURES

Implementation of the plan

Traffic Information Broadcast by Aircraft (TIBA) procedures

CHAPTER 1: DETAILED PROCEDURES – BAHRAIN ACC

1.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

1.2 FIRS WITH SUPPORTING PROCEDURES

1.3 NOTIFICATION PROCEDURES

1.4 LIMITED SERVICE - PROCEDURES

1.4.1 Disruption of ground/air communication capability

Effect on flights

1.4.2 Disruption of ability to provide control services

Separation standards

Contingency tracks

Air Traffic Flow Management

Responsibilities of adjacent ANSPs

1.5 NO SERVICE - PROCEDURES

1.5.1 Loss of ground/air communication capability

Effect on flights

1.5.2 Loss of ability to provide control services

1.6 FLIGHT CREW AND OPERATOR PROCEDURES

1.6.1 for flights within the Bahrain FIR – General

1.6.2 for flights within the Bahrain FIR – Westbound

1.6.3 for flights within the Bahrain FIR – Eastbound

1.6.4 for flights approaching the Bahrain FIR when the contingency is activated

Not in Receipt of an ATC Clearance
1.6.5 Entering from another FIR...

1.7 **BAHRAIN ACC – CONTINGENCY ROUTE STRUCTURE**

1.7.1 For activation within Bahrain FIR...
1.7.2 for activation within adjacent FIR’s...
- Emirates FIR...
- Jeddah FIR...
- Kuwait FIR...
- Muscat FIR...
- Tehran FIR...
- Sana’a FIR...

1.8 **QATAR TMA – CONTINGENCY ROUTE STRUCTURE**

1.8.1 For activation within Bahrain FIR...
1.8.2 for activation within adjacent FIR’s...
- Emirates FIR...
- Jeddah FIR...
- Kuwait FIR...
- Muscat FIR...
- Tehran FIR...
- Sana’a FIR...

1.9 **LONG TERM CONTINGENCY ARRANGEMENTS**

---

**APPENDIX**

---

**CHAPTER 2: DETAILED PROCEDURES - CAIRO ACC**

2.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES
2.2 FIRS WITH SUPPORTING PROCEDURES
2.3 NOTIFICATION PROCEDURES
2.4 LIMITED SERVICE - PROCEDURES
2.5 NO SERVICE - PROCEDURES

2.6 **CAIRO FIR CONTINGENCY ROUTE STRUCTURE**

2.6.1 For activation within Cairo FIR...
2.6.2 for activation within adjacent FIR’s...

2.7 **LONG TERM CONTINGENCY ARRANGEMENTS**

---

**APPENDIX**

---
APPENDIX - - EVACUATION MESSAGES – CAIRO ACC

CHAPTER 3: DETAILED PROCEDURES - IRAN ACC

3.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

3.2 FIRS WITH SUPPORTING PROCEDURES

3.3 NOTIFICATION PROCEDURES

3.4 LIMITED SERVICE - PROCEDURES

3.4.1 Disruption of ground/air communication capability

Effect on flights

3.4.2 Disruption of ability to provide control services

Separation standards

Contingency tracks

Air Traffic Flow Management

Responsibilities of adjacent ANSPs

3.5 NO SERVICE - PROCEDURES

3.5.1 Loss of ground/air communication capability

Effect on flights

3.5.2 Loss of ability to provide control services

3.6 FLIGHT CREW AND OPERATOR PROCEDURES

3.6.1 for flights within the Tehran FIR – General

3.6.2 for flights within the Tehran FIR – Westbound

3.6.3 for flights within the Tehran FIR – Eastbound

3.6.4 for flights approaching the Tehran FIR when the contingency is activated

Not in Receipt of an ATC Clearance

In receipt of an acknowledged ATC Clearance outside Tehran FIR

In receipt of an acknowledged ATC Clearance within Tehran FIR

3.6.5 Entering from another FIR

3.7 TEHRAN ACC – CONTINGENCY ROUTE STRUCTURE

3.7.1 For activation within Tehran FIR

3.7.2 for activation within adjacent FIR’s

Ankara FIR

Baghdad FIR

Bahrain FIR

Baku FIR

Emirates FIR

Kabul FIR

Karachi FIR

Kuwait FIR

Muscat FIR

Turkmenbashi FIR

Yerevan FIR
3.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX - STATES PROCEDURES IN EVENT OF TEHRAN ACC EVACUATION
APPENDIX - CONTACT DETAILS – TEHRAN ACC
APPENDIX - EVACUATION MESSAGES – TEHRAN ACC

CHAPTER 4: DETAILED PROCEDURES - IRAQ ACC

4.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

4.2 FIRS WITH SUPPORTING PROCEDURES

4.3 NOTIFICATION PROCEDURES

4.4 LIMITED SERVICE - PROCEDURES

4.4.1 Disruption of ground/air communication capability
Effect on flights

4.4.2 Disruption of ability to provide control services
Separation standards
Contingency tracks
Air Traffic Flow Management
Responsibilities of adjacent ANSPs

4.5 NO SERVICE - PROCEDURES

4.5.1 Loss of ground/air communication capability
Effect on flights

4.5.2 Loss of ability to provide control services

4.6 FLIGHT CREW AND OPERATOR PROCEDURES

4.6.1 for flights within the Baghdad FIR – General
4.6.2 for flights within the Baghdad FIR – Westbound
4.6.3 for flights within the Baghdad FIR – Eastbound
4.6.4 for flights approaching the Baghdad FIR when the contingency is activated
Not in Receipt of an ATC Clearance
In receipt of an acknowledged ATC Clearance outside Baghdad FIR
In receipt of an acknowledged ATC Clearance within Baghdad FIR
4.6.5 Entering from another FIR

4.7 BAGHDAD ACC – CONTINGENCY ROUTE STRUCTURE

4.7.1 For activation within Baghdad FIR
Amman FIR
Ankara FIR
Damascus FIR
Jeddah FIR
Kuwait FIR
Tehran FIR

4.8 LONG TERM CONTINGENCY ARRANGEMENTS
APPENDIX - STATES PROCEDURES IN EVENT OF BAGHDAD ACC EVACUATION
APPENDIX - CONTACT DETAILS – BAGHDAD ACC
APPENDIX - EVACUATION MESSAGES – BAGHDAD ACC

CHAPTER 5: DETAILED PROCEDURES - AMMAN ACC

5.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

5.2 FIRS WITH SUPPORTING PROCEDURES

5.3 NOTIFICATION PROCEDURES

5.4 LIMITED SERVICE - PROCEDURES

  5.4.1 Disruption of ground/air communication capability
  Effect on flights

  5.4.2 Disruption of ability to provide control services
  Separation standards
  Contingency tracks
  Air Traffic Flow Management
  Responsibilities of adjacent ANSPs

5.5 NO SERVICE - PROCEDURES

  5.5.1 Loss of ground/air communication capability
  Effect on flights

  5.5.2 Loss of ability to provide control services

5.6 FLIGHT CREW AND OPERATOR PROCEDURES

  5.6.1 for flights within the Amman FIR – General

  5.6.2 for flights within the Amman FIR – Westbound

  5.6.3 for flights within the Amman FIR – Eastbound

  5.6.4 for flights approaching the Amman FIR when the contingency is activated

    Not in Receipt of an ATC Clearance

    In receipt of an acknowledged ATC Clearance outside Amman FIR

    In receipt of an acknowledged ATC Clearance within Amman FIR

  5.6.5 Entering from another FIR

5.7 AMMAN ACC – CONTINGENCY ROUTE STRUCTURE

  5.7.1 For activation within Amman FIR

  5.7.2 For activation within adjacent FIR’s

    Baghdad FIR

    Cairo FIR

    Damascus FIR

    Jeddah FIR

    Tel Aviv FIR

5.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX - STATES PROCEDURES IN EVENT OF AMMAN ACC EVACUATION
APPENDIX - CONTACT DETAILS – AMMAN ACC
APPENDIX - EVACUATION MESSAGES – AMMAN ACC

CHAPTER 6: DETAILED PROCEDURES - KUWAIT ACC

6.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

6.2 FIRS WITH SUPPORTING PROCEDURES

6.3 NOTIFICATION PROCEDURES

6.4 LIMITED SERVICE - PROCEDURES

6.4.1 Disruption of ground/air communication capability
Effect on flights

6.4.2 Disruption of ability to provide control services
Separation standards
Contingency tracks
Air Traffic Flow Management
Responsibilities of adjacent ANSPs

6.5 NO SERVICE - PROCEDURES

6.5.1 Loss of ground/air communication capability
Effect on flights

6.5.2 Loss of ability to provide control services

6.6 FLIGHT CREW AND OPERATOR PROCEDURES

6.6.1 for flights within the Kuwait FIR – General

6.6.2 for flights within the Kuwait FIR – Westbound

6.6.3 for flights within the Kuwait FIR – Eastbound

6.6.4 for flights approaching the Kuwait FIR when the contingency is activated
Not in Receipt of an ATC Clearance
In receipt of an acknowledged ATC Clearance outside Kuwait FIR
In receipt of an acknowledged ATC Clearance within Kuwait FIR

6.6.5 Entering from another FIR

6.7 KUWAIT ACC – CONTINGENCY ROUTE STRUCTURE

6.7.1 For activation within Kuwait FIR

6.7.2 for activation within adjacent FIR’s
Baghdad FIR
Bahrain FIR
Jeddah FIR
Tehran FIR

6.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX - STATES PROCEDURES IN EVENT OF KUWAIT ACC EVACUATION
APPENDIX - CONTACT DETAILS – KUWAIT ACC
APPENDIX -- EVACUATION MESSAGES – KUWAIT ACC

CHAPTER 7: DETAILED PROCEDURES - BEIRUT ACC
7.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

7.2 FIRS WITH SUPPORTING PROCEDURES

7.3 NOTIFICATION PROCEDURES

7.4 LIMITED SERVICE - PROCEDURES

7.4.1 Disruption of ground/air communication capability
Effect on flights

7.4.2 Disruption of ability to provide control services
Separation standards
Contingency tracks
Air Traffic Flow Management
Responsibilities of adjacent ANSPs

7.5 NO SERVICE - PROCEDURES

7.5.1 Loss of ground/air communication capability
Effect on flights

7.5.2 Loss of ability to provide control services

7.6 FLIGHT CREW AND OPERATOR PROCEDURES

7.6.1 for flights within the Beirut FIR – General
7.6.2 for flights within the Beirut FIR – Westbound
7.6.3 for flights within the Beirut FIR – Eastbound
7.6.4 for flights approaching the Beirut FIR when the contingency is activated
Not in Receipt of an ATC Clearance
In receipt of an acknowledged ATC Clearance outside Beirut FIR
In receipt of an acknowledged ATC Clearance within Beirut FIR
7.6.5 Entering from another FIR

7.7 BEIRUT ACC – CONTINGENCY ROUTE STRUCTURE

7.7.1 For activation within Beirut FIR
7.7.2 for activation within adjacent FIR’s
Damascus FIR
Nicosia FIR

7.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX - STATES PROCEDURES IN EVENT OF BEIRUT ACC EVACUATION
APPENDIX - CONTACT DETAILS – BEIRUT ACC
APPENDIX - EVACUATION MESSAGES – BEIRUT ACC

CHAPTER 8: DETAILED PROCEDURES - TRIPOLI ACC

8.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

8.2 FIRS WITH SUPPORTING PROCEDURES

8.3 NOTIFICATION PROCEDURES
8.4 LIMITED SERVICE - PROCEDURES

8.4.1 Disruption of ground/air communication capability
Effect on flights

8.4.2 Disruption of ability to provide control services
Separation standards
Contingency tracks
Air Traffic Flow Management
Responsibilities of adjacent ANSPs

8.5 NO SERVICE - PROCEDURES

8.5.1 Loss of ground/air communication capability
Effect on flights

8.5.2 Loss of ability to provide control services

8.6 FLIGHT CREW AND OPERATOR PROCEDURES

8.6.1 for flights within the Tripoli FIR – General
8.6.2 for flights within the Tripoli FIR – Westbound
8.6.3 for flights within the Tripoli FIR – Eastbound
8.6.4 for flights approaching the Tripoli FIR when the contingency is activated
Not in Receipt of an ATC Clearance
In receipt of an acknowledged ATC Clearance outside Tripoli FIR
In receipt of an acknowledged ATC Clearance within Tripoli FIR
8.6.5 Entering from another FIR

8.7 TRIPOLI ACC – CONTINGENCY ROUTE STRUCTURE

8.7.1 For activation within Tripoli FIR
8.7.2 for activation within adjacent FIR’s
Algiers FIR
Cairo FIR
Khartoum FIR
Malta FIR
N’Djamena FIR
Niamey UIR
Nicosia FIR
Tunis FIR

8.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX - STATES PROCEDURES IN EVENT OF TRIPOLI ACC EVACUATION
APPENDIX - - CONTACT DETAILS – TRIPOLI ACC
APPENDIX - - EVACUATION MESSAGES – TRIPOLI ACC

CHAPTER9: DETAILED PROCEDURES - MUSCAT ACC

9.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

9.2 FIRS WITH SUPPORTING PROCEDURES
9.3 NOTIFICATION PROCEDURES

9.4 LIMITED SERVICE - PROCEDURES

9.4.1 Disruption of ground/air communication capability
   Effect on flights

9.4.2 Disruption of ability to provide control services
   Separation standards
   Contingency tracks
   Air Traffic Flow Management
   Responsibilities of adjacent ANSPs

9.5 NO SERVICE - PROCEDURES

9.5.1 Loss of ground/air communication capability
   Effect on flights

9.5.2 Loss of ability to provide control services

9.6 FLIGHT CREW AND OPERATOR PROCEDURES

9.6.1 for flights within the Muscat FIR – General

9.6.2 for flights within the Muscat FIR – Westbound

9.6.3 for flights within the Muscat FIR – Eastbound

9.6.4 for flights approaching the Muscat FIR when the contingency is activated
   Not in Receipt of an ATC Clearance
   In receipt of an acknowledged ATC Clearance outside Muscat FIR
   In receipt of an acknowledged ATC Clearance within Muscat FIR

9.6.5 Entering from another FIR

9.7 MUSCAT ACC – CONTINGENCY ROUTE STRUCTURE

9.7.1 For activation within Muscat FIR

9.7.2 for activation within adjacent FIR’s
   Bahrain FIR
   Emirates FIR
   Karachi FIR
   Mumbai FIR
   Tehran FIR
   Sana’a FIR

9.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX -- STATES PROCEDURES IN EVENT OF MUSCAT ACC EVACUATION
APPENDIX - - CONTACT DETAILS – MUSCAT ACC
APPENDIX - - EVACUATION MESSAGES – MUSCAT ACC

CHAPTER 10: DETAILED PROCEDURES – JEDDAH ACC

10.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

10.2 FIRS WITH SUPPORTING PROCEDURES

10.3 NOTIFICATION PROCEDURES
10.4 LIMITED SERVICE - PROCEDURES

10.4.1 Disruption of ground/air communication capability.
   Effect on flights.

10.4.2 Disruption of ability to provide control services.
   Separation standards.
   Contingency tracks.
   Air Traffic Flow Management.
   Responsibilities of adjacent ANSPs.

10.5 NO SERVICE - PROCEDURES

10.5.1 Loss of ground/air communication capability.
   Effect on flights.

10.5.2 Loss of ability to provide control services.

10.6 FLIGHT CREW AND OPERATOR PROCEDURES

10.6.1 for flights within the Jeddah FIR – General.
10.6.2 for flights within the Jeddah FIR – Westbound.
10.6.3 for flights within the Jeddah FIR – Eastbound.
10.6.4 for flights approaching the Jeddah FIR when the contingency is activated.
   Not in Receipt of an ATC Clearance.
   In receipt of an acknowledged ATC Clearance outside Jeddah FIR.
   In receipt of an acknowledged ATC Clearance within Jeddah FIR.
10.6.5 Entering from another FIR.

10.7 JEDDAH ACC – CONTINGENCY ROUTE STRUCTURE

10.7.1 for activation within Jeddah FIR.
10.7.2 for activation within adjacent FIR’s.
   Amman FIR.
   Asmara FIR.
   Bahrain FIR.
   Baghdad FIR.
   Cairo FIR.
   Khartoum FIR.
   Kuwait FIR.
   Sana’a FIR.

10.8 RIYADH ACC – CONTINGENCY ROUTE STRUCTURE

10.8.1 for activation within Jeddah FIR.
10.8.2 for activation within adjacent FIR’s.
   Amman FIR.
   Asmara FIR.
   Bahrain FIR.
   Baghdad FIR.
   Cairo FIR.
   Khartoum FIR.
   Kuwait FIR.
   Sana’a FIR.

10.9 LONG TERM CONTINGENCY ARRANGEMENTS
APPENDIX - STATES PROCEDURES IN EVENT OF JEDDAH ACC EVACUATION
APPENDIX - CONTACT DETAILS – RIYADH AND JEDDAH ACC
APPENDIX - EVACUATION MESSAGES – RIYADH AND JEDDAH ACC

CHAPTER 11: DETAILED PROCEDURES – KHARTOUM ACC

11.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

11.2 FIRS WITH SUPPORTING PROCEDURES

11.3 NOTIFICATION PROCEDURES

11.4 LIMITED SERVICE - PROCEDURES

11.4.1 Disruption of ground/air communication capability
Effect on flights

11.4.2 Disruption of ability to provide control services
Separation standards
Contingency tracks
Air Traffic Flow Management
Responsibilities of adjacent ANSPs

11.5 NO SERVICE - PROCEDURES

11.5.1 Loss of ground/air communication capability
Effect on flights

11.5.2 Loss of ability to provide control services

11.6 FLIGHT CREW AND OPERATOR PROCEDURES

11.6.1 for flights within the Khartoum FIR – General

11.6.2 for flights within the Khartoum FIR – Westbound

11.6.3 for flights within the Khartoum FIR – Eastbound

11.6.4 for flights approaching the Khartoum FIR when the contingency is activated
Not in Receipt of an ATC Clearance
In receipt of an acknowledged ATC Clearance outside Khartoum FIR
In receipt of an acknowledged ATC Clearance within Khartoum FIR

11.6.5 Entering from another FIR

11.7 KHARTOUM ACC – CONTINGENCY ROUTE STRUCTURE

11.7.1 for activation within Khartoum FIR

11.7.2 for activation within adjacent FIR’s

Addis Abeba FIR
Asmara FIR
Brazzaville FIR
Cairo FIR
Entebbe FIR
Jeddah FIR
Nairobi FIR
N’Djamena FIR
Tripoli FIR
11.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX - STATES PROCEDURES IN EVENT OF KHARTOUM ACC EVACUATION
APPENDIX - CONTACT DETAILS – RIYADH AND KHARTOUM ACC
APPENDIX - EVACUATION MESSAGES – KHARTOUM ACC

CHAPTER 12: DETAILED PROCEDURES - DAMASCUS ACC

12.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

12.2 FIRS WITH SUPPORTING PROCEDURES

12.3 NOTIFICATION PROCEDURES

12.4 LIMITED SERVICE - PROCEDURES

12.4.1 Disruption of ground/air communication capability
Effect on flights

12.4.2 Disruption of ability to provide control services
Separation standards
Contingency tracks
Air Traffic Flow Management
Responsibilities of adjacent ANSPs

12.5 NO SERVICE - PROCEDURES

12.5.1 Loss of ground/air communication capability
Effect on flights

12.5.2 Loss of ability to provide control services

12.6 FLIGHT CREW AND OPERATOR PROCEDURES

12.6.1 for flights within the Damascus FIR – General

12.6.2 for flights within the Damascus FIR – Westbound

12.6.3 for flights within the Damascus FIR – Eastbound

12.6.4 for flights approaching the Damascus FIR when the contingency is activated
Not in Receipt of an ATC Clearance
In receipt of an acknowledged ATC Clearance outside Damascus FIR
In receipt of an acknowledged ATC Clearance within Damascus FIR

12.6.5 Entering from another FIR

12.7 DAMASCUS ACC – CONTINGENCY ROUTE STRUCTURE

12.7.1 For activation within Damascus FIR

12.7.2 for activation within adjacent FIR’s
Amman FIR
Ankara FIR
Baghdad FIR
Beirut FIR
Nicosia FIR

12.8 LONG TERM CONTINGENCY ARRANGEMENTS
APPENDIX - STATES PROCEDURES IN EVENT OF DAMASCU ACC EVACUATION
APPENDIX - CONTACT DETAILS – DAMASCUS ACC
APPENDIX - EVACUATION MESSAGES – DAMASCUS ACC

CHAPTER 13: DETAILED PROCEDURES – EMIRATES ACC

13.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

13.2 FIRS WITH SUPPORTING PROCEDURES

13.3 NOTIFICATION PROCEDURES

13.4 LIMITED SERVICE - PROCEDURES

13.4.1 Disruption of ground/air communication capability
Effect on flights

13.4.2 Disruption of ability to provide control services
Separation standards
Contingency tracks
Air Traffic Flow Management
Responsibilities of adjacent ANSPs

13.5 NO SERVICE - PROCEDURES

13.5.1 Loss of ground/air communication capability
Effect on flights

13.5.2 Loss of ability to provide control services

13.6 FLIGHT CREW AND OPERATOR PROCEDURES

13.6.1 for flights within the Emirates FIR – General

13.6.2 for flights within the Emirates s FIR – Westbound

13.6.3 for flights within the Emirates FIR – Eastbound

13.6.4 for flights approaching the Emirates FIR when the contingency is activated
Not in Receipt of an ATC Clearance
In receipt of an acknowledged ATC Clearance outside Emirates FIR
In receipt of an acknowledged ATC Clearance within Emirates FIR

13.6.5 Entering from another FIR

13.7 EMIRATES ACC – CONTINGENCY ROUTE STRUCTURE

13.7.1 For activation within Emirates FIR

13.7.2 for activation within adjacent FIR’s
Bahrain FIR
Muscat FIR
Qatar
Tehran FIR

13.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX - STATES PROCEDURES IN EVENT OF EMIRATES ACC EVACUATION
APPENDIX - CONTACT DETAILS – EMIRATES ACC
APPENDIX - EVACUATION MESSAGES – EMIRATES ACC
CHAPTER 14: DETAILED PROCEDURES – YEMEN ACC

14.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

14.2 FIRS WITH SUPPORTING PROCEDURES

14.3 NOTIFICATION PROCEDURES

14.4 LIMITED SERVICE - PROCEDURES

14.4.1 Disruption of ground/air communication capability
Effect on flights

14.4.2 Disruption of ability to provide control services
Separation standards
Contingency tracks
Air Traffic Flow Management
Responsibilities of adjacent ANSPs

14.5 NO SERVICE - PROCEDURES

14.5.1 Loss of ground/air communication capability
Effect on flights

14.5.2 Loss of ability to provide control services

14.6 FLIGHT CREW AND OPERATOR PROCEDURES

14.6.1 for flights within the Sana’a FIR – General

14.6.2 for flights within the Sana’a FIR – Westbound

14.6.3 for flights within the Sana’a FIR – Eastbound

14.6.4 for flights approaching the Sana’a FIR when the contingency is activated
Not in Receipt of an ATC Clearance
In receipt of an acknowledged ATC Clearance outside Sana’a FIR
In receipt of an acknowledged ATC Clearance within Sana’a FIR

14.6.5 Entering from another FIR

14.7 SANA’A ACC – CONTINGENCY ROUTE STRUCTURE

14.7.1 for activation within Sana’a FIR

14.7.2 for activation within adjacent FIR’s
Addis Ababa FIR
Asmara FIR
Bahrain FIR
Jeddah FIR
Mogadishu FIR
Mumbai FIR
Muscat FIR

14.8 LONG TERM CONTINGENCY ARRANGEMENTS

APPENDIX - STATES PROCEDURES IN EVENT OF SANA’A ACC EVACUATION
APPENDIX - CONTACT DETAILS – SANA’A ACC
APPENDIX - EVACUATION MESSAGES – SANA’A ACC
PART II - CONTINGENCY SITUATIONS AFFECTING MULTIPLE FIRS

SCOPE OF THE PLAN

MID REGIONAL VOLCANIC ASH CONTINGENCY PLAN - TABLE OF CONTENTS

FOREWORD

ALERTING PHASE

Originating ACC actions (eruption in its own flight information region)

Adjacent ACC actions

Flow management units’ action

REACTIVE PHASE

Originating ACC actions (eruption in its own FIR)

120 NM temporary danger area

Contaminated area based on SIGMET

Contaminated area based on VAA

Adjacent ACC actions

ATFM unit actions

PROACTIVE PHASE

ATFM PROCEDURES

AIR TRAFFIC CONTROL PROCEDURES

Air traffic control procedures for ACCs

GENERAL GUIDANCE FOR THE DEVELOPMENT OF ATS CONTINGENCY PLANS FOR VOLCANIC ASH CLOUDS

APPENDIX - ANTICIPATED PILOT ISSUES WHEN ENCOUNTERING VOLCANIC ASH CLOUDS

APPENDIX - ACTION TAKEN BY METEOROLOGICAL WATCH OFFICES IN THE EVENT OF A VOLCANIC ERUPTION

APPENDIX - ACTION TO BE TAKEN BY THE VAAC IN THE EVENT OF A VOLCANIC ERUPTION

MID REGIONAL DIVERSION AND MASS TURNBACK PLAN
FOREWORD

This Document is for guidance only. Regulatory material relating to the MID Regional aircraft operations is contained in relevant ICAO Annexes, PANS/ATM (Doc.4444), Regional Supplementary Procedures (Doc.7030), State AIPs and current NOTAMs, which should be read in conjunction with the material contained in this Document.

The MID Region is fast growing continental airspace in the world, and is strategically situated between EUR/NAT Region to the North, WACAF Region to the west ESAF Region to the South East and APAC Region to the East. In 2010 in excess of ----- flights transited the airspace. The ATS Route accommodates a high concentration of traffic which regularly sees traffic flows in excess of 100 flights per hour. Control of traffic in this vast and complex airspace is delegated to a number of states, with their Continental Control facilities geographically dispersed.

The MID Regional Air Traffic Management Operational Contingency Plan is primarily for the information of operators and pilots planning and conducting operations in MID Region. The intent is to provide a description of the arrangements in place to deal with a range of contingency situations.

The Manual has been produced with the approval and on behalf of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG); a MID Regional planning body established under the auspices of the International Civil Aviation Organisation (ICAO). This Group is responsible for developing the required operational procedures; specifying the necessary services and facilities and; defining the aircraft and operator approval standards employed in the MID Region.

Edited by
Middle East Regional Office of ICAO
P. O. Box 85, Airport Post Office
Cairo 11776, Egypt
Tel: +20 2 2267 4845/46/41
Fax : +20 2 2267 4843
Email : icaomid@cairo.icao.int
http:// www.icao.int/mid/

This Document will be made available to users from a number of web sites including the ICAO MID website http:// www.icao.int/mid/.

To assist with the editing of this Manual and to ensure the currency and accuracy of future editions it would be appreciated if readers would submit their comments/suggestions for possible amendments/additions, to the ICAO MID Regional Office at the above Email address.
### RECORD OF AMENDMENTS

<table>
<thead>
<tr>
<th>Amendment Number</th>
<th>Effective Date</th>
<th>Initiated by</th>
<th>Paragraph/Reference</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ATM CONTINGENCY PLAN
FOR FLIGHTS OPERATING
WITHIN THE MID REGIONAL CONTINENTAL CONTROL AREAS

Objective

The Air Traffic Management (ATM) Contingency Plan contains details of the arrangements in place to ensure, as far as possible, the continued safety of air navigation in the event of partial or total disruption of Air Traffic Services within the MID region. This document is produced in accordance with the requirement of ICAO Annex 11 – Air Traffic Services, Chapter 2, paragraph 2.30.

This plan details both common procedures throughout the MID Region and the procedures specific to the individual ANSPs within the MID region. The plan is presented in two parts:

Part 1 – Contingency Situations Affecting ATC Facilities

ATC services within the MID region are provided from a number of geographical locations and this plan details the contingency arrangements at each of these facilities. It is considered unlikely that any physical contingency at one particular facility will affect another directly, hence in Part 1 of this document the procedures for each ACC are considered independently.

Part 2 – Contingency Situations Affecting Multiple FIRs

This part of the plan considers events which are likely to affect more than one facility within the MID region. In particular these include the contingency arrangements in place to deal with;

- the airspace suffering contamination by volcanic ash.
- the steps taken to deal with a mass turn back of traffic over the MID region.

States and FIRs affected

This document contains contingency procedures for those Air Navigation Service Providers (ANSPs) who provide an ATC service within the MID region, and those ANSPs whose airspace has a common boundary with the MID region for which supporting procedures are published.

The states, FIRs and ACCs affected by this contingency plan and for which procedures are promulgated are as follows:

Bahrain
  - Bahrain FIR

Egypt
  - Cairo FIR

Iran, Islamic Republic of
Air Traffic management Operational Contingency Plan – MID Region

- Tehran Control
- Baghdad Control
- Amman Control
- Kuwait Control
- Beirut Control
- Tripoli Control
- Muscat Control
- Bahrain Control
- Jeddah Control
- Riyadh Control
- Khartoum Control
- Damascus Control
- Emirates Control
- Sana’a Control
PART 1 –
CONTINGENCY SITUATIONS AFFECTING ATC FACILITIES

SCOPE OF THE PLAN

This part of the Contingency Plan considers:

- Common procedures adopted by ATC facilities in the event of contingency situations.
- Detailed procedures adopted by individual ATC facilities in the event of contingency situations. The plan considers contingency situations which may result in a degradation of the ATC service provided (limited service) as well as situations where there is a total loss of the ability to provide ATC services (no service).

