



International Civil Aviation Organization

**THE THIRTEENTH MEETING OF ASIA/PACIFIC ROBEX
WORKING GROUP (ROBEX WG/13)**

Seoul, Republic of Korea, 16 – 18 March 2015

Agenda Item (conjoint session) 1: VAAC Backup Tests

MUTUAL BACK-UP OPERATIONS BETWEEN VAACS TOKYO AND DARWIN

(Presented by Japan and Australia)

SUMMARY

This paper presents the outcomes from a backup test conducted between the VAAC Tokyo and VAAC Darwin on 22 October 2014.

1. INTRODUCTION

1.1 Australia and Japan provide Volcanic Ash Advisory Centres within the framework of the International Airways Volcano Watch (IAVW). The relevant responsibilities are set out in Annex 3 – Meteorological Service for International Air Navigation, Chapter 3, Section 3.5. Of note subsection 3.5.3 states that: “*In the case of interruption of the operation of a VAAC, its function shall be carried out by another VAAC or another meteorological centre, as designated by the VAAC Provider State concerned.*”

1.2 Backup procedures to be used in case of interruption to the operation of a VAAC are included in the Handbook of the International Airways Volcano Watch (IAVW) – Appendix D (ICAO Doc 9766). The document also notes that the “*backup site may be another meteorological centre in the same Contracting State or it may be another VAAC*”.

1.3 Appendix D of ICAO Doc 9766 also states that: “*The backup arrangements should be tested at least annually*”

2. DISCUSSION

2.1 Procedures for conducting a backup test were developed jointly by the Darwin and Tokyo VAACs. These procedures included nominating a mutually agreed date and time on which test Volcanic Ash Advisories (VAA) would be issued, developing the necessary AFTN address lists and deciding on an appropriate format for the test VAA. Recipients of the test VAA were requested to respond by email to the VAAC that the advisory had been received and these responses were collated for the analysis of the test.

2.2 ICAO APAC Office issued a State Letter titled ‘*T 4/9.1:API47/14(MET): IAVW Handbook (Doc 9766) Appendix D – Backup Procedures for Volcanic Ash Advisory Centres Schedule for Tokyo/Darwin VAAC back-up test – October 2014*’ dated 01 October 2014 to notifying recipients and requesting their participation.

2.3 The test was conducted on the 22 October 2014 with VAAC Tokyo activating backup procedures for the VAAC Darwin area of responsibility at 0100 UTC, issuing a test VAA then handing back responsibility at 0130 UTC. VAAC Darwin subsequently activated backup procedures for the VAAC Tokyo area of responsibility at 0200 UTC, issued a test VAA then handed back responsibility at 0230 UTC. The full procedures were detailed in the State Letter (also see **Attachment 1**) and the list of AFTN addresses as well as States are shown in **Attachments 2 and 3**.

2.4 VAAs were disseminated via AFTN in a timely manner and acknowledgements of receipt were provided to VAACs Darwin and Tokyo from recipients shown in **Attachment 4**. The acknowledgements enable the VAACs to move onto the next step to investigate the pathways to the units that did not receive the VAAs, as well as to check the proper addresses to provide advisories. In this meaning, this test was successful and continued participation of related units is appreciated.

3. RECOMMENDATIONS

3.1 Recommendations arising from the backup operations:

- a) That VAACs Tokyo and Darwin use email as a main source of communication with an online version of the proforma. When email is not available, fax is to be used. If no response is received within 10 minutes make a phone call for a reminder.
- b) That VAACs Tokyo and Darwin continue to promote the implementation and understanding of the IAVW, through active engagement with regional MWOs.
- c) That VAACs use test results to identify the necessity to update the AFTN addresses for its VAA provision.
- d) That the VAACs continue to conduct annual back-up testing.

4. ACTION BY THE MEETING

4.1 The meeting is invited to note the information and recommendations contained in this paper and provide comment.

ATTACHMENT 1

TOKYO – DARWIN VAAC BACK-UP TEST PROCEDURES

1. Introduction

1.1 The *Handbook on the International Airways Volcano Watch (IAVW) — Operational Procedures and Contact List* (Doc 9766) recommends that Volcanic Ash Advisory Centres (VAACs) should conduct back-up tests at least annually.

