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DIRECTORATE GENERAL OF CIVIL AVIATION
AERONAUTICAL INFORMATION SERVICE (AIS)
KUWAIT INTERNATIONAL AIRPORT

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**AIRAC AIP
SUPPLEMENT**
NR 02/21
DATE: 16/03/2021

EMAIL: aip@dgca.gov.kw.

WITH EFFECT FROM (WET) 20 MAY 2021 0001UTC

AERODROME (AD)

KUWAIT INTERNATIONAL AIRPORT

**INSTALLATION OF NEW DVOR/DME RADIO NAVIGATION AID AT NEW LOCATION,
INSTALLATION NEW INSTRUMENT LANDING SYSTEM (ILS) FOR RUNWAY 15L, RUNWAY
33R RUNWAY 15R AND RUNWAY 33L
AND REALIGNMENT OF AIRWAYS SECTORS BASED ON NEW DVOR/DME NAVAID LOCATED
AT NEW SITE.**

1. INTRODUCTION

1.1 A new DVOR/DME radio navigational aid KUA is located on a new site on the extended centreline of Runway 33L at 1174m from Threshold Runway 15R, and a New Instrument Landing System (ILS) for Runway 15L, Runway 33R Runway 15R And Runway 33L for CAT I and CAT II has been installed at Kuwait International Airport.

1.2 The purpose of this AIP Supplement is to notify the aviation industry of the new location of the new DVOR/DME and the New Instrument Landing System (ILS), realignment of airways sectors anchored to the new DVOR/DME. Relevant information pertaining to the new navaid and the New Instrument Landing System (ILS) provided in this AIP Supplement is presented in similar ICAO format applicable for the Aeronautical Information Publication.

2. LOCATION AND DETAILS OF NEW RADIO NAVIGATION AID

2.1 The new location and details of the DVOR/DME KUA that will replace the existing DVOR/DME KUA are as follows:

Type of aid	IDENT	Frequency	Hours of operation	Position of Transmitting Antenna Co-ordinates WGS 84	DME Transmitting Antenna Elevation/ REMARKS
DVOR/DME	KUA	114.15MHz /CH88Y	H24	29° 14' 56.99" N 047° 57' 16.77" E	DME antenna Elevation ELEV 174ft(53m) AMSL

3. NEW DATA

3.1 Revised radio navigation and landing aids data of the new ILS facilities.

AD2.OKBK-10 2.19 RADIO NAVIGATION AND LANDING AIDS

Type	IDENT	Frequency	Position of Transmitting Antenna Co-ordinates WGS 84	OPR Hour	Remarks
1	2	3	4	5	6
ILS LLZ RWY 33L CAT II	IKIA	109.5 MHz	29°14'39.41" N 047°57'34.26" E	24h	0.25 NM from THR15R
ILS GP RWY 33L CAT II	N/A	332.6 MHz	29°12'54.056" N 047°58'24.93" E	24h	0.19 NM beyond THR33L GP angle 3.0° RDH 56 ft
ILS DME RWY 33L	IKIA	32 X	29°12'54.20" N 047°58'25.19" E	24h	Co-located with GP ELEV 186.25 ft
ILS LLZ RWY 15R CAT II	IKIB	111.3 MHz	29°12'36.30" N 047°58'39.67" E	24h	0.17 NM from THR33L

ILS GP RWY 15R CAT II	N/A	332.3 MHz	29°14'15.43" N 047°57'41.69" E	24h	0.17 NM beyond THR15R GP angle 3.0° RDH 52 ft
ILS DME RWY 15R	IKIB	50 X	29°14'15.50" N 047°57'41.98" E	24h	Co-located with GP ELEV 158.73 ft
ILS LLZ RWY 15L CAT II	IKIC	110.1 MHz	29°12'21.21" N 048°00'07.75" E	24h	0.44 NM from THR33R
ILS GP RWY 15L CAT II	N/A	334.4 MHz	29°14'21.49" N 047°59'09.10" E	24h	0.14 NM beyond THR15L GP angle 3.0° RDH 55 ft
ILS DME RWY 15L	IKIC	38 X	29°14'21.36" N 047°59'08.84" E	24h	Co-located with GP ELEV 182.215 ft
ILS LLZ RWY 33R CAT II	IKID	110.5 MHz	29°14'37.43" N 047°58'55.40" E	24h	0.16 NM from THR15L
ILS GP RWY 33R CAT II	N/A	329.6 MHz	29°12'57.01" N 047°59'53.97" E	24h	0.18 NM beyond THR33R GP angle 3.0° RDH 56 ft
ILS DME RWY 33R	IKID	42 X	29°12'56.92" N 047°59'53.69" E	24h	Co-located with GP ELEV 220.079 ft
DVOR/ DME	KUA	114.15MHz CH88 Y	29°14'56.98" N 047°57'16.77" E	24h	1174m from THR15R ELEV 174 ft
DVOR	KFR	112.0 MHz CH57 X	28°37'15.25" N 047°57'29.48" E	24h	37 NM South from KIA (OKBK)