Where available, information is also provided outlining the steps taken by ANSPs to deal with a long term unavailability of an ATC facility. In particular the procedures detailed by each ATC facility will, insofar as possible, comprise the following:

- FIRs for which the Contingency Plan applies
- FIRs with supporting procedures
- Notification procedures
- Implementation of the plan
- Limited service
  - disruption of ground/air communication capability
  - disruption of ability to provide control services
- No service
  - loss of ground/air communication capability
  - loss of ability to provide control services
- Contingency Route Structure:
  - for activation within that FIR
  - for activation within adjacent FIR
- Long term contingency arrangements
- Contact details

COMMON PROCEDURES

Implementation of the plan

In the event of adoption of contingency procedures ANSPs will notify all affected agencies and operators appropriately.

In Limited Service situations the individual ANSP will decide upon the level of notification necessary and take action as required to cascade the information.
In **No Service** situations it is likely that the ATC facility involved will be subject to evacuation. In this instance the ANSP will issue NOTAMs and broadcast on appropriate frequencies that contingency procedures have been initiated. The notification process employed by individual ANSPs is detailed in their respective entries in this plan, however the general format will be as follows:

Issue a NOTAM advising operators of the evacuation. The following is an example of the type of information which may be promulgated:

> "**Due to emergency evacuation of (States ACC) all ATC services are terminated. Flights within (States ACC) FIR should continue as cleared and contact the next ATC agency as soon as possible. Flights not in receipt of an ATC clearance should land at an appropriate airfield or request clearance to avoid (State) FIR. Flights should monitor (defined frequencies).”**"

Broadcast an evacuation message on appropriate frequencies:

> "**Emergency evacuation of (States ACC) is in progress. No air traffic control service will be provided by (States ACC). Use extreme caution and monitor (control frequencies), emergency frequencies and air to air frequencies. Contact the next air traffic control unit as soon as possible**”.

**Traffic Information Broadcast by Aircraft (TIBA) procedures**

The following communications procedures have been developed in accordance with the Traffic Information Broadcast by Aircraft (TIBA) procedures recommended by ICAO (Annex 11 – Air Traffic Services, Attachment C). These procedures should be applied when completing an altitude change to comply with the ATC clearance.

At least 3 minutes prior to the commencement of a climb or descent the flight should broadcast on the last assigned frequency, 121.5, 243.0 and 123.45 the following:

> "**ALL STATION (callsign) (direction) DIRECT FROM (landfall fix) TO (oceanic entry point) LEAVING FLIGHT LEVEL (number) FOR FLIGHT LEVEL (number) AT (distance)(direction) FROM (oceanic entry point) AT (time).”**"

When the level change begins, the flight should make the following broadcast:

> "**ALL STATIONS (callsign) (direction) DIRECTION FROM (landfall fix) TO (oceanic entry point) LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number).”**

When level, the flight should make the following broadcast:

> "**ALL STATIONS (callsign) MAINTAINING FLIGHT LEVEL (number).”**"
CHAPTER 1: DETAILED PROCEDURES – BAHRAIN FIR

1.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Bahrain FIR

1.2 FIRs WITH SUPPORTING PROCEDURES

Emirates FIR
Jeddah FIR
Riyadh ACC
Kuwait FIR
Muscat FIR
Tehran FIR
Sana’a FIR
1.3  NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic
management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible
after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation
message will be broadcast on appropriate frequencies and operators in receipt of the contingency message
are asked to forward this information to affected flights wherever possible.

1.4  LIMITED SERVICE – PROCEDURES

1.4.1  Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent
Aerodromes. VHF services on the Bahrain frequency normally provided by Bahrain Control will be
delegated as appropriate to the other ATS units namely Doha, Riyadh and Dhahran. Appropriate
frequencies will be advised by Bahrain and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Bahrain Communications center and Bahrain ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar
Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on
Station

In the event that the operation is degraded substantially, ATFM measures may be
imposed as necessary.

1.4.2  Disruption of ability to provide control services

Air Traffic management Operational Contingency Plan – MID Region
Bahrain ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

**Separation standards**

Bahrain ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

**Contingency tracks**

Dependant on the nature of the service limitation, Bahrain may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

**Air Traffic Flow Management**

Bahrain ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Bahrain ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

**Responsibilities of adjacent ANSPs**

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

**1.5 NO SERVICE – PROCEDURES**

**1.5.1 Loss of ground/air communication capability**

In the event of Bahrain ACC being unable to provide ground/air communications for Bahrain FIR Bahrain and Qatar APP Units will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;

- Transmitters (Loss of all Transmitters)
- Receivers (Loss of all Receivers)
- Aerials (Loss of all Aerials)
- Data Lines (Loss of data lines)

b) Propagation;
Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing

- No Staff
- Illness (Seasonal Influenza)
- Weather
- Industrial Relations issues

d) Evacuation of Bahrain ACC

- Fire
- Bomb threat

**Effect on flights**

In the event of Bahrain ACC being unable to provide ground/air communications for a sustained period of time Bahrain CAA in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Bahrain FIR.

ATFM measures may be imposed as necessary.

1.5.2 **Loss of ability to provide control services**

Should Bahrain ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Bahrain FIR.

In the event that Bahrain ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Bahrain Contingency plan.

The Plan will be activated by promulgation of a NOTAM issued by (CAA) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by (CAA) and/or ICAO MID office.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Bahrain Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.
1.6 FLIGHT CREW AND OPERATOR PROCEDURES

1.6.1 For flights within the Bahrain FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45 and the assigned Unit frequency. A listening watch on these frequencies must be maintained.

1.6.2 For flights within the Bahrain FIR – Westbound

Emirates ACC will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tehran ACC</td>
<td>00982144544116 or 44554060 or 44544133 (Sector Controller)</td>
<td>00982144544117</td>
<td><a href="mailto:maj.alireza@yahoo.com">maj.alireza@yahoo.com</a> <a href="mailto:alireza.majzoubi@gmail.com">alireza.majzoubi@gmail.com</a></td>
<td>OIIIZGZX</td>
</tr>
<tr>
<td>Muscat ACC</td>
<td>00968 24 519 550</td>
<td>00968 24519 930</td>
<td></td>
<td>OOMMZQZX</td>
</tr>
<tr>
<td>Riyadh ACC</td>
<td>+966 1 221 1121</td>
<td>00966</td>
<td><a href="mailto:atskia@gmail.com">atskia@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jeddah ACC</td>
<td>+9662685 5764/5</td>
<td>+9662 685 54021</td>
<td><a href="mailto:atcfahad@hotmail.com">atcfahad@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sana’a ACC</td>
<td>00967 1345402/3</td>
<td>00967 1344047</td>
<td><a href="mailto:atccns@gmail.com">atccns@gmail.com</a></td>
<td>OYSNZQZX OYSNZQZA</td>
</tr>
<tr>
<td>Bahrain ACC</td>
<td>009731732 1080/1081</td>
<td>0097317321029</td>
<td><a href="mailto:bahatc@caa.gov.bh">bahatc@caa.gov.bh</a></td>
<td>OBBBZQZX OBBBZQZA</td>
</tr>
<tr>
<td>Emirates ACC</td>
<td>0097125996969</td>
<td>0097125996850 0097125996852</td>
<td><a href="mailto:atc@sze.gcna.ae">atc@sze.gcna.ae</a> <a href="mailto:mdolbey@sze.gcna.ae">mdolbey@sze.gcna.ae</a></td>
<td>OMAEZQZX OMAEYAYH</td>
</tr>
<tr>
<td>Kuwait ACC</td>
<td>+96524346220/ 24710268</td>
<td>+965 24346221</td>
<td><a href="mailto:baracoda99@hotmail.com">baracoda99@hotmail.com</a> <a href="mailto:q8dgca_danoff@hotmail.com">q8dgca_danoff@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Qatar APP</td>
<td>+974 4462 2300</td>
<td>+974 4465 6554</td>
<td><a href="mailto:ahmed@caa.gov.qa">ahmed@caa.gov.qa</a></td>
<td></td>
</tr>
</tbody>
</table>

| ICAO MID     | 0020 2 4845/46/41 | 2267 | 0020 2 2267 4843 | icaomid@icao.int |
| IATA         | OO962 6 569 8728 | OO962 6 560 4548 | saidh@iata.org   |           |
Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

1.6.3 For flights within the Bahrain FIR – Eastbound

Jeddah ACC, Riyadh ACC and Kuwait ACC will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

1.6.4 For flights approaching the Bahrain FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Bahrain ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Bahrain FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Bahrain FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Bahrain FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Bahrain FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

1.7 Bahrain FIR – Contingency Route Structure

1.7.1 For activation within Bahrain FIR

In a limited service contingency situation Bahrain ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Bahrain FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN.

1.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Bahrain FIR should use the following contingency routes:
### CONTINGENCY ROUTE STRUCTURE FOR BAHRAIN FIR

<table>
<thead>
<tr>
<th>ROUTE NAME</th>
<th>ENTRY FIX</th>
<th>AIRWAY ROUTING</th>
<th>EXIT FIX</th>
<th>ALTITUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAHCR1WB</td>
<td>BALUS</td>
<td>UL768 RAMSI UL602</td>
<td>DAVUS</td>
<td>FL260+ EXCEPT FL340</td>
</tr>
<tr>
<td>BAHCR2WB</td>
<td>BALUS</td>
<td>UL768</td>
<td>COPPI</td>
<td>FL260+ EXCEPT FL340</td>
</tr>
<tr>
<td>BAHCR3WB</td>
<td>BALUS</td>
<td>N929 SILNO A791</td>
<td>BPN</td>
<td>FL260+ EXCEPT FL340</td>
</tr>
<tr>
<td>BAHCR4WB</td>
<td>BALUS</td>
<td>N929 SILNO G663</td>
<td>GIBUS</td>
<td>FL260+ EXCEPT FL340</td>
</tr>
<tr>
<td>BAHCR5WB</td>
<td>ALSER</td>
<td>G663 SILNO G663</td>
<td>GIBUS</td>
<td>FL340 ONLY</td>
</tr>
<tr>
<td>BAHCR6WB</td>
<td>ALSER</td>
<td>G663 SILNO A791</td>
<td>BPN</td>
<td>FL340 ONLY</td>
</tr>
<tr>
<td>BAHCR7WB</td>
<td>COPPI</td>
<td>G667</td>
<td>AVOBO</td>
<td>FL240 ONLY</td>
</tr>
<tr>
<td>BAHCR8EB</td>
<td>AKRAM</td>
<td>B418 MUTAR G663</td>
<td>ALSER</td>
<td>FL270, FL350</td>
</tr>
<tr>
<td>BAHCR9EB</td>
<td>AKRAM</td>
<td>B41B ASPAN UN318</td>
<td>OXAT</td>
<td>FL270, 290, 350</td>
</tr>
<tr>
<td>BAHCR10EB</td>
<td>MGA</td>
<td>UP891</td>
<td>EMILU</td>
<td>FL250</td>
</tr>
<tr>
<td>BAHCR11EB</td>
<td>TAGSO</td>
<td>UN318</td>
<td>LOXAT</td>
<td>FL310, FL370</td>
</tr>
<tr>
<td>BAHCR12EB</td>
<td>ULOVO</td>
<td>UP559 KEDAT UM691 KUSAR UN318</td>
<td>LOXAT</td>
<td>FL330, FL390+</td>
</tr>
<tr>
<td>BAHCR13EB</td>
<td>RABAP</td>
<td>UM667 UMAMA UP559 LOTIT A791</td>
<td>NADAM</td>
<td>FL250, 290, 330, 370+</td>
</tr>
<tr>
<td>BAHCRE14B</td>
<td>AMBIK</td>
<td>➔GEVAL ➔</td>
<td>KUVER</td>
<td>FL270, FL350</td>
</tr>
</tbody>
</table>

**CONDITIONS**

1. all aircraft to be level prior to entry fix
2. mach speeds assigned to all aircraft
3. no altitude changes in Bahrain fir
4. all aircraft will correct altitude for direction of flight

**SEPARATION**

1. all inbound aircraft to be separated by **minimum 15 minutes** longitudinally at entry fix. Separation shall be **constant or increasing** as per assigned speeds/mach numbers;
2. all inbound aircraft to be separated by **minimum 20 minutes** longitudinally at entry fix if faster aircraft behind; **maximum overtake speed difference of m.04 or 25KTS IAS**.

Communications with the next ATSU should be established at the earliest opportunity.
## CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES

<table>
<thead>
<tr>
<th>CONTINGENCY ROUTE</th>
<th>ROUTE</th>
<th>MANDATORY REPORT</th>
<th>MANDATORY REPORT</th>
<th>EXIT FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAHCR1WB</td>
<td>BALUS UL76</td>
<td>BALUS</td>
<td>RAMSI</td>
<td>IVONI</td>
</tr>
<tr>
<td></td>
<td>RAMSI UL60</td>
<td>B/U 121.1 DOHA</td>
<td>132.45 MHZ</td>
<td>KUW 125.3 MHZ</td>
</tr>
<tr>
<td></td>
<td>DAVUS</td>
<td></td>
<td>127.85</td>
<td></td>
</tr>
<tr>
<td>BAHCR2WB</td>
<td>BALUS UL76</td>
<td>BALUS</td>
<td>RAMSI</td>
<td>COPPI JED 134.4 FL340</td>
</tr>
<tr>
<td></td>
<td>COPPI</td>
<td>B/U 121.1 DOHA</td>
<td>132.45 MHZ</td>
<td>Below RIY 132.5 FL360</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>127.85</td>
<td>Above</td>
</tr>
<tr>
<td>BAHCR3WB</td>
<td>BALUS N929</td>
<td>BALUS</td>
<td>RULEX</td>
<td>GIBUS RIY 126.0 MHZ</td>
</tr>
<tr>
<td></td>
<td>SILNO A791</td>
<td>B/U 121.1 DOHA</td>
<td>132.45 MHZ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BPN</td>
<td></td>
<td>127.85</td>
<td></td>
</tr>
<tr>
<td>BAHCR4WB</td>
<td>BALUS N929</td>
<td>BALUS</td>
<td>RULEX 132.45 MHZ</td>
<td>GIBUS RIY 126.0 MHZ</td>
</tr>
<tr>
<td></td>
<td>SILNO G663</td>
<td>B/U 121.1 DOHA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GIBUS</td>
<td></td>
<td>127.85</td>
<td></td>
</tr>
<tr>
<td>BAHCR5WB</td>
<td>ALSER G663</td>
<td>ALSER</td>
<td>SILNO 125.05 MHZ</td>
<td>GIBUS RIY 126.0 MHZ</td>
</tr>
<tr>
<td></td>
<td>GIBUS</td>
<td>132.45 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td>BAHCR6WB</td>
<td>ALSER G663</td>
<td>ALSER</td>
<td>SILNO 125.05 MHZ</td>
<td>BPN JED 134.3 MHZ</td>
</tr>
<tr>
<td></td>
<td>SILNO A791</td>
<td>132.45 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BPN</td>
<td>127.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAHCR7WB</td>
<td>COPPI G667</td>
<td>COPPI</td>
<td>MGA 126.0 MHZ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AVOBO</td>
<td>132.45 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td>BAHCR8EB</td>
<td>B418 NUTAR</td>
<td>AKRAM</td>
<td>MUTAR 132.45 MHZ</td>
<td>ALSER TEH 133.4 MHZ</td>
</tr>
<tr>
<td></td>
<td>G663</td>
<td>126.7 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td>BAHCR9EB</td>
<td>B418 ASPAN</td>
<td>AKRAM</td>
<td>ASPAN 132.45 MHZ</td>
<td>LOXAT UAE 128.25 MHZ</td>
</tr>
<tr>
<td></td>
<td>UN318</td>
<td>126.7 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td>BAHCR10EB</td>
<td>UP891</td>
<td>MGA 126.7 MHZ</td>
<td>EMILU KUW 125.3 MHZ</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B/U 126.3 DAM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAHCR11EB</td>
<td>UN318</td>
<td>EGNOV</td>
<td>ASPAN 132.45 MHZ</td>
<td>LOXAT UAE 128.25 MHZ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>126.7 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td>BAHCR12EB</td>
<td>UP559</td>
<td>KEDAT</td>
<td>ASPAN 132.45 MHZ</td>
<td>LOXAT UAE 128.25 MHZ</td>
</tr>
<tr>
<td></td>
<td>UM691</td>
<td>126.7 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UM318</td>
<td>KEDAT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAHCR13EB</td>
<td>UM667</td>
<td>GEVAL</td>
<td>LOTIT 132.12 MHZ</td>
<td>NADAM UAE 132.15 MHZ</td>
</tr>
<tr>
<td></td>
<td>UMAMA UP5</td>
<td>132.45 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOTIT A791</td>
<td>132.45 MHZ</td>
<td>B/U 126.3 DAM</td>
<td></td>
</tr>
<tr>
<td>BAHCR14EB</td>
<td>AMBIK → GEVAL → KUVER</td>
<td>GEVAL</td>
<td>KUVER TEH 133.4 MHZ</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>132.45 MHZ</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Any Aircraft with HF capabilities can make position reports on BAH HF frequencies 8910KHZ 5667KHZ 2992KHZ
1.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Bahrain loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Bahrain facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Bahrain FIR after several days. In the interim period, flight operations in Bahrain would be severely restricted and all flights will be required to route clear of the Bahrain FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM…………….DUE TO DISRUPTION OF ATS IN THE BAHRAIN FIR ALL ACFT ARE ADVISED TO AVOID BAHRAIN FIR.

b) Airspace available with limited ATS

NOTAM ………….DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BAHRAIN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DELAY AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM …………DUE TO DISRUPTION OF ATS IN BAHRAIN FIR ALL ACFT ARE ADVISED THAT THE BAHRAIN AIR TRAFFIC SERVICES CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY BAHRAIN FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE CONTINGENCY ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY BAHRAIN AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM………………OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BAHRAIN FIR.
CHAPTER 2: DETAILED PROCEDURES – CAIRO FIR

2.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Cairo FIR

2.2 FIRs WITH SUPPORTING PROCEDURES

Athens FIR
Nicosia FIR
Amman FIR
Tel Aviv FIR
Jeddah FIR
Riyadh ACC,
Khartoum FIR
Tripoli FIR

2.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

2.4 LIMITED SERVICE – PROCEDURES

2.4.1 The various circumstances surrounding each contingency situation make it difficult to establish exact and detailed procedures to be followed in each case. Here are the general guidelines which should be followed in case of limited service.

- The AOCT "ATS Operational Contingency Team" will convene to have the appropriate procedures applied according to the situation arising.
- The AOCT will take the necessary action As Soon As Possible to inform all adjacent ANSPs and Operators.
- The Limited Service message will be broadcast on appropriate frequencies and operators in receipt of such message are asked to forward this information to affected flights wherever possible.
- Cairo ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.
- Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.
- Cairo ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.
• Dependant on the nature of the service limitation, Cairo ACC may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.
• Cairo ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

2.5 NO SERVICE – PROCEDURES

In the event of Cairo ACC being unable to provide the Air Traffic Services (ATS), the head of ECAA will activate the Egyptian Air Traffic Services contingency plan, the civil aviation authorities of the adjacent FIRs will be notified in accordance with the Operational Coordination Agreement (OCA) signed between Cairo ACC and the adjacent ACCs. The adjacent ACCs will in return activate the procedures stated in the OCA.

The Plan will be activated by promulgation of a NOTAM issued by (ECAA) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (ECAA) and/or ICAO MID office.

2.6 CAIRO FIR – CONTINGENCY ROUTE STRUCTURE

2.6.1 For activation within Cairo FIR

In a limited service contingency situation Cairo ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Cairo FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN and/or any other means available.

2.6.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Cairo FIR should use the following contingency routes.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athens ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicosia ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amman ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeddah ACC</td>
<td>00966</td>
<td>00966</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riyadh ACC</td>
<td>00966</td>
<td>00966</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Khartoum ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tripoli ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICAO MID</td>
<td>0020 2 2267 4845/46/41</td>
<td>0020 2 2267 4843</td>
<td><a href="mailto:icomid@icao.int">icomid@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>IATA</td>
<td>OO962 6 569 8728</td>
<td>OO962 6 560 4548</td>
<td><a href="mailto:saidh@iata.org">saidh@iata.org</a></td>
<td></td>
</tr>
</tbody>
</table>
## Contingency Route Structure and Frequencies for Flight Monitoring Services Cairo FIR

<table>
<thead>
<tr>
<th>Contingency Routes in Cairo (CRC)</th>
<th>ATS Routes</th>
<th>Frequencies</th>
<th>FL Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRC1</td>
<td>PASAM-A411-CVO-IMRUT-UL617-TANSA</td>
<td>126.6Mhz CVO 127.7Mhz</td>
<td>FLs 380, 340 and 280</td>
</tr>
<tr>
<td>CRC 2</td>
<td>PASAM-A411-CVO-A16-RASDA</td>
<td>126.6Mhz CVO 124.7Mhz</td>
<td>FLs 380,340 and 280</td>
</tr>
<tr>
<td>CRC 3</td>
<td>PASAM-A411-CVO-A727-OTIKO- W725-BRN-A411-LOSUL</td>
<td>126.6Mhz CVO 127.7Mhz</td>
<td>FLs 380,340 and 280</td>
</tr>
<tr>
<td>CRC 4</td>
<td>METSA-W733-NWB-A791-MENLI-A411-CVO-A727-IMRUT- L617/UL617-TANSA</td>
<td>126.6Mhz CVO 127.7Mhz</td>
<td>FLs 360 and 240</td>
</tr>
<tr>
<td>CRC 5</td>
<td>METSA-W733-NWB-A791-MENLI-A411-CVO-A1- BOPED- W725-BRN- A411-LOSUL</td>
<td>126.6Mhz CVO 127.7Mhz</td>
<td>FLs 360 and 240</td>
</tr>
<tr>
<td>CRC 6</td>
<td>RASDA-A16-CVO-A727-SEMRU-B418-SILKA</td>
<td>124.7Mhz CVO 132.2Mhz SEMRU 126.6Mhz</td>
<td>FLs 350 and 270</td>
</tr>
<tr>
<td>CRC 7</td>
<td>RASDA-A16-CVO-A727-LXR-R775-DEDLI</td>
<td>124.7Mhz CVO 132.2Mhz SEMRU 129.4Mhz</td>
<td>FLs 350 and 270</td>
</tr>
<tr>
<td>CRC 8</td>
<td>RASDA-A16-CVO-A727-SML</td>
<td>124.7Mhz CVO 132.2Mhz SEMRU 129.4Mhz</td>
<td>FLs 350 and 270</td>
</tr>
<tr>
<td>CRC 9</td>
<td>LOSUL-A411-BRN-UP751-LXR-A145-IMRAD</td>
<td>127.7Mhz KATAB 132.2Mhz AST 129.4Mhz</td>
<td>FLs 370 and 310</td>
</tr>
<tr>
<td>CRC 10</td>
<td>LOSUL-A411-BRN-UP751-LXR-R775-DEDLI</td>
<td>127.7Mhz KATAB 132.2Mhz AST 129.4Mhz</td>
<td>FLs 370 and 310</td>
</tr>
<tr>
<td>CRC 11</td>
<td>LOSUL-A411-BRN-A145-KHG-B12-SML</td>
<td>127.7Mhz DANAD</td>
<td>FLs 370 and 310</td>
</tr>
<tr>
<td>CRC</td>
<td>Route Description</td>
<td>Frequencies</td>
<td>FLs</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------------</td>
<td>-------------</td>
<td>-----</td>
</tr>
<tr>
<td>12</td>
<td>SML-B12-DBA-UL613-TANSA</td>
<td>132.2Mhz/</td>
<td>320 and 260</td>
</tr>
<tr>
<td></td>
<td></td>
<td>129.4Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>129.4Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>127.7Mhz</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>SML-B12-KATAB-UP751-BRN-A411-LOSUL</td>
<td>132.2Mhz</td>
<td>320 and 260</td>
</tr>
<tr>
<td></td>
<td></td>
<td>129.4Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>127.7Mhz</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>SML-B12-KHG-W8-CVO-A16-MILAD-A16-RASDA OR N307-LAKTO</td>
<td>132.2Mhz</td>
<td>320 and 260</td>
</tr>
<tr>
<td></td>
<td></td>
<td>129.4Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>127.7Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>129.4Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>127.7Mhz</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>PAXIS-UL607-GESAD-L551-DBA-B12-SML</td>
<td>132.2Mhz</td>
<td>330 and 390</td>
</tr>
<tr>
<td></td>
<td></td>
<td>129.4Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>127.7Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>129.4Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>127.7Mhz</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>NALSO-NWB-SHM-IMRAD-GIBAL-DEDLI</td>
<td>129.4Mhz</td>
<td>290 and 250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>126.6Mhz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>129.4Mhz</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>DEDLI-GIBAL-IMRAD-SHM-NWB-NALSO</td>
<td>129.4Mhz</td>
<td>300 and 220</td>
</tr>
<tr>
<td></td>
<td></td>
<td>126.6Mhz</td>
<td></td>
</tr>
</tbody>
</table>

This CRCs table does not include any eastbound routes to AMMAN FIR.
Note: Cairo FIR served as well by HF Frequency 11300 KHz
Communications with the next ATSU should be established at the earliest opportunity.

2.7 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Egypt loses the ability to provide an ATC service in the Cairo FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Cairo facility may influence the time required to bring the contingency facility
into service, but it is expected that under most circumstances an ATC service will be available in the Cairo FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Cairo FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**SAMPLE NOTAMS**

a) **Avoidance of airspace**

NOTAM.........DUE TO DISRUPTION OF ATS IN THE CAIRO FIR ALL ACFT ARE ADVISED TO AVOID THE CAIRO FIR.

b) **Airspace available with limited ATS**

NOTAM ..........DUE TO ANTICIPATED DISRUPTION OF ATS IN THE CAIRO FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) **Contingency plan activated**

NOTAM ..........DUE TO DISRUPTION OF ATS IN CAIRO FIR ALL ACFT ARE ADVISED THAT THE Cairo FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY CAIRO AIRSPACE.

d) **Non adherence to the Contingency Plan**

NOTAM..........OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE CAIRO FIR.
CHAPTER 3: DETAILED PROCEDURES – TEHRAN FIR

3.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Tehran FIR

3.2 FIRs WITH SUPPORTING PROCEDURES

Ankara FIR
Baghdad FIR
Bahrain FIR
Baku FIR
Emirates FIR
Kabul FIR
Karachi FIR
Kuwait FIR
Muscat FIR
Turkmenbashi FIR
Yerevan FIR

3.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

3.4 LIMITED SERVICE – PROCEDURES

3.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Tehran frequency normally provided by Tehran Control will be delegated as appropriate to the other ATS units namely -------------. Appropriate frequencies will be advised by Tehran and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Tehran Communications center and Tehran ACC )

Propagation
Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

3.4.2 Disruption of ability to provide control services

Tehran ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Tehran ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Tehran may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Tehran ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Tehran ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.
3.5 NO SERVICE – PROCEDURES

3.5.1 Loss of ground/air communication capability

In the event of Tehran ACC being unable to provide ground/air communications for Tehran FIR ------- ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;
   • Transmitters (Loss of all Transmitters)
   • Receivers (Loss of all Receivers)
   • Aerials (Loss of all Aerials)
   • Data Lines (Loss of data lines)

b) Propagation;
   • Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   • No Staff
   • Illness (Seasonal Influenza)
   • Weather
   • Industrial Relations issues

d) Evacuation of Tehran ACC
   • Fire
   • Bomb threat

Effect on flights

In the event of Tehran ACC being unable to provide ground/air communications for a sustained period of time ------- ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Tehran FIR.

ATFM measures may be imposed as necessary.

3.5.2 Loss of ability to provide control services

Should Tehran ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Tehran FIR.

In the event that Tehran ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio
frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Tehran Contingency plan.

The Plan will be activated by promulgation of a NOTAM issued by (IRCAO) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by (IRCAO) and/or ICAO MID office.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Tehran Contingency Procedures – Appendix xx.’ In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

3.6 FLIGHT CREW AND OPERATOR PROCEDURES

3.6.1 For flights within the Tehran FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

3.6.2 For flights within the Tehran FIR – Westbound

(ACC’S) will endeavour to provide an ATC service throughout the Tehran FIR as soon as evacuation commences. These procedures are detailed at Tehran Contingency Procedures – Appendix x.

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankara FIR</td>
<td>+903123980000</td>
<td>+903123980961</td>
<td></td>
<td>LTAAZRX</td>
</tr>
<tr>
<td></td>
<td>+903123981153</td>
<td></td>
<td></td>
<td>LTAAZQZX</td>
</tr>
<tr>
<td></td>
<td>+903123981614</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+903123980296</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baghdad FIR</td>
<td>+9647901655461</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahrain ACC</td>
<td>+97317321080</td>
<td>+97317321029</td>
<td><a href="mailto:bahate@caa.gov.bh">bahate@caa.gov.bh</a></td>
<td>OBBBZQZX</td>
</tr>
<tr>
<td></td>
<td>+97317321081</td>
<td></td>
<td></td>
<td>OBBBZQZA</td>
</tr>
<tr>
<td></td>
<td>+97317320486</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baku FIR</td>
<td>+994124971673</td>
<td></td>
<td></td>
<td>UBBBZRX</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UBBBZQZX</td>
</tr>
<tr>
<td>NAKHCEVAN ACC</td>
<td>+994136446950</td>
<td></td>
<td></td>
<td>UBBNZPZX</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UBBNZQZX</td>
</tr>
</tbody>
</table>
Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

3.6.3 For flights within the Tehran FIR – Eastbound

ACC will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

3.6.4 For flights approaching the Tehran FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Tehran ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Tehran FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Tehran FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Tehran FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Tehran FIR.
However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

3.7 TEHRAN FIR – CONTINGENCY ROUTE STRUCTURE

3.7.1 For activation within Tehran FIR

In a limited service contingency situation Tehran ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Tehran FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN.

