INTERNATIONAL CIVIL AVIATION ORGANIZATION

AFI REGIONAL SIGMET GUIDE

ELEVENTH EDITION — NOVEMBER 2021

Note: This edition includes changes agreed for Amendment 78 to Annex 3 (applicable Nov 2018)

APPENDIX C

SIGMET TEST PROCEDURES

Contents

CHAPTER 1 ─ REGIONAL SIGMET TEST PROCEDURES

1. Introduction

1.1.   The Meteorology Divisional Meeting (2002) formulated Recommendation 1/12 b), *Implementation of SIGMET requirements,* which called, *inter alia,* for the relevant planning and implementation regional groups (PIRGs) to conduct periodic tests of the issuance and reception of SIGMET messages, especially those for volcanic ash.

1.2.   This document describes the procedures for conducting regional SIGMET tests. The test procedures encompass all the three types of SIGMET, as follows:

- SIGMET for volcanic ash (WV SIGMET);
- SIGMET for tropical cyclone (WC SIGMET); and
- SIGMET for other weather phenomena (WS SIGMET).

1.3.   The requirements for dissemination of SIGMET are specified in Annex 3, Appendix 6, 1.2 and in this guide Section 3 Paragraph 3.6 to the AFI SIGMET Guide.

1.4.   Tropical cyclone and volcanic ash cloud SIGMETs will be referred to hereafter as `WC` SIGMET (due to the T_1T_2 section of the WMO AHL being set to `WC`) and `WV` SIGMET (due to the T_1T_2 section of the WMO AHL being set to `WV`) respectively. All other SIGMET types will be referred to by `WS` (due to the T_1T_2 section of the WMO AHL being set to `WS`).

2. Purpose and scope of regional SIGMET tests

2.1.   The purpose of the regional SIGMET tests is to check the awareness of participating MWOs of the ICAO requirements for the issuance of SIGMET and the compliance of the States' procedures for preparation and dissemination of SIGMET bulletins with the relevant ICAO Standards and Recommended Practices (SARPs) and regional procedures.

2.2.   An MWO is at liberty to issue SIGMET test messages for local reasons (i.e. testing of local systems/routing etc.). Whilst such tests may not involve other MWOs or agencies directly, it is recommended that the general principles of this guide be followed with regard to local, ad hoc testing.

Note: It is recommended that MWO's consider issuing SIGMET test messages following upgrades to operational SIGMET or dissemination systems.

2.3.   Hereafter, references to 'SIGMET tests' or 'tests' should be understood to refer to AFI regional SIGMET tests.

2.4.   The scope of the tests is to check also the interaction (where appropriate, depending on regional requirements) between the tropical cyclone advisory centres (TCAC) and volcanic ash advisory centres (VAAC), and the MWOs in their areas of responsibility. Therefore, where the issuance of `WC` and `WV` SIGMET is being tested, the TEST SIGMET messages initiated by the MWO should normally be triggered by a test advisory issued by the respective TCAC or VAAC.

2.5.   Dakar and Pretoria regional OPMET data banks (RODB) will monitor the dissemination by filing all TEST SIGMETs and advisories and the corresponding reception times. The monitoring results for `WC`,

WV and **WS** SIGMET will be provided in the form of summaries to the SIGMET test focal points given in section 3.4.3 with a copy to the ICAO Regional Office Dakar and Nairobi

2.6.   A consolidated summary report will be prepared by both the SIGMET test focal points and submitted to the ICAO regional office Dakar and Nairobi. The report will include recommendations for improvement of the SIGMET exchange and availability. The results of the tests should be reported to the AFI Infrastructure and Information Management Sub-Group (IIM/SG) meetings.

2.7.   Participating States, for which discrepancies of the procedures or other findings are identified by the tests, will be advised by the ICAO Regional Office and requested to take necessary corrective action.

3. SIGMET test procedures

3.1.   **Procedures for WC and WV SIGMET tests**

3.1.1.   Participating units

3.1.1.1.   **Tropical Cyclone Advisory Centres (TCAC):**
        TCAC, La Reunion

3.1.1.2.   **Volcanic Ash Advisory Centres (VAAC):**
        VAAC, Toulouse

3.1.1.3.   **Regional OPMET Data Banks (RODB):**
        RODB Dakar
        RODB Pretoria

3.1.1.4.   **Meteorological Watch Offices (MWO):**
        All MWOs listed in AFI eANP Volume II Part V Table MET II-1, under the
        responsibility of the corresponding TCACs and VAACs.