4. Realignment of air routes in Control Area, Control Zone and adjustment of ATC Surveillance Minimum Altitude Chart.

4.1 The existing end sectors of air routes anchored on the existing DVOR/DME KUA are realigned to the new DVOR/ DME KUA.

4.2 Details of the changes to Control Area (CTA), ATC Surveillance Minimum Altitude Chart, Control Zone and and realignment of airway tracks are shown as follows:-

APPENDIX A – Kuwait Control Area (CTA).

APPENDIX B - Enroute Chart.

APPENDIX C – Area Chart.

APPENDIX D - Kuwait Control Zone (CTR)

APPENDIX F - ATC Surveillance Minimum Altitude chart

4.3 Significant changes to Terminal area, tracks and Distances, are shown in tables APPENDIX B1 to B5.

4.4 The following Pages and charts pertaining to Kuwait international Airport in AIP Kuwait are superseded and withdrawn:

ENR 2.1-1 KUWAIT CONTROL ZONE (CTR)

ENR 3.1-2 to 3.1-5 and 3.2-2 ATS RUOTES

ENR 6.1-1 ENROUTE CHART

OKBK AD 2 -35 ATC SURVEILLANCE MINIMUM ALTITUDE CHART

OKBK AD 2 -37 AERA CHART

4.5 The following affected chart in AIP Kuwait will be updated through AIP Amendment:

ENR 6.1-1 Enroute chart-ICAO.

OKBK AD 2 -35 ATC SURVEILLANCE MINIMUM ALTITUDE CHART

OKBK AD2- 37 Area Chart-ICAO

5. IMPLEMENTATION

5.1 This AIP Supplement will become effective on 20 MAY 2021 when the new DVOR/DME KUA radio navigational aid is commissioned for operations. A trigger NOTAM will be issued notifying the effective date of implementation of the new NAVAID and cessation of operation of the old KUA DVOR/DME.