3.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Tehran FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

**Contingency Route Scheme**

<table>
<thead>
<tr>
<th>Entry FIR</th>
<th>Exit FIR</th>
<th>Entry FIX</th>
<th>Route Designator</th>
<th>Exit FIX</th>
<th>Flight Levels</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankara</td>
<td>Nakhchivan</td>
<td>DASIS</td>
<td>UL333 R661</td>
<td>DULAV</td>
<td>FL330</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALRAM</td>
<td>G208 R661</td>
<td>DULAV</td>
<td>FL310, FL410</td>
<td>ALRAM–UMH Eastbound (one way) then two way</td>
</tr>
<tr>
<td>Ankara</td>
<td>Yerevan</td>
<td>ALRAM</td>
<td>UL333 G482</td>
<td>MAGRI</td>
<td>FL330</td>
<td>ALRAM–UMH Eastbound then two way</td>
</tr>
<tr>
<td>Ankara</td>
<td>Ashgabat</td>
<td>ALRAM</td>
<td>G208 G482</td>
<td>MAGRI</td>
<td>FL310, FL410</td>
<td>ALRAM–UMH Eastbound then two way</td>
</tr>
<tr>
<td>Ankara</td>
<td>Karachi bound to Delhi and beyond</td>
<td>DASIS</td>
<td>UL333-A416-W4</td>
<td>RIKOP</td>
<td>FL310, FL410</td>
<td>ALRAM–UMH Eastbound then two way</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALRAM</td>
<td>-G208-G781-A416-W4</td>
<td>RIKOP</td>
<td>FL330</td>
<td>ALRAM–UMH Eastbound then two way</td>
</tr>
<tr>
<td>Ankara</td>
<td>Karachi bound to Delhi and beyond</td>
<td>DASIS</td>
<td>R660-A416-N39-G208 G452</td>
<td>DERBO</td>
<td>FL330</td>
<td>ALRAM–UMH Eastbound then two way</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALRAM</td>
<td>G208–G208 UL124 - R661–T210–G208 UL125-G452</td>
<td>DERBO</td>
<td>FL310, FL410</td>
<td>ALRAM–UMH Eastbound then two way</td>
</tr>
<tr>
<td>Ankara</td>
<td>Karachi Bound to</td>
<td>ALRAM</td>
<td>G208-UL124 R661 –T210-G208 UL125</td>
<td>KEBUD</td>
<td>FL310, FL410</td>
<td>ALRAM–UMH Eastbound</td>
</tr>
<tr>
<td>Mumbai and beyond</td>
<td>G208-R654-G665</td>
<td>ASVIB</td>
<td>then two way</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------</td>
<td>-------</td>
<td>--------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DASIS</strong></td>
<td>ASVIB</td>
<td>FL330</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ankara</strong></td>
<td><strong>Bahrain</strong></td>
<td><strong>ALRAM</strong></td>
<td>G208-UL223-G667-W31-B417</td>
<td><strong>TULAX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FL310, FL410</td>
<td><strong>ALRAM–UMH Eastbound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>then two way</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>G208-UL223-W3-R659</strong></td>
<td><strong>MIDSI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>G208-R654-R659</strong></td>
<td><strong>MIDSI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>G208-R654–R659–G663</strong></td>
<td><strong>ALSER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DASIS</strong></td>
<td><strong>UL333 R660-R661-R654-R659</strong></td>
<td><strong>MIDSI</strong></td>
<td>FL330</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>UL333 R660-R661-R654-R659–G663</strong></td>
<td><strong>ALSER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ALRAM</strong></td>
<td><strong>G208-UL223-G667-W31-B417</strong></td>
<td><strong>TULAX</strong></td>
<td>FL310, FL410</td>
<td><strong>ALRAM–UMH Eastbound then two way</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ankara</strong></td>
<td><strong>Kuwait</strong></td>
<td><strong>ALRAM</strong></td>
<td>G208-UL223-G667-W31-B417</td>
<td><strong>TULAX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FL310, FL410</td>
<td><strong>ALRAM–UMH Eastbound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>then two way</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DASIS</strong></td>
<td><strong>UL333 R660-R661-R654-R659–W31-B417</strong></td>
<td><strong>TULAX</strong></td>
<td>FL330</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ALRAM</strong></td>
<td><strong>G208-R654-R659-G666-UL223</strong></td>
<td><strong>SIR</strong></td>
<td>FL310, FL410</td>
<td><strong>ALRAM–UMH Eastbound</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>then two way</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>DASIS</strong></td>
<td><strong>UL333 R660-R661-R654-R659-G666-UL223</strong></td>
<td><strong>SIR</strong></td>
<td>FL330</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Landing UAE</strong></td>
<td><strong>ALRAM</strong></td>
<td>G208-UL223-W3-G666</td>
<td><strong>ORSAR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FL310, FL410</td>
<td><strong>ALRAM–UMH Eastbound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>then two way</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>DASIS</strong></td>
<td><strong>UL333 R660-R661-R654-R659-G666–G666–</strong></td>
<td><strong>KAMAR</strong></td>
<td>FL330</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Ankara</strong></td>
<td><strong>Kabul</strong></td>
<td><strong>G208-R654-R659-G666–UL223</strong></td>
<td><strong>KAMAR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FL310, FL410</td>
<td><strong>ALRAM–</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALRAM</td>
<td></td>
<td>UMH Eastbound then two way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
<td>---------------------</td>
<td>---------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>T210-G208-R205-G202</td>
<td>G208-G208/UL124-G781-A416-or G792</td>
<td>SOKAM CHARN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALRAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ankara</td>
<td>Muscat</td>
<td>DASIS</td>
<td>R660-B121-T210-G208-W32-R654</td>
<td>ORBIX</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALRAM</td>
<td>G208-R661-T210-G208-W32-R654</td>
<td>ORBIX</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FL310, FL410 ALRAM–UMH Eastbound then two way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yerevan</td>
<td>Bahrain</td>
<td>MAGRI</td>
<td>G482-R661-R654-R659-G663</td>
<td>ALSER</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>G482-R661-R654-R659</td>
<td>MIDSI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yerevan</td>
<td>Kuwait</td>
<td>MAGRI</td>
<td>G482-R661-R654-G667-W30-B417</td>
<td>TULAX</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FL390</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yerevan</td>
<td>Emirates</td>
<td>MAGRI</td>
<td>G482-R661-R654-R659-G666-W147 UL223</td>
<td>SIR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MAGRI</td>
<td>G482-R661-R654-R659-G666</td>
<td>ORSAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Karachi bound to Delhi and beyond</td>
<td>MAGRI</td>
<td>-B121-UL333-UN319-G452</td>
<td>DERBO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karachi Bound to Mumbai and beyond</td>
<td>MAGRI</td>
<td>B121-A416-N39-G208/UL125-W32-UL124</td>
<td>KEBUD</td>
<td>FL390</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yerevan</td>
<td>Kabul</td>
<td>MAGRI</td>
<td>B121-UL333-UN319-R794-G202</td>
<td>KAMAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B121-A416-or G792</td>
<td>SOKAM CHARN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yerevan</td>
<td>Muscat</td>
<td>MAGRI</td>
<td>B121-A416-T212 G208 UL125-W32-R654</td>
<td>ORBIX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baku</td>
<td>Emirates</td>
<td>ULDUS</td>
<td>P574-R654-R659-G666-UL223</td>
<td>SIR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R661 UL125-</td>
<td>FL370</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Air Traffic management Operational Contingency Plan – MID Region
<table>
<thead>
<tr>
<th>Air Traffic management Operational Contingency Plan – MID Region</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nakhchivan</strong></td>
</tr>
<tr>
<td><strong>LALDA</strong></td>
</tr>
<tr>
<td>G670-B121-G667-R654-R659-G666-UL223</td>
</tr>
<tr>
<td><strong>DULAV</strong></td>
</tr>
<tr>
<td>R661 UL125-R654-R659-G666</td>
</tr>
<tr>
<td><strong>LALDA</strong></td>
</tr>
<tr>
<td>G670-B121-G667-R654-R659-G666</td>
</tr>
<tr>
<td><strong>Landing UAE</strong></td>
</tr>
<tr>
<td><strong>ULDUS</strong></td>
</tr>
<tr>
<td>P574-R659-G663</td>
</tr>
<tr>
<td>P574-R659-MIDSI</td>
</tr>
<tr>
<td><strong>DULAV</strong></td>
</tr>
<tr>
<td>MIDSI</td>
</tr>
<tr>
<td><strong>LALDA</strong></td>
</tr>
<tr>
<td><strong>ALSER</strong></td>
</tr>
<tr>
<td>G670-B121-G667-R654-R659-G663</td>
</tr>
<tr>
<td><strong>Kuwait</strong></td>
</tr>
<tr>
<td><strong>ULDUS</strong></td>
</tr>
<tr>
<td>P574-SAV-G667-AWZ-W30-MAH-B417</td>
</tr>
<tr>
<td><strong>TULAX</strong></td>
</tr>
<tr>
<td><strong>FL370</strong></td>
</tr>
<tr>
<td><strong>ORBITX</strong></td>
</tr>
<tr>
<td><strong>FL250</strong></td>
</tr>
<tr>
<td><strong>FL250</strong></td>
</tr>
<tr>
<td><strong>Kuwait</strong></td>
</tr>
<tr>
<td><strong>ULDUS</strong></td>
</tr>
<tr>
<td>UN319-A419-R654</td>
</tr>
<tr>
<td><strong>FL370</strong></td>
</tr>
<tr>
<td><strong>FL290</strong></td>
</tr>
<tr>
<td><strong>FL250</strong></td>
</tr>
<tr>
<td><strong>FL250</strong></td>
</tr>
<tr>
<td>Route</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Nakhchivan</td>
</tr>
<tr>
<td>Karach bound to Delhi and beyond</td>
</tr>
<tr>
<td>Karachi Bound to Mumbai and beyond</td>
</tr>
<tr>
<td>Ashgabat</td>
</tr>
<tr>
<td>Ashgabat</td>
</tr>
<tr>
<td>Ashgabat</td>
</tr>
<tr>
<td>Ashgabat</td>
</tr>
<tr>
<td>Ashgabat</td>
</tr>
<tr>
<td>Ashgabat</td>
</tr>
<tr>
<td>Ashgabat</td>
</tr>
<tr>
<td>Ashgabat</td>
</tr>
<tr>
<td>Emirates</td>
</tr>
<tr>
<td>Emirates</td>
</tr>
<tr>
<td>Emirates</td>
</tr>
<tr>
<td>Emirates</td>
</tr>
<tr>
<td>Emirates</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Emirates</td>
</tr>
<tr>
<td>Emirates</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Kuwait</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
</tbody>
</table>

Air Traffic management Operational Contingency Plan – MID Region
<table>
<thead>
<tr>
<th>Origin</th>
<th>Destination</th>
<th>Route</th>
<th>FL</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>Ashgabat</td>
<td>MIDSI</td>
<td>R659-G663-A419</td>
<td>RIKOP</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Kabul</td>
<td>MIDSI</td>
<td>A453</td>
<td>PIRAN</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Landing UAE</td>
<td>KUVER</td>
<td>B416-R784-W143-G666</td>
<td>ORSAR</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Landing UAE</td>
<td>KUVER</td>
<td>B416-R784-W143-G666-UL223</td>
<td>SIR</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Ankara</td>
<td>MIDSI</td>
<td>R659-R654-R661-R660</td>
<td>DASIS</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Ankara</td>
<td>MIDSI</td>
<td>R659-R654-G208-G781</td>
<td>BONAM</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Ankara</td>
<td>MIDSI</td>
<td>R659-W3-UL223-G781</td>
<td>DASIS</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Ankara</td>
<td>ALSER</td>
<td>G663-R659-R654-R661-R660</td>
<td>DASIS</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Ankara</td>
<td>ALSER</td>
<td>G663-R659-R654-G208-G781</td>
<td>BONAM</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Ankara</td>
<td>ALSER</td>
<td>G663-W3-UL223-G781</td>
<td></td>
</tr>
<tr>
<td>Muscat</td>
<td>Karachi</td>
<td>IMLOT</td>
<td>A791</td>
<td>JI</td>
</tr>
<tr>
<td>Muscat</td>
<td>Karachi</td>
<td>DENDA</td>
<td>R462</td>
<td></td>
</tr>
<tr>
<td>Muscat</td>
<td>Baku</td>
<td>ORBIX</td>
<td>R654-W32-G208-N39-R794</td>
<td>ULDUS</td>
</tr>
<tr>
<td>Muscat</td>
<td>Baku</td>
<td>Nakhchivan</td>
<td>R654-W32-G208-N39-A416-R661</td>
<td>DULAV</td>
</tr>
<tr>
<td>Muscat</td>
<td>Yerevan</td>
<td>ORBIX</td>
<td>R654-W32-G208-N39-A416-B121</td>
<td>MAGRI</td>
</tr>
<tr>
<td>Muscat</td>
<td>Ashgabat</td>
<td>ORBIX</td>
<td>R654-W2-G775</td>
<td>ORPAB</td>
</tr>
<tr>
<td>Muscat</td>
<td>Kabul</td>
<td>ORBIX</td>
<td>R654-W2-A453</td>
<td>PIRAN</td>
</tr>
<tr>
<td>Muscat</td>
<td>Baghdad</td>
<td>ORBIX</td>
<td>R654-G202-B411</td>
<td>PAXAT</td>
</tr>
<tr>
<td>Muscat</td>
<td>Ankara</td>
<td>ORBIX</td>
<td>R654-W32-G208-T210-R661-G208-G781</td>
<td>BONAM</td>
</tr>
<tr>
<td>Origin</td>
<td>Destination</td>
<td>Flight Sequence</td>
<td>Level</td>
<td>FL</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td>----------------</td>
<td>-------</td>
<td>----</td>
</tr>
<tr>
<td>Baghdad</td>
<td>Baku</td>
<td>PAXAT B411-G202-G667-P574</td>
<td>ULDUS</td>
<td>FL270</td>
</tr>
<tr>
<td>Baghdad</td>
<td>Yerevan</td>
<td>PAXAT B411-G202-G667-R654-R661-G482</td>
<td>MAGRI</td>
<td>FL270</td>
</tr>
<tr>
<td>Baghdad</td>
<td>Ashgabat</td>
<td>PAXAT B411-G202-G663-A419</td>
<td>RIKOP</td>
<td>FL270</td>
</tr>
<tr>
<td>Baghdad</td>
<td>Kabul</td>
<td>PAXAT B411-G202</td>
<td>KAMAR</td>
<td>FL270</td>
</tr>
<tr>
<td>Baghdad</td>
<td>Karachi</td>
<td>PAXAT B411-G202-R654</td>
<td>DERBO</td>
<td>FL270</td>
</tr>
<tr>
<td>Baghdad</td>
<td>Muscat</td>
<td>PAXAT B411-G202-R654</td>
<td>ORBIX</td>
<td>FL270</td>
</tr>
<tr>
<td>Baghdad</td>
<td>Landing UAE</td>
<td>PAXAT B411-G202-R659-G666</td>
<td>ORSAR</td>
<td>FL270</td>
</tr>
<tr>
<td>Kabul</td>
<td>Ankara</td>
<td>KAMAR G202-R794-UN319-A416-R660</td>
<td>DASIS</td>
<td>FL380</td>
</tr>
<tr>
<td>Kabul</td>
<td>Baku</td>
<td>KAMAR G202-R794-UN319</td>
<td>ULDUS</td>
<td>FL380</td>
</tr>
<tr>
<td>Kabul</td>
<td>Nakhchivan</td>
<td>KAMAR G202-R794-UN319-A416-R660-R661</td>
<td>DULAV</td>
<td>FL380</td>
</tr>
<tr>
<td>Kabul</td>
<td>Yerevan</td>
<td>KAMAR G202-R794-UN319-A416-R660-G482</td>
<td>MAGRI</td>
<td>FL380</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOKAM A416-R660-G482</td>
<td></td>
<td>FL340</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CHARN G792-B411-A416-R660-G482</td>
<td></td>
<td>FL360</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOKAM A416-G775 ORPAB</td>
<td></td>
<td>FL340</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A416-G792 GIRUN</td>
<td></td>
<td>FL360</td>
</tr>
</tbody>
</table>

Air Traffic management Operational Contingency Plan – MID Region
<table>
<thead>
<tr>
<th>Source</th>
<th>Destination</th>
<th>CHARN</th>
<th>G792</th>
<th>G792-G775</th>
<th>ORPAB</th>
<th>ORBIX</th>
<th>DARAX</th>
<th>MIDS</th>
<th>FL200</th>
<th>FL360</th>
<th>FL320</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kabul</td>
<td>Ashgabat</td>
<td>PIRAN</td>
<td>A453-G452</td>
<td>G669</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FL200</td>
<td>FL200</td>
<td>FL360</td>
</tr>
<tr>
<td>Kabul</td>
<td>Muscat</td>
<td>PIRAN</td>
<td>A453-W2-R654</td>
<td>ORBIX</td>
<td>FL200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kabul</td>
<td>UAE</td>
<td>PIRAN</td>
<td>A453-A419</td>
<td>DARAX</td>
<td>FL200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kabul</td>
<td>Bahrain</td>
<td>PIRAN</td>
<td>A453</td>
<td>MIDS</td>
<td>FL200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kabul</td>
<td>Kuwait</td>
<td>PIRAN</td>
<td>A453-G452-G669</td>
<td>NANPI</td>
<td>FL200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kabul</td>
<td>Baghdad</td>
<td>PIRAN</td>
<td>A453-G452-R654-G202-B411</td>
<td>PAXAT</td>
<td>FL200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karachi</td>
<td>Ashgabat</td>
<td>DERBO</td>
<td>G452-G775</td>
<td>ORPAB</td>
<td>FL320</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karachi</td>
<td>Muscat</td>
<td>DERBO</td>
<td>G452-W2-R654</td>
<td>ORBIX</td>
<td>FL320</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karachi</td>
<td>UAE</td>
<td>DERBO</td>
<td>G452-A453-A419</td>
<td>DARAX</td>
<td>FL320</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karachi</td>
<td>Bahrain</td>
<td>DERBO</td>
<td>G452-A453</td>
<td>MIDS</td>
<td>FL320</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Air Traffic management Operational Contingency Plan – MID Region
### ADJACENT FIR FREQUENCIES AND TELEPHONE NUMBERS

<table>
<thead>
<tr>
<th>ATS UNIT</th>
<th>RTF Call Sign</th>
<th>Frequency</th>
<th>Telephone NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baku</td>
<td>Baku RADAR</td>
<td><strong>Main</strong> 133.100</td>
<td>+994124971673</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stand by</strong> 133.300, 129.000, 135.100</td>
<td></td>
</tr>
<tr>
<td>Yerevan</td>
<td>Yerevan RADAR</td>
<td><strong>Main</strong> 128.800</td>
<td>+37410593304</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stand by</strong> 124.000</td>
<td></td>
</tr>
<tr>
<td>Nakhchivan</td>
<td>Nakhchivan RADAR</td>
<td><strong>Main</strong> 127.900</td>
<td>+994136446950</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stand by</strong> 118.200</td>
<td></td>
</tr>
<tr>
<td>Ankara</td>
<td>Ankara RADAR</td>
<td><strong>Main</strong> 127.300</td>
<td>+903123980000 ext. 1153 or 1614</td>
</tr>
<tr>
<td></td>
<td>Via DASIS</td>
<td><strong>Stand by</strong> 129.300, 122.275</td>
<td>+903123980961</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Main</strong> 128.100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Via BONAM, ALRAM</td>
<td><strong>Stand by</strong> 132.900, 129.450</td>
<td></td>
</tr>
<tr>
<td>Baghdad</td>
<td>Tehran Control</td>
<td><strong>Main</strong> 123.000</td>
<td>+9647901655461</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stand by</strong> 123.525</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Main</strong> 125.300</td>
<td>+9654762994</td>
</tr>
</tbody>
</table>
3.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Tehran loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location to backup ACC (located in IKIA).

The facility is established at another location IKIA but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Tehran facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Tehran FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Tehran FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace
NOTAM................DUE TO DISRUPTION OF ATS IN THE TEHRAN FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS
NOTAM ...........DUE TO ANTICIPATED DISRUPTION OF ATS IN THE TEHRAN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated
NOTAM ...........DUE TO DISRUPTION OF ATS IN TEHRAN FIR ALL ACFT ARE ADVISED THAT THE Tehran FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TEHRAN AIRSPACE.

d) Non adherence to the Contingency Plan
NOTAM .............OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE TEHRAN FIR.

e) Avoidance of airspace

NOTAM.................DUE TO TEHRAN ACC BUILDING EVACUATION ALL ACFT SHALL BE ADVISED TO AVOID TEHRAN FIR
CHAPTER 4: DETAILED PROCEDURES – BAGHDAD FIR

4.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Baghdad FIR

4.2 FIRs WITH SUPPORTING PROCEDURES

Amman FIR
Ankara FIR
Damascus FIR
Jeddah FIR
Kuwait FIR
Tehran FIR

4.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

*Note:* In the event of an evacuation, we must assume that the Tower at ORBI is also evacuated. There needs to be a system in place where we can initiate the evacuation messages via cell phone (we call Erbil tower, Najaf Tower and Basra Tower and they broadcast the evacuation message and implement the contingency routes, they will also need to issue the NOTAM and contact adjacent FIRs).

4.4 LIMITED SERVICE – PROCEDURES

4.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Baghdad frequency normally provided by Baghdad Control will be delegated as appropriate to the other ATS units namely Erbil, Najaf and Basra Towers. Appropriate frequencies will be advised by Baghdad and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Baghdad Communications center and Baghdad ACC)

Propagation
Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

**Staffing**

- Reduced Staffing
- Illness
- Weather (Severe Weather i.e. Storm, Snow, Flooding)

**Security Threat**

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

### 4.4.2 Disruption of ability to provide control services

Baghdad ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

**Separation standards**

Baghdad ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

**Contingency tracks**

Dependant on the nature of the service limitation, Baghdad may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

**Air Traffic Flow Management**

Baghdad ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Baghdad ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

**Responsibilities of adjacent ANSPs**

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.
4.5 NO SERVICE – PROCEDURES

4.5.1 Loss of ground/air communication capability

In the event of Baghdad ACC being unable to provide ground/air communications for Baghdad FIR Erbil, Najaf and Basra Towers will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Baghdad ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Baghdad ACC being unable to provide ground/air communications for a sustained period of time Erbil, Najaf and Basra Towers in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Baghdad FIR.

ATFM measures may be imposed as necessary.

4.5.2 Loss of ability to provide control services

Should Baghdad ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Baghdad FIR.

In the event that Baghdad ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio
frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Baghdad Contingency plan.

The Plan will be activated by promulgation of a NOTAM issued by (ICAA) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (ICAA) and/or ICAO MID office, as authorized by Head of ICAA. It is expected that the civil aviation authorities concerned and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Baghdad Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

4.6 FLIGHT CREW AND OPERATOR PROCEDURES

4.6.1 For flights within the Baghdad FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5, 123.45 and the assigned Unit frequency. A listening watch on these frequencies must be maintained.

4.6.2 For flights within the Baghdad FIR – Westbound

Kuwait ACC will endeavour to provide an ATC service throughout the Baghdad FIR as soon as evacuation commences. These procedures are detailed at Baghdad Contingency Procedures – Appendix x.

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amman FIR</td>
<td>+ 962 64 451672</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ankara FIR</td>
<td>+903123 980290 +903 12 398 0961</td>
<td>+903 11 540 0312</td>
<td><a href="mailto:cellatin.brozkurt@dhmi.gov.tr">cellatin.brozkurt@dhmi.gov.tr</a></td>
<td></td>
</tr>
<tr>
<td>Damascus FIR</td>
<td>+963 115 400164 +963 12 398 0961</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeddah FIR</td>
<td>+966 26 8550067</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kuwait FIR</td>
<td>+965 4332476 +965 4760463</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tehran FIR</td>
<td>+982 144 544116</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

4.6.3 For flights within the Baghdad FIR – Eastbound

Ankara ACC will endeavour to provide an ATC service throughout the Baghdad FIR as soon as evacuation commences. These procedures are detailed at Baghdad Contingency Procedures – Appendix x.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

4.6.4 For flights approaching the Baghdad FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Baghdad ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Baghdad FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Baghdad FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Baghdad FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Baghdad FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

4.7 BAGHDAD FIR – CONTINGENCY ROUTE STRUCTURE

4.7.1 For activation within Baghdad FIR

In a limited service contingency situation Baghdad ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Baghdad FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN.

4.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Baghdad FIR should use the following contingency routes:
Communications with the next ATSU should be established at the earliest opportunity.

For Transit Flights South North Except traffic Landing Kuwait

<table>
<thead>
<tr>
<th>Entry FIR</th>
<th>Exit FIR</th>
<th>Entry FIX</th>
<th>Route Designator</th>
<th>Exit FIX</th>
<th>Flight Levels</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankara</td>
<td>Kuwait</td>
<td>NINVA</td>
<td>UM688</td>
<td>SIDAD</td>
<td>FL330, FL350, FL370, FL390, FL410</td>
<td>NINVA 129.10, VAXEN 123.0, PEBAD 125.3</td>
</tr>
<tr>
<td>Damascus</td>
<td>Kuwait</td>
<td>MODIK</td>
<td>G202 M320 UM688</td>
<td>SIDAD</td>
<td>FL 270</td>
<td>MODIK 121.3, RAPLU 129.10, LOPAM 123.0, PEBAD 125.3</td>
</tr>
<tr>
<td>Amman</td>
<td>Kuwait</td>
<td>PASIP</td>
<td>L200 M320 UM688</td>
<td>SIDAD</td>
<td>FL 230</td>
<td>PASIP 128.5, GIBUX 129.10, LOPAM 123.0, PEBAD 125.3</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Ankara</td>
<td>TASMI</td>
<td>UL602</td>
<td>KABAN</td>
<td>FL320, FL340, FL360, FL380, FL400</td>
<td>TASMI 123.0, SEPTU 129.10, UMESA 132.9</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Damascus</td>
<td>TASMI</td>
<td>UL602 M320 G202</td>
<td>MODIK</td>
<td>FL280</td>
<td>TASMI 123.0, ELODI 129.10, MODIK 121.3</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Amman</td>
<td>TASMI</td>
<td>UL602 M320 L200</td>
<td>PASIP</td>
<td>FL240</td>
<td>TASMI 123.0, ELODI 129.10, PASIP 128.5</td>
</tr>
<tr>
<td>Tehran</td>
<td>Damascus</td>
<td>PAXAT</td>
<td>DCT G202</td>
<td>MODIK</td>
<td>FL 260</td>
<td>PAXAT 129.1, MODIK 121.3</td>
</tr>
</tbody>
</table>

1) Note No ATC Service provided to any flight Departing from within the Baghdad FIR;
2) Adjacent FIRs to provide 10Minutes Longitudinal Separation between Aircraft at the same Flight Level, with similar or faster performance Aircraft proceeding; and
3) UP975 from SIDAD to UKMUGNOT USABLE Air Route Segment.
4.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Baghdad loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Baghdad facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Baghdad FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Baghdad FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace
NOTAM…………….DUE TO DISRUPTION OF ATS IN THE BAGHDAD FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS
NOTAM …………DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BAGHDAD FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated
NOTAM ………..DUE TO DISRUPTION OF ATS IN BAGHDAD FIR ALL ACFT ARE ADVISED THAT THE Baghdad FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TEHRAN AIRSPACE.

d) Non adherence to the Contingency Plan
NOTAM ……………OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BAGHDAD FIR.
CHAPTER 5: DETAILED PROCEDURES – AMMAN FIR

5.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Amman FIR

5.2 FIRs WITH SUPPORTING PROCEDURES

Jeddah FIR
Riyadh ACC
Baghdad FIR
Damascus FIR
Tel Aviv FIR
Cairo FIR

5.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

5.4 LIMITED SERVICE – PROCEDURES

5.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Amman frequency normally provided by Amman Control will be delegated as appropriate to the other ATS units namely ----- ----- -----. Appropriate frequencies will be advised by Amman and the assisting stations.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Amman Communications center and Amman ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

5.4.2 Disruption of ability to provide control services

Amman ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Amman ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Amman may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Amman ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Amman ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

5.5 NO SERVICE – PROCEDURES

5.5.1 Loss of ground/air communication capability
In the event of Amman ACC being unable to provide ground/air communications for Amman FIR, the ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Amman ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Amman ACC being unable to provide ground/air communications for a sustained period of time, the ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Amman FIR.

ATFM measures may be imposed as necessary.

5.5.2 Loss of ability to provide control services

Should Amman ACC be evacuated, the potential would exist for a major disruption to Air Traffic Control (ATC) within the Amman FIR.