1.2 The Tokyo and Darwin VAACs have developed a mutual back-up arrangement that includes procedures for undertaking a back-up test as described in Doc 9766.

2. Purpose and Scope of VAAC Back-up tests

2.1 The purpose of the VAAC back-up test is to ensure that internal procedures for the handover of responsibility and the issue of products for the other VAAC's area of responsibility are robust and functional.

2.2 The scope of the test also includes checking the dissemination pathways of the volcanic ash advisory (VAA) messages. However it is not designed to check the issuance of volcanic ash SIGMET and so there is **no requirement** to issue test SIGMETs.

3. Back-up test of VAAC Darwin by VAAC Tokyo

3.1 At 0100UTC on 22 October 2014 VAAC Darwin will request back-up services from VAAC Tokyo according to internal procedures and using the operational VAAC contact details contained within the IAVW Handbook (Doc 9766) Table 4-2. VAAC Tokyo will issue a VAA for commencement of back-up test to participating operational units as per the VAA example in Attachment 1A (i) and the AFTN addresses in Attachment 2A.

3.2 VAAC Tokyo will issue a VAA for VAAC back-up test to participating operational units as per the VAA example in Attachment 1A (ii) and the AFTN addresses in Attachment 2A. All recipients (ACCs/FICs, MWOs, WAFCs and RODBs) of this VAA are requested to **respond to VAAC Darwin** using the email address vaac.darwin@bom.gov.au and the subject 'VAA TEST' with an affirmative or negative response regarding the receipt of the test VAA.

3.3 At 0130UTC on 22 October 2014 VAAC Darwin will notify of intent to resume normal operations to VAAC Tokyo, and at 0145UTC VAAC Darwin will issue a VAA for cessation of back-up test to participating operational units as per the VAA example in Attachment 1A (iii) and the AFTN addresses in Attachment 2A.

3.4 MWOs should NOT issue a test SIGMET at any stage of the test.

4. Back-up test of VAAC Tokyo by VAAC Darwin

4.1 At 0200UTC on 22 October 2014 the VAAC Tokyo will request back-up services from VAAC Darwin according to internal procedures and using the operational VAAC contact details contained within the IAVW Handbook (Doc 9766) Table 4-2. VAAC Darwin will issue a VAA for commencement of back-up test to participating operational units as per the VAA example in Attachment 1B (i) and the AFTN addresses in Attachment 2B.

Attachment to AP147/14 (MET)

4.2 VAAC Darwin will issue a VAA for VAAC back-up test to participating operational units as per the VAA example in Attachment 1B (ii) and the AFTN addresses in Attachment 2B. All recipients (ACCs/FICs, MWOs, WAFCs and RODBs) of this VAA are requested to **respond to VAAC Tokyo** using the email address vaac@eqvol2.kishou.go.jp and the subject 'VAA TEST' with an affirmative or negative response regarding the receipt of the test VAA.

4.3 At 0230UTC on 22 October 2014 VAAC Tokyo will notify of intent to resume normal operations to VAAC Darwin, and at 0245UTC VAAC Tokyo will issue a VAA for cessation of back-up test to participating operational units as per the VAA example in Attachment 1B (iii) and the AFTN addresses in Attachment 2B.

4.5 MWOs should NOT issue a test SIGMET at any stage of the test.

5. Back-up test termination and reporting

5.1 At 0300UTC on 22 October 2014 the test will be terminated.

5.2 In case of significant eruption, the test should be ceased.

5.3 During the test each VAAC will maintain a logbook of events and will provide the other VAAC with a copy.

5.4 Email responses to the VAA for VAAC back-up test will be analysed by the VAACs. Both VAACs will analyse the responses to the test VAAs and will present the results to the conjoint meeting of the ROBEX Working Group and Meteorological Hazards Task Force to be held in March 2015.