3.1.2.   WV/WC SIGMET test messages

3.1.2.1.   On the specified date for the test Time (UTC) to be agreed by ICAO Dakar and Nairobi Regional Offices, the participating VAAC and TCAC should issue a TEST VA or TC advisory[1]. The structure of the TEST advisories should follow the standard format given in Annex 3 with indication that it is a test message using the TEST indicator at the appropriate position of the SIGMET, and as shown in Attachment C-0 to this Appendix.

3.1.2.2.   MWOs, upon receipt of the TEST VA or TC advisory, should issue a TEST SIGMET for volcanic ash (**WV**) or tropical cyclone (**WC**), respectively, and send it to all participating RODBs. The WMO AHL, the first line of the SIGMET, and the FIR reference in the second line of the SIGMET should be valid entries. The remainder of the body of the message should contain only the specified 'TEST' indicator. TEST SIGMETs should normally have short validity periods (10 minutes), but where appropriate TEST SIGMET may be issued with validity periods up to the maximum allowed (4 hours for **WS**, 6 hours for **WC** and **WV**').

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[1] Note, although not within the scope of this document, the VA and TC advisory messages also include TEST and EXER Indicators
   with effect from Amendment 78. Consult ICAO Annex 3 Table A2-1 and A2-2 accordingly.

3.1.2.3.   If the MWO does not receive the TEST VA or TCA advisory within 30 minutes of the commencement time of the test then they should still issue a TEST SIGMET indicating that the VAA or TCA was not received. See Attachment C-0 for an examples of the test message.

3.1.2.4.   The use of the TEST indicator and the next sequence number will avoid over-writing of previously issued and valid SIGMETs. To avoid any possible risk of confusion during genuine volcanic eruptions or tropical cyclone events, then TEST SIGMET for VA or TC should not be sent in the case where there is a valid SIGMET of the same type for the MWO's area of responsibility. However, in this case the responsible MWO should notify the WV/WC SIGMET test focal point as given in 3.4.1.3 so that they can be excluded from the analysis.

3.2.   **Procedures for WS SIGMET tests**

The WS SIGMET is initiated by the MWO at the designated time in 3.2.2 for the hazardous phenomena specified by ICAO Regional Offices Dakar and Nairobi. It is not initiated by an advisory as in the WC and WV SIGMET tests.

3.2.1.   Participating units

Each Regional Office should develop its own list of participating units, using the template below:

3.2.1.1.   **Regional OPMET Data Banks (RODB):**
        RODB Dakar
        RODB Pretoria

3.2.1.2.   **Meteorological Watch Offices (MWO):**
        All AFI States MWOs listed in AFI eANP Volume II Part V Table MET II-1.

3.2.2.   WS SIGMET Test Message

3.2.2.1.   The MWOs should issue a TEST SIGMET during the 10-minute period within the issue time specified in the State Letter communicating the SIGMET Test.

3.2.2.2.   The WMO AHL, the first line of the SIGMET, and the FIR reference in the second line of the SIGMET should be valid. The remainder of the body of the message should contain only the 'TEST' indicator. TEST SIGMETs should normally have short validity periods (10 minutes), but where appropriate TEST SIGMET may be issued with validity periods up to the maximum allowed (4 hours for `WS`, 6 hours for `WC` and `WV`'.

3.3.   **Common procedures**

3.3.1.   Special procedure to avoid overwriting of a valid WV/WC/WS SIGMET

3.3.1.1.   It is vital to ensure that the use of the 'TEST' indicator is intended to ensure that messages are correctly processed and not used for operational decision making. Accordingly, it is suggested that Test SIGMETs will use the next normally available sequence number for test SIGMET messages or the first available sequence number of any pre-defined letter assigned to test SIGMETs for those States identifying SIGMETs using an alphanumerical sequence number (ex: A3 or B03)..

For example, a SIGMET test is scheduled for 0200 UTC on the 29th. Three SIGMETs have already been issued for the FIR since 0001 UTC. The TEST SIGMET is issued as follows:

WSSG31 GOBD 290200
GOOO SIGMET 4 VALID 290200/290210 GOBD-
GOOO DAKAR FIR TEST SIGMET PLEASE DISREGARD=

3.3.2.   The test date and time

3.3.2.1.   ICAO Dakar and Nairobi Regional Offices will set a date and time for each SIGMET test after consultation with the participating VAACs, TCACs and RODBs. The information about the agreed date and time will be sent to all States concerned by a State letter and copied to the States' SIGMET Tests Focal Points.