6. CANCELLATION

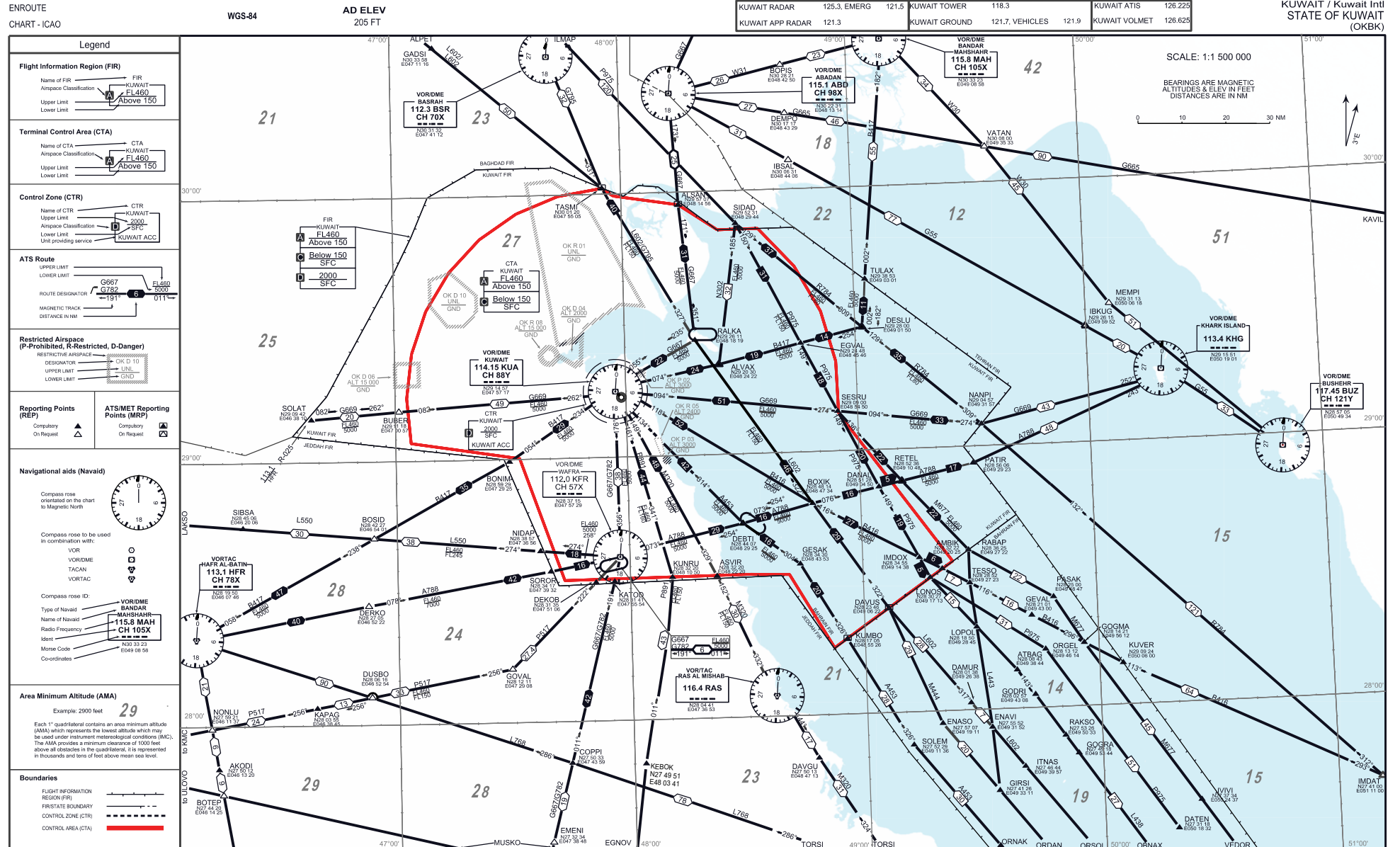
6.1 This AIP Supplement will remain current until the information is published in AIP Kuwait.

Director Air Navigation Department

AIR TRAFFIC SERVICES AIRSPACE

ENR 2.1 FIR, CTA					
Name Lateral limits & Vertical limits Co-ordinates (WGS - 84)	Class of Airspace	Unit Providing Service	Call sign Languages Hours of Operation	Frequency/ Purpose	Remarks
1a	1b	2	3	4	5
Kuwait Flight Information Region (FIR):- N29 06 04 E046 33 11 - N29 15 02 E046 42 11 N29 43 19 E047 00 24 - N29 51 05 E047 04 54 N30 00 01 E047 09 20 - N30 06 13 E047 22 17 N30 06 13 E047 42 28 - N30 01 13 E047 55 28 N29 59 24 E048 00 42 - N30 01 46 E048 04 34 N30 01 20 E048 09 52 - N29 51 10 E048 24 51 N29 51 00 E048 45 00 - N29 13 11 E049 40 03 N29 00 11 E049 27 03 - N28 44 11 E049 40 03 N28 15 00 E048 52 00 - then following the Saudi Arabia territorial waters and Kuwait / Saudi Arabia International boundary to the point N29 06 04 E046 33 11.	A FL460 above FL 150	KUWAIT ACC	Kuwait Center / Radar (English) H24	125.300 MHz	Traffic is required to contact Kuwait ACC/ FIC at least 10 minutes prior to entering Kuwait FIR. ATC airspace classification does not apply to military restricted airspace.
	C Below FL 150 SFC			132.100 MHz (Stand by)	
	D 2000 FT SFC			121.500MHz (Emergency)	
1a	1b	2	3	4	5
Kuwait Control Area (CTA):- N29 08 28 E048 55 03 - then along a semi-circle of 50NM radius centered on 'KUA' DVOR (N29 14 56.98 E047 57 16.76) to the point: N29 51 11 E048 37 03 - then along the following points: N29 51 11 E048 30 03 - N29 51 09 E048 25 00 N29 57 07 E048 14 56 - N29 59 30 E047 58 00 N30 01 20 E047 55 05 - then along a semi-circle of 48NM radius centered on 'KUA' DVOR to the point: N29 04 11 E047 03 15 - N29 00 11 E047 32 03 N28 32 11 E047 43 03 - N28 32 30 E048 31 03 N28 32 10 E048 41 00 - N28 15 00 E048 52 00 N28 33 58 E049 23 10 - N29 08 28 E048 55 03	A FL460 above FL 150	KUWAIT APP	Kuwait Approach / Radar (English) H24	124.800 MHz	MAX IAS 250 KTS below ALT 10000 FT.
	C Below FL 150 SFC			121.300 MHz (Stand by)	
				121.500 MHz (Emergency)	