ATTACHMENT 1A – SAMPLE VAA MESSAGES

(i) VAA for commencement of back-up test; AFTN message from VAAC Tokyo to operational units in VAAC Darwin area of responsibility:

GG *****
DDHHMM RJTDYMYX
FVAU01 ADRM DDHHMM
VA ADVISORY
DTG: YYYYMMDD/HHMMZ
VAAC: DARWIN
VOLCANO: NOTICE 999999
PSN: S8959 E9959
AREA: UNKNOWN
SUMMIT ELEV: 9999M
ADVISORY NR: YYYY/N
INFO SOURCE: NIL
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS: NIL
OBS VA DTG: NIL
OBS VA CLD: NIL
FCST VA CLD +6HR: NO VA EXP
FCST VA CLD +12HR: NO VA EXP
FCST VA CLD +18HR: NO VA EXP
RMK: VAAC DARWIN AND VAAC TOKYO ARE CONDUCTING A BACK UP TEST NOW.
THIS IS A TEST NOTICE ISSUED BY VAAC TOKYO FOR THE VAAC DARWIN AREA
OF RESPONSIBILITY ANNOUNCING THE START OF BACK UP TEST FOR VAAC
DARWIN BY VAAC TOKYO.
NXT ADVISORY: NO FURTHER ADVISORIES.

(ii) VAA for VAAC back-up test; AFTN message from VAAC Tokyo to operational units in VAAC Darwin area of responsibility:

GG *****
DDHHMM RJTDYMYX
FVAU01 ADRM DDHHMM
VA ADVISORY
DTG: YYYYMMDD/HHMMZ
VAAC: DARWIN
VOLCANO: TEST 999999
PSN: S8959 E9959
AREA: UNKNOWN
SUMMIT ELEV: 9999M
ADVISORY NR: YYYY/N
INFO SOURCE: NIL
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS: NIL
OBS VA DTG: NIL
OBS VA CLD: NIL
FCST VA CLD +6HR: NO VA EXP
FCST VA CLD +12HR: NO VA EXP
FCST VA CLD +18HR: NO VA EXP
RMK: THIS IS A TEST ADVISORY ISSUED BY TOKYO
VAAC FOR THE VAAC DARWIN AREA OF RESPONSIBILITY. PLEASE
ACKNOWLEDGE RECEIPT OF THIS ADVISORY BY SENDING AN EMAIL TO
DARWIN.VAAC AT BOM.GOV.AU
NXT ADVISORY: NO FURTHER ADVISORIES.

(iii) VAA for cessation of back-up test; AFTN message from VAAC Darwin to operational units in VAAC Darwin area of responsibility:

GG *****
DDHHMM YMMCYMYX
FVAU01 ADRM DDHHMM
VA ADVISORY
DTG: YYYYMMDD/HHMMZ
VAAC: DARWIN
VOLCANO: NOTICE 999999
PSN: S8959 E9959
AREA: UNKNOWN
SUMMIT ELEV: 9999M
ADVISORY NR: YYYY/N
INFO SOURCE: NIL
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS: NIL
OBS VA DTG: NIL
OBS VA CLD: NIL
FCST VA CLD +6HR: NO VA EXP
FCST VA CLD +12HR: NO VA EXP
FCST VA CLD +18HR: NO VA EXP
RMK: VAAC DARWIN AND VAAC TOKYO ARE CONDUCTING A BACK UP TEST NOW.
THIS IS A TEST NOTICE ISSUED BY VAAC DARWIN FOR THE VAAC DARWIN AREA
OF RESPONSIBILITY ANNOUNCING THE END OF BACK UP TEST FOR VAAC DARWIN
BY VAAC TOKYO.
NXT ADVISORY: NO FURTHER ADVISORIES.
(***** Indicates appropriate AFTN addresses as per Attachment 2A)

ATTACHMENT 1B – SAMPLE VAA MESSAGES

(i) VAA for commencement of back-up test; AFTN message from VAAC Darwin to operational units in VAAC Tokyo area of responsibility:

GG *****
DDHHMM YMMCYMYX
FVFE01 RJTD DDHHMM
VA ADVISORY
DTG: YYYYMMDD/HHMMZ
VAAC: TOKYO
VOLCANO: NOTICE 999999
PSN: S8959 E9959
AREA: UNKNOWN
SUMMIT ELEV: 9999M
ADVISORY NR: YYYY/N
INFO SOURCE: NIL
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS: NIL
OBS VA DTG: NIL
OBS VA CLD: NIL
FCST VA CLD +6HR: NO VA EXP
FCST VA CLD +12HR: NO VA EXP
FCST VA CLD +18HR: NO VA EXP
RMK: VAAC DARWIN AND VAAC TOKYO ARE CONDUCTING A BACK UP TEST NOW.
THIS IS A TEST NOTICE ISSUED BY VAAC DARWIN FOR THE VAAC TOKYO AREA
OF RESPONSIBILITY ANNOUNCING THE START OF BACK UP TEST FOR VAAC
TOKYO BY VAAC DARWIN.
NXT ADVISORY: NO FURTHER ADVISORIES.

(ii) VAA for VAAC back-up test; AFTN message from VAAC Darwin to operational units in VAAC Tokyo area of responsibility:

GG *****
DDHHMM YMMCXYX
FVFE01 RJTD DDHHMM
VA ADVISORY
DTG: YYYYMMDD/HHMMZ
VAAC: TOKYO
VOLCANO: TEST 999999
PSN: S89.59 E99.59
AREA: UNKNOWN
SUMMIT ELEV: 9999M
ADVISORY NR: YYYY/N
INFO SOURCE: NIL
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS: NIL
OBS VA DTG: NIL
OBS VA CLD: NIL
FCST VA CLD +6HR: NO VA EXP
FCST VA CLD +12HR: NO VA EXP
FCST VA CLD +18HR: NO VA EXP
RMK: THIS IS A TEST ADVISORY ISSUED BY DARWIN
VAAC FOR THE VAAC TOKYO AREA OF RESPONSIBILITY. PLEASE
ACKNOWLEDGE RECEIPT OF THIS ADVISORY BY SENDING AN EMAIL TO
VAAC AT EQVOL2.KISHOU.GO.JP
NXT ADVISORY: NO FURTHER ADVISORIES.

(iii) VAA for cessation of back-up test; AFTN message from VAAC Tokyo to operational units in VAAC Tokyo area of responsibility:

GG *****
DDHHMM RJTDYMYX
FVFE01 RJTD DDHHMM
VA ADVISORY
DTG: YYYYMMDD/HHMMZ
VAAC: TOKYO
VOLCANO: NOTICE 999999
PSN: S89.59 E99.59
AREA: UNKNOWN
SUMMIT ELEV: 9999M
ADVISORY NR: YYYY/N
INFO SOURCE: NIL
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS: NIL
OBS VA DTG: NIL
OBS VA CLD: NIL
FCST VA CLD +6HR: NO VA EXP
FCST VA CLD +12HR: NO VA EXP
FCST VA CLD +18HR: NO VA EXP
RMK: VAAC DARWIN AND VAAC TOKYO ARE CONDUCTING A BACK UP TEST NOW.
THIS IS A TEST NOTICE ISSUED BY VAAC TOKYO FOR THE VAAC TOKYO AREA
OF RESPONSIBILITY ANNOUNCING THE END OF TEST FOR VAAC TOKYO BY VAAC
DARWIN.
NXT ADVISORY: NO FURTHER ADVISORIES.

(***** Indicates appropriate AFTN addresses as per Attachment 2B)

ATTACHMENT 2A

AFTN addresses for exchange of VAAC back-up test VAA messages in the VAAC Darwin area of Responsibility (Updated 15 October 2014)