3.3.2.2.   Tests for different types of SIGMET should preferably be conducted on separate dates.

3.3.2.3.   SIGMET tests for **WC**, **WV** and **WS** should be conducted at least yearly.

3.3.3.   Dissemination of test SIGMETs and advisories

3.3.3.1.   All TEST TC/VA advisories should be sent by the TCAC La Reunion and the VAAC Toulouse to the participating units, as specified in the AFI Regional Air Navigation Plan. The relevant AFTN addresses are listed in Attachment C-1 to this Appendix C.

3.3.3.2.   All TEST SIGMETs should be sent by the MWOs to the participating units, as specified in the AFI Regional Air Navigation Plan. The relevant AFTN addresses are listed in Attachment C-1 to this Appendix C.

3.3.3.3.   Dakar and Pretoria RODBs nominated as AFI IROGs will relay the test bulletins to their corresponding IROG.

3.3.3.4.   SIGMET tests should be terminated within 2 hours of the test start time. Exceptionally, where the test requires SIGMETs to be valid for up to 4 hours, then tests may be extended to a maximum of 4 hours for WS SIGMET and 6 hours for WC and WV SIGMET.

3.3.4.   Coordination with the ATS units

3.3.4.1.   MWOs should inform the associated ATS units of the forthcoming SIGMET tests by a suitable advanced notice.

3.4.   **Processing of the test messages and results**

3.4.1.   The RODBs should file all incoming TEST advisories and SIGMETs and perform an analysis of the availability, timeliness of arrival and the correctness of the WMO bulletin headings. A SIGMET TEST Summary Table, as shown in Chapter 2 of this Appendix, should be prepared by each RODB and sent to the regional SIGMET test focal point given in section 3.4.3, with a copy to the ICAO Regional Office. .

3.4.2.   The SIGMET test focal points should prepare the final report of the test and present to the ICAO Regional Office. A summary report should be submitted to the next AFI Infrastructure and Information Management Sub-Group (IIM/SG) meetings;

The current SIGMET test focal points for the AFI Region are listed in Attachment C-2 to this Appendix C.

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4.   Samples Messages of SIGMET Tests

ATTACHMENT C-0 : Format of TEST Advisories and SIGMETs

1.   Format of TEST Volcanic Ash Advisory

```
VA ADVISORY
TEST
DTG:            YYYYMMDD/0200Z
VAAC:           <<NAME OF VAAC>>
VOLCANO:        TEST
PSN:            UNKNOWN
AREA:           <<NAME OF VAAC>> VAAC AREA
SUMMIT ELEV:    UNKNOWN
ADVISORY NR:    YYYY/nn
INFO SOURCE:    NIL
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS:     NIL
OBS VA DTG:     DD/GGggZ
OBS VA CLD:     ASH NOT IDENTIFIABLE FROM SATELLITE DATA
FCST VA CLD +6 HR:    DD/0800Z SFC/FL600 NO ASH EXP
FCST VA CLD +12 HR:   DD/1400Z SFC/FL600 NO ASH EXP
FCST VA CLD +18 HR:   DD/2000Z SFC/FL600 NO ASH EXP
RMK: THIS IS A TEST VA ADVISORY. MWO SHOULD NOW ISSUE A TEST SIGMET
FOR VA,. PLEASE REFER TO THE LETTER FROM Dakar/NairobiREGIONAL
OFFICE DATED xxxxxxxxxx.
NXT ADVISORY: NO FURTHER ADVISORIES=
```

2.   Format of TEST Tropical Cyclone Advisory

```
TC ADVISORY
TEST
DTG:            YYYYMMDD/0200Z
TCAC:           <<NAME OF TCAC>>
TC:             TEST
NR:             nn (actual number)
OBS PSN:        NIL
CB:             NIL
MOV:            NIL
C:              NIL
MAX WIND:       NIL
FCST PSN +06HR: NIL
FCST MAX WIND +06HR:  NIL
```

```
FCST PSN +12HR:NIL
FCST MAX WIND +12HR:  NIL
FCST PSN +18HR:NIL
FCST MAX WIND +18HR:  NIL
FCST PSN +24HR:NIL
FCST MAX WIND +24HR:  NIL
RMK: THIS IS A TEST TC ADVISORY. MWO SHOULD NOW ISSUE A TEST SIGMET
FOR TC. PLEASE REFER TO THE LETTER FROM Dakar/Nairobi REGIONAL
OFFICE DATED xxxxxxxxxx.
NXT MSG: NIL=
```