Appendix B



ENR 3. ATS ROUTES
ENR 3.1 LOWER AND AREA NAVIGATION (RNAV) ROUTES

Route Designator (RNAV Type) Significant Points	Track (MAG)	Dist (NM)	Change Over Point/ C O P (NM)	Upper Limit Lower Limit MNM FLT ALT	Class of Airspace	Lateral Limits (NM)	Direction of Cruising Levels	Remarks Controlling Unit
1	2	3	4	5	6	7	8	9
A453 ALFA FOUR FIVE THREE RNAV5-FL160/FL460  KUMBO N28 17 05 E048 55 26 ▲ GESAK N28 34 30 E048 43 53 ▲ DEBTI N28 44 07 E048 29 25 ▲ KUWAIT DVOR/DME (KUA) N29 14 57 E047 57 17								WESTBOUND ONLY
								Transfer of Control Kuwait FIR
	326°	20		FL 460 FL 160	A at or above FL 150		EVEN ↓	Bahrain FIR Contact Kuwait ACC at least 5 minutes prior to entering FIR
	304°	16		5 000FT	C Below FL 150 SFC			
	314°	42						
A 788 ALFA SEVEN EIGHT EIGHT RNAV5-FL160/FL 460 ▲ SOROR N28 34 17 E047 39 32 ▲ WAFRA DVOR/DME (KFR) N28 37 15 E047 57 29 ▲ DEBTI N28 44 07 E048 29 25 ▲ BOXIK N28 48 14 E048 47 34 ▲ DANAL N28 51 28 E049 04 50 ▲ RETEL N28 52 36 E049 10 48 ▲ PATIR N28 56 06 E049 29 23								EASTBOUND ONLY
								Jeddah FIR Kuwait FIR
	073°	16					ODD ↓	
	073°	29		FL 460 FL 160	A at or above FL 150			
		16				10		INT. A453
		16		5 000 FT	C Below FL 150 SFC			20 NM Longitudinal Separation between Kuwait ACC and Tehran ACC
	076°	5						Contact Kuwait ACC at least 10 minutes prior to entering FIR
		17						Kuwait FIR Tehran FIR

Route Designator (RNAV Type) Significant Points	Track (MAG)	Dist (NM)	Change Over Point/ C O P (NM)	Upper Limit Lower Limit MNM FLT ALT	Class of Airspace	Lateral Limits (NM)	Direction of Cruising Levels	Remarks Controlling Unit	
1	2		3		4	5	6		
B416 BRAVO FOUR ONE SIX RNAV5-FL160/FL460 KUWAIT ▲ DVOR/DME (KUA) N29 14 57 E047 57 17 BOXIK ▲ N28 48 14 E048 47 34 IMDOX ▲ N28 34 55 E049 14 38 AMBIK ▲ N28 32 22 E049 20 25	118°	52		FL 460 FL 160 5 000 FT	A FL 460 at or above FL 150 C Below FL 150 SFC	10	ODD ↓		
		27							
	116°	6							Transfer of Control Kuwait FIR
									Bahrain FIR
	B417 BRAVO FOUR ONE SEVEN RNAV5-FL160/FL460 ▲ BONIM N28 59 29 E047 29 25 ▲ KUWAIT DVOR/DME (KUA) N29 14 57 E047 57 17 △ ALVAX N29 20 30 E048 24 22 ▲ EGVAL N29 24 48 E048 45 45 △ DESLU N29 28 00 E049 01 50 ▲ TULAX N29 38 53 E049 03 01	054° 234°	29		FL 460 FL 160 5 000 FT	A FL 460 at or above FL 150 C Below FL 150 SFC	10	ODD ↓	Jeddah FIR
074° 254°		24					20 NM Longitudinal Separation between Kuwait ACC and Tehran ACC		
		19							
		14					↑ EVEN	Contact Kuwait ACC at least 10 minutes prior to entering FIR	
		002° 182°	11						Kuwait FIR
									Tehran FIR