YPDMYMYX (VAAC Darwin)					
AGGHYMYX,	ANYNYOYX,	AYPMYMYX,	AYPMYSYX,	AYPMZGZX,	AYPYANGM,
AYPYANGO,	EGKKVIRW,	EGLLSITV,	EGZZMASI,	EGZZMPAC,	EGZZVANW,
EHAMKLM D,	EHAMKLMK,	EHAMKLMW,	ELXCLXB,	KDENXLDW,	KJFKGTIW,
KWBCYMYX,	LOZMMSS,	LSZHSWRW,	NFFNYPYX,	NZAAANZO,	NZKLYMYX,
RJAAANAO,	RJAAJALO,	RJAANCAO,	RJAAYMYX,	RKSIYPYX,	RPHIZRZX,
RPLLYMYX,	VCBIYMYX,	VCBIZQZX,	VHHHCPAO,	VHHHYMYX,	VOMFZQZX,
VOMMYMYX,	VTBBYPYX,	VTBDYMYX,	VTBSYMYX,	VVGLYMYX,	VVNBZRZX,
VVTSYMYX,	VVTSZRZX,	VYYYYMYX,	VYYYZQZX,	WAAAYMYX,	WAAAZQZX,
WABBYMYX,	WADDYMYF,	WADDYMYX,	WADDYOYX,	WBFCZQZX,	WBKMYMYX,
WBSBYMYX,	WIHHYMYX,	WIIYMYX,	WIIIZQZX,	WMFCZQZX,	WMKBYMYX,
WMKBYWYX,	WMKKMASD,	WMKMYMYX,	WPDLTZX,	WRRRYNYX,	WSATYMYX,
WSJCZRZX,	WSSSIAO,	WSSSYMYW,	WSSSYMYX,	WSSSYZYX,	WSZYMYR,
YAMBZAZX,	YAMBZGZA,	YAMBZTX,	YBBBNCYM,	YBBBVOZM,	YBBBZRZA,
YBBBZRZB,	YBBBZRZG,	YBBBZRZX,	YMMLJSTX,	YMMZRZA,	YMMZRZB,
YMMZRZG,	YMMZRZX,	YPDNZAZX,	YPDNZGZA,	YPDNZTX,	YPTNZAZX,
YPTNZGZA,	YPTNZTX,	YSSYQFAM			

Note: the above list is subject to validation and updates by States/units concerned.

ATTACHMENT 2B

AFTN addresses for exchange of VAAC back-up test VAA messages in the VAAC Tokyo area of responsibility (Updated 15 October 2014)

RJTDYMYX (VAAC Tokyo)					
EGZZMASI,	KWBCYMYX,	NFFNYPYX,	RCTPYMYX,	RCTPZQZX,	RJAAYMYX,
RJCGZQZX,	RJDGZQZX,	RJTDYMYX,	RJTGZQZX,	RKRRZQZX,	RKSIYMYX,
RORGZQZX,	RPHIZRZX,	RPLLYMYX,	UELLYMYX,	UELLZRZX,	UHHHYMYX,
UHHHZRZX,	UHMMYMYX,	UHMMYMYX,	UHMMZRZX,	UHPPZRZX,	UIIYMYX,
UIIIZRZX,	VDPPYMYX,	VDPPZRZX,	VHHHYMYX,	VHKKZQZX,	VLVTYMYX,
VLVTZQZX,	VTBBYPYX,	VTBBYZYX,	VTBSYMYX,	VVGLYMYX,	VVNBZRZX,
VVTSZRZX,	WSSSYZYX,	YBBBYPYX,	ZBAAYMYX,	ZBHHZQZX,	ZBLAZQZX,
ZBPEZQZX,	ZBYNZQZX,	ZGCSZQZX,	ZGGGYMYX,	ZGKLZQZX,	ZGNNZQZX,
ZGZUZQZX,	ZHHHYMYX,	ZHWHZQZX,	ZJHKYMYX,	ZJSAZQZX,	ZKPYYMYX,
ZKPYYMYX,	ZLANZQZX,	ZLHWZQZX,	ZLSNZQZX,	ZLXYMYX,	ZMUBYMYX,
ZMUBZQZX,	ZPKMZQZX,	ZSAMZQZX,	ZSCNZQZX,	ZSHAZQZX,	ZSNJZQZX,
ZSOFZQZX,	ZSQDZQZX,	ZSSSYMYX,	ZSTNZQZX,	ZUCKZQZX,	ZUDSZQZX,
ZUUUYMYX,	ZWUQZQZX,	ZWWWYMYX,	ZWWWZQZX,	ZYHBZQZX,	ZYSHZQZX,
ZYTLZQZX,	ZYTXMYX,				

Note: the above list is subject to validation and updates by States/units concerned.