In the event that Amman ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Jordan Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by (CARC) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by (CARC) and/or ICAO MID office.
As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Amman Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

5.6 FLIGHT CREW AND OPERATOR PROCEDURES

5.6.1 For flights within the Amman FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

5.6.2 For flights within the Amman FIR – Westbound

Cairo, Damascus, Jeddah ACC and Tel Aviv ACC will endeavour to provide an ATC service throughout the Amman FIR as soon as evacuation commences. These procedures are detailed at Amman Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeddah ACC</td>
<td>00966</td>
<td>00966</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riyadh ACC</td>
<td>00966</td>
<td>00966</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baghdad ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Damascus ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tel Aviv ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cairo ACC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| ICAO MID      | 0020 2 2267 4845/46/41 | 0020 2 2267 4843 | icaomid@icao.int |
| IATA          | OO962 6 569 8728       | OO962 6 560 4548 | saidh@iata.org   |

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.
5.6.3 For flights within the Amman FIR – Eastbound

Cairo, Damascus, Jeddah ACC and Tel Aviv ACC will endeavour to provide an ATC service throughout the Amman FIR as soon as evacuation commences. These procedures are detailed at Amman Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

5.6.4 For flights approaching the Amman FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Amman ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Amman FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Amman FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Amman FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Amman FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

5.7 AMMAN FIR – CONTINGENCY ROUTE STRUCTURE

5.7.1 For activation within Amman FIR

In a limited service contingency situation Amman ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Amman FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

5.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Amman FIR should use the following contingency routes:
## Contingency Route Structure for Amman FIR

<table>
<thead>
<tr>
<th>Present ATS Route</th>
<th>Contingency Routings</th>
<th>FIRs Involved</th>
</tr>
</thead>
</table>
| **EAST SECTOR:** ATS routes B544, UR219, UR785 | **East Bound Traffic:** all traffic has to follow the routes: L513 to BUSRA and HAZEM, A412/L513 to QAA–GRY, W333/R652 in JEDDAH FIR. Other traffic coming from the north through ZELAF or TANF will have to continue on A412/L513 to QAA–GRY, W333/R652 in JEDDAH FIR. **West Bound Traffic:** all traffic has to come through GRY/ATS route R652 then on W333/A412/L513, GRY – QAA then L513 HAZEM to BUSRA and DAMASCUS FIR. | • Damascus FIR  
• Jeddah FIR |
| **WEST SECTOR:** this sector has four outlets: **North Border:** ATS route A412/L513 and W2 with DAMASCUS in case of closure | **East Bound Traffic:** all traffic has to go through TALMI. Or ATS route A412/L513 – QTR then ATS route R652 to METSA and CAIRO FIR. As for the east bound traffic it will, be through SALAM or METSA on route R652 - QTR, thereafter to QAA or to continue to GRY in JEDDAH.FIR. | • Tel Aviv FIR  
• CAIRO FIR  
• JEDDAH FIR |
| **West Border Air Corridors with TELAVIV FIR:** in case of being closed, east bound traffic has to follow: | **West Bound Traffic:** will use A412/L513 to QTR then R652 to METSA and CAIRO FIR. Arrivals have to come through A412/L513 or L513 - BUSRA and QAA or on R652 from CAIRO FIR through METSA. | • Damascus FIR  
• Cairo FIR |
| **South border METSA and R652 to and from CAIRO FIR:** in case of closure | Departures or arrivals have to use W2 to BUSRA – HAZEM – A412/L513 to QAA and vice versa. OR via TELAVIV FIR instead of L513 or A412 | • Damascus FIR  
• Tel Aviv FIR |
| **East border ATS route R652 QTR – PARAM – GRY in case of closure** | **East Bound Traffic:** has to use A412/L513 to ZELAF then UR785 to JEDDAH FIR. West bound traffic will proceed through OTILA to SOKAN UR219 to ZELAF then A412 to QAAVOR. | • DAMASCUS FIR  
• Jeddah FIR |

Communications with the next ATSU should be established at the earliest opportunity.

Appendix
### APPENDIX

**CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES**

<table>
<thead>
<tr>
<th>CONTINGENCY ROUTES IN AMMAN (CRJ)</th>
<th>ATS ROUTES</th>
<th>COM</th>
</tr>
</thead>
</table>

Within East Sector, Non RNAV equipped ACFT may operate only along Airway BS44.
5.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Jordan loses the ability to provide an ATC service in the Amman FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Amman facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Amman FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Amman FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace
NOTAM…………………DUE TO DISRUPTION OF ATS IN THE AMMAN FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS
NOTAM ……………DUE TO ANTICIPATED DISRUPTION OF ATS IN THE AMMAN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated
NOTAM …………DUE TO DISRUPTION OF ATS IN AMMAN FIR ALL ACFT ARE ADVISED THAT THE AMMAN FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY AMMAN AIRSPACE.

d) Non adherence to the Contingency Plan
NOTAM ……………OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE AMMAN FIR
CHAPTER 6: DETAILED PROCEDURES – KUWAIT FIR

6.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Kuwait FIR

6.2 FIRs WITH SUPPORTING PROCEDURES

Baghdad FIR
Baghain FIR
Jeddah FIR
Tehran FIR

6.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

6.4 LIMITED SERVICE – PROCEDURES

6.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Kuwait frequency normally provided by Kuwait Control will be delegated as appropriate to the other ATS units namely -----------------. Appropriate frequencies will be advised by Kuwait and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Kuwait Communications center and Kuwait ACC )

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)
Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

6.4.2 **Disruption of ability to provide control services**

Kuwait ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

*Separation standards*

Kuwait ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

*Contingency tracks*

Dependant on the nature of the service limitation, Kuwait may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

*Air Traffic Flow Management*

Kuwait ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Kuwait ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

*Responsibilities of adjacent ANSPs*

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

6.5 **NO SERVICE – PROCEDURES**

6.5.1 **Loss of ground/air communication capability**

In the event of Kuwait ACC being unable to provide ground/air communications for Kuwait FIR ----- ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.
Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Kuwait ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Kuwait ACC being unable to provide ground/air communications for a sustained period of time ------ ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Kuwait FIR.

ATFM measures may be imposed as necessary.

6.5.2 Loss of ability to provide control services

Should Kuwait ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Kuwait FIR.

In the event that Kuwait ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Kuwait Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Kuwait Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.
Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

6.6 FLIGHT CREW AND OPERATOR PROCEDURES

6.6.1 For flights within the Kuwait FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

6.6.2 For flights within the Kuwait FIR – Westbound

---------------- ACC’s will endeavour to provide an ATC service throughout the Kuwait FIR as soon as evacuation commences. These procedures are detailed at Kuwait Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baghdad FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahrain FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeddah FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tehran FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ICAO MID 0020 2 2267 4845/46/41 0020 2 2267 4843 icaomid@icao.int
IATA OO962 6 569 8728 OO962 6 560 4548 saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

6.6.3 For flights within the Kuwait FIR – Eastbound

------------------------ ACC’s will endeavour to provide an ATC service throughout the Kuwait FIR as soon as evacuation commences. These procedures are detailed at Kuwait Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

Air Traffic management Operational Contingency Plan – MID Region
6.6.4 For flights approaching the Kuwait FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Kuwait ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Kuwait FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Kuwait FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Kuwait FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Kuwait FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

6.7 KUWAIT FIR – CONTINGENCY ROUTE STRUCTURE

6.7.1 For activation within Kuwait FIR

In a limited service contingency situation Kuwait ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Kuwait FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

6.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Kuwait FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

6.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Kuwait loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Kuwait facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Kuwait FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Baghdad FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.
Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace
NOTAM………………DUE TO DISRUPTION OF ATS IN THE KUWAIT FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS
NOTAM …………DUE TO ANTICIPATED DISRUPTION OF ATS IN THE KUWAIT FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated
NOTAM ………….DUE TO DISRUPTION OF ATS IN KUWAIT FIR ALL ACFT ARE ADVISED THAT THE Kuwait FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY KUWAIT AIRSPACE.

d) Non adherence to the Contingency Plan
NOTAM ……………OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE KUWAIT FIR
CHAPTER 7: DETAILED PROCEDURES – BEIRUT FIR

7.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Beirut FIR

7.2 FIRs WITH SUPPORTING PROCEDURES

Damascus FIR
Nicosia FIR

7.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

7.4 LIMITED SERVICE – PROCEDURES

7.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Beirut frequency normally provided by Beirut Control will be delegated as appropriate to the other ATS units namely -----------------. Appropriate frequencies will be advised by Beirut and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Beirut Communications center and Beirut ACC )

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat
Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

7.4.2 Disruption of ability to provide control services

Beirut ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Beirut ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Beirut may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Beirut ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Beirut ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

7.5 NO SERVICE – PROCEDURES

7.5.1 Loss of ground/air communication capability

In the event of Beirut ACC being unable to provide ground/air communications for Beirut FIR ---- ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:
a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Beirut ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Beirut ACC being unable to provide ground/air communications for a sustained period of time, ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Beirut FIR.

ATFM measures may be imposed as necessary.

7.5.2 Loss of ability to provide control services

Should Beirut ACC be evacuated, the potential would exist for a major disruption to Air Traffic Control (ATC) within the Beirut FIR.

In the event that Beirut ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Beirut Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Beirut Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.
7.6 FLIGHT CREW AND OPERATOR PROCEDURES

7.6.1 For flights within the Beirut FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

7.6.2 For flights within the Beirut FIR – Westbound

ACC’s will endeavour to provide an ATC service throughout the Beirut FIR as soon as evacuation commences. These procedures are detailed at Beirut Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damascus FIR</td>
<td>0020 2 2267 4845/46/41</td>
<td>0020 2 2267 4843</td>
<td><a href="mailto:icaomid@icao.int">icaomid@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Nicosia FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

7.6.3 For flights within the Beirut FIR – Eastbound

ACC’s will endeavour to provide an ATC service throughout the Beirut FIR as soon as evacuation commences. These procedures are detailed at Beirut Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

7.6.4 For flights approaching the Beirut FIR when the contingency is activated.

Not in Receipt of an ATC Clearance
In the event that Beirut ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Beirut FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Beirut FIR or to land at an appropriate airfield.

*In receipt of an acknowledged ATC Clearance outside Beirut FIR*

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Beirut FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

**7.7 BEIRUT FIR – CONTINGENCY ROUTE STRUCTURE**

**7.7.1 For activation within Beirut FIR**

In a limited service contingency situation Beirut ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Beirut FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN.

**7.7.2 For activation within adjacent FIR**

Unless instructed otherwise, flights entering the Beirut FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

**7.8 LONG TERM CONTINGENCY ARRANGEMENTS**

In the event that Beirut loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Beirut facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Beirut FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Beirut FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.
APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace
NOTAM ……………DUE TO DISRUPTION OF ATS IN THE BEIRUT FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS
NOTAM ……………DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BEIRUT FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated
NOTAM ……………DUE TO DISRUPTION OF ATS IN BEIRUT FIR ALL ACFT ARE ADVISED THAT THE Beirut FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY BEIRUT AIRSPACE.

d) Non adherence to the Contingency Plan
NOTAM ……………OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BEIRUT FIR
CHAPTER 8: DETAILED PROCEDURES – TRIPOLI FIR

8.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Tripoli FIR

8.2 FIRs WITH SUPPORTING PROCEDURES

Algiers FIR
Cairo FIR
Khartoum FIR
Malta FIR
N’Djamena FIR
Niamey UIR
Nicosia FIR
Tunis FIR

8.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

8.4 LIMITED SERVICE – PROCEDURES

8.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Tripoli frequency normally provided by Tripoli Control will be delegated as appropriate to the other ATS units namely -----------------. Appropriate frequencies will be advised by Tripoli and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Tripoli Communications center and Tripoli ACC )
Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

8.4.2 Disruption of ability to provide control services

Tripoli ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Tripoli ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Tripoli may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Tripoli ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Tripoli ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs
The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

8.5 NO SERVICE – PROCEDURES

8.5.1 Loss of ground/air communication capability

In the event of Tripoli ACC being unable to provide ground/air communications for Tripoli FIR ------ ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Tripoli ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Tripoli ACC being unable to provide ground/air communications for a sustained period of time ------ ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Tripoli FIR.

ATFM measures may be imposed as necessary.

8.5.2 Loss of ability to provide control services

Should Tripoli ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Tripoli FIR.
In the event that Tripoli ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Tripoli Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Tripoli Contingency Procedures – Appendix xx.’ In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

8.6 FLIGHT CREW AND OPERATOR PROCEDURES

8.6.1 For flights within the Tripoli FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

8.6.2 For flights within the Tripoli FIR – Westbound

---------- ACC’s will endeavour to provide an ATC service throughout the Tripoli FIR as soon as evacuation commences. These procedures are detailed at Tripoli Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algiers FIR</td>
<td>0020 2 2267 4845/46/41</td>
<td>0020 2 2267 4843</td>
<td><a href="mailto:icaomid@icao.int">icaomid@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Cairo FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Khartoum FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malta FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N’Djamena FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Niamey UIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicosia FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tunis FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ICAO MID 0020 2 2267 4845/46/41
IATA OO962 6 569 8728

Air Traffic management Operational Contingency Plan – MID Region
Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

8.6.3 For flights within the Tripoli FIR – Eastbound

ACC’s will endeavour to provide an ATC service throughout the Tripoli FIR as soon as evacuation commences. These procedures are detailed at Tripoli Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

8.6.4 For flights approaching the Tripoli FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Tripoli ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Tripoli FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Tripoli FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Tripoli FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Tripoli FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

8.7 TRIPOLI FIR – CONTINGENCY ROUTE STRUCTURE

8.7.1 For activation within Tripoli FIR

In a limited service contingency situation Tripoli ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Tripoli FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

8.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Tripoli FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

8.8 LONG TERM CONTINGENCY ARRANGEMENTS
In the event that Tripoli loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Tripoli facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Tripoli FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Tripoli FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace
NOTAM…………….DUE TO DISRUPTION OF ATS IN THE TRIPOLI FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS
NOTAM ………….DUE TO ANTICIPATED DISRUPTION OF ATS IN THE TRIPOLI FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated
NOTAM ……….DUE TO DISRUPTION OF ATS IN TRIPOLI FIR ALL ACFT ARE ADVISED THAT THE Tripoli FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TRIPOLI AIRSPACE.

d) Non adherence to the Contingency Plan
NOTAM ……………OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE TRIPOLI FIR
CHAPTER 9: DETAILED PROCEDURES – MUSCAT FIR

9.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Muscat FIR

9.2 FIRs WITH SUPPORTING PROCEDURES

Bahrain FIR
Emirates FIR
Jeddah FIR
Karachi FIR
Mumbai FIR
Tehran FIR
Sana’a FIR

9.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

9.4 LIMITED SERVICE – PROCEDURES

9.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Muscat frequency normally provided by Muscat Control will be delegated as appropriate to the other ATS units namely ----- ------ -------. Appropriate frequencies will be advised by Muscat and the assisting stations.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Muscat Communications center and Muscat ACC )

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing
Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

9.4.2 Disruption of ability to provide control services

Muscat ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Muscat ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Muscat may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Muscat ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Muscat ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.
9.5 NO SERVICE – PROCEDURES

9.5.1 Loss of ground/air communication capability

In the event of Muscat ACC being unable to provide ground/air communications for Muscat FIR, ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Muscat ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Muscat ACC being unable to provide ground/air communications for a sustained period of time, ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Cairo FIR.

ATFM measures may be imposed as necessary.

9.5.2 Loss of ability to provide control services

Should Muscat ACC be evacuated, the potential would exist for a major disruption to Air Traffic Control (ATC) within the Muscat FIR.

In the event that Muscat ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio
frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Oman Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by the Sultanate of Oman International NOTAM Office (NOF) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by the designated authority, as authorized by the DGMAN. It is expected that the civil aviation authorities concerned and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Muscat Contingency Procedures – Appendix xx.” In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

9.6 FLIGHT CREW AND OPERATOR PROCEDURES

9.6.1 For flights within the Muscat FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

9.6.2 For flights within the Muscat FIR – Westbound

Mumbai ACC, Karachi ACC, Sana’a ACC and Tehran ACC will endeavour to provide an ATC service throughout the Muscat FIR as soon as evacuation commences. These procedures are detailed at Muscat Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tehran ACC</td>
<td>0098 21 44544116 or</td>
<td>0098 21 44544117</td>
<td><a href="mailto:maj.alireza@yahoo.com">maj.alireza@yahoo.com</a></td>
<td>OIIIIZGZX</td>
</tr>
<tr>
<td></td>
<td>44554060</td>
<td></td>
<td><a href="mailto:alireza.majzoubi@gmail.com">alireza.majzoubi@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>44544133 (Sector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Controller)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karachi ACC</td>
<td>0092 21 9248 756</td>
<td>0092 21 9248 758</td>
<td><a href="mailto:gmats@cyber.net.pk">gmats@cyber.net.pk</a></td>
<td>OPKCOZQXA</td>
</tr>
<tr>
<td>Mumbai ACC</td>
<td>0091 22 26828088</td>
<td>0091 22 26828066</td>
<td><a href="mailto:WSOUMUM@AAI.AERO">WSOUMUM@AAI.AERO</a></td>
<td>VABFQOZQZA</td>
</tr>
<tr>
<td>Sana’a ACC</td>
<td>00967 1345402/3</td>
<td>00967 1344047</td>
<td><a href="mailto:atccns@gmail.com">atccns@gmail.com</a></td>
<td>OYSNZQZX</td>
</tr>
</tbody>
</table>
Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

9.6.3 For flights within the Muscat FIR – Eastbound

Bahrain ACC, Emirates ACC and Sana’a ACC will endeavour to provide an ATC service throughout the Muscat FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

9.6.4 For flights approaching the Muscat FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Cairo ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Muscat FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Muscat FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Muscat FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Muscat FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

9.7 MUSCAT FIR – CONTINGENCY ROUTE STRUCTURE

9.7.1 For activation within Muscat FIR

In a limited service contingency situation Muscat ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the
Muscat FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

9.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Muscat FIR should use the following contingency routes:

### CONTINGENCY ROUTE STRUCTURE FOR MUSCAT FIR

<table>
<thead>
<tr>
<th>ATS WAYPOINT</th>
<th>DIRECTION</th>
<th>FL ASSIGNMENT</th>
<th>NEXT ACC</th>
<th>COM</th>
</tr>
</thead>
<tbody>
<tr>
<td>RASKI/Parar</td>
<td>Westbound</td>
<td>240 (Muscat arrivals only) 300 and 380</td>
<td>UAE</td>
<td></td>
</tr>
<tr>
<td>Totox Rexod Lotav Kital</td>
<td>Westbound</td>
<td>220 (Muscat arrivals only) 320 and 400</td>
<td>UAE</td>
<td></td>
</tr>
<tr>
<td>Tapdo</td>
<td>Westbound</td>
<td>200 (Muscat arrivals only) 260 and 340</td>
<td>UAE</td>
<td></td>
</tr>
<tr>
<td>Denda</td>
<td>Westbound</td>
<td>180 (Muscat arrivals only) 280 and 360</td>
<td>UAE</td>
<td></td>
</tr>
<tr>
<td>Imlot</td>
<td>Westbound</td>
<td>ALL LEVELS</td>
<td>UAE</td>
<td></td>
</tr>
<tr>
<td>Southbound traffic to Hai VOR (only from Labri P304)</td>
<td>Westbound</td>
<td>180 and 280</td>
<td>Sana’a</td>
<td></td>
</tr>
<tr>
<td>Northbound traffic to Musap/SODEX</td>
<td>Westbound</td>
<td>160/260</td>
<td>UAE</td>
<td></td>
</tr>
<tr>
<td>Departures from Muscat via B400</td>
<td>Westbound</td>
<td>240 and 300 cross 20nm south of IZXI 200 or below and to be level 20nm before Kebas</td>
<td>Salalah App or Sana’a</td>
<td></td>
</tr>
<tr>
<td>Aspux</td>
<td>Westbound</td>
<td>340 and above</td>
<td>Bahrain</td>
<td></td>
</tr>
</tbody>
</table>

Communications with the next ATSU should be established at the earliest opportunity.

**APPENDIX**

**CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES**

<table>
<thead>
<tr>
<th>ATS</th>
<th>DIRECTION</th>
<th>FL</th>
<th>NEXT ACC</th>
<th>COM</th>
</tr>
</thead>
</table>

Air Traffic management Operational Contingency Plan – MID Region
Waypoint Assignment Table

<table>
<thead>
<tr>
<th>Waypoint</th>
<th>Assignment</th>
<th>Airports</th>
</tr>
</thead>
<tbody>
<tr>
<td>RASKI/PARAR</td>
<td>EASTBOUND</td>
<td>MUMBAI</td>
</tr>
<tr>
<td>TOTOX REXOD</td>
<td>EASTBOUND</td>
<td>MUMBAI</td>
</tr>
<tr>
<td>LOTAV KITAL</td>
<td>EASTBOUND</td>
<td>MUMBAI</td>
</tr>
<tr>
<td>ALPOR</td>
<td>EASTBOUND</td>
<td>330 AND 370</td>
</tr>
<tr>
<td>DENDA</td>
<td>EASTBOUND</td>
<td>TEHRAN</td>
</tr>
<tr>
<td>IMLOT</td>
<td>EASTBOUND</td>
<td>TEHRAN</td>
</tr>
<tr>
<td>ASPUX</td>
<td>EASTBOUND</td>
<td>MUMBAI</td>
</tr>
</tbody>
</table>

9.8 Long Term Contingency Arrangements

In the event that Muscat loses the ability to provide an ATC service in the Muscat FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Muscat facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Muscat FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Muscat FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

Appendix XX

Sample Notams

a) Avoidance of airspace

NOTAM…………….Due to disruption of ATS in the Muscat FIR all acft are advised to avoid the FIR.

b) Airspace available with limited ATS

NOTAM ………….Due to anticipated disruption of ATS in the Muscat FIR all acft are advised that there will be limited ATS. Pilots may experience DLA and overflights may consider avoiding the airspace.

c) Contingency plan activated

NOTAM ………….Due to disruption of ATS in Muscat FIR all acft are advised that the Cairo FIR international contingency plan for acft intending to overfly the FIR is in effect. Flight planning must be in accordance with the routes listed and fl assignment. Pilots must strictly adhere to the contingency procedures. Only approved international flights are permitted to overfly Muscat airspace.
d) Non adherence to the Contingency Plan

NOTAM ……………..OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE MUSCAT FIR.

CHAPTER 10: DETAILED PROCEDURES – JEDDAH FIR

10.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Jeddah FIR

10.2 FIRs WITH SUPPORTING PROCEDURES

Amman FIR
Asmara FIR
Bahrain FIR
Baghdad FIR
Cairo FIR
Khartoum FIR
Kuwait FIR
Sana’a FIR

10.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

10.4 LIMITED SERVICE – PROCEDURES

10.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Jeddah frequency normally provided by Jeddah Control will be delegated as appropriate to the other ATS units namely -----------------. Appropriate frequencies will be advised by Jeddah and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Jeddah Communications center and Jeddah ACC )

Propagation
Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing
- Reduced Staffing
- Illness
- Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat
- Depending on the level of the Security threat and if essential staff are allowed to remain on Station

    In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

10.4.2 Disruption of ability to provide control services

    Jeddah ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

    Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

    Jeddah ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

    Dependant on the nature of the service limitation, Jeddah may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

    Jeddah ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

    Jeddah ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

    The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.
10.5 NO SERVICE – PROCEDURES

10.5.1 Loss of ground/air communication capability

In the event of Tripoli ACC being unable to provide ground/air communications for Jeddah FIR ------ ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Jeddah ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Jeddah ACC being unable to provide ground/air communications for a sustained period of time ------- ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Jeddah FIR.

ATFM measures may be imposed as necessary.

10.5.2 Loss of ability to provide control services

Should Jeddah ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Jeddah FIR.

In the event that Jeddah ACC are evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio
frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Jeddah Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Jeddah Contingency Procedures – Appendix xx.’ In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

10.6 FLIGHT CREW AND OPERATOR PROCEDURES

10.6.1 For flights within the Jeddah FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

10.6.2 For flights within the Jeddah FIR – Westbound

--------------- ACC’s will endeavour to provide an ATC service throughout the Jeddah FIR as soon as evacuation commences. These procedures are detailed at Jeddah Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amman FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asmara FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahrain FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baghdad FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cairo FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Khartoum FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kuwait FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sana’a FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICAO MID</td>
<td>0020 2 2267 4845/46/41</td>
<td>0020 2 2267 4843</td>
<td><a href="mailto:icomid@icao.int">icomid@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>IATA</td>
<td>OO962 6 569 8728</td>
<td>OO962 6 560 4548</td>
<td><a href="mailto:saidh@iata.org">saidh@iata.org</a></td>
<td></td>
</tr>
</tbody>
</table>

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.
10.6.3 For flights within the Jeddah FIR – Eastbound

ACC will endeavour to provide an ATC service throughout the Jeddah FIR as soon as evacuation commences. These procedures are detailed at Jeddah Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

10.6.4 For flights approaching the Jeddah FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Jeddah ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Jeddah FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Jeddah FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Jeddah FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Jeddah FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

10.7 JEDDAH FIR – CONTINGENCY ROUTE STRUCTURE

10.7.1 For activation within Jeddah FIR

In a limited service contingency situation Jeddah ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Jeddah FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN.

10.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Jeddah FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

10.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Jeddah loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.
The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Jeddah facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Jeddah FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Jeddah FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace
NOTAM……………DUE TO DISRUPTION OF ATS IN THE JEDDAH FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS
NOTAM ………….DUE TO ANTICIPATED DISRUPTION OF ATS IN THE JEDDAH FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated
NOTAM ………...DUE TO DISRUPTION OF ATS IN JEDDAH FIR ALL ACFT ARE ADVISED THAT THE Tripoli FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY JEDDAH AIRSPACE.

d) Non adherence to the Contingency Plan
NOTAM ………….OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE JEDDAH FIR
CHAPTER 11: DETAILED PROCEDURES – KHARTOUM FIR

11.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Khartoum FIR

11.2 FIRs WITH SUPPORTING PROCEDURES

Cairo FIR
Jeddah FIR
Ndjamena FIR
Tripoli FIR
Asmara FIR
Addis Ababa FIR
Nairobi FIR
Entebbe FIR
Kinshasa FIR
Brazzaville ACC

11.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

11.4 LIMITED SERVICE – PROCEDURES

11.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Khartoum frequency normally provided by Khartoum Control will be delegated as appropriate to the other ATS units namely ----- ------ --------. Appropriate frequencies will be advised by Cairo and the assisting stations.

Situations which could result in a Limited Service are:

Equipment Failure
a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Khartoum Communications center and Khartoum ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

11.4.2 Disruption of ability to provide control services

Khartoum ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Khartoum ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Khartoum may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Khartoum ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Khartoum ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.
Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

11.5 NO SERVICE – PROCEDURES

11.5.1 Loss of ground/air communication capability

In the event of Khartoum ACC being unable to provide ground/air communications for Khartoum FIR ------- ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Khartoum ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Khartoum ACC being unable to provide ground/air communications for a sustained period of time ------- ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Cairo FIR.

ATFM measures may be imposed as necessary.

11.5.2 Loss of ability to provide control services
Should Khartoum ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Khartoum FIR.

In the event that Khartoum ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Sudan Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by the Sudanese International NOTAM Office (NOF) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by the designated authority, as authorized by the DGCA. It is expected that the civil aviation authorities concerned, and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Khartoum Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

11.6 FLIGHT CREW AND OPERATOR PROCEDURES

11.6.1 For flights within the Khartoum FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45, A listening watch on these frequencies must be maintained.

11.6.2 For flights within the Khartoum FIR – Westbound

Jeddah ACC, Asmara ACC, Addis Ababa ACC, Nairobi ACC and Entebbe ACC will endeavour to provide an ATC service throughout the Khartoum FIR as soon as evacuation commences. These procedures are detailed at Cairo Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cairo ACC</td>
<td>TBN</td>
<td>Fax: (20) 2-2665435</td>
<td>E-mail: <a href="mailto:egoca@idsc.gov.eg">egoca@idsc.gov.eg</a></td>
<td>HECAYAYX</td>
</tr>
</tbody>
</table>

Air Traffic management Operational Contingency Plan – MID Region
Air Traffic management Operational Contingency Plan – MID Region

<table>
<thead>
<tr>
<th>Location</th>
<th>TBN</th>
<th>Fax:</th>
<th>Access Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tripoli ACC</td>
<td>TBN</td>
<td>(218) 37454 TBN</td>
<td>HLLTYAYX</td>
</tr>
<tr>
<td>Jeddah ACC</td>
<td>TBN</td>
<td>(966) 2-6401477 TBN</td>
<td>OEJDYAYX</td>
</tr>
<tr>
<td>Ndjamena ACC</td>
<td>+253522520830 +253522526231 TBN</td>
<td>TBN TBN</td>
<td></td>
</tr>
<tr>
<td>Asmara ACC</td>
<td>(291) 1-124334 Fax: (291) 1-181255 TBN</td>
<td>HHAAYAYX</td>
<td></td>
</tr>
<tr>
<td>Addis Ababa ACC</td>
<td>TBN</td>
<td>(251) 1-612533 E-mail: <a href="mailto:civil-aviation@telecom.net.et">civil-aviation@telecom.net.et</a> HAAAYAYX</td>
<td></td>
</tr>
<tr>
<td>Nairobi ACC</td>
<td>TBN</td>
<td>(254) 20-822300 E-mail: <a href="mailto:info@kcaa.or.ke">info@kcaa.or.ke</a> HKNCYAYD</td>
<td></td>
</tr>
<tr>
<td>Entebbe ACC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinshasa ACC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazzaville ACC</td>
<td>+242055478182 +242069920433 TBN</td>
<td>FCCCZRZX</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| ICAO MID          | 0020 2 2267 4845/46/41 0020 2 2267 4843 icaomid@icao.int |
| IATA              | OO962 6 569 8728 OO962 6 560 4548 saidh@iata.org |

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

11.6.3 For flights within the Khartoum FIR – Eastbound

Tripoli ACC, Ndjamena ACC, Kinshasa and Brazzaville ACC will endeavour to provide an ATC service throughout the Khartoum FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

11.6.4 For flights approaching the Khartoum FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Khartoum ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Cairo FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Khartoum FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Khartoum FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Khartoum FIR.
However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

11.7 Khartoum FIR – CONTINGENCY ROUTE STRUCTURE

11.7.1 For activation within Khartoum FIR

In a limited service contingency situation Khartoum ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Khartoum FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

11.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Khartoum FIR should use the following contingency routes:

INTERNATIONAL ROUTE STRUCTURE AND COMMUNICATIONS FOR TRANSIT OF THE KHARTOUM FIR WHEN NO ATS AVAILABLE IN SUDAN AIRSPACE

<table>
<thead>
<tr>
<th>Contingency Routes Khartoum (CRK)</th>
<th>ATS Route</th>
<th>Direction</th>
<th>FL Assignment (FLAS)</th>
<th>ACCs</th>
<th>COM (Frequency Details in Appendix X)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRK UR611</td>
<td>N/S</td>
<td>Odd F370, F350, F330</td>
<td>CAIRO</td>
<td>HF, VHF</td>
<td></td>
</tr>
<tr>
<td>CRK UB612</td>
<td>N/S</td>
<td>Odd F330, F350, Even F320,F360</td>
<td>CAIRO</td>
<td>HF, VHF</td>
<td></td>
</tr>
<tr>
<td>CRK UA451</td>
<td>N/S</td>
<td>Odd F370, F350, Even F300</td>
<td>CAIRO</td>
<td>HF, VHF</td>
<td></td>
</tr>
<tr>
<td>CRK UG660</td>
<td>E/W</td>
<td>Even F340, F340, F280, Odd F290,F310</td>
<td>CAIRO</td>
<td>HF, VHF</td>
<td></td>
</tr>
<tr>
<td>CRK UB736</td>
<td>E/W</td>
<td>Even F340, F260, Odd F390,F410</td>
<td>NIROBI</td>
<td>HF, VHF</td>
<td></td>
</tr>
<tr>
<td>CRK UB527</td>
<td>N/S</td>
<td>Odd F370, Even F380</td>
<td>NIROBI</td>
<td>HF, VHF</td>
<td></td>
</tr>
<tr>
<td>CRK UT267</td>
<td>E/W</td>
<td>Even F400,F340,F280</td>
<td>CAIRO</td>
<td>HF, VHF</td>
<td></td>
</tr>
<tr>
<td>CRK UT124</td>
<td>E/W</td>
<td>Even F320, F360</td>
<td>NIROBI</td>
<td>HF, VHF</td>
<td></td>
</tr>
</tbody>
</table>

Communications with the next ATSU should be established at the earliest opportunity.