Appendix B4

ENR 3.1-4

ATS ROUTES

Route Designator (RNAV Type) Significant Points	Track (MAG)	Dist (NM)	Change Over Point/ C O P (NM)	Upper Limit Lower Limit MMN FLT ALT	Class of Airspace	Lateral Limits (NM)	Direction of Cruising Levels	Remarks Controlling Unit
1		2		3		4	5	6
G782 GOLF SEVEN EIGHT TWO RNAV5-FL160/FL460 ▲ KUWAIT DVOR/DME (KUA) N29 14 57 E047 57 17 ▲ WAFRA DVOR/DME (KFR) N28 37 15 E047 57 29 ▲ KATOD N28 31 41 E047 55 54 ▲ COPPI N27 50 33 E047 43 59	176° 356° 191° 011° 191° 011°	38 6 42		FL 460 FL 160 5000 FT	A FL 460 at or above FL 150 C Below FL 150 SFC	10	ODD ↓ ↑ EVEN EVEN ↓ ↑ ODD	Transfer of Control Kuwait ACC Jeddah ACC
G795 GOLF SEVEN NINE FIVE RNAV5-FL160/FL460 ▲ RALKA RDL 051 KUA 22 DME N29 26 11 E048 18 19 ▲ TASMI N30 01 20 E047 55 05	327°			FL 460 FL 160 5000 FT	A FL 460 at or above FL 150 C Below FL 150 SFC		EVEN ↓	Kuwait FIR Baghdad FIR

ATS ROUTES

Route Designator (RNAV Type) Significant Points	Track (MAG)	Dist (NM)	Change Over Point/ C O P (NM)	Upper Limit Lower Limit MNM FLT ALT	Class of Airspace	Lateral Limits (NM)	Direction of Cruising Levels	Remarks Controlling Unit
1	2			3		4	5	6
M320 MIKE THREE TWO ZERO RNAV5-FL160/FL 460 ▲ KUWAIT DVOR/DME (KUA) N29 14 57 E047 57 17 ▲ ASVIR N28 32 20 E048 22 20								
	149° 329°	48		FL 460 FL 160 5000 FT	A FL 460 at or above FL 150	10	ODD ↓ ↑ EVEN	Kuwait FIR Jeddah FIR
M677 MIKE SIX SEVEN SEVEN RNAV5-FL160/FL460 ▲ SESRU N29 09 00 E048 54 50 ▲ RETEL N28 52 36 E049 10 48 ▲ RABAP N28 36 25 E049 27 22								
	136°	22		FL 460 FL 80 5000 FT	A FL 460 at or above FL 150 C Below FL 150 SFC	10	ODD ↓	EAST BOUND ONLY Transfer of Control Kuwait FIR Bahrain FIR