3.   Format of TEST SIGMET for Volcanic Ash

```
WVXXii CCCC YYGGgg
CCCC SIGMET <<NUMBER>> VALID YYGGgg/YYGGgg CCCC-
CCCC <<NAME>> FIR TEST=
```

or

```
WVXXii CCCC YYGGgg
CCCC SIGMET <<NUMBER>> VALID YYGGgg/YYGGgg CCCC-
CCCC <<NAME>> FIR TEST.   THIS IS A TEST MESSAGE, PLEASE
DISREGARD. TEST VA ADVISORY NUMBER YYYY/nn RECEIVED FM [name]
VAAC AT YYGGggZ=
```

or

```
WVXXii CCCC YYGGgg
CCCC SIGMET <<NUMBER>> VALID YYGGgg/YYGGgg CCCC-
CCCC <<NAME>> FIR TEST. THIS IS A TEST SIGMET, PLEASE DISREGARD.
TEST VA ADVISORY NOT RECIEVED FM [name] VAAC=
```

Examples:
```
WVJP31 RJTD 170205
RJJJ SIGMET Z99 VALID 170205/170215 RJTD-
RJJJ FUKUOKA FIR TEST=

WVJP31 RJTD 170205
RJJJ SIGMET 2 VALID 170205/170215 RJTD-
RJJJ FUKUOKA FIR TEST. THIS IS A TEST SIGMET, PLEASE DISREGARD. VA
ADVISORY NUMBER 2018/01 RECEIVED FM TOKYO VAAC AT 170200Z=

WVJP31 RJTD 170235
RJJJ SIGMET 4 VALID 170205/170215 RJTD-
RJJJ FUKUOKA FIR TEST. THIS IS A TEST SIGMET, PLEASE DISREGARD.
TEST VA ADVISORY NOT RECEIVED FM TOKYO VAAC=
```

4. Format of TEST SIGMET for Tropical Cyclone

```
WCXXii CCCC YYGGgg
CCCC SIGMET <<NUMBER>> VALID YYGGgg/YYGGgg CCCC-
CCCC <<NAME>> FIR TEST=
```

or

```
WCXXii CCCC YYGGgg
CCCC SIGMET <<NUMBER>> VALID YYGGgg/YYGGgg CCCC-
CCCC <<NAME>> FIR TEST.  THIS IS A TEST  SIGMET, PLEASE DISREGARD.
TEST TC ADVISORY NUMBER xx RECEIVED FM [name] TCAC AT YYGGggZ=
```

```
WCXXii CCCC YYGGgg
CCCC SIGMET <<NUMBER>>  VALID YYGGgg/YYGGgg CCCC-
CCCC <<NAME>> FIR TEST. THIS IS A TEST SIGMET, PLEASE DISREGARD.
TEST TC ADVISORY NOT RECEIVED FM [name] TCAC=
```

Example:
```
WCJP31 RJTD 100205
RJJJ SIGMET 1 VALID 100205/100215 RJTD-
RJJJ FUKUOKA FIR TEST=

WCJP31 RJTD 100205
RJJJ SIGMET Z99 VALID 100205/100215 RJTD-
RJJJ FUKUOKA FIR TEST. THIS IS A TEST SIGMET, PLEASE DISREGARD.
TEST TC ADVISORY NUMBER 1 RECEIVED FM TOKYO TCAC AT 180200Z=

WCJP31 RJTD 100235
RJJJ SIGMET Z99 VALID 100205/100215 RJTD-
RJJJ FUKUOKA FIR TEST. THIS IS A TEST SIGMET, PLEASE DISREGARD.
TEST TC ADVISORY NOT RECEIVED FM TOKYO TCAC=
```

5.   Format of TEST SIGMET for other weather phenomena

```
WSXXii CCCC YYGGgg
CCCC SIGMET <<number>> VALID YYGGgg/YYGGgg CCCC-
CCCC <<NAME>> FIR TEST=
```

or

WSXXii CCC YYGGgg
CCCC SIGMET <<number>> VALID YYGGgg/YYGGgg CCCC-
CCCC <<NAME>> FIR TEST. THIS IS A TEST SIGMET, PLEASE DISREGARD=

Example:

```
WSJP31 RJTD 240205
RJJJ SIGMET A2 VALID 240205/240215 RJTD-
RJJJ FUKUOKA FIR TEST.  THIS IS A TEST SIGMET, PLEASE DISREGARD=
```