APPENDIX

CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES
<table>
<thead>
<tr>
<th>CONTINGENCY ROUTE</th>
<th>ATS ROUTE</th>
<th>ACC</th>
<th>COM</th>
</tr>
</thead>
<tbody>
<tr>
<td>KHARTOUM (CRK)</td>
<td>UR611</td>
<td>CAIRO</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 129.4 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Secondary 130.9 MHz</td>
</tr>
<tr>
<td></td>
<td>UB612</td>
<td>CAIRO</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 129.4 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Secondary 130.9 MHz</td>
</tr>
<tr>
<td></td>
<td>UB612</td>
<td></td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td>SOUTH SECTOR</td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 121.3 MHz</td>
</tr>
<tr>
<td></td>
<td>UB736</td>
<td>NAIROBI</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 129.4 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Secondary 130.9 MHz,</td>
</tr>
<tr>
<td></td>
<td>UA451</td>
<td>CAIRO</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 129.4 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Secondary 130.9 MHz,</td>
</tr>
<tr>
<td></td>
<td>UG660</td>
<td>CAIRO</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 129.4 MHz/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Secondary 130.9 MHZ</td>
</tr>
<tr>
<td></td>
<td>UB736</td>
<td>NAIROBI</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 121.3 MHz</td>
</tr>
<tr>
<td></td>
<td>UB527</td>
<td>NAIROBI</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 121.3 MHz</td>
</tr>
<tr>
<td></td>
<td>UT124</td>
<td>CAIRO</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 121.3 MHz/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Secondary 130.9 MHZ</td>
</tr>
<tr>
<td></td>
<td>UM863</td>
<td>CAIRO</td>
<td>HF, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HF 11300, VHF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary 121.3 MHz/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Secondary 130.9 MHZ</td>
</tr>
</tbody>
</table>
11.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Sudan loses the ability to provide an ATC service in the Khartoum FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Khartoum facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Khartoum FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Cairo FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM…………….DUE TO DISRUPTION OF ATS IN THE KHARTOUM FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM………….DUE TO ANTICIPATED DISRUPTION OF ATS IN THE KHARTOUM FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM ……….DUE TO DISRUPTION OF ATS IN KHARTOUM FIR ALL ACFT ARE ADVISED THAT THE SUDANESE INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY SUDANESE AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM ……………OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE KHARTOUM FIR
CHAPTER 12: DETAILED PROCEDURES – DAMASCUS FIR

12.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Damascus FIR

12.2 FIRs WITH SUPPORTING PROCEDURES

Amman FIR
Ankara FIR
Baghdad FIR
Beirut FIR
Nicosia FIR

12.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

12.4 LIMITED SERVICE – PROCEDURES

12.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Damascus frequency normally provided by Damascus Control will be delegated as appropriate to the other ATS units namely -----------------. Appropriate frequencies will be advised by Damascus and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Damascus Communications center and Damascus ACC

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

12.4.2 Disruption of ability to provide control services

Damascus ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. Enroute reclearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Damascus ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Damascus may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Damascus ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Damascus ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependent on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

12.5 NO SERVICE – PROCEDURES

12.5.1 Loss of ground/air communication capability

In the event of Damascus ACC being unable to provide ground/air communications for Damascus FIR ------ ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.
Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Damascus ACC
   - Fire
   - Bomb threat

**Effect on flights**

In the event of Damascus ACC being unable to provide ground/air communications for a sustained period of time ------ ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Damascus FIR.

ATFM measures may be imposed as necessary.

**12.5.2 Loss of ability to provide control services**

Should Damascus ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Damascus FIR.

In the event that Damascus ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Damascus Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Damascus Contingency Procedures – Appendix xx. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.
Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

12.6 FLIGHT CREW AND OPERATOR PROCEDURES

12.6.1 For flights within the Damascus FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

12.6.2 For flights within the Damascus FIR – Westbound

------------ ACC’s will endeavour to provide an ATC service throughout the Damascus FIR as soon as evacuation commences. These procedures are detailed at Damascus Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amman FIR</td>
<td>0020 2 2267 4845</td>
<td>0020 2 2267 4843</td>
<td><a href="mailto:icaomid@icao.int">icaomid@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Ankara FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baghdad FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beirut FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicosia FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

12.6.3 For flights within the Damascus FIR – Eastbound

------------ ACC’s will endeavour to provide an ATC service throughout the Damascus FIR as soon as evacuation commences. These procedures are detailed at Damascus Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.
12.6.4 For flights approaching the Damascus FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Damascus ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Damascus FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Damascus FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Damascus FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Damascus FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

12.7 DAMASCUS FIR – CONTINGENCY ROUTE STRUCTURE

12.7.1 For activation within Damascus FIR

In a limited service contingency situation Damascus ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Damascus FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

12.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Damascus FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

12.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Damascus loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Damascus facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Damascus FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Damascus FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.
Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

a) **Avoidance of airspace**  
**NOTAM…………….DUE TO DISRUPTION OF ATS IN THE DAMASCUS FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.**

b) **Airspace available with limited ATS**  
**NOTAM ……………DUE TO ANTICIPATED DISRUPTION OF ATS IN THE DAMASCUS FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.**

c) **Contingency plan activated**  
**NOTAM ………….DUE TO DISRUPTION OF ATS IN DAMASCUS FIR ALL ACFT ARE ADVISED THAT THE Damascus FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY DAMASCUS AIRSPACE.**

d) **Non adherence to the Contingency Plan**  
**NOTAM …………… OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE DAMASCUS FIR**
CHAPTER 13: DETAILED PROCEDURES – EMIRATES FIR

13.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Emirates FIR

13.2 FIRs WITH SUPPORTING PROCEDURES

Bahrain FIR
Muscat FIR
Qatar TMA
Tehran FIR

13.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the Emirates ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

13.4 LIMITED SERVICE – PROCEDURES

13.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Emirates frequency normally provided by Emirates Control will be delegated as appropriate to Muscat ACC and Bahrain ACC. The Appropriate frequencies will be advised by Emirates ACC and the assisting ATSUs.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
   b) Receivers (Loss of a number of Receivers)
   c) Aerials (Loss of a number of Aerials)
   d) Data Lines (Loss of data lines between Emirates Communications center and Emirates ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)
Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

13.4.2 Disruption of the ability to provide control services

Emirates ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in an emergency.

Traffic without a valid clearance may be subject to tactical traffic management measures to meet the requirements of the service limitation.

Separation standards

Emirates ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Emirates ACC may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Emirates ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Emirates ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units’ airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

13.5 NO SERVICE – PROCEDURES

13.5.1 Loss of ground/air communication capability

In the event of Emirates ACC being unable to provide ground/air communications for the Emirates FIR, Emirates ACC will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.
Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Emirates ACC
   - Fire
   - Bomb threat

*Effect on flights*

In the event of Emirates ACC being unable to provide ground/air communications for a sustained period of time, Muscat ACC and Bahrain ACC, in coordination with adjacent FIR’s, could provide a limited communications facility to flights in the Emirates FIR.

ATFM measures may be imposed as necessary.

**13.5.2 Loss of ability to provide control services**

Should Emirates ACC be evacuated, the potential would exist for a major disruption to Air Traffic Control (ATC) within the Emirates FIR.

In the event of Emirates ACC being evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with an alternate means of communication. The procedures to be adopted are detailed in the Emirates Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as detailed in the Emirates Contingency Procedures – Muscat ACC and Bahrain ACC, Appendix E. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.
Contact information that may be used in the event of an emergency evacuation is provided in Appendix E.

13.6 FLIGHT CREW AND OPERATOR PROCEDURES

13.6.1 For flights within the Emirates FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

13.6.1.1 For flights within the Emirates FIR – Westbound

Muscat ACC will endeavour to provide an ATC service throughout the Emirates FIR as soon as evacuation commences. These procedures are detailed at Emirates Contingency Procedures – Appendix E.

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

ADJACENT ATSU CONTACT DETAILS:

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain FIR</td>
<td>9731 7321080, 9731 7321081</td>
<td>9731 7321029, <a href="mailto:bahatc@caa.gov.bh">bahatc@caa.gov.bh</a></td>
<td>OBBBZQZX</td>
<td></td>
</tr>
<tr>
<td>Muscat FIR</td>
<td>9682 4519550, 96824519507</td>
<td>9682 4519932, <a href="mailto:n.almazroui@caa.gov.om">n.almazroui@caa.gov.om</a></td>
<td>OOMMZQZX</td>
<td></td>
</tr>
<tr>
<td>Qatar TMA</td>
<td>9744 4622515, 9744 4656561, 9744 4656562</td>
<td>9744 4621765, <a href="mailto:doha.ais@caa.gov.qa">doha.ais@caa.gov.qa</a>, <a href="mailto:ahmed@caa.gov.qa">ahmed@caa.gov.qa</a></td>
<td>OTBDZTZX</td>
<td></td>
</tr>
<tr>
<td>Tehran FIR</td>
<td>9821 44544116, 9821 44544060</td>
<td>9821 44544117, <a href="mailto:Maj.alireza@yahoo.com">Maj.alireza@yahoo.com</a></td>
<td>OIIIIZGX</td>
<td></td>
</tr>
</tbody>
</table>

ICAO MID 0020 2 2267 4845/46/41 0020 2 2267 4843 icaomid@icao.int
IATA OO962 6 569 8728 OO962 6 560 4548 saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

13.6.2 For flights within the Emirates FIR – Eastbound

Bahrain ACC will endeavour to provide an ATC service throughout the Emirates FIR as soon as evacuation commences. These procedures are detailed at Emirates Contingency Procedures – Appendix E.
Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

13.6.3 For flights approaching the Emirates FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Emirates ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Emirates FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Emirates FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Emirates FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Emirates FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

13.7 EMIRATES FIR – CONTINGENCY ROUTE STRUCTURE

13.7.1 For activation within Emirates FIR

In a limited service contingency situation Emirates ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Emirates FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN.

13.7.2 For activation within an adjacent FIR

Unless instructed otherwise, flights entering the Emirates FIR should use the following contingency routes:
- All routes which are not mentioned will be not available;
- Ten minutes longitudinal separation from OBBB, OIII, OOMM and OTDB;
- All traffic transiting UAE FIR shall be maintaining flight level:

<table>
<thead>
<tr>
<th>WESTBOUND</th>
<th>OVERFLYING AND LANDING TRAFFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATS Waypoint</strong></td>
<td><strong>ATS Route</strong></td>
</tr>
<tr>
<td>MENSA</td>
<td>N571</td>
</tr>
</tbody>
</table>

Air Traffic management Operational Contingency Plan – MID Region
# EASTBOUND

<table>
<thead>
<tr>
<th>ATS Waypoint</th>
<th>ATS Route</th>
<th>ATSU Frequency</th>
<th>Transfer Waypoint</th>
<th>Available Flight Level</th>
<th>EXIT ATS Waypoint</th>
<th>NEXT ATSU Frequency</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NADA M</td>
<td>A791</td>
<td>BAHRAIN 132.125</td>
<td>SHJ</td>
<td>FL390</td>
<td>LALDO</td>
<td>MUSCAT ACC 119.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SHJ</td>
<td>FL250, FL290, FL330, FL370</td>
<td>TONVO</td>
<td>MUSCAT ACC 119.8</td>
<td></td>
</tr>
<tr>
<td>SIR</td>
<td>L223</td>
<td>TEHRA N/133.4</td>
<td>RAGOL</td>
<td>FL350</td>
<td>TARDI</td>
<td>MUSCAT ACC/124.7</td>
<td></td>
</tr>
<tr>
<td>LABTA</td>
<td>Y505</td>
<td>BAHRAIN N/132.12</td>
<td>80NM FROM SHJ</td>
<td>FL190/FL170</td>
<td>------</td>
<td>DUBAI APP/124.9</td>
<td>Available only for Traffic Landing Northern Emirates</td>
</tr>
<tr>
<td>ORSAR</td>
<td>G666 /B41 6</td>
<td>THRAN/133.4</td>
<td>80NM FROM SHJ</td>
<td>A090/FL210</td>
<td>------</td>
<td>DUBAI APP/124.9</td>
<td>Available only for Traffic Landing Northern Emirates</td>
</tr>
<tr>
<td>GITEX</td>
<td>N685</td>
<td>BAHRAIN N/132.125</td>
<td>ADV</td>
<td>FL270, FL310, FL390</td>
<td>LABRI</td>
<td>MUSCAT ACC 124.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>60NM FROM ADV</td>
<td>FL190</td>
<td>------</td>
<td>ABU DHABI APP/124.4</td>
<td>Available only for Traffic Landing Southern</td>
</tr>
</tbody>
</table>

Air Traffic management Operational Contingency Plan – MID Region
### DEPARTING TRAFFIC

#### WESTBOUND:

<table>
<thead>
<tr>
<th>ATS Route</th>
<th>ATSU Frequency</th>
<th>Transfer Waypoint</th>
<th>Available Flight Level</th>
<th>NEXT ATSU Frequency</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>N571</td>
<td>DUBAI APP/124.9</td>
<td>60NM FROM SHJ</td>
<td>FL200</td>
<td>BAHRAIN 132.125</td>
<td>Dubai APP Shall Climb Traffic to FL180 then to be Transferred to Bahrain ACC</td>
</tr>
<tr>
<td>G462</td>
<td>ABU DHABI APP/124.4</td>
<td>60NM FROM ADV</td>
<td>FL180</td>
<td>BAHRAIN 132.125</td>
<td>Abu-Dhabi Shall Climb Traffic to FL160 then to be Transferred to Bahrain ACC</td>
</tr>
<tr>
<td>Z994</td>
<td>ABU DHABI APP/124.4</td>
<td>60NM FROM ADV</td>
<td>FL200</td>
<td>BAHRAIN 132.125</td>
<td>Available for Traffic Landing Doha Traffic Departing Dubai CTA Shall be transferred Locally by Dubai APP to Abu-Dhabi APP then to be Routed via TAS Route Z994</td>
</tr>
</tbody>
</table>

#### EASTBOUND

<table>
<thead>
<tr>
<th>ATS Route</th>
<th>ATSU Frequency</th>
<th>Transfer Waypoint</th>
<th>Available Flight Level</th>
<th>NEXT ATSU Frequency</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A791</td>
<td>DUBAI APP 124.9</td>
<td>LALDO</td>
<td>FL230</td>
<td>MUSCAT ACC 119.8</td>
<td>Dubai APP Shall Climb Traffic to FL230 then to be Transferred to Muscat ACC</td>
</tr>
<tr>
<td>L223</td>
<td>DUBAI APP 124.9</td>
<td>TARDI</td>
<td>FL210</td>
<td>MUSCAT ACC 124.7</td>
<td>Abu-Dhabi Shall Climb Traffic to FL210 then to be Transferred to MUSCAT ACC</td>
</tr>
<tr>
<td>N318</td>
<td>ABU DHABI APP 124.4</td>
<td>LABRI</td>
<td>FL230</td>
<td>MUSCAT ACC 124.7</td>
<td>Abu-Dhabi Shall Climb Traffic to FL230 then to be Transferred to MUSCAT ACC</td>
</tr>
</tbody>
</table>

Communications with the next ATSU should be established at the earliest opportunity.

### 13.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Emirates ACC loses the ability to provide an ATC service in the Emirates FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the main facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the

---

Air Traffic management Operational Contingency Plan – MID Region
Emirates FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Emirates FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

**APPENDIX XX**

**SAMPLE NOTAMS**

a) **Avoidance of airspace**

NOTAM…………..DUE TO DISRUPTION OF ATS IN THE EMIRATES FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) **Airspace available with limited ATS**

NOTAM ………..DUE TO ANTICIPATED DISRUPTION OF ATS IN THE EMIRATES FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) **Contingency plan activated**

NOTAM ………..DUE TO DISRUPTION OF ATS IN EMIRATES FIR ALL ACFT ARE ADVISED THAT THE Emirates FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY EMIRATES AIRSPACE.

d) **Non adherence to the Contingency Plan**

NOTAM ………….OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE EMIRATES FIR
CHAPTER 14: DETAILED PROCEDURES – SANA’A FIR

14.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Sana’a FIR

14.2 FIRs WITH SUPPORTING PROCEDURES

Addis Ababa FIR
Asmara FIR
Bahrain FIR
Jeddah FIR
Mogadishu FIR
Mumbai FIR
Muscat FIR

14.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

14.4 LIMITED SERVICE – PROCEDURES

14.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Sana’a frequency normally provided by Sana’a Control will be delegated as appropriate to the other ATS units namely -----------------. Appropriate frequencies will be advised by Sana’a and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

a) Transmitters (Loss of a number of Transmitters)
b) Receivers (Loss of a number of Receivers)
c) Aerials (Loss of a number of Aerials)
d) Data Lines (Loss of data lines between Sana’a Communications center and Sana’a ACC )

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.
Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

14.4.2 Disruption of ability to provide control services

Sana’a ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Sana’a ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Sana’a may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Sana’a ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Sana’a ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.
14.5 NO SERVICE – PROCEDURES

14.5.1 Loss of ground/air communication capability

In the event of Sana’a ACC being unable to provide ground/air communications for Sana’a FIR, ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

a) Equipment Failure;
   - Transmitters (Loss of all Transmitters)
   - Receivers (Loss of all Receivers)
   - Aerials (Loss of all Aerials)
   - Data Lines (Loss of data lines)

b) Propagation;
   - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.

c) Staffing
   - No Staff
   - Illness (Seasonal Influenza)
   - Weather
   - Industrial Relations issues

d) Evacuation of Sana’a ACC
   - Fire
   - Bomb threat

Effect on flights

In the event of Sana’a ACC being unable to provide ground/air communications for a sustained period of time, ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Sana’a FIR.

ATFM measures may be imposed as necessary.

14.5.2 Loss of ability to provide control services

Should Sana’a ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Sana’a FIR.

In the event that Sana’a ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio
frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Sana’a Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators as, detailed in the Sana’a Contingency Procedures – Appendix xx.’ In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in Appendix XX.

14.6 FLIGHT CREW AND OPERATOR PROCEDURES

14.6.1 For flights within the Sana’a FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and **123.45**. A listening watch on these frequencies must be maintained.

14.6.2 For flights within the Sana’a FIR – Westbound

ACC’s will endeavour to provide an ATC service throughout the Sana’a FIR as soon as evacuation commences. These procedures are detailed at Sana’a Contingency Procedures – Appendix x

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TEL. No</th>
<th>FAX No</th>
<th>EMAIL</th>
<th>AFTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addis Ababa FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asmara FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahrain FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeddah FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mogadishu FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mumbai FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscat FIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICAO MID</td>
<td>0020 2 2267 4845/46/41</td>
<td>0020 2 2267 4843</td>
<td><a href="mailto:icaomid@icao.int">icaomid@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>IATA</td>
<td>+962 6 569 8728</td>
<td>+962 6 560 4548</td>
<td><a href="mailto:saidh@iata.org">saidh@iata.org</a></td>
<td></td>
</tr>
</tbody>
</table>

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.
14.6.3 For flights within the Sana’a FIR – Eastbound

ACC’s will endeavour to provide an ATC service throughout the Sana’a FIR as soon as evacuation commences. These procedures are detailed at Sana’a Contingency Procedures – Appendix x

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

14.6.4 For flights approaching the Sana’a FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Sana’a ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Sana’a FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Sana’a FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Sana’a FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot’s discretion, continue, but must expect a limited ATC service or no service within the Sana’a FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

14.7 SANA’A FIR – CONTINGENCY ROUTE STRUCTURE

14.7.1 For activation within Sana’a FIR

In a limited service contingency situation Sana’a ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Sana’a FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

14.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Sana’a FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

14.8 LONG TERM CONTINGENCY ARRANGEMENTS
In the event that Sana’a loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Sana’a facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Sana’a FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Sana’a FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

APPENDIX XX

SAMPLE NOTAMS

a) Avoidance of airspace
NOTAM…………….DUE TO DISRUPTION OF ATS IN THE SANA’A FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS
NOTAM …………DUE TO ANTICIPATED DISRUPTION OF ATS IN THE SANA’A FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated
NOTAM ………..DUE TO DISRUPTION OF ATS IN SANA’A FIR ALL ACFT ARE ADVISED THAT THE Sana’a FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY SANA’A AIRSPACE.

d) Non adherence to the Contingency Plan
NOTAM ………….OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE SANA’A FIR
CONTINGENCY ROUTING SCHEME FOR
ASIA/MIDDLE EAST/EUROPE – 2003
(CRAME-03)

Version III

Approved by the President on behalf of the ICAO Council
Introduction

The Contingency Routing Scheme for Asia/Middle East/Europe – 2003 (CRAME-03) has the objectives of ensuring continued safety of air navigation within FIRs affected by airspace closures and minimising effects on international civil air transportation in the event of military action occurring in the Middle East area. The procedures contained in this document supplements or details, where so required, those actions and procedures prescribed in State specific contingency plans.

The contingency routing scheme is designed to provide alternative routes to/from Asia, Middle East, and Europe, which will allow aircraft operators to avoid airspace in the Middle East, as necessary, with a minimum of disruption to flight operations.

It is not possible to predict with certainty what airspace will remain open or closed to civil aviation and for what period of time. Experience from operating similar contingency plans under similar conditions shows that a flexible approach to airspace management is required. Frequent changes in military objectives and concentrations of military activities will affect the airspace available for civil operations. In this regard, the contingency routing scheme takes into account that States may need to modify the extent to which they can support the contingency arrangements. Accordingly, this contingency scheme has been designed to contain a variety of options, which can be used for varying scenarios.

It is recognized that operators may incur economic penalties during application of the contingency scenarios. Therefore, air traffic flow control measures will be implemented as required.

Airspace Definition

The contingency routing scenarios are designed for air traffic operating through the following flight information regions (FIRs) south and north of the Himalayas (see charts in Appendix B): Addis Ababa, Alma Ata, Asmara, Bahrain, Bangkok, Cairo, Colombo, Delhi, Emirates, Frunze, Jeddah, Kabul, Karachi, Khartoum, Kunming, Lahore, Lanzhou, Madras, Male, Mogadishu, Mumbai, Muscat, Sana’a, Semipalatinsk, Seychelles, Tehran, Ulaan Baatar, Urumqi and Vientiane.

Contingency Situation

These procedures have been developed to provide alternative routings for various scenarios in the event that military activity in the Middle East closes airspace to international civil aviation or where operators wish to avoid airspace due to a perceived risk to the safety of flight.
Responsibilities

Elements of this contingency scheme may be activated by NOTAM or Aeronautical Information Publication (AIP) Supplement as required and issued by the air traffic services (ATS) authorities responsible for the FIRs concerned. ATS authorities will notify by NOTAM any closures of ATS routes and airspace that become potentially hazardous to air traffic. The NOTAM should give information on any degradation of communications, navigation and surveillance services. The affected ATS unit should activate its contingency scheme by the most direct means possible (direct speech, AFTN (SS priority) or any other means of priority message) to the following:

- a) all airborne aircraft potentially affected by such closures or degradation of services
- b) adjacent FIRs and air traffic control (ATC) Centres;
- c) to the following ICAO Regional Offices:
  1) Bangkok (AFTN: VTBBICOX);
  2) Cairo (SITA: CAICAYA);
  3) Nairobi (SITA: NBOCAYA.); and
  4) Paris (SITA: PAREUYA); and
- d) and to the following IATA Regional Offices:
  1) Singapore (WSSSIATA);
  2) Amman;
  3) Nairobi; and
  4) Brussels.
ICAO Approval

By agreement of States and international organizations through the ICAO Regional Offices of Asia/Pacific, Middle East and European and North Atlantic, this contingency scheme is approved by the President on behalf of the ICAO Council.

Coordination

The appropriate ICAO Regional Office will distribute this contingency scheme to all relevant States and international organisations within their regions.

Amendment and Review

This contingency scheme should be reviewed regularly and amended as appropriate. In addition, States should periodically review their own national contingency plan and coordinate any amendments with neighbouring States and ICAO.

Revision Conditions

Amendments and revisions are to be coordinated with affected States, organisations and ICAO. Proposed amendments to the contingency scheme should be forwarded to the relevant ICAO Regional Office for action.

Contact Names and Telephone Numbers

To be provided by State ATS Providers and international organizations to the relevant ICAO Regional Office for distribution. A list of contact details is contained in Appendix A.

Contingency Scenarios

This contingency scheme provides a series of options for alternative routings where ATS routes and airspace are closed or operators choose to avoid airspace, which could pose a risk to the safety of flight.
Airspace and Routes

This contingency scheme has been developed based on existing ATS routes and making use of appropriate contingency routes in the Contingency Routing Plan for Asia/Middle East/Europe (CRAME). Priority has been given to safety considerations and to ensuring that as far as possible, ATC operations are not complicated. Temporary routes are also established where necessary.

The contingency routings are designed to take into consideration that disruptions to normal traffic flows have the potential to create an additional burden and complexity to ATC. Therefore, temporary contingency routes have been designed to be safe and instantly manageable by ATC. This may require additional track miles to be flown by the aircraft operator.

The contingency schemes were given CRAME designators based on various scenarios that may take place, which are:

**Scenario 1 (Yellow routes):** Flights planning to operate on existing routes to and from Gulf States aerodromes that are open to civil flights, and overflights are permitted over portions of the Arabian Peninsula.

**Scenario 2 (Pink routes):** Flights planning to avoid the Persian Gulf by operating on existing routes through Pakistan and Iran via the Arabian Sea.

**Scenario 3 (Blue routes):** Flights planning to avoid the Persian Gulf by operating through Pakistan, Iran and Turkey.

**Scenario 4 (Orange routes):** Flights planning to avoid the Persian Gulf, Iran and Turkey by operating through Afghanistan and India.

**Scenario 5 (Red routes):** Flights planning to avoid the Persian Gulf, Iran, Turkey and Afghanistan by operating across the Arabian Sea and Indian Ocean.

**Scenario 6 (Green routes):** Flights planning to avoid the Middle East entirely by operating north of the Himalayas or east and north of Afghanistan (Kabul FIR).

**Scenario 7 (Purple routes):** Flights planning to avoid the Western Middle East, Jordan, Lebanon, Saudi Arabia and Syria by operating through Turkey, Iraq, Kuwait and Bahrain.

The scenarios above are further delineated in terms of alternative routes that are available to meet each scenario’s stated objective. This will normally be in the form of a contingency route designator (e.g. CS Green 6.4) or an existing code where the route is already specified as a part of CRAME or the ATS route designator for established ATS routes. Details of these alternative routes that apply to each scenario are contained in the charts at Appendix B. Except for Scenarios 5 and 6, which are limited to existing route structures, the route details and procedures associated with each
contingency route is at Appendix C.

**Special Note:**

*Under Scenarios 1 to 5 above, airline company policy may dictate that their aircraft avoid the Middle East area completely as well as operations over Afghanistan, which may require them to plan via China, North of the Himalayas in accordance with Scenario 6.*

---

**Air Traffic Management**

**ATS Responsibilities**

Normal communications, navigation and surveillance (CNS) and air traffic management (ATM) are expected to be provided for the FIRs concerned.

It should be noted that tactical air traffic control considerations during periods of over-loading may require re-assignment of routes or portions thereof. Where possible, the designated alternative routes have been designed to maximize the use of existing ATS route structures and communication services.

The State ATS provider should issue NOTAMs detailing the services and facilities not available, including where known, an expected date of restoration, and giving information on the arrangements for the provision of alternative services where appropriate. In addition, if a disruption to service is anticipated, the State ATS provider should publish a NOTAM that alerts the operator to the possible disruption and what actions are expected to take place. This will allow both operators and affected State ATS providers to prepare in advance of any such occurrence.

**Separation**

Separation criteria will be applied in accordance with the *Procedures for Air Navigation Services—Air Traffic Management* (PANS-ATM, Doc 4444) and the Regional Supplementary Procedures (Doc 7030).

**Level Restrictions: Regional Route Structure**

Wherever possible, aircraft on long-haul international flights shall be given priority and cleared to optimum cruising levels, i.e. at FL 280 and above.
Air Traffic Flow Management

Air traffic flow management (ATFM) measures will be introduced as required to ensure an optimum flow of air traffic to and through areas during times when demand exceeds or is expected to exceed the available capacity. ATFM also should ensure that safety is not compromised by the development of unacceptable levels of traffic congestion. During the implementation of this contingency scheme there could be periods of traffic build up that would require implementation of ATFM.

ATS providers with responsibility for contingency routes should coordinate in advance appropriate ATFM arrangements that include setting acceptable traffic flow rates for the various routing scenarios. An example of traffic flow rates based on applying 10 minute and 15 minute longitudinal separation is provided in Appendix F. Flow rates would need to be established for each contingency route by States concerned.