Route Designator (RNAV Type) Significant Points	Track (MAG)	Dist (NM)	Change Over Point/ C O P (NM)	Upper Limit Lower Limit MNM FLT ALT	Class of Airspace	Lateral Limits (NM)	Direction of Cruising Levels	Remarks Controlling Unit
1	2			3		4	5	6
N302 NOVEMBER THREE ZERO TWO RNAV5-FL160/FL460 ▲ SIDAD N29 52 31 E048 29 44 △ ALVAX N29 20 30 E048 24 22								Baghdad FIR
	185°	32		FL 460 FL 80 5000 FT	A FL 460 at or above FL 150 C Below FL 150 SFC	10	ODD ↓	Kuwait FIR
R784 ROMEO SEVEN EIGHT FOUR RNAV5-FL160/FL460 ▲ SIDAD N29 52 31 E048 29 44 △ DESLU N29 28 00 E049 01 50 ▲ NANPI N29 04 57 E049 31 57								Baghdad FIR
	129° 309°	37		FL 460 FL 160 5000 FT	A FL 460 at or above FL 150 C Below FL 150 SFC	10	ODD ↓	Kuwait FIR 20 NM Longitudinal Separation between Kuwait ACC and Tehran ACC Contact Kuwait ACC at least 10 minutes prior to entering FIR Kuwait FIR
		35						

ATS ROUTES

Route Designator (RNAV Type)	Track (MAG)	Dist (NM)	Change Over Point/ C O P (NM)	Upper Limit Lower Limit MNM FLT ALT	Class of Airspace	Lateral Limits (NM)	Direction of Cruising Levels	Remarks Controlling Unit
Significant Points								
1	2		3		4	5	6	
L 550 LIMA FIVE FIVE ZERO RNAV5-FL160/FL 460 ▲ WAFRA DVOR/DEM (KFR) N28 37 15 E047 57 29 ▲ NIDAP N28 38 57 E047 36 56	274°	18		FL 460 FL 160	A FL 460 at or above FL 150	10	EVEN ↓	Kuwait FIR Jeddah FIR
L 602 LIMA SIX ZERO TWO RNAV5-FL160/FL 460 ▣ DAVUS N28 23 46 E049 06 22 ▲ BOXIK N28 48 14 E048 47 34 ▲ RALKA RD 051 KUA N29 26 11 E048 18 19 ▲ TASMI N30 01 20 E047 55 05								Bahrain FIR
	322°	29		FL 460 FL 160	A FL 460 at or above FL 150	10	EVEN ↓	Kuwait FIR
		46	Contact Kuwait ACC at least 5 minutes prior to entering FIR.					
		41						
	327°	40			Kuwait FIR Baghdad FIR			

ATS ROUTES

Route Designator (RNAV Type)	Track (MAG)	Dist (NM)	Change Over Point/ C O P (NM)	Upper Limit Lower Limit MNM FLT ALT	Class of Airspace	Lateral Limits (NM)	Direction of Cruising Levels	Remarks Controlling Unit
Significant Points								
1	2		3		4	5	6	
P 517 PAPA FIVE ONE SEVEN RNAV5-FL160/FL 460 ▲ WAFRA DVOR/DME (KFR) N28 37 15 E047 57 29 ▲ DEKOB N28 31 35 E047 51 06	222°	8		FL 460 FL 160	A FL 460 at or above FL 150	10	EVEN ↓	RNAV ROUTE WAFRA TO DEKOB Kuwait FIR Jeddah FIR
P 891 PAPA EIGHT NINE ONE RNAV5-FL160/FL 460 ▲ KUNRU N28 32 20 E048 10 50 ▲ KUWAIT DVOR/DME(KUA) N29 14 57 E047 57 17	341°	44		FL 460 FL 160	A FL 460 at or above FL 150	10	EVEN ↓	 Jeddah FIR Kuwait FIR
P 975 PAPA NINE SEVEN FIVE RNAV5-FL160/FL 460 ▲ SIDAD N29 52 31 E048 29 44 ▲ EGVAL N29 24 48 E048 45 45 ▲ SESRU N29 09 00 E048 54 50 ▲ DANAL N28 51 28 E049 04 50 ▲ IMDOX N28 34 55 E049 14 38 ▲ LONOS N28 30 27 E049 17 13	150°	31						RNAV ROUTE SIDAD TO LONOS Baghdad FIR Kuwait FIR Contact Kuwait ACC at least 10 minutes prior to entering FIR
	149°	18						
		20						
		5						
		5						
								INT. ATS ROUTE M677 Kuwait FIR Transfer of control Bahrain FIR