_____

CHAPTER 2 — SAMPLE TABLE TO USED BY REGIONAL OPMET DATA BANKS

Name of RODB   Dakar
Date of Test   2011/11/17
Target (VA or TC)   VA

VA Advisories (FV)

TTAAii	CCCC	YYGGgg	Received Time(UTC)	Comments/Remarks
FVAK23	PAWU	170159	01:59:29	
FVAU01	ADRM	170201	02:01:53	
FVFE01	RJTD	170200	02:00:09	
FVPS01	NZKL	170207	02:08:27	
FVXX02	LFPW	170202	02:02:41	
FVXX25	KNES	170200	02:02:01	

VA SIGMET (WV)

TTAAii	CCCC	YYGGgg	MWO	FIR	Received Time(UTC)	Comments/Remarks
WVAK01	PAWU	170200	PAWU	PAZA	02:00:11	
WVAU01	ADRM	170201	YDRM	YBBB	02:02:04	
WVCI31	RCTP	170205	RCTP	RCAA	02:04:58	
WVCI33	ZBAA	170205	ZBAA	ZBPE	02:05:26	
WVCI34	ZSSS	170205	ZSSS	ZSHA	02:02:34	
WVCI35	ZJHK	170201	ZJHK	ZJSA	02:03:34	
WVCI36	ZUUU	170205	ZUUU	ZPKM	02:11:04	
WVCI37	ZLXY	170205	ZLXY	ZLHW	02:07:44	
WVCI38	ZYTX	170205	ZYTX	ZYSH	02:01:50	
WVCI39	ZWWW	170202	ZWWW	ZWUQ	02:02:40	
WVCI45	ZHHH	170204	ZHHH	ZHWH	02:08:52	
WVFJ01	NFFN	170000	NFFN	NFFF	02:15:46	
WVIN31	VOMM	170201	VOMM	VOMF	02:09:57	
WVJP31	RJTD	170205	RJTD	RJJJ	02:06:24	
WVKP31	ZUUU	170206	ZUUU	VDPP	02:12:23	
WVLA31	VLVT	170200	VLVT	VLVT	02:01:03	
WVMS31	WMKK	170205	WMKK	WBFC	02:04:28	
WVPA01	PHFO	170201	PHFO	KZAK	02:02:09	
WVPH31	RPLL	170210	RPLL	RPHI	02:08:43	
WVPN01	KKCI	170200	KKCI	KZAK	02:00:11	
WVRA31	RUCH	170205	RUCH	UIAA	02:08:01	
WVRA31	RUHB	170206	RUHB	UHHH	02:07:57	
WVRA31	RUMG	170205	RUMG	UHMM	02:08:59	
WVRA31	RUPV	170200	RUPV	UHMP	02:09:13	
WVRA31	RUSH	170205	RUSH	UHSS	02:04:22	
WVRA31	RUVV	170202	RUVV	UHWW	02:03:13	
WVRA32	RUPV	170200	RUPV	UHMA	02:06:01	

```
WVRA32  RUYK   170207   RUYK   UELL   02:07:28
WVRA33  RUHB   170202   RUHB   UHBB   02:02:49
WVSR20  WSSS   170205   WSSS   WSJC   02:05:38
WVSS20  VHHH   170202   VHHH   VHHK   02:03:05
WVTH31  VTBS   170211   VTBS   VTBB   02:13:53
WVVS31  VVGL   170200   VVGL   VVNB   02:05:06
WVVS31  VVGL   170208   VVGL   VVTS   02:14:38
```

— END —

ATTACHMENT C-1 : MWO AFTN ADDRESSES

Name of MWOs	ICAO Location Indicator of the MWO	AFTN Addresses / *Adresse RSFTA*			FIC/ACC served by the MWO	
		MWO CVM	ACC CCR	FIC /CIV	Name	ICAO Location. Indicator
Accra	DGAA	DGAAYMYX	DGACZQZX	DGFCZIZX	Accra	DGAC
Addis Ababa	HAAB		HAAAZQZX	HAAAZIZX	Addis Ababa	HAAA
Antananarivo	FMMI	FMMIYMYX	FMMMZQZX	FMMMZIZX	Antananarivo	FMMM
Asmara	HHAS		HHAAZQZX		Asmara	HHAA
Brazzaville	FCBB		FCCCZQZX	FCCCZIZX	Brazzaville	FCCC
Bujumbura	HBBA			HBBAZIZX	Bujumbura	HBBA
Dakar	GOOY	GOOYYZYZ	GOOOZQZX	GOOOZIZX	Dakar	GOOO
Dar-Es-Salaam	HTDA	HTDAYMYX	HTDCZQZX	HTDCZIZX	Dar-es-Salaam	HTDC
Entebbe	HUEN		HUECZQZX	HUENZIZX	Entebbe	HUEC
Gaborone/SSK	FBSK	FBSKYMYX	FBGRZQZX	FBGRZIZX	Gaborone	FBGR
Harare	FVRG	FVRGYMYX		FVRGZIZ	Harare	FVRG