In order to regulate and maximise the airspace capacity and make use of available flight levels, it may be necessary to impose speed restrictions/requirements on some routes for specific time periods.

Tactical flow management measures which monitor the progress of individual aircraft will intervene when required to meet ATM constraints.

States should review the airport traffic movement curfew hours, with a view to providing leniency during the critical period when the contingency routes are activated so as to allow for late arrivals or departures as a result of flow control measures.

Transition to contingency scheme the event of airspace closure

During times of uncertainty when airspace closures seem possible, aircraft operators should be prepared for a possible change in routing while en-route. This would require familiarization of the alternative routes outlined in this contingency scheme as well as what may be promulgated by a State via NOTAM or AIP.

In the event of an airspace closure that has not been promulgated, ATC should if possible broadcast to all aircraft in their airspace what airspace is being closed and to stand by for further ATC instructions.

ATS providers should recognize that when closure of airspace or airports are promulgated, individual airlines may have different company requirements as to their alternative routings. ATC should be alert to respond to any request by aircraft and react commensurate with safety.
Transfer of Control and Co-ordination

Transfer of Control
The transfer of control and communication should be at the common FIR boundary unless there is mutual agreement between the adjacent ATS units. State ATS providers should also review current co-ordination requirements in light of contingency operations or short notice airspace closures.

Communications

Flight Monitoring
In areas where a control service is not available, a flight monitoring and broadcast procedure should be used. The ICAO Traffic Information Broadcast by Aircraft (TIBA) procedure as shown in Appendix D should be used for flights in the Asia Pacific and Middle East Regions on VHF 128.95 MHz and the IATA In-flight Broadcast Procedure (IFBP) is used for flights in African/Indian Ocean FIRs as specified in Appendix E, Paragraph 6.1 on VHF 126.9 MHz.

Pilot and Operator Procedures

Intercept Operations
Pilots need to be aware that a contingency situation involving military activity carries the possibility of being intercepted by military aircraft. Aircraft operators must therefore be familiar with international intercept procedures contained in Annex 2 to the Chicago Convention, paragraph 3.8 and Appendix 2, Sections 2 and 3 as shown in Appendix G, as well as specific intercept procedures that may be contained in a State AIP.

Pilots need to continuously guard the VHF emergency frequency 121.5 MHz and should operate their transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where secondary surveillance radar (SSR) is used for ATS purposes. Transponders should be set on a discrete code assigned by ATC or select code 2000 if ATC has not assigned a code.

If an aircraft is intercepted by another aircraft, the pilot shall immediately:

a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with international procedures;

b) notify, if possible, the appropriate air traffic services unit;

c) attempt to establish radio communication with the intercepting aircraft by making a general call on the emergency frequency 121.5 MHz and 243 MHz if equipped; and
d) set transponder to Code 7700, unless otherwise instructed by the appropriate ATS unit.

If any instructions received by radio from any sources conflict with those given by the intercepting aircraft, the intercepted aircraft shall request immediate clarification while continuing to comply with the instructions given by the intercepting aircraft.

---

**Overflight Approval**

**Overflight approval requirements**

Aircraft operators are to obtain overflight approval from States for flights operating through their FIRs, where required. In a contingency situation, flights may be rerouted at short notice and it may not be possible for operators to give the required notice to obtain approval. This would be a particular problem when airspace is closed at short notice. States responsible for the FIRs in which contingency routes are established should consider making special arrangements to expedite flight approvals in these contingency situations.

States should facilitate the entry/overflight of humanitarian flights within their territorial airspace/FIRs in case be requested by Humanitarian Agencies.

---

**Appendices**

- **Appendix A** List of contact persons and details
- **Appendix B** Chart(s) of Contingency routes
- **Appendix C** Matrix containing details of contingency routes
- **Appendix D** ICAO Contingency TIBA Procedures
- **Appendix E** IATA In-flight Broadcasting Procedures
- **Appendix F** ATFM air traffic flow rates
- **Appendix G** ICAO Interception Procedures
## Appendix A
### List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARMENIA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armenia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arthur Gasparyan</td>
<td>3741 59 33 04</td>
<td>3741 47 71 90</td>
<td>3749 59 33 04</td>
<td><a href="mailto:arthur.gasparyan@armats.am">arthur.gasparyan@armats.am</a></td>
<td>UGEEADXX</td>
<td></td>
</tr>
<tr>
<td>(Focal Point – H24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avag Poghosyan</td>
<td>3741 59 30 76</td>
<td>3749 40 15 82</td>
<td>3741 28 70 02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Alternate – H24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AZERBAIJAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azerbaijan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bala Mirzoev</td>
<td>99412 971 604</td>
<td>99450 326 2863</td>
<td>99412 972 733</td>
<td><a href="mailto:bala.mirzoev@azans.az">bala.mirzoev@azans.az</a></td>
<td>UBBBADXX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0500 – 1400)</td>
<td>(H24)</td>
<td>(0500 – 1400)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATC Supervisor</td>
<td>99412 971 673</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(on duty)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BAHRAIN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahrain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ali Ahmed Mohammed</td>
<td>973 1732 1117</td>
<td>973 39608860</td>
<td>973 1732 1 9966</td>
<td><a href="mailto:aliahmed@caa.gov.bh">aliahmed@caa.gov.bh</a></td>
<td>Bahrain ACC</td>
<td></td>
</tr>
<tr>
<td>(Mohamed)</td>
<td>321 031 80</td>
<td></td>
<td></td>
<td></td>
<td>Duty Supervisor</td>
<td></td>
</tr>
<tr>
<td>Mr. Mohamed Ahmed</td>
<td>973 1732 1117</td>
<td>973 39608860</td>
<td>973 1732 1 9966</td>
<td><a href="mailto:saleemmh@caa.gov.bh">saleemmh@caa.gov.bh</a></td>
<td>Tel: 973 1732 1081/1080</td>
<td></td>
</tr>
<tr>
<td>Juman</td>
<td>873 763 688 478(H24)</td>
<td>973 39969399</td>
<td>873 763 688 478(H24)</td>
<td></td>
<td>Fax: 973 1732 1029</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Email : <a href="mailto:bahatc@caa.gov.bh">bahatc@caa.gov.bh</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Air Navigation Crisis Management Centre</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Operational on H24</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A
### List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BANGLADESH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairman</td>
<td>880-2-8911122</td>
<td></td>
<td>880-2-8913322</td>
<td><a href="mailto:caab@nsl.bangla.net">caab@nsl.bangla.net</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAA of Bangladesh</td>
<td>880-2-8911122</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CHINA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Liu Zhonghua</td>
<td>86-10-6401 2907</td>
<td></td>
<td>86-10-6513 5983</td>
<td></td>
<td></td>
<td>AFTN: ZBBBZGZX</td>
</tr>
<tr>
<td>Mr. Zhang Tongguo</td>
<td>86-10-6401 2907</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EGYPT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Moatassem Bellah Abd Elraheem Baligh</td>
<td>202 265 7849202 265 7849</td>
<td>202 639 1792202-639 1792</td>
<td>01001695252202 417 8460</td>
<td>202 268 0627202 268 0627</td>
<td><a href="mailto:moatassem_5@hotmail.com">moatassem_5@hotmail.com</a> <a href="mailto:elkady@nansceg.org">elkady@nansceg.org</a> <a href="mailto:mielkady@hotmail.com">mielkady@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Mr. Aly Hussien Aly</td>
<td>202 637 3950</td>
<td>202 417 8460</td>
<td>201 01609 760</td>
<td>202 268 0627</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GEORGIA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vladimir Gogashvili</td>
<td>995 32 947 326 (0500-1400 UTC)</td>
<td>995 77 411 125</td>
<td>995 32 947326 (0500-1400UTC)</td>
<td><a href="mailto:atc@airnav.com.ge">atc@airnav.com.ge</a> <a href="mailto:atc@caucasus.net">atc@caucasus.net</a></td>
<td></td>
<td>UGGGADXX</td>
</tr>
<tr>
<td><strong>HONG KONG, CHINA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Norman Lo</td>
<td>(852) 2867 4202</td>
<td>(852) 2504 4299</td>
<td>(852) 9038 0695</td>
<td>(852) 2910-1177 (VHHH ATCC-H24)</td>
<td><a href="mailto:nsmlo@cad.gov.hk">nsmlo@cad.gov.hk</a></td>
<td></td>
</tr>
<tr>
<td>Deputy Director General Civil Aviation</td>
<td>(852) 2910-6402</td>
<td>(852) 2341-1928</td>
<td>(852) 9022-8422</td>
<td>(852) 2910-1177</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. John Lau</td>
<td>(852) 2910-6402</td>
<td>(852) 2341-1928</td>
<td>(852) 9022-8422</td>
<td>(852) 2910-1177</td>
<td><a href="mailto:jtclau@cad.gov.hk">jtclau@cad.gov.hk</a></td>
<td></td>
</tr>
<tr>
<td><strong>INDIA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.S. Chawla</td>
<td>91-11-2463 1684</td>
<td>981-0016-825</td>
<td>91-11-2461 1078</td>
<td><a href="mailto:edatmchqnad@airportsindia.org.in">edatmchqnad@airportsindia.org.in</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DGCA India</td>
<td>91-11-2462 7830</td>
<td>91-11-2467 1272</td>
<td>91-11-2462 9221</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A
### List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAI</td>
<td></td>
<td></td>
<td></td>
<td>91-11-2463 2990</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDONESIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DGAC – Indonesia</td>
<td></td>
<td></td>
<td></td>
<td>62-21-424 6703</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Director of Aviation Safety</td>
<td></td>
<td></td>
<td></td>
<td>62-21-350 7569</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ebrahim Shoushtari</td>
<td>9821 63148900982</td>
<td></td>
<td>989121861900</td>
<td>9821 63148906</td>
<td><a href="mailto:E_shoushtari@yahoo.com">E_shoushtari@yahoo.com</a> <a href="mailto:E.shoushtari@airport.ir">E.shoushtari@airport.ir</a></td>
<td>Note.- During New Year Holidays in Iran (20 March – 5 April) or for any urgent message Contact Tehran ACC on +9821-44544116 Contact the Dep. Of CAO in Operation or in the Dept. of ATS</td>
</tr>
<tr>
<td>Deputy CEO for Aeronautical Operations (IAC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. A. Golmohammadi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DG of Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ali- Arabi</td>
<td>98 21 445 44101</td>
<td>21-440 0753</td>
<td>98-912296794698</td>
<td>9821 4454410298</td>
<td>214-527-194</td>
<td><a href="mailto:aarabi@airport.ir">aarabi@airport.ir</a></td>
</tr>
<tr>
<td>DG of ATS Department</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Momenirokh</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deputy of CAO in Operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Javad – Pashaei</td>
<td>9821 44544103</td>
<td>21-601 4235</td>
<td>98912296794698</td>
<td>9821 4454410298</td>
<td>214-527-194</td>
<td><a href="mailto:aarabi@airport.ir">aarabi@airport.ir</a></td>
</tr>
<tr>
<td>Deputy Director of ATS Dept.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. E. Shoushtari</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deputy of ATS Dept.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ramezan Ali – Ziae</td>
<td>9821-44544103</td>
<td>21-408 7386</td>
<td>98912387491798</td>
<td>9821 44544102</td>
<td>913-284 3796</td>
<td><a href="mailto:r.a.ziae@airport.ir">r.a.ziae@airport.ir</a></td>
</tr>
</tbody>
</table>
# Appendix A

## List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRAQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ali Mohsin Hashim</td>
<td>96418133370</td>
<td>9647702997761</td>
<td>9647815762525</td>
<td></td>
<td><a href="mailto:atc_iraqcaa@yahoo.com">atc_iraqcaa@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Deputy of ATS Dept.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| JORDAN |              |              |              |     |        |                      |
| Nayef Al Marshoud Director, ATM | 9626 489 | 962 5 3862584 | 962 797498992 | 962 | nayefmarshoud@hotmail.com |                      |
| Mr. Majed Yousef Aqeel Director, ATM | 7729 | 777789470029 | 702 0100 | 266 | datm@carc.gov.jo | majedqeel@yahoo.com |

| KAZAKHSTAN |              |              |              |     |        |                      |
| Amantai Zholdybayev B. | 7 3172 328 688 | 7 300 533 6583 | 7 3172 324 225 |     | tokbakbayev@mtc.gov.kz |                      |

| KYRGYZSTAN |              |              |              |     |        |                      |
| Georgy Sitnikov (Focal Point – Day only) | 996 312 542 142 | 996 312 542 140 | 996 312 542 141 |     | Parc2@mail.elcat.kg | UAFMYAYX |
| Civil Sector ATFM (H24) | 996 312 603 552 | 996 312 603 573 | 996 312 313 573 |     | UAFMZDZX |                      |

| KUWAIT |              |              |              |     |        |                      |
| Mr. Adel S. Boresli Eng. Fozan M. Al-Fozan | 965 24710268965 | 96599036556 | 965 24346221965 | 431 | as.buresli@dgca.gov.kw2vnedd |                      |
| 476 0421 | 431 9232 | @qualitynet.net |                      |     |                      |                      |

| LEBANON |              |              |              |     |        |                      |
| Mr. Walid Al Hassanieh | 9611 628 | 961 5 501 046 | 961 70 474 | 9611 629 023 | hassaniehw@beirutairport.gov.l |                      |
| 1789614 628 178 | 5179613 837 833 | 629 023 | behamiehk@beirutairport.gov.l |     | OLBAZPZX |                     |
|                      |                      |                      |                      |     | OLBAZRZX |                      |
Appendix A
List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief, Air Navigation Department Mr. Khaled Chamieh Chief, Air Navigation Department</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALAYSIA</td>
<td>007-603-7846 5233 007-603-7846 9428</td>
<td>603-7980 0870</td>
<td></td>
<td>603-7847 2997</td>
<td><a href="mailto:accwmfc@tm.net.my">accwmfc@tm.net.my</a></td>
<td></td>
</tr>
<tr>
<td>LIBYA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALDIVES</td>
<td>960-313308</td>
<td>960-774154</td>
<td>960-323039</td>
<td></td>
<td><a href="mailto:msolih@airports.com.mv">msolih@airports.com.mv</a></td>
<td></td>
</tr>
<tr>
<td>MYANMAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DCA Myanmar</td>
<td>95-1-665124</td>
<td></td>
<td></td>
<td><a href="mailto:dca.myanmar@mptmail.net.mm">dca.myanmar@mptmail.net.mm</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U. Yoa Shu</td>
<td>951-663-838 951-642-223</td>
<td></td>
<td>951-665-124</td>
<td></td>
<td><a href="mailto:dca.myanmar@mptmail.net.mm">dca.myanmar@mptmail.net.mm</a></td>
<td></td>
</tr>
<tr>
<td>NEPAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>977-1-262516</td>
<td></td>
</tr>
<tr>
<td>OMAN</td>
<td>968 519 201</td>
<td>968 947 6806</td>
<td>968 519 939/ 519 930</td>
<td></td>
<td><a href="mailto:Abdullah_Nasser@dgcam.com.om">Abdullah_Nasser@dgcam.com.om</a></td>
<td></td>
</tr>
<tr>
<td>Mr. Saud Al-Adhoobi</td>
<td>968 519 305</td>
<td>968 932 1664</td>
<td>968 519 939/ 519 930</td>
<td></td>
<td><a href="mailto:saud@dgcam.com.om">saud@dgcam.com.om</a></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A
### List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAKISTAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Zahid H. Khan</td>
<td>922 1924 8134</td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:gmats@cyber.net.pk">gmats@cyber.net.pk</a></td>
<td></td>
</tr>
<tr>
<td><strong>PHILIPPINES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Anacleto V. Venturina</td>
<td>63-2-8320906</td>
<td>63-2-8729416</td>
<td>63-2-7592742</td>
<td></td>
<td><a href="mailto:avv@ats.ato.gov.ph">avv@ats.ato.gov.ph</a></td>
<td></td>
</tr>
<tr>
<td>Mr. Salvador G. Rafael</td>
<td>63-2-7592742</td>
<td>63-46-4171281</td>
<td>63-2-7592742</td>
<td></td>
<td><a href="mailto:srafael@atmd.ats.ato.gov.ph">srafael@atmd.ats.ato.gov.ph</a></td>
<td></td>
</tr>
<tr>
<td><strong>QATAR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUSSIAN FEDERATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yury Meleshko (Focal Point – CAA)</td>
<td>7 095 155 5931</td>
<td>7 095 961 5680 (H24)</td>
<td>7 095 151 3335</td>
<td></td>
<td><a href="mailto:Scherbakov_lk@scaa.civilavia.ru">Scherbakov_lk@scaa.civilavia.ru</a></td>
<td></td>
</tr>
<tr>
<td>Watch Supervisors (H24)</td>
<td>7 095 155 5693</td>
<td>7 095 155 5695</td>
<td>7 095 155 5217</td>
<td></td>
<td></td>
<td>UUUVYVYX</td>
</tr>
<tr>
<td>Senior Controllers (H24)</td>
<td>7 095 155 8572</td>
<td>7 095 155 5515</td>
<td></td>
<td></td>
<td></td>
<td>UUUVZDZX</td>
</tr>
<tr>
<td><strong>SAUDI ARABIA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. khalid B Al Barakati Mr. Mohammad Al Alawi</td>
<td>9662 671 7717 EXT 18089662 640-1005</td>
<td>9665 562 15829665 562 4582</td>
<td>9662 671 7717 EXT 18179662 640-1005</td>
<td></td>
<td><a href="mailto:khaled1111.alsharif@yahoo.com">khaled1111.alsharif@yahoo.com</a> <a href="mailto:malalawi_m@yahoo.com">malalawi_m@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td><strong>SINGAPORE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Mervyn Fernando</td>
<td>65-6541 2420</td>
<td>65-6783 8544</td>
<td>65-9616 4300</td>
<td>65-6545 6224</td>
<td><a href="mailto:mervyn_fernando@caas.gov.sg">mervyn_fernando@caas.gov.sg</a></td>
<td></td>
</tr>
<tr>
<td>Mr. Kuah Kong Beng</td>
<td>65-6541 2457</td>
<td></td>
<td>65-6545 6516</td>
<td></td>
<td><a href="mailto:Kuah_kong_beng@caas.gov.sg">Kuah_kong_beng@caas.gov.sg</a></td>
<td></td>
</tr>
<tr>
<td><strong>SRI LANKA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A
List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ranjith M. Silva</td>
<td>94-1-251621</td>
<td>94-1-862-454</td>
<td>94-777-71 2770</td>
<td>94-1-253187</td>
<td><a href="mailto:rmsaaasl@slt.lk">rmsaaasl@slt.lk</a></td>
<td></td>
</tr>
<tr>
<td><strong>SUDAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eng. Feras Mohamad</td>
<td>963 1133 33815</td>
<td></td>
<td></td>
<td>963 11 2232201</td>
<td><a href="mailto:dgca@scaa.sydgca">dgca@scaa.sydgca</a>@net.sy</td>
<td>P.O. BOX:6257</td>
</tr>
<tr>
<td>Director General of Civil Aviation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Damascus, Syria</td>
</tr>
<tr>
<td>Mr. Mafaqzod</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Director General of Civil Aviation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hassan Hamoud</td>
<td>009631154010180</td>
<td>00963116460395</td>
<td>00963 988235106</td>
<td>963 11 540101801</td>
<td><a href="mailto:atm@scaa.sy">atm@scaa.sy</a></td>
<td></td>
</tr>
<tr>
<td>ATM Director</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P.O. BOX:6257 Damascus, Syria</td>
</tr>
<tr>
<td><strong>SUDAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TAJIKISTAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vladimir Prijukov</td>
<td>992 377 221 2414</td>
<td>992 377 223 1130</td>
<td>992 377 229 8432</td>
<td>992 377 221 2414</td>
<td><a href="mailto:mtdh@tajik.net">mtdh@tajik.net</a></td>
<td>UTDAYAYZ</td>
</tr>
<tr>
<td>(0300 – 1200 UTC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(SITA: DYUG7J)</td>
</tr>
<tr>
<td><strong>THAILAND</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Vanchai Srimongkol</td>
<td>66-2-286 2909</td>
<td></td>
<td></td>
<td>66-2-286 2909</td>
<td><a href="mailto:svanchai@aviation.go.th">svanchai@aviation.go.th</a></td>
<td>AFTN: VTBAZGZX</td>
</tr>
<tr>
<td>DOA Thailand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Kumtorn Sirikorn</td>
<td>66-2-285 9905</td>
<td>66-2-287 5050</td>
<td>661-846 2623</td>
<td>66-2-285 9995</td>
<td><a href="mailto:kumtorn@aerothai.or.th">kumtorn@aerothai.or.th</a></td>
<td>AFTN: VTBYYYYYX SITA: BKKOPTG</td>
</tr>
<tr>
<td>Aerothai - Focal Point</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Somkiat Prakitsuwan</td>
<td>66-2-535 2449</td>
<td></td>
<td></td>
<td>66-2-504 3814</td>
<td><a href="mailto:somkiat.p@thaiairways.co.th">somkiat.p@thaiairways.co.th</a></td>
<td>SITA: BKKOPTG</td>
</tr>
<tr>
<td>Thai Airways</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Prasert Pathummal</td>
<td>66 2 996 9101</td>
<td></td>
<td></td>
<td>66 2 504 3803</td>
<td><a href="mailto:prasert.p@thaiairways.co.th">prasert.p@thaiairways.co.th</a></td>
<td>SITA: BKKOWTG</td>
</tr>
<tr>
<td>Thai Airways</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TURKEY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Version III 14/7/132/7/13 A-7
# Appendix A
## List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>URKmenistan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.A. Amanov (Working Hours)</td>
<td>993 1235 5534</td>
<td></td>
<td>993 1235 4402</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Traffic Controller on duty (ACC) (H24)</td>
<td>993 1233 1352</td>
<td>993 1233 1352</td>
<td></td>
<td></td>
<td>SITA: ASBGCT5</td>
<td></td>
</tr>
<tr>
<td><strong>United Arab Emirates (UAE)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ahmed Al Jallaf Executive Director, Air Navigation Service Provider Mr. Riis Johansen Director, Air Navigation Services</td>
<td>9712 599 6888 9712 405 4216</td>
<td>97150 614 9065</td>
<td>9712 599 6883 9712 405 4316</td>
<td><a href="mailto:aljallaf@szc.geaa.ae">aljallaf@szc.geaa.ae</a> <a href="mailto:atmuae@emirates.net.ae">atmuae@emirates.net.ae</a></td>
<td></td>
<td>9712 599 6999 SCZ</td>
</tr>
<tr>
<td><strong>Uzbekistan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yuri Savkov Chief ATFMU (H24)</td>
<td>998 712 6769 86</td>
<td></td>
<td>998 7121 3358</td>
<td><a href="mailto:uzaeronav@airways.uz">uzaeronav@airways.uz</a></td>
<td></td>
<td>UTTTZDZX</td>
</tr>
<tr>
<td><strong>Viet Nam</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Nguyen The Hung, Chief, Air Navigation Division</td>
<td>84 4 8274191 84 4 8525312</td>
<td></td>
<td>84 4 8274194</td>
<td><a href="mailto:iad_caav@hn.vnn.vn">iad_caav@hn.vnn.vn</a></td>
<td></td>
<td>AFTN:VVVYAY X</td>
</tr>
<tr>
<td><strong>Yemen</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Abdullah_Ahmed_AL-</td>
<td>9671 345 4029674 9671 506828674 967777776830232</td>
<td>9671-1-3440479674</td>
<td></td>
<td><a href="mailto:ps@gmail.comSan1ans">ps@gmail.comSan1ans</a>@hotmail.c</td>
<td></td>
<td>D.G ANS</td>
</tr>
</tbody>
</table>

---

A-8 | Version III | 14/7/132/7/13
## Appendix A

### List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awlaqi Mr. Saleh A. Al-Theeb</td>
<td>345-402</td>
<td>344-048</td>
<td>655-16</td>
<td>345-402</td>
<td>om</td>
<td></td>
</tr>
<tr>
<td>Abdullah Abdulwareth Aleryani</td>
<td>967-1-345403</td>
<td>967-1-344254</td>
<td>967777190602</td>
<td>967-1-345403</td>
<td><a href="mailto:ermlabd@gmail.com">ermlabd@gmail.com</a></td>
<td>D.G ACC/FIC</td>
</tr>
<tr>
<td>Ahmed Mohammed Al-koobati</td>
<td>967-1-344675</td>
<td>967-1-214375</td>
<td>967777241375</td>
<td>967-1-344047</td>
<td><a href="mailto:70@yahoo.com">70@yahoo.com</a></td>
<td>D.Air Navigation Operation</td>
</tr>
<tr>
<td>IATA – APAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>David Behrens</td>
<td>65 6239 7161</td>
<td>65 6738 3305</td>
<td>65 9694 7401</td>
<td>65-6536 6267</td>
<td><a href="mailto:behrensd@iata.org">behrensd@iata.org</a></td>
<td></td>
</tr>
<tr>
<td>IATA – EUR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cees Gresnigt (H24)</td>
<td>32 2 626 1800</td>
<td>31 651 5353 68</td>
<td>32 2 648 5135</td>
<td></td>
<td><a href="mailto:gresnigtc@iata.org">gresnigtc@iata.org</a> <a href="mailto:dicapuas@iata.org">dicapuas@iata.org</a></td>
<td>None</td>
</tr>
<tr>
<td>Razvan Bucuroiu (H24)</td>
<td>32 2 6261800</td>
<td>32 478 630395</td>
<td>32 2 648 5135</td>
<td></td>
<td><a href="mailto:bucuroiu@iata.org">bucuroiu@iata.org</a> <a href="mailto:dicapuas@iata.org">dicapuas@iata.org</a></td>
<td>None</td>
</tr>
<tr>
<td>IATA – MID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faqir Jehad</td>
<td>962 6 569 8728</td>
<td>962 6 5811 994</td>
<td>962 79 596 6559</td>
<td>962 6 560 4548</td>
<td><a href="mailto:Faqirj@iata.org">Faqirj@iata.org</a></td>
<td></td>
</tr>
<tr>
<td>IATA – ESAF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Trevor Fox (IATA RD)</td>
<td>254 2 710-100</td>
<td>254 2 882-946</td>
<td>254 2 723-978</td>
<td></td>
<td><a href="mailto:foxt@iata.org">foxt@iata.org</a></td>
<td>AFTN: HKNAIAUX</td>
</tr>
<tr>
<td>IATA – Nairobi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Meissa Ndiaye (IATA)</td>
<td>254-2-723999</td>
<td>254-2-573892</td>
<td>254-2-723978</td>
<td>254-2-727391</td>
<td><a href="mailto:ndiayem@iata.org">ndiayem@iata.org</a></td>
<td></td>
</tr>
<tr>
<td>ICAO Bangkok</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John E. Richardson (RO/ATM) Focal Point</td>
<td>662-537 8189 ext. 152</td>
<td>662-722 4055 ext. 6253</td>
<td>661-824 2467</td>
<td>662 537 8199</td>
<td><a href="mailto:jrichardson@bangkok.icao.int">jrichardson@bangkok.icao.int</a> <a href="mailto:jrich0282@yahoo.com">jrich0282@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>David Moores (RO/ATM)</td>
<td>662-537 8189 ext. 151</td>
<td>662-653 1783 ext. 2803</td>
<td>661 938 9710</td>
<td></td>
<td><a href="mailto:dmoores@bangkok.icao.int">dmoores@bangkok.icao.int</a> <a href="mailto:dsmoores@backpacker.com">dsmoores@backpacker.com</a></td>
<td></td>
</tr>
<tr>
<td>ICAO Cairo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Ramdoyal</td>
<td>202 267 4845</td>
<td>202 516 3825</td>
<td>201 018 20339</td>
<td>202 267 4843</td>
<td><a href="mailto:dramdoyal@cairo.icao.int">dramdoyal@cairo.icao.int</a></td>
<td></td>
</tr>
</tbody>
</table>
## List of Contacts

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(RO/ATM)</td>
<td>ext 104</td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:ramdoyal@hotmail.com">ramdoyal@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>M.R. Khonji (DRD)</td>
<td>202 267 4841</td>
<td>202 415 2073</td>
<td>201 232 14946</td>
<td>202 267 4843</td>
<td><a href="mailto:mkhonji@cairo.icao.int">mkhonji@cairo.icao.int</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ext. 116/115</td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:mkhonji@hotmail.com">mkhonji@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td><strong>ICAO Nairobi (ESAF)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lot Mollel (ICAORD)</td>
<td>254 2 622394</td>
<td>254 2 521208</td>
<td></td>
<td>254 2 623028</td>
<td><a href="mailto:lot.mollel@icao.unon.org">lot.mollel@icao.unon.org</a></td>
<td></td>
</tr>
<tr>
<td>Apolo Kharuga Team Co-ordinator</td>
<td>254 2 622372</td>
<td>254 2 882264</td>
<td></td>
<td>254 2 226706</td>
<td><a href="mailto:apollo.kharuga@icao.unon.org">apollo.kharuga@icao.unon.org</a></td>
<td></td>
</tr>
<tr>
<td>Marcel Munyakazi (RO/ATM)</td>
<td>254 2 622373</td>
<td>254 2 574149</td>
<td></td>
<td>254 2 520135</td>
<td><a href="mailto:marcel.munyakazi@icao.unon.org">marcel.munyakazi@icao.unon.org</a></td>
<td></td>
</tr>
<tr>
<td><strong>ICAO Paris</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gunnar Emausson</td>
<td>33 1 46 41 85 92</td>
<td>33 1 47 57 34 33</td>
<td>33 6 22 11 40 58</td>
<td>33 1 46 41 85 00</td>
<td><a href="mailto:gemausson@paris.icao.int">gemausson@paris.icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Jacques Vanier</td>
<td>33 1 46 41 85 24</td>
<td>33 1 34 46 01 14</td>
<td></td>
<td>33 1 46 41 85 00</td>
<td><a href="mailto:jvanier@paris.icao.int">jvanier@paris.icao.int</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:jvanier@wanadoo.fr">jvanier@wanadoo.fr</a></td>
<td></td>
</tr>
<tr>
<td>Duty Contingency Contact Officer</td>
<td>33 1 4641 8585</td>
<td>33 6 70 94 56 27</td>
<td>33 1 46 41 85 00</td>
<td>33 1 46 41 85 00</td>
<td><a href="mailto:Eurcontingency@paris.icao.int">Eurcontingency@paris.icao.int</a></td>
<td></td>
</tr>
<tr>
<td><strong>ICAO Headquarters – Montreal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vince Galotti (C/ATM)</td>
<td>1 514 954-6711</td>
<td>1 514 281-0731</td>
<td>1 514 951-0283</td>
<td>1-514-954 8197</td>
<td><a href="mailto:vgalotti@icao.int">vgalotti@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Chris Dalton (TO/ATM)</td>
<td>1 514 954-8219</td>
<td>1 514 485-3635</td>
<td></td>
<td>1-514-954 8197</td>
<td><a href="mailto:cdalton@icao.int">cdalton@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>ext. 6710</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gustavo De Leon (TO/ATM)</td>
<td>1 514 954-8219</td>
<td>1 514 482-7182</td>
<td>1 514 883-4847</td>
<td>1-514-954 8197</td>
<td><a href="mailto:gdeleon@icao.int">gdeleon@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>ext. 6199</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:g_deleon_p@hotmail.com">g_deleon_p@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Aleksandar Pavlovic (CAIS/MAP)</td>
<td>1-514 954 8162</td>
<td>1-514 932 7632</td>
<td></td>
<td>1-514-954 6077</td>
<td><a href="mailto:apavlovic@icao.int">apavlovic@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>ext 8190</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hindupur Sudarshan (TO/RAO)</td>
<td>1-514 954 8219</td>
<td>1-514 486 4041</td>
<td></td>
<td>1-514-954 6077</td>
<td><a href="mailto:hsudarshan@icao.int">hsudarshan@icao.int</a></td>
<td></td>
</tr>
<tr>
<td><strong>EUROCONTROL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix A

**List of Contacts**

<table>
<thead>
<tr>
<th>NAMES</th>
<th>PHONE (WORK)</th>
<th>PHONE (HOME)</th>
<th>MOBILE PHONE</th>
<th>FAX</th>
<th>E-MAIL</th>
<th>OTHER CONTACT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Byrom</td>
<td>32 2 729 98 00</td>
<td></td>
<td>32 4 75 47 06 85</td>
<td>32 2 729 9028</td>
<td><a href="mailto:john.byrom@eurocontrol.int">john.byrom@eurocontrol.int</a></td>
<td></td>
</tr>
<tr>
<td>Guy Guizien</td>
<td>32 2 729 97 62</td>
<td></td>
<td>32 4 75 26 17 93</td>
<td>32 2 729 9028</td>
<td><a href="mailto:guy.guizien@eurocontrol.int">guy.guizien@eurocontrol.int</a></td>
<td></td>
</tr>
</tbody>
</table>
CONTINGENCY SCHEME ROUTE DETAILS

1. INTRODUCTION

1.1 The following scenarios provide aircraft operators with alternative routings to their normal routes that may be affected by airspace closures.