KUWAIT / Kuwait International

2.16 HELICOPTER LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared	NIL
6	Lighting	NIL
7	Remarks	NIL

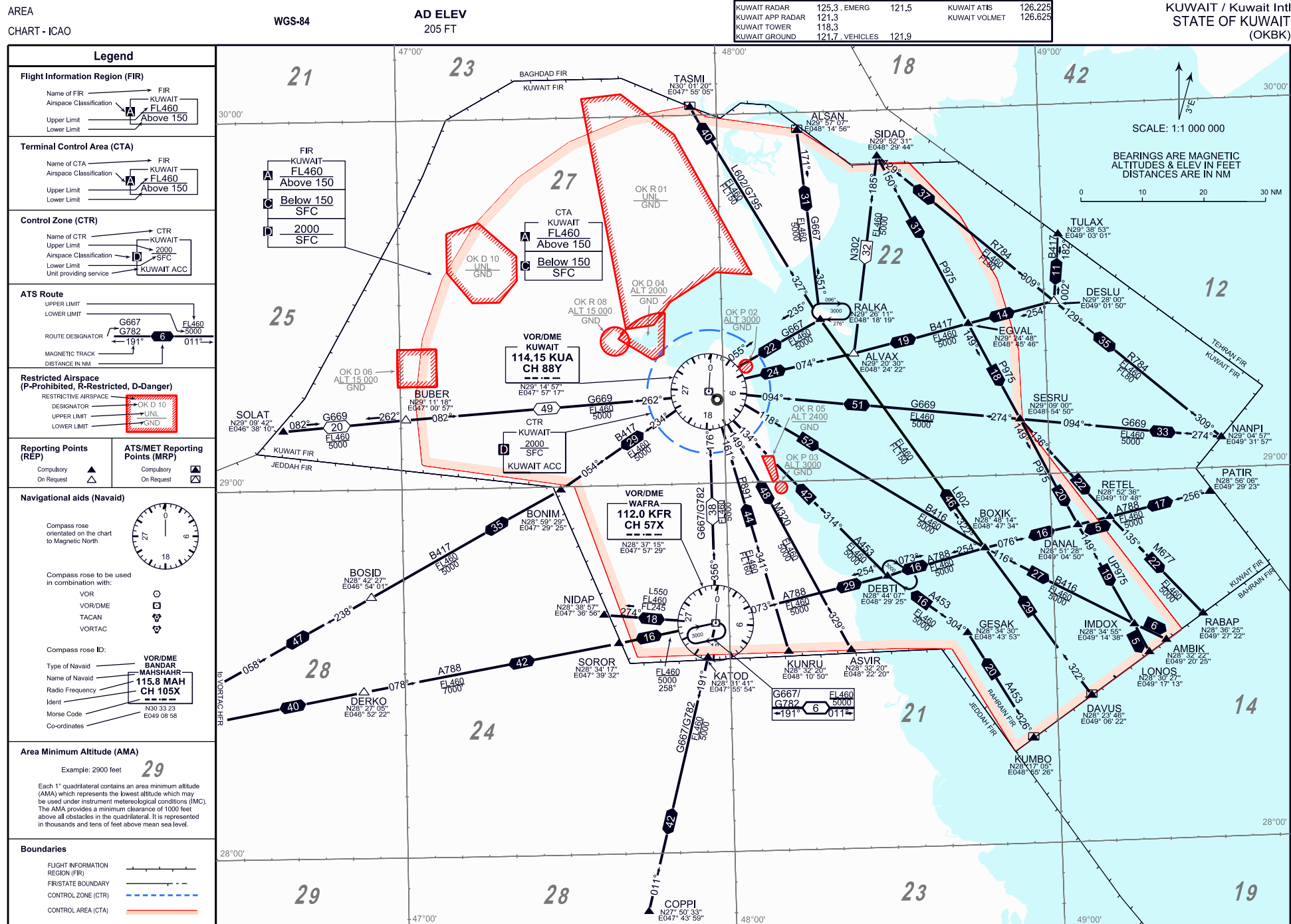
2.17 ATS AIRSPACE

1	Designation and lateral limits	Kuwait CTR Circle radius 10 NM centered on KUA DVOR/DME at coordinates: N29 14 56.99 E047 57 16.77
2	Vertical limits	Lower limit: GND - Upper limit: ALT 2 000FT AGL
3	Airspace classification	D
4	ATS unit, Call sign Language(s)	Kuwait Tower English
5	Transition altitude	13 000 FT
6	Remarks	Radio communication to be established with ATC prior to CTR entry.