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Name of MWOs	ICAO Location Indicator of the MWO	AFTN Addresses / *Adresse RSFTA*			FIC/ACC served by the MWO	
		MWO CVM	ACC CCR	FIC /CIV	Name	ICAO Location. Indicator
Johannesburg	FAOR	FAPRYMYX	FACAZQZX	FACAZIZX	Cape Town	FACA
Johannesburg	FAOR	FAPRYMYX	FAJAZQZX	FAJAZIZX	Johannesburg	FAJA
Johannesburg	FAOR	FAPRYMYX		FAJOZIZX	Johannesburg Oceanic	FAJO
Kano	DNKN	DNKNYMYX	DNKKZQZX		Kano	DNKK
Kigali	HRYR			HRYRZQZX	Kigali	HRYR
Kinshasa	FZAA	FZAAYMYX			Kinshasa	FZAA
Kamuzu / Lilongwe	FWKI	FWKIYMYX		FWLLZIZX	Kamuzu / Lilongwe	FWLL
Lomé	DXXX	DXXXPRVI			Lomé	DXXX
Luanda	FNLU	FNLUYMYX	FNANZAZX	FNANZQZX	Luanda	FNAN
Lusaka	FLKK	FLKKYMYX		FLFIZIZX	Kenneth Kaunda	FLFI
Mauritius	FIMP	FIMPYMYX		FIMMZIZX	Mauritius	FIMM
Maputo	FQMA	FQMAYMYX			Beira	FQBE

Name of MWOs	ICAO Location Indicator of the MWO	AFTN Addresses / *Adresse RSFTA*			FIC/ACC served by the MWO	
		MWO CVM	ACC CCR	FIC /CIV	Name	ICAO Location. Indicator
Mogadishu	HCMM			HCSMZIZX	Mogadishu	HCSM
N'Djamena	FTTJ			FTTTZIZX	N'Djamena	FTTT
Nairobi	HKJK	HKJKYMYX		HKNAZIZX	Nairobi	HKNA
Niamey	DRRN	DRRNYMYX	DRRRZQZX	DRRRZIZX	Niamey	DRRR
Roberts	GLRB	GLRBYRYX		GLRBZIZX	Roberts	GLRB
Sal	GVAC	GVACYMYX		GVSCZIZX	Sal	GVSC
Seychelles	FSIA	FSIAYMYX	FSSSZQZX	FSSSZIZX	Seychelles	FSSS
Windhoek	FYWW	FYWHYMYX			Windhoek	FYWH

ATTACHMENT C-2: SIGMET TEST FOCAL POINTS

	State/*Etat*/ Organisation	Name/*Nom et Prénom*	Address/*Adresse*	E-mail	Fax	Telephone
1	France	DUPON Valentin	VAAC Toulouse	valentin.dupont@meteo.fr		Tel: +33 (0) 5 61 07 81 50 Mob: +33 (0) 6 98 05 33 47
2	Meteo-France	Philippe Hereil	VAAC Toulouse Manager, Met Services for Aviation Operations Head	Philippe.hereil@meteo.fr		(33) 561 078 239
4	France	Caroff Philippe	TCAC La Réunion	Philippe.caroff@meteo.fr		+262 26 2 92 11 06
5	South Africa	Mr Maluta Tshifaro	RODB Pretoria SA Weather Services (SAWS)	Maluta.Tshifaro@weathersa.co.za		
6	South Africa	Ms. Gaborekwe Khambule	RODB Pretoria SA Weather Services (SAWS)	Gaborekwe.Khambule@weathersa.co.za		
7	Senegal	Mr MBENGUE Babacar	RODB Dakar	mbengbabs@yahoo.fr; mbenguebab@asecna.org		+221 33 809 23 27 +221 77 654 98 24