ROUTES — DESCRIPTION

Scenario 1 (Yellow routes): Flights planning to operate on existing routes to and from Gulf State aerodromes that are open to civil flights, and overflights are permitted over portions of the Arabian Peninsular

Scenario 2 (Pink routes): Flights planning to avoid the Gulf area on existing routes through Pakistan and Iran via the Arabian Sea

Scenario 3 (Blue routes): Flights planned to avoid the Gulf area by operating through Pakistan, Iran and Turkey

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Route Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>TIGER/G452 TIGER–G452–RK–ZAHEladen</td>
</tr>
<tr>
<td>3.4</td>
<td>ZAHEladen/AAE ZAH–G208–PG–P318 (S)–DOSTI–M638–KC–G208(E)–AAE</td>
</tr>
<tr>
<td>3.5</td>
<td>KC/JI KC–A791 L308 (W)–PARET–JI</td>
</tr>
<tr>
<td>3.6</td>
<td>JI/KC JI–A791(E)–LATEM–KC</td>
</tr>
</tbody>
</table>
Scenario 4 (Orange routes): Flights planned to avoid the Gulf area, Iran and Turkey by operating through India, Pakistan and Afghanistan

|     |      | Note:— Contingency levels FL310-FL390 within Kabul FIR. |
| 4.2 | M881  | DELHI–A466–LAHORE–A466–JHANG ISMAIL KHAN (DI)–P500–ADINA M881–LAJAK EGPAN |
|     |      | Note 1:— Contingency levels FL280-FL290 within Kabul FIR. |
|     |      | Note 2:— M881 conflicts laterally with ATS route P500. |
| 4.3 | A466  | DELHIA–466–LAHORE–A466–DI–AM DAR–TERMEZ |
|     |      | Note:— Contingency flight levels FL290–FL390. |
| 4.4 | N644  | JHANG ISMAIL KHAN (DI)–N644–PAVLO–LEMOD |
|     |      | Note:— Contingency levels FL310-FL390. |
|     |      | RNP 10 approved aircraft only |
| 4.5 | L750  | TIGER–G202N–ZHOB–L750–ROSIE–RANAH |
|     |      | Note:— Contingency levels FL310-FL390 |
|     |      | RNP 10 approved aircraft only |
| 4.6 | B466/N636/P628/G792 | NAWABSHAH–B466/N636–KANDAHAR–N636/P628–CHAR N–G792–MASHHAD–GIRUN or MASHHAD–G775–ASHGABAT |
|     |      | Note:— Contingency levels FL310-FL350. |
|     |      | RNP 10 approved aircraft only |
|     |      | Note 1:— Contingency levels FL310-FL350 within Kabul FIR. |
|     |      | Note 2:— Within Tehran FIR G792 minimum enroute altitude FL310. |
Scenario 5 (Red routes): Flights planned to avoid the Persian Gulf, Iran, Turkey, and Afghanistan by operating across the Arabian Sea and the Indian Ocean

<table>
<thead>
<tr>
<th>Crame 3A and 2C — as amended</th>
<th>Mumbai (BBB)–P751–BOLUR (1700.7N 063 07.4E)–ASPUX (1744.1N 06000.1E)–UN315–Haima (HAI)–LOTOS (N22 00.0 E050 39.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note 1: — Crame 3A is identical to Crame 2C.</td>
<td>Note 2: — Traffic may route beyond LOTOS (N22:00.0 E050:39.2) via:</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>i) LOTOS–N569 ALRIK (N2206.5 E04825.6) L883 PMA YEN UL300–Luxor (LXR)–A727–Cairo (CVO). Westbound routing only;</td>
<td>i) LOTOS–N569 ALRIK (N2206.5 E04825.6) L883 PMA YEN UL300–Luxor (LXR)–A727–Cairo (CVO). Westbound routing only;</td>
</tr>
<tr>
<td>ii) LOTOS– N569/L883 PMA YEN –Yenbo (YEN)–A411–WEJ–A411–Sharm el Sheikh (SHM)–A411–Cairo (CVO). Westbound routing only;</td>
<td>iii) Cairo (CVO)–A727–SEMRU (N28:02.0 E032:03.1)–B418–WEJH (WEJ)–UL573–Dafinah (DFN)–M628 UMRAN (N2315.1 E04520.4) L883 ALRIK (N2206.5 E04825.6) –LOTOS (N22 12.7 E045 48.0). Eastbound routing only;</td>
</tr>
<tr>
<td>iii) Cairo (CVO)–A727–SEMRU (N28:02.0 E032:03.1)–B418–WEJH (WEJ)–UL573–Dafinah (DFN)–M628 UMRAN (N2315.1 E04520.4) L883 ALRIK (N2206.5 E04825.6) –LOTOS (N22 12.7 E045 48.0). Eastbound routing only;</td>
<td>iv) LOTOS–N569 ALRIK L883 –UMRAN (N2315.1 E04520.4) M628 Dafinah (DFN)–G782–Jeddah (JDW). Or N569 RABTO (N2216.1 E04003.4) G782 JDW Westbound routing only;</td>
</tr>
<tr>
<td>iv) LOTOS–N569 ALRIK L883 –UMRAN (N2315.1 E04520.4) M628 Dafinah (DFN)–G782–Jeddah (JDW). Or N569 RABTO (N2216.1 E04003.4) G782 JDW Westbound routing only;</td>
<td>v) Jeddah (JDW)–B417–BONUM (N2212.9 E03938.1)–N569 RABTO (N2216.1 E04003.4) N569–LOTOS. Eastbound routing only; and</td>
</tr>
<tr>
<td>v) Jeddah (JDW)–B417–BONUM (N2212.9 E03938.1)–N569 RABTO (N2216.1 E04003.4) N569–LOTOS. Eastbound routing only; and</td>
<td>vi) LOTOS–Y100–KFA for flights to/from Bahrain, Dammam and Doha airports (consult local NOTAMs).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crame 3B</th>
<th>Katunayake (KAT)–P570–TVM–UL425–ASPUX (1744.1N 06000.1E)–UN315–HAI–LOTOS (N22 00.0 E050 39.2) then flight plan route to destination (consult local NOTAMs).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: — This is the most northerly route available. Traffic may route beyond LOTOS (N22:00.0 E050:39.2) via:</td>
<td>Note: — This is the most northerly route available. Traffic may route beyond LOTOS (N22:00.0 E050:39.2) via:</td>
</tr>
<tr>
<td>i) LOTOS–N569 ALRIK (N2206.5 E04825.6) L883 PMA YEN UL300–Luxor (LXR)–A727–Cairo (CVO). Westbound routing only;</td>
<td>i) LOTOS–N569 ALRIK (N2206.5 E04825.6) L883 PMA YEN UL300–Luxor (LXR)–A727–Cairo (CVO). Westbound routing only;</td>
</tr>
<tr>
<td>ii) LOTOS– N569/L883 PMA YEN –Yenbo (YEN)–A411–WEJ–A411–Sharm el Sheikh (SHM)–A411–Cairo (CVO). Westbound routing only;</td>
<td>ii) LOTOS– N569/L883 PMA YEN –Yenbo (YEN)–A411–WEJ–A411–Sharm el Sheikh (SHM)–A411–Cairo (CVO). Westbound routing only;</td>
</tr>
<tr>
<td>iii) Cairo (CVO)–A727–SEMRU (N28:02.0 E032:03.1)–B418–WEJH (WEJ)–UL573–Dafinah (DFN)–M628 UMRAN (N2315.1 E04520.4) L883 ALRIK (N2206.5 E04825.6) –LOTOS (N22 12.7 E045 48.0). Eastbound routing only;</td>
<td>iii) Cairo (CVO)–A727–SEMRU (N28:02.0 E032:03.1)–B418–WEJH (WEJ)–UL573–Dafinah (DFN)–M628 UMRAN (N2315.1 E04520.4) L883 ALRIK (N2206.5 E04825.6) –LOTOS (N22 12.7 E045 48.0). Eastbound routing only;</td>
</tr>
</tbody>
</table>
### Appendix C
### Contingency Scheme Route Details

| v) LOTOS–N569 ALRIK L883 – UMRAN (N2315.1 E04520.4) M628 Dafinah (DFN)–G782–Jeddah (JDW). Or N569 RABTO (N2216.1 E04003.4) G782 JDW. Westbound routing only; and | vi) LOTOS–Y100–KFA for flights to/from Doha (consult local NOTAMs). |
| Jeddah (JDW)–B417–BONUM (N2212.9 E03938.1)–N569 RABTO (N2216.1 E04003.4) N569–LOTOS. Eastbound routing only; and | |

### CRAME 4A

| Mumbai (BBB)–P751–RIGAM (N14:39.5 E05304.2)–B526–RIYAN (RIN)–M559 ITOLI (N1528.4 E04509.4) M301 SAA–UR777–DANAK–UB413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs). | |

**Note:**— CRAME 4A assumes that the Sanaa and Jeddah FIRs are available. Traffic may also route beyond ODAKA (N14:40.6 E052:34.0) as follows:

- RIGAM–P751–Aden (KRA)–B413–DANAK–B413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs).  

### CRAME 4 B


**Note:**— CRAME 4B assumes the Sanaa and Jeddah FIRs are open. Traffic may also route beyond RASEM (N14:11.5 E0050:28.6) as follows:

- ORBAT (N1406.6 E05039.4)–P751–Aden (KRA)–B413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs). 

### Flights departing/arriving/overflying from/to Hong Kong, Thailand and northern India.

#### CRAME 5A

| Mumbai (BBB)–G450–ORLID (N11 17.1 E060 00.1)–UT382–AVEDA (N0913.5 E04911.4) – DAROT (N0911.4 E04721.2)–Hargeisa (HARGA) then flight plan route to destination (consult local NOTAMs). | |

#### CRAME 5B

| Male (MLE)–DCT–MAGUG (N05 20.7 E006 00.) UT384 DAROT (N0911.4 E04721.2)–Hargeisa (HARGA) then flight plan route to destination (consult local NOTAMs). | |
Appendix C
Contingency Scheme Route Details

<table>
<thead>
<tr>
<th>Scenario 6 (Green routes): Flights planned to avoid the Middle East entirely by flying north of the Himalayas or east and north of Afghanistan (Kabul FIR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6.1</strong></td>
</tr>
</tbody>
</table>

**Scenario 7 (Purple routes):** Flights planning to avoid the western Middle East States, Jordan, Lebanon, Saudi Arabia and Syria by operating on the existing routes through Turkey, Iraq, Kuwait and Bahrain.

---

**Note:** Traffic may route beyond Hargeisa via DCT–Dire–Dawa (DWA) – W886–Addis Ababa (ADS)–UR2–TIKAT (N12:24.3 E035:38.2) then flight plan route to destination (consult local NOTAMs).
TRAFFIC INFORMATION BROADCASTS BY AIRCRAFT (TIBA) AND RELATED OPERATING PROCEDURES

(See Annex 11, Chapter 4, 4.2.2, Note 2)

1. Introduction and applicability of broadcasts

1.1 Traffic information broadcasts by aircraft are intended to permit reports and relevant supplementary information of an advisory nature to be transmitted by pilots on a designated VHF radiotelephone (RTF) frequency for the information of pilots of other aircraft in the vicinity.

1.2 TIBAs should be introduced only when necessary and as a temporary measure.

1.3 The broadcast procedures should be applied in designated airspace where:

   a) there is a need to supplement collision hazard information provided by air traffic services outside controlled airspace; or
   
   b) there is a temporary disruption of normal air traffic services.

1.4 Such airspaces should be identified by the States responsible for provision of air traffic services within these airspaces, if necessary with the assistance of the appropriate ICAO Regional Office(s), and duly promulgated in aeronautical information publications or NOTAM, together with the VHF RTF frequency, the message formats and the procedures to be used. Where, in the case of 1.3 a), more than one State is involved, the airspace should be designated on the basis of regional air navigation agreements and promulgated in Doc 7030.

1.5 When establishing a designated airspace, dates for the review of its applicability at intervals not exceeding 12 months should be agreed by the appropriate ATS authority(ies).

2. Details of broadcasts

2.1 VHF RTF frequency to be used

2.1.1 The VHF RTF frequency to be used should be determined and promulgated on a regional basis. However, in the case of temporary disruption occurring in controlled airspace, the States responsible may promulgate, as the VHF RTF frequency to be used within the limits of that airspace, a frequency used normally for the provision of air traffic control service within that airspace. (For the purpose of this contingency scheme, broadcasts shall be made on 128.95 MHz).

2.1.2 Where VHF is used for air-ground communications with ATS and an aircraft has only two serviceable VHF sets, one should be tuned to the appropriate ATS frequency and the other to the TIBA frequency.

2.2 Listening watch

A listening watch should be maintained on the TIBA frequency 10 minutes before entering the designated airspace until leaving this airspace. For an aircraft taking off from an aerodrome located within the lateral limits of the designated airspace listening watch should start as soon as appropriate after take-off and be maintained until leaving the airspace.

2.3 Time of broadcasts
2.3.1 A broadcast should be made:
   a) 10 minutes before entering the designated airspace or, for a pilot taking off from an aerodrome located within the lateral limits of the designated airspace, as soon as appropriate after take-off;
   b) 10 minutes prior to crossing a reporting point;
   c) 10 minutes prior to crossing or joining an ATS route;
   d) at 20-minute intervals between distant reporting points;
   e) 2 to 5 minutes, where possible, before a change in flight level;
   f) at the time of a change in flight level; and
   g) at any other time considered necessary by the pilot.

2.4 Forms of broadcast

2.4.1 The broadcasts other than those indicating changes in flight level, i.e. the broadcasts referred to in 2.3 a), b), c), d) and g), should be in the following form:

   ALL STATIONS (necessary to identify a traffic information broadcast)
   (call sign)
   FLIGHT LEVEL (number) (or CLIMBING* TO FLIGHT LEVEL (number))
   (direction)
   (ATS route) (or DIRECT FROM (position) TO (position))
   POSITION (position**) AT (time)
   ESTIMATING (next reporting point, or the point of crossing or joining a designated ATS route) AT (time)
   (call sign)
   FLIGHT LEVEL (number)
   (direction)

   Fictitious example:

   “ALL STATIONS WINDAR 671 FLIGHT LEVEL 350 NORTHWEST BOUND DIRECT FROM PUNTA SAGA TO PAMPA POSITION 5040 SOUTH 2010 EAST AT 2358 ESTIMATING CROSSING ROUTE LIMA THREE ONE AT 4930 SOUTH 1920 EAST AT 0012 WINDAR 671 FLIGHT LEVEL 350 NORTHWEST BOUND OUT”

2.4.2 Before a change in flight level, the broadcast (referred to in 2.3 e)) should be in the following form:

   ALL STATIONS
(call sign)

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

LEAVING FLIGHT LEVEL (number) FOR FLIGHT LEVEL (number) AT (position and time)

2.4.3 Except as provided in 2.4.4, the broadcast at the time of a change in flight level (referred to in 2.3 f)) should be in the following form:

ALL STATIONS

(call sign)

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

followed by:

ALL STATIONS

(call sign)

MAINTAINING FLIGHT LEVEL (number)

2.4.4 Broadcasts reporting a temporary flight level change to avoid an imminent collision risk should be in the following form:

ALL STATIONS

(call sign)

LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

followed as soon as practicable by:

ALL STATIONS

(call sign)

RETURNING TO FLIGHT LEVEL (number) NOW

2.5 Acknowledgement of the broadcasts

The broadcasts should not be acknowledged unless a potential collision risk is perceived.

3. Related operating procedures

3.1 Changes of cruising level
3.1.1 Cruising level changes should not be made within the designated airspace, unless considered necessary by pilots to avoid traffic conflicts, for weather avoidance or for other valid operational reasons.

3.1.2 When cruising level changes are unavoidable, all available aircraft lighting which would improve the visual detection of the aircraft should be displayed while changing levels.

3.2 Collision avoidance

If, on receipt of a traffic information broadcast from another aircraft, a pilot decides that immediate action is necessary to avoid an imminent collision risk, and this cannot be achieved in accordance with the right-of-way provisions of Annex 2, the pilot should:

a) unless an alternative manoeuvre appears more appropriate, immediately descend 150 m (500 ft), or 300 m (1 000 ft) if above FL 290 in an area where a vertical separation minimum of 600 m (2 000 ft) is applied;

b) display all available aircraft lighting which would improve the visual detection of the aircraft;

c) as soon as possible, reply to the broadcast advising action being taken;

d) notify the action taken on the appropriate ATS frequency; and

e) as soon as practicable, resume normal flight level, notifying the action on the appropriate ATS frequency.

3.3 Normal position reporting procedures

Normal position reporting procedures should be continued at all times, regardless of any action taken to initiate or acknowledge a traffic information broadcast.
IATA IN-FLIGHT BROADCAST PROCEDURE (IFBP) AFI REGION

1. LISTENING WATCH

1.1 A listening watch should be maintained on the designated frequency (126.9MHz in AFI Region), 10 minutes before entering the designated airspace until leaving this airspace. For an aircraft taking-off from an aerodrome located within the lateral limits of the designated airspace, listening watch should start as soon as appropriate and be maintained until leaving the airspace.

2. TIME OF BROADCAST

2.1 A broadcast should be made in English:

a) 10 minutes before entering the designated airspace or, for a pilot taking-off from an aerodrome located within the lateral limits of the designated airspace, as soon as appropriate;

b) 5 minutes prior to crossing a reporting point;

c) 5 minutes prior to crossing or joining an ATS route;

d) at 20 minute intervals between distant reporting points;

e) 2 to 5 minutes, where possible, before a change in flight level;

f) at the time of a change in flight level; and

g) at any other time considered necessary by the pilot.

3. OPERATING PROCEDURES

3.1 Changes of Cruising Level

3.1.1 Cruising level change should not be made within the designated airspace unless considered necessary by pilots to avoid traffic conflicts, for weather avoidance, or for other valid operational reasons.

3.1.2 When cruising level changes are unavoidable, all available aircraft lighting which would improve the visual detection of the aircraft should be displayed while changing levels.

3.2 Collision Avoidance

3.2.1 If, on receipt a traffic information broadcast from another aircraft, a pilot decides that immediate action is necessary to avoid an imminent collision risk to his aircraft, and this cannot be achieved in accordance with the right-of-way provisions of Annex 2, he should:

a) unless an alternative manoeuvre appears more appropriate descend immediately
1000 ft if above FL290 or 500 ft if at or below FL290;

b) display all available aircraft lighting which would improve the visual detection of the aircraft;

c) as soon as possible reply to the broadcast advising action being taken;

d) notify the action taken on the appropriate ATS frequency; and

e) as soon as situation has been rectified, resume normal flight level, notifying the action on the appropriate ATS frequency.

3.3 Normal Position Reporting Procedures

3.3.1 Normal position reporting procedures should be continued at all times, regardless of any action taken to initiate or acknowledge a traffic information broadcast.

3.4 Operation of Transponders

3.4.1 Pilots should ensure that transponder procedures as contained in ICAO PANS OPS Doc 8168 are complied with and in the absence of other directions from ATC, operate the transponder on Mode A and C Code 2000\(^1\).

3.5 Use of TCAS

3.5.1 TCAS equipped aircraft should have TA/RA mode selected at maximum range.

4. THE IFBP IN AFI

4.1 In many FIRs in the AFI Region communications both fixed and mobile have either not been implemented or operate well below the required reliability. This has an impact on the proper provision of Air Traffic Services, especially flight information service. Consequently, the AFI Regional Technical Conference has decided that the IATA In-Flight Broadcast Procedure (IFBP) should be used within designated FIRs in the region as an interim measure until such time as communications facilities affecting the FIR in question have been improved.

5. DESIGNATED FREQUENCY IN AFI

5.1 In the AFI Region the designated frequency for the IFBP is 126.9 MHz.

---

\(^1\) Pilots are advised to ensure operation of transponders even when outside radar coverage in order to enable TCAS equipped aircraft to identify conflicting traffic.
6. AREA OF APPLICATION

6.1 In the AFI Region the IFBP should be applied in the following FIRs and airspaces:

- Accra
- Beira
- Entebbe
- Lilongwe
- N’Djamena
- Addis Ababa
- Brazzaville
- Kano
- Luanda
- Nairobi
- Alger
- Bujumbura
- Khartoum
- Lusaka
- Niamey
- Antananarivo
- Dakar
- Kigali
- Mauritius
- Roberts
- Asmara
- Dar es Salaam
- Kinshasa
- Mogadishu
- Tripoli

6.2 The In-Flight Broadcast Procedure need not be applied in the following FIRs:

- Bloemfontein
- Casablanca
- Harare
- Port Elizabeth
- Tunis
- Canaries
- Dakar Oceanic
- Johannesburg
- Sal Oceanic
- Windhoek
- Cape Town
- Durban

7. ENFORCEMENT

7.1 All airlines operating in the AFI region are requested to:

a) ensure that their air crews are fully briefed on the procedure and area of application described;

b) ensure that their charts and flight documentation are fully amended to reflect the foregoing;

7.2 Any operator reported to IATA as not applying the procedure shall be contacted immediately, informed of the procedure, and requested to apply it.

7.3 Attention is drawn to the fact that during the Haj Pilgrimage period the number of east-west flights in the North-Central part of the AFI Region increases dramatically and with it the risk of ATS incidents and the importance of the In-Flight Broadcast Procedure.

8. REVIEW

8.1 The procedure and its area of applicability shall be reviewed by the AFI Regional Coordination Group from time to time and FIRs in which the procedure is to be applied may be added or excluded as necessary.

9. DISTRIBUTION

9.1 To assist in ensuring its widest possible applicability the procedure is distributed to all known operators in the AFI Region, as well as to the following agencies/organizations:

- ATLAS
- FAA
- IACA
- IAOPA
- IBAA
- Jeppesen
- KSS Chart department
- NATO
EXAMPLE OF A BROADCAST

a) “ALL STATIONS” given only once to attract attention;
b) “THIS IS AZ.....” (callsign);
c) “FL.....”;
d) “NORTHEASTBOUND LAGOS-ROME VIA UA400”;
e) “POSITION.....AT.....(UTC)”;
f) “ESTIMATING POSITION.....AT.....(UTC)”;
g) “AZ.....” (callsign)
h) “FL.....”
i) “NORTHEASTBOUND” (direction of flight through the area).
Article 3 bis*

The contracting States recognize that every State must refrain from resorting to the use of weapons against civil aircraft in flight and that, in case of interception, the lives of persons on board and the safety of aircraft must not be endangered. This provision shall not be interpreted as modifying in any way the rights and obligations of States set forth in the Charter of the United Nations.

(Extract from ICAO Annex 2 — *Rules of the Air*)

3.8 Interception

Note.— The word “interception” in this context does not include intercept and escort service provided, on request, to an aircraft in distress, in accordance with Volumes II and III of the International Aeronautical and Maritime Search and Rescue Manual (Doc 9731).

3.8.1 Interception of civil aircraft shall be governed by appropriate regulations and administrative directives issued by Contracting States in compliance with the Convention on International Civil Aviation, and in particular Article 3(d) under which Contracting States undertake, when issuing regulations for their State aircraft, to have due regard for the safety of navigation of civil aircraft. Accordingly, in drafting appropriate regulations and administrative directives due regard shall be had to the provisions of Appendix 1, Section 2 and Appendix 2, Section 1.

Note.— Recognizing that it is essential for the safety of flight that any visual signals employed in the event of an interception which should be undertaken only as a last resort be correctly employed and understood by civil and military aircraft throughout the world, the Council of the International Civil Aviation Organization, when adopting the visual signals in Appendix 1 to this Annex, urged Contracting States to ensure that they be strictly adhered to by their State aircraft. As interceptions of civil aircraft are, in all cases, potentially hazardous, the Council has also formulated special recommendations which Contracting States are urged to apply in a uniform manner. These special recommendations are contained in Attachment A.

3.8.2 The pilot-in-command of a civil aircraft, when intercepted, shall comply with the Standards in Appendix 2, Sections 2 and 3, interpreting and responding to visual signals as specified in Appendix 1, Section 2.

Note.— See also 2.1.1 and 3.4.

* On 10 May 1984 the Assembly amended the Convention by adopting the Protocol introducing Article 3 bis. Under Article 94 a) of the Convention, the amendment came into force on 1 October 1998 in respect of States which have ratified it.
INTERCEPTION OF CIVIL AIRCRAFT

(Appendix 2 of ICAO Annex 2 — Rules of the Air)

(Note.— See Chapter 3, 3.8 of the Annex)

1. Principles to be observed by States

1.1 To achieve the uniformity in regulations which is necessary for the safety of navigation of civil aircraft due regard shall be had by Contracting States to the following principles when developing regulations and administrative directives:

a) interception of civil aircraft will be undertaken only as a last resort;

b) if undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or instruct it to effect a landing at a designated aerodrome;

c) practice interception of civil aircraft will not be undertaken;

d) navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established; and

e) in the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

Note.— In the unanimous adoption by the 25th Session (Extraordinary) of the ICAO Assembly on 10 May 1984 of Article 3 bis to the Convention on International Civil Aviation, the Contracting States have recognized that “every State must refrain from resorting to the use of weapons against civil aircraft in flight.”

1.2 Contracting States shall publish a standard method that has been established for the manoeuvring of aircraft intercepting a civil aircraft. Such method shall be designed to avoid any hazard for the intercepted aircraft.

Note.— Special recommendations regarding a method for the manoeuvring are contained in Attachment A, Section 3.

1.3 Contracting States shall ensure that provision is made for the use of secondary surveillance radar, where available, to identify civil aircraft in areas where they may be subject to interception.

2. Action by intercepted aircraft

2.1 An aircraft which is intercepted by another aircraft shall immediately:

a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Appendix 1;
Appendix G
ICAO Interception Procedures

b) notify, if possible, the appropriate air traffic services unit;
c) attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz; and
d) if equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

2.2 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

2.3 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

3. Radio communication during interception

If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table 2.1 and transmitting each phrase twice:

<table>
<thead>
<tr>
<th>Phrases for use by INTERCEPTING aircraft</th>
<th>Phrases for use by INTERCEPTED aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phrase</strong></td>
<td>** Pronunciation1**</td>
</tr>
<tr>
<td>CALL SIGN</td>
<td>KOL SA-IN</td>
</tr>
<tr>
<td>FOLLOW</td>
<td>FOL-LO</td>
</tr>
<tr>
<td>DESCEND</td>
<td>DEE-SEND</td>
</tr>
<tr>
<td>YOU LAND</td>
<td>YOU LAAND</td>
</tr>
<tr>
<td>PROCEED</td>
<td>PRO-SEED</td>
</tr>
<tr>
<td>MAYDAY</td>
<td>MAYDAY</td>
</tr>
<tr>
<td>LAND</td>
<td>LAAND</td>
</tr>
<tr>
<td>DESCEND</td>
<td>DEE-SEND</td>
</tr>
</tbody>
</table>

1. In the second column, syllables to be emphasized are underlined.
2. The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.
3. Circumstances may not always permit, nor make desirable, the use of the phrase “HIJACK”.