2.18 ATS COMMUNICATION FACILITIES

Service	Call sign	Frequency	Hours of operations	Remarks
1	2	3	4	5
ACC/RSR	Kuwait Radar	125.300 MHz 132.100 MHz 121.500 MHz	H24	Primary Secondary Emergency
APP/RSR	Kuwait Approach Radar	124.800 MHz 121.300 MHz 121.500 MHz	H24	Primary Secondary Emergency
TWR	Kuwait Tower	118.300 MHz 121.500 MHz	H24	Primary Emergency
GMC	Kuwait Delivery	126.775 MHz	0300 - 2100 Daily	REQ . 10 Minutes prior to start up
	Kuwait Ground Movement Control	121.700 MHz 121.900 MHz 121.500 MHz	H24	Primary For Vehicles Emergency
D-ATIS/ATIS	Kuwait Information	126. 225 MHz	H24	
D-VOLMET/ VOLMET	Kuwait Volmet	126. 625 MHz	H24	

Appendix D



ATC SURVEILLANCE MINIMUM
ALTITUDE CHART - ICAO
CHART - ICAO

WGS-84

AD ELEV
205 FT

KUWAIT RADAR	125.3, EMERG	121.5	KUWAIT ATIS	126.225
KUWAIT APP RADAR	124.8		KUWAIT VOLMET	126.625
KUWAIT TOWER	118.3			
KUWAIT GROUND	121.7, VEHICLES	121.9		

KUWAIT/Kuwait Intl
STATE OF KUWAIT
(OKBK)

In case of communication failure
aircraft shall conform to the
general procedures specified
in Annex 10, Volume II.

BEARINGS ARE MAGNETIC
ALTITUDES IN FEET

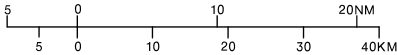
Example: 2900 feet **29**

Each 1° quadrilateral contains an eare minimum altitude
(AMA) which represents the lowest altitude which may
be used under instrument meteorological conditions (IMC).
The AMA provides a minimum clearance of 1000 feet
above all obstacles in the quadrilateral. It is represented
in thousands and tens of feet above mean sea level.

Sector & min Altitude **2300'**



SCALE: 1 : 1 000 000



This chart may be used
for cross-checking of altitudes
assigned while under radar
control.

SECTOR COORDINATES

1	N29 15 02.00	E046 42 11.00
2	N29 43 18.83	E047 00 23.94
3	N29 51 08.78	E047 04 55.71
4	N29 56 27.79	E047 07 37.77
5	N30 00 01.00	E047 09 20.00
6	N30 06 12.99	E047 22 17.00
7	N30 06 12.99	E047 42 28.00
8	N29 59 24.00	E048 00 42.00
9	N30 01 45.00	E048 04 33.99
10	N30 01 19.99	E048 09 51.99
11	N29 51 08.99	E048 24 59.99
12	N29 51 20.99	E048 45 02.99
13	N29 13 10.99	E049 40 03.00
14	N29 00 10.63	E049 27 05.06
15	N28 44 11.00	E049 40 03.00
16	N28 34 04.18	E049 23 13.27
17	N28 15 00.00	E048 52 00.00
18	N28 32 09.99	E048 40 59.99
19	N28 32 11.00	E047 43 03.00
20	N28 42 01.39	E047 39 05.61
21	N29 00 11.00	E047 32 03.00
22	N29 01 20.07	E047 21 24.74
23	N29 06 03.99	E046 33 19.00
24	N29 11 18.48	E046 38 24.63
25	N29 14 06.09	E047 13 07.49
26	N29 16 36.35	E047 16 22.90
27	N29 26 43.62	E047 29 51.43
28	N29 27 23.96	E047 37 08.86
29	N29 26 40.02	E047 41 26.77
30	N29 06 25.48	E047 53 12.87
31	N28 42 20.98	E047 47 22.49
32	N28 41 23.49	E047 47 22.49
33	N28 41 52.22	E048 06 09.04
34	N28 32 21.73	E048 07 19.29
35	N28 31 41.37	E047 47 22.48