<table>
<thead>
<tr>
<th>Version III</th>
<th>14/7132/743</th>
</tr>
</thead>
</table>
# Contingency Agreement Status

<table>
<thead>
<tr>
<th>State</th>
<th>Corresponding States</th>
<th>Status</th>
<th>Soft Copies Sent to ICAO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>Iran, Kuwait, Oman, Qatar, Saudi Arabia, UAE</td>
<td>Signed</td>
<td>Sent</td>
</tr>
<tr>
<td>Egypt</td>
<td>Greece, Jordan, Libya, Cyprus, Saudi Arabia, Sudan</td>
<td>Signed</td>
<td>Sent</td>
</tr>
<tr>
<td>Iran</td>
<td>Armenia, Azerbaijan, Turkmenistan, Afghanistan, Bahrain, Iraq, Kuwait, Oman, Pakistan, Turkey, UAE</td>
<td>Signed</td>
<td>Sent</td>
</tr>
<tr>
<td>Iraq</td>
<td>Iran, Jordan, Kuwait, Saudi Arabia, Syria, Turkey</td>
<td>Signed</td>
<td>Sent</td>
</tr>
<tr>
<td>STATE</td>
<td>CORRESPONDING STATES</td>
<td>STATUS</td>
<td>SOFT COPIES SENT TO ICAO</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------</td>
<td>---------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>JORDAN</td>
<td>EGYPT, IRAQ, ISRAEL, SAUDI ARABIA, SYRIA</td>
<td>Signed</td>
<td>Sent</td>
</tr>
<tr>
<td>KUWAIT</td>
<td>BAHRAIN, IRAN, IRAQ, SAUDI ARABIA</td>
<td>Signed</td>
<td></td>
</tr>
<tr>
<td>LEBANON</td>
<td>CYPRUS, SYRIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OMAN</td>
<td>BAHRAIN, INDIA, IRAN, PAKISTAN, UAE, YEMEN</td>
<td>Signed</td>
<td>Sent</td>
</tr>
<tr>
<td>QATAR</td>
<td>BAHRAIN, SAUDI ARABIA, UAE</td>
<td>Signed</td>
<td></td>
</tr>
<tr>
<td>SAUDI ARABIA</td>
<td>BAHRAIN, EGYPT, ERITREA, IRAQ, JORDAN, KUWAIT, SUDAN, YEMEN</td>
<td>Signed</td>
<td></td>
</tr>
<tr>
<td>SYRIA</td>
<td>IRAQ, JORDAN, LEBANON, CYPRUS, TURKEY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATE</td>
<td>CORRESPONDING STATES</td>
<td>STATUS</td>
<td>SOFT COPIES SENT TO ICAO</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------</td>
<td>----------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>UAE</td>
<td>BAHRAIN IRAN OMAN QATAR</td>
<td>Signed</td>
<td>Sent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signed</td>
<td></td>
</tr>
<tr>
<td>YEMEN</td>
<td>DJIBOUTI ERITREA ETHIOPIA INDIA OMAN SAUDI ARABIA SOMALIA</td>
<td>Signed</td>
<td></td>
</tr>
</tbody>
</table>
# Contingency Contact Details

<table>
<thead>
<tr>
<th>Names</th>
<th>Phone (Work)</th>
<th>Phone (Home)</th>
<th>Mobile Phone</th>
<th>Fax</th>
<th>E-Mail</th>
<th>Other Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bahrain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ali Ahmed Mohammed</td>
<td>973 17321116</td>
<td></td>
<td>973 39969399</td>
<td>973 173219977</td>
<td><a href="mailto:ali@ca.gov.bh">ali@ca.gov.bh</a></td>
<td>Bahrain ACC Duty Supervisor Tel: 973 1732 1081/1080 Fax: 973 1732 1029 Email: <a href="mailto:bahatc@caa.gov.bh">bahatc@caa.gov.bh</a></td>
</tr>
<tr>
<td>Mr. Saleem Mohammed Hasan</td>
<td>973 17321117</td>
<td>973 39608860</td>
<td>973 173219966</td>
<td></td>
<td><a href="mailto:saleem@ca.gov.bh">saleem@ca.gov.bh</a></td>
<td></td>
</tr>
<tr>
<td><strong>Egypt</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Moatassem Bellah,</td>
<td>202 265 7849</td>
<td>202 639 1792</td>
<td>01001695252</td>
<td>202 268 0627</td>
<td><a href="mailto:moatassem_5@hotmail.com">moatassem_5@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Abd Elraheem Baligh</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Aly Hussien Aly</td>
<td>202 637 3950</td>
<td>202 417 8460</td>
<td>201 01609 760</td>
<td>202 268 0627</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Iran</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ebrahim Shoushtari,</td>
<td>982163148900</td>
<td>989121861900</td>
<td>9821 63148906</td>
<td><a href="mailto:E_shoushtari@yahoo.com">E_shoushtari@yahoo.com</a></td>
<td><a href="mailto:E.shoushtari@airport.ir">E.shoushtari@airport.ir</a></td>
<td>Note: During New Year Holidays in Iran (20 March – 5 April) or for any urgent message Contact Tehran ACC on +9821-44544116</td>
</tr>
<tr>
<td>Deputy CEO for Aeronautical Operations (IAC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ali Arabi, DG of ATS Department</td>
<td>98 21 445 44101</td>
<td>98-9122967946</td>
<td>9821 44544102</td>
<td><a href="mailto:aarabi@airport.ir">aarabi@airport.ir</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Javad – Pashaei, Deputy Director of ATS Dept.</td>
<td>9821 44544103</td>
<td>989122967946</td>
<td>9821 44544102</td>
<td><a href="mailto:aarabi@airport.ir">aarabi@airport.ir</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ramezan Ali Ziaee, Deputy Director of ATS Dept.</td>
<td>9821-44544103</td>
<td>989123874917</td>
<td>9821 44544102</td>
<td><a href="mailto:r.a.ziaee@airport.ir">r.a.ziaee@airport.ir</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAMES</td>
<td>PHONE (WORK)</td>
<td>PHONE (HOME)</td>
<td>MOBILE PHONE</td>
<td>FAX</td>
<td>E-MAIL</td>
<td>OTHER CONTACT DETAILS</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
<td>-------------</td>
<td>-----------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>IRAQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ali Mohsin Hashim ATS Director</td>
<td>96418133370</td>
<td>9647702997761</td>
<td>9647815762525</td>
<td></td>
<td><a href="mailto:atc_iraqcaa@yahoo.com">atc_iraqcaa@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>JORDAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nayef Al Marshoud Director, ATM</td>
<td>9626 489 7729</td>
<td>962 5 3862584</td>
<td>962 797498992</td>
<td>9626 4891 266</td>
<td><a href="mailto:nayefmarshoud@hotmail.com">nayefmarshoud@hotmail.com</a></td>
<td><a href="mailto:datm@carc.gov.jo">datm@carc.gov.jo</a></td>
</tr>
<tr>
<td>KUWAIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Adel S. Boresli</td>
<td>965 24710268</td>
<td>96599036556</td>
<td>965 24346221</td>
<td></td>
<td><a href="mailto:as.buresli@dgca.gov.kw">as.buresli@dgca.gov.kw</a></td>
<td></td>
</tr>
<tr>
<td>LEBANON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walid Al Hassanieh Chief Air Navigation Dept.</td>
<td>+ 961 1 628178</td>
<td>+961 70474517</td>
<td>+961 1 629023</td>
<td></td>
<td><a href="mailto:hassaniehw@beirutairport.gov.lb">hassaniehw@beirutairport.gov.lb</a></td>
<td>AFTN OLBAZPX</td>
</tr>
<tr>
<td>LIBYIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OMAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Abdullah Nasser Al-Harthly</td>
<td>968519201</td>
<td>9689476806</td>
<td>968519939</td>
<td></td>
<td><a href="mailto:Abdullah_nasser@dgcam.com.om">Abdullah_nasser@dgcam.com.om</a></td>
<td></td>
</tr>
<tr>
<td>Mr. Saud Al-Adhoobi</td>
<td>968519305</td>
<td>9689321664</td>
<td>968519939/519930</td>
<td></td>
<td><a href="mailto:saud@dgcam.com.om">saud@dgcam.com.om</a></td>
<td></td>
</tr>
<tr>
<td>SAUDI ARABIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Mohammad Al Alawi</td>
<td>96626401005</td>
<td>96655621582</td>
<td>9662 6401005</td>
<td></td>
<td><a href="mailto:alalawi_m@yahoo.com">alalawi_m@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>SUDAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYRIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eng. Feras Mohamad Director General of Civil Aviation</td>
<td>963 1133 33815</td>
<td></td>
<td></td>
<td>963 11 2232201</td>
<td><a href="mailto:dgca@scaa.sy">dgca@scaa.sy</a></td>
<td>P.O.BOX:6257 Damascus, Syria</td>
</tr>
<tr>
<td>Hassan Hamoud ATM Director</td>
<td>009631154010180</td>
<td>00963116460395</td>
<td>00963 988235106</td>
<td>963 11 540101801</td>
<td><a href="mailto:atm@scaa.sy">atm@scaa.sy</a></td>
<td>P.O.BOX:6257 Damascus, Syria</td>
</tr>
<tr>
<td>NAMES</td>
<td>PHONE (WORK)</td>
<td>PHONE (HOME)</td>
<td>MOBILE PHONE</td>
<td>FAX</td>
<td>E-MAIL</td>
<td>OTHER CONTACT DETAILS</td>
</tr>
<tr>
<td>-------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
<td>-----</td>
<td>--------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>UNITED ARAB EMIRATES (UAE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ahmed Al Jallaf</td>
<td>9712 599 6888</td>
<td>97150 614 9065</td>
<td>9712 599 6883</td>
<td><a href="mailto:aljallaf@sze.gcca.ae">aljallaf@sze.gcca.ae</a></td>
<td></td>
<td>9712 599 6999 SCZ</td>
</tr>
<tr>
<td>Executive Director, Air Navigation Service Provider</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YEMEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Abdullah Ahmed Al-Awlaqi</td>
<td>9671 345 402</td>
<td>9671 506828</td>
<td>967777776830</td>
<td>967-1-344047</td>
<td><a href="mailto:ns@gmail.com">ns@gmail.com</a></td>
<td>D.G ANS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abdullah Abdulwareth Aleryani</td>
<td>967-1-345403</td>
<td>967-1-344254</td>
<td>967777190602</td>
<td>967-1-345403</td>
<td><a href="mailto:ernlabd@gmail.com">ernlabd@gmail.com</a></td>
<td>D.G ACC/FIC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ahmed Mohammed Al-Koobati</td>
<td>967-1-344675</td>
<td>967-1-214375</td>
<td>967777241375</td>
<td>967-1-344047</td>
<td><a href="mailto:70@yahoo.com">70@yahoo.com</a></td>
<td>D.Air Navigation Operation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IATA – MID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICAO Cairo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elie El Khoury (RO ATM/SAR)</td>
<td>202 267 4845 ext 104</td>
<td></td>
<td></td>
<td>202 267 4843</td>
<td><a href="mailto:ekhouryi@icao.int">ekhouryi@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Jehad Faqir (DRD)</td>
<td>202 267 4841 ext. 116/115</td>
<td></td>
<td></td>
<td>202 267 4843</td>
<td><a href="mailto:jfaqir@icao.int">jfaqir@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>ICAO Headquarters – Montreal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vince Galotti (C/ATM)</td>
<td>1514 954-6711</td>
<td>1 514 281-0731</td>
<td>1 514 951-0283</td>
<td>1-514-954 8197</td>
<td><a href="mailto:vgalotti@icao.int">vgalotti@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Chris Dalton (TO/ATM)</td>
<td>1 514 954-8219 ext. 6710</td>
<td>1 514 485-3635</td>
<td></td>
<td>1-514-954 8197</td>
<td><a href="mailto:cdalton@icao.int">cdalton@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Gustavo De Leon (TO/ATM)</td>
<td>1 514 954-8219 ext. 6199</td>
<td>1 514 482-7182</td>
<td>1 514 883-4847</td>
<td>1-514-954 8197</td>
<td><a href="mailto:gdeleon@icao.int">gdeleon@icao.int</a> <a href="mailto:g_deleon_p@hotmail.com">g_deleon_p@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Aleksandar Pavlovic (C/AIS/MAP)</td>
<td>1-514 954 8162</td>
<td>1-514 932 7632</td>
<td></td>
<td>1-514-954 6077</td>
<td><a href="mailto:apavlovic@icao.int">apavlovic@icao.int</a></td>
<td></td>
</tr>
<tr>
<td>Hindupur Sudarshan (TO/RAO)</td>
<td>1-514 954 8219 ext 8190</td>
<td></td>
<td></td>
<td>1-514-954 6077</td>
<td><a href="mailto:hsudarshan@icao.int">hsudarshan@icao.int</a></td>
<td></td>
</tr>
</tbody>
</table>
REPORT ON AGENDA ITEM 5: FUTURE WORK PROGRAMME

5.1 The meeting agreed that, in accordance with the MIDANPIRG Procedural Handbook, and based on Terms of Reference (TOR) and Action Plan of the Task Force, the ARN TF/7 meeting could be tentatively scheduled for the second quarter of 2014. The actual dates however, would depend on MID Regional Office workload/activities and would thus be confirmed in due course. The duration would be three (3) working days. The venue would be Cairo, unless a State indicates an interest in hosting the meeting.

5.2 The meeting agreed to the updated Provisional Agenda for the ARN TF/7 meeting, as at Appendix 5A to the Report on Agenda Item 5.

5.3 The meeting reviewed and agreed to the ARN/TF Terms of Reference (TOR) as at Appendix 5B to the Report on Agenda Item 5.
SEVENTH MEETING OF THE ATS ROUTE NETWORK TASK FORCE

(ARN TF/7)

PROVISIONAL AGENDA

Agenda Item 1: Adoption of the Provisional Agenda
Agenda Item 2: Follow-up on MIDANPIRG Conclusions and Decisions relevant to ATS Route Network
Agenda Item 3: Review ATS Route Network
Agenda Item 4: Contingency Planning
Agenda Item 5: Review of Air Navigation deficiencies in the ATS Routes Network
Agenda Item 6: Future Work Programme
Agenda Item 7: Any other business
**A) TERMS OF REFERENCE**

1. Review the MID ATS Route Network in order to assess its capacity and constraints.

2. Based on the airspace user needs and in coordination with stakeholders (States, International Organizations, user representative organizations and other ICAO Regions), identify requirements and improvements for achieving and maintaining an efficient route network in the MID Region.

3. Propose a strategy and prioritized plan for development of improvements to the route network, highlighting:
   - areas that require immediate attention
   - interface issues with adjacent ICAO Regions

4. Develop a working depository for route proposals that will be used as a dynamic reference document for ongoing discussions on routes under development/modification. In this respect, the Task Force should explore the utility that can be realized from the route catalogue concept/ATS routes database.

5. Engage the necessary parties regarding routes under consideration, especially the Military Authorities.

6. In coordination with the MIDRMA, carry out safety assessment of the proposed changes to the ATS Route Network.

7. After adoption by the ATM/AIM/SAR SG, or as delegated by the same, submit completed route proposals for amendment of the Basic ANP Table ATS-1, to the MID Office for processing.

**B) COMPOSITION**

The ARN TF will be composed of:

a) experts nominated by Middle East Provider States from both Civil Aviation Authority and Military Authority;

b) IATA, IFALPA and MIDRMA; and

c) other representatives from adjacent States and concerned international organizations (on ad-hoc basis).

**C) WORKING ARRANGEMENTS**

The Task Force shall:

a) report to the ATM/AIM/SAR Sub Group; and

b) meet as required and at least once a year.
REPORT ON AGENDA ITEM 6: ANY OTHER BUSINESS

6.1 Nothing has been discussed under this Agenda Item.
### LIST OF PARTICIPANTS

<table>
<thead>
<tr>
<th>STATES</th>
<th>NAME</th>
<th>TITLE &amp; ADDRESS</th>
</tr>
</thead>
</table>
| BAHRAIN      | Mr. Saleem Mohamed Hassan         | Chief Air Traffic Management  
Civil Aviation Affairs  
P.O. Box 586  
KINGDOM OF BAHRAIN  
Fax: (973) 17 329 966  
Tel: (973) 17 321 117  
Mobile: (973) 39 608 860  
Email: saleemmh@caa.gov.bh |
| EGYPT        | Mr. Alaa Orabi                    | Director Air Traffic Planning  
National Air Navigation Services Company  
Cairo Airport Road  
Cairo - EGYPT  
Fax: (202) 2268 0627  
Tel: (202) 2267 8889/2265 7990  
Mobile: (20100) 6666 128  
Email: alaa.orabi@nansceg.net |
|              | Mr. Ashraf Ahmed Moustafa El Khshab | Manager of Planning of TMAs and Control Zones  
National Air Navigation Services Company (NANSC)  
Cairo Air Navigation Center  
Cairo Airport Road  
Cairo-EGYPT  
Fax: (202) 2268 0627  
Tel: (202) 2265 7814  
Mobile: (20100) 5274 873  
Email: khshab@gmail.com |
|              | Mr. Ibrahim M. Hasan Melouk       | Head of ATC Inspectors  
National Air Navigation Services Company - NANSC  
Cairo International Airport Road  
Cairo - EGYPT  
Fax: (202) 2268 0627  
Tel: (202) 226226613  
Mobile: (20100) 160 2360  
Email: melouk1953@windowslive.com |
<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE &amp; ADDRESS</th>
</tr>
</thead>
</table>
| Mr. Mohamed Abdel Wahab Aly  | Technical Director of ACC  
National Air Navigation Services Company (NANSC)  
Cairo Air Navigation Center  
Cairo Airport Road  
Cairo-EGYPT  
Fax: (202) 2268 0627  
Tel: (202) 2265 7814  
Mobile: (0106)340 3444  
Email: mohamedabdelwahab47@gmail.com |
| Mr. Mohamed Ahmed Soliman     | Route Network Planning Director  
National Air Navigation Services Company (NANSC)  
Cairo Air Navigation Center  
Cairo Airport Road  
Cairo-EGYPT  
Fax: (202) 2268 0627  
Tel: (202) 2265 7814  
Mobile: (20100) 601 3043  
Email: memesoly@yahoo.com |
| Mr. Tarek Abdel Kader Aly     | Air Traffic Controller - OJTI  
National Air Navigation Services Company (NANSC)  
Cairo Air Navigation Center  
Cairo Airport Road  
Cairo-EGYPT  
Fax: (202) 2268 0627  
Tel: (202) 2265 7814  
Mobile: (20122) 2211 303  
Email: tarek.atc@hotmail.com |
| Ms. Heba Mostafa Mohamed      | Supervisor AIS Unit and Technical Coordinator  
Ministry of Civil Aviation  
Cairo Airport Road  
Cairo - EGYPT  
Fax: (202) 2268 5420  
Tel: (2020) 2417 5389  
Mobile: (20014) 7222 395  
Email: heba.mostafa1@hotmail.com |
| Mr. Mohamed Talaat Metwally   | Head of Technical Bureau for the Minister of Civil Aviation  
Ministry of Civil Aviation  
Cairo Airport Road  
Cairo - EGYPT  
Fax: (202) 2268 8378  
Tel: (202) 2696 7780  
Mobile: (2012) 22214441  
Email: motalaat@civilaviation.gov.eg |
<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE &amp; ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IRAQ</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Mr. Ali Mohsin Hashim | Director ATS  
Iraqi Civil Aviation Authority  
Baghdad International Airport  
Baghdad - IRAQ  
Tel: (964) 7815762525  
Mobile: (964-7702) 997 761 & 7815 762 525  
Email: atc_iraqcaa@yahoo.com |
| Mr. Mohanad Ali Mohammad Jwad | Supervisor ATC  
Iraqi Civil Aviation Authority  
Baghdad International Airport  
Baghdad - IRAQ  
Tel: (964) 7901540690  
Mobile: (964) 7708817030  
Email: darkness_shop@yahoo.com |
| Mr. Riad Chehayeb | Operations Mentor  
Serco/Baghdad  
Baghdad - IRAQ  
Mobile: (964) 781 875 8555  
Email: riad.chehayeb@serco.ae |
| Mr. Ed Jarvis | Senior Aviation Advisor  
Iraqi Civil Aviation Authority  
US Embassy  
Baghdad - IRAQ  
Tel: (1-240) 553 0581 Ext 3785  
Mobile: (964) 770 443 3840  
Email: jarvisej@state.gov |
| **ISLAMIC REPUBLIC OF IRAN** | |
| Mr. Saeed Akbari | General Director of Aeronautical Operation  
Supervisory Bureau  
Iran Civil Aviation Organization  
Tehran Mehrabad International Airport  
Tehran - ISLAMIC REPUBLIC OF IRAN  
Fax: (9821) 4466 5576  
Tel: (9821) 6607 3534  
Mobile: (9891) 21404462  
Email: tehran-atc@yahoo.com  
s-akbari@cao.ir |
| **JORDAN** | |
| Mr. Nayef Irshaid Al Marshoud | Director of ATM  
Civil Aviation Regulatory Commission  
P.O. Box 7547  
Amman - JORDAN  
Fax: (962-6) 489 1266  
Tel: (962-6) 489 7729  
Mobile: (962-7) 77789470  
Email: datm@carc.gov.jo |
<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE &amp; ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Suleiman Jumah Khalafat</td>
<td>Navigation Branch/Air Force Royal Jordanian Air Force RJAF HQ Amman, Marka, JORDAN Fax: (962-6) 487 4121 Tel: (962-6) 4896351 Ext 22664 Mobile: (962-7) 99827364 Email: <a href="mailto:opsnavig@rjaf.mil.jo">opsnavig@rjaf.mil.jo</a></td>
</tr>
<tr>
<td>Mr. Fuad Issa Tamimi</td>
<td>Chief Air Traffic Controller Royal Jordanian Air Force RJAF HQ Amman, Marka, JORDAN Fax: (962-6) 489 1266 Tel: (962-6) 489 7729/487 4121 Mobile: (962-7) 9907 1880 Email: <a href="mailto:fuadtata@hotmail.com">fuadtata@hotmail.com</a></td>
</tr>
<tr>
<td><strong>OMAN</strong></td>
<td></td>
</tr>
<tr>
<td>Mr. Moosa Abdulaziz Al Bulushi</td>
<td>Air Traffic Standard Officer Public Authority for Civil Aviation Muscat International Airport P.O. Box 1 CPO Seeb Muscat - SULTANATE OF OMAN Fax: (968) 24519 939 Tel: (968) 24519 501 Mobile: (968) 9980 1800 Email: <a href="mailto:mos@caa.gov.om">mos@caa.gov.om</a></td>
</tr>
<tr>
<td>Mr. Nasser Salim Al-Tuwaaya</td>
<td>Air Traffic Controller Public Authority for Civil Aviation Muscat International Airport P.O. Box 1752- Code 112 Muscat, SULTANATE OF OMAN Fax: (968) 24519523 Tel: (968) 24519 305 Mobile: (968) 95180 233 Email: <a href="mailto:nass2008@caa.gov.om">nass2008@caa.gov.om</a></td>
</tr>
<tr>
<td><strong>QATAR</strong></td>
<td></td>
</tr>
<tr>
<td>Mr. Ahmed Al-Eshaq</td>
<td>Director of ANS Civil Aviation Authority P.O.Box 3000 Doha – QATAR Fax: (974) 44656554 Tel: (974) 44622300 Mobile: (974) 55550440 Email: <a href="mailto:ahmed@caa.gov.qa">ahmed@caa.gov.qa</a></td>
</tr>
<tr>
<td>NAME</td>
<td>TITLE &amp; ADDRESS</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Ms. Lubna Al-Salman         | Air Traffic Controller  
Air Navigation Dep.  
Civil Aviation Authority  
Doha International Airport  
P.O.Box 73  
Doha – QATAR  
Fax: (974) 4465 6554  
Tel: (974) 4462 2300  
Mobile: (974) 6667 3311  
Email: lubna.alsalman@caa.gov.qa |
| SAUDI ARABIA                |                                                                                   |
| Mr. Abdulrahman S. Alzahrani| Chief ATC Unit  
General Authority of Civil Aviation  
KINGDOM OF SAUDI ARABIA  
P.O.Box 45064  
Jeddah 21444  
KINGDOM OF SAUDI ARABIA  
Fax: (966-2) 671 7717  
Tel: (966-2) 671 7717  
Mobile: (966-5) 5544 5335  
Email: absalzahrani@gcac.gov.sa |
| Mr. Abdulshakoor Abdulrahim Qashqari | Airspace Planner  
General Authority of Civil Aviation  
KINGDOM OF SAUDI ARABIA  
P.O.Box 45064  
Jeddah 21444 –  
KINGDOM OF SAUDI ARABIA  
Fax: (966-2) 671 7717 Ext 1807  
Tel: (966-2) 671 7717 Ext 1809  
Mobile: (966-5) 6889 9892  
Email: aqashqari@yahoo.com |
| Mr. Mohammed Mubairik Al-Ghanmi | A.T.C. Operation Manager  
General Authority of Civil Aviation (GACA)  
P.O.Box 6326  
Jeddah 21442  
KINGDOM OF SAUDI ARABIA  
Fax: (966-2) 685 5768  
Tel: (966-2) 685 5045  
Mobile: (966-50) 460 5501  
Email: ateghanmi@hotmail.com |
<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE &amp; ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUDAN</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Mr. Ibrahim Musa Ibrahim | ATM Director  
Sudan Civil Aviation Authority  
P.O.Box 480  
Khartoum - SUDAN  
Fax: (249-1) 8377 9125  
Tel: (249-1) 8377 5925  
Mobile: (249-91) 6113 943  
Email: Ibrahim_blia@hotmail.com  
Ibrahimblia140@gmail.com |
| Mr. Ahmed Mohamed Ahmed Ali | Air Traffic Controller  
Khartoum International Airport  
Area Navigation Centre  
Sudan Civil Aviation Authority  
Khartoum - SUDAN  
Fax: (249-1) 8377 9125  
Tel: (249-1) 8377 5925  
Mobile: (249-9) 1293 0923  
Email: ahmedmgr123@yahoo.com |
| **UNITED ARAB EMIRATES** | |
| Mr. Ahmed Al Sabiri | ATS Inspector  
General Civil Aviation Authority  
P.O. Box 6558  
Abu Dhabi  
UNITED ARAB EMIRATES  
Fax: (971-2) 405 4406  
Tel: (971-2) 405 4278  
Mobile: (971-50) 6119 357  
Email: aalsabiri@gcaa.gov.ae |
| Mr. Abdulla Al Sayed Al Hashmi | Director of Air Traffic Management  
General Civil Aviation Authority  
P.O.Box 666,  
Abu Dhabi  
UNITED ARAB EMIRATES  
Fax: (971-2) 599 6836  
Tel: (971-2) 599 6830  
Mobile: (971-50) 442 0486  
Email: ahashimi@szc.gCAA.ae |
| Mr. Saqr Almarashda | Air Traffic Control Officer  
General Civil Aviation Authority  
P.O.Box 666,  
Abu Dhabi  
UNITED ARAB EMIRATES  
Fax: (971-2) 599 6836  
Tel: (971-2) 599 6831  
Mobile: (971-50) 761 1717  
Email: smarashda@szc.gCAA.ae |
<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE &amp; ADDRESS</th>
</tr>
</thead>
</table>
| CANSO | Director Middle East Affairs  
CANSO  
SAUDI ARABIA  
Fax: (966-2) 640 1477  
Tel: (966-2) 672 6595  
Mobile: (966-50) 3356 993  
Email: salem.jahdli@canso.org |
| EUROCONTROL | Head of Section – Airspace Design  
EUROCONTROL  
Rue de la Fusée 96  
B-1130 Brussels  
Fax: (32-2) 729 9003  
Tel: (32-2) 729 3134  
Mobile: (32) 485 568 570  
Email: tihomir.todorov@eurocontrol.int |
| IATA | Director SO&I  
IATA, MENA  
King Abdallah II Street  
P.O.Box 940587  
Amman 11194, JORDAN  
Fax: (962-6) 593 9921  
Tel: (962-6) 580 4256  
Mobile: (962-79) 704 5559  
Email: baumann@iata.org |
| Mr. Grant Wilson | Assistant Director - Infrastructure  
Middle East & North Africa  
International Air Transport Association  
IATA  
P.O.Box 940587  
Amman 11194 Jordan  
Fax: (962-6) 593 9921  
Tel: (962-6) 580 4253  
Mobile: (962-79) 666 9548  
Email: wilsongr@iata.org |
| Mr. Peter J. Raw | Manager Aeronautical Svcs & ATM  
Emirates Airline  
The Emirates Group Headquarters  
P.O. Box 92  
Dubai-United Arab Emirates  
Fax: (971) 4286 4085  
Tel: (971) 4708 4302  
Mobile: (971) 50950 8624  
Email: peter.raw@emirates.com |
<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE &amp; ADDRESS</th>
</tr>
</thead>
</table>
| MIDRMA | MIDRMA Manager  
Mr. Fareed Abdullah Al Alawi | Civil Aviation Affairs  
P.O. Box 586  
KINGDOM OF BAHRAIN  
Fax: (973) 17 329 966  
Tel: (973) 17 321 158  
Mobile: (973) 39 651 596  
Email: falalawi@caa.gov.bh |
| Mr. Fathi Ibrahim Al-Thawadi | MIDRMA Officer  
MIDRMA  
P.O. Box 50468  
KINGDOM OF BAHRAIN  
Fax: (973) 19 329 956  
Tel: (973) 17 329 054  
Mobile: (971) 39 676 614  
Email: midrma@midrma.com |

- END -