ATTACHMENT 3

List of States, participating units and tasks required* for VAAC back-up test

STATE	UNIT TYPE	LOCATION NAME	LOC. ID.	TASK REQUIRED*	AFTN ADDRESS
AUSTRALIA	ACC/FIC	BRISBANE/BRISBANE INTL	YBBN	D	YBBNZQZX
AUSTRALIA	ACC/FIC	MELBOURNE ACC/FIC	YMMM	D	YMMMZQZX
AUSTRALIA	RODB	BRISBANE (FIR/FIC/ACC/COM/MET/NOF)	YBBB	D J	YBBBYPYX
AUSTRALIA	VAAC	DARWIN (REGIONAL FORECASTING CENTRE)	YPDM	A E F H I M	YPDMYMYX
CAMBODIA	ACC/FIC	PHNOM PENH	VDPP	J	VDPPZRZX
CAMBODIA	MWO	PHNOM PENH	VDPP	J	VDPPYMYX
CHINA	ACC/FIC	TAIBEI CITY/TAIBEI INTL AP	RCTP	J	RCTPZQZX
CHINA	ACC/FIC	HONG KONG FIR	VHHK	J	VHHKZQZX
CHINA	ACC/FIC	HUHHOT/BAITA	ZBHH	J	ZBHHZQZX
CHINA	ACC/FIC	HULUNBEIER/HAILAR	ZBLA	J	ZBLAZQZX
CHINA	ACC/FIC	BEIJING FIR	ZBPE	J	ZBPEZQZX
CHINA	ACC/FIC	TAIYUAN/WUSU	ZBYN	J	ZBYNZQZX
CHINA	ACC/FIC	CHANGSHA CITY	ZGCS	J	ZGCSZQZX
CHINA	ACC/FIC	GUILIN/LIANGJIANG	ZGKL	J	ZGKLZQZX
CHINA	ACC/FIC	NANNING/WUXU	ZGNN	J	ZGNNZQZX
CHINA	ACC/FIC	GUANGZHOU FIR	ZGZU	J	ZGZUZQZX
CHINA	ACC/FIC	WUHAN FIR	ZHWH	J	ZHWHZQZX
CHINA	ACC/FIC	SANYA FIR/ACC	ZJSA	J	ZJSAZQZX
CHINA	ACC/FIC	LANZHOU CITY	ZLAN	J	ZLANZQZX
CHINA	ACC/FIC	LANZHOU FIR	ZLHW	J	ZLHWZQZX
CHINA	ACC/FIC	XI'AN CITY	ZLSN	J	ZLSNZQZX
CHINA	ACC/FIC	KUNMING FIR	ZPKM	J	ZPKMZQZX
CHINA	ACC/FIC	XIAMEN/GAOQI	ZSAM	J	ZSAMZQZX
CHINA	ACC/FIC	NANCHANG/CHANGBEI	ZSCN	J	ZSCNZQZX
CHINA	ACC/FIC	SHANGHAI FIR	ZSHA	J	ZSHAZQZX
CHINA	ACC/FIC	NANJING/LUKOU	ZSNJ	J	ZSNJZQZX
CHINA	ACC/FIC	HEFEI/XINQIAO	ZSOF	J	ZSOFZQZX
CHINA	ACC/FIC	QINGDAO/LIUTING	ZSQD	J	ZSQDZQZX
CHINA	ACC/FIC	JINAN CITY	ZSTN	J	ZSTNZQZX
CHINA	ACC/FIC	CHONGQING/JIANGBEI	ZUCK	J	ZUCKZQZX
CHINA	ACC/FIC	CHENGDU CITY	ZUDS	J	ZUDSZQZX
CHINA	ACC/FIC	URUMQI FIR	ZWUQ	J	ZWUQZQZX
CHINA	ACC/FIC	URUMQI/DIWOPU	ZWWW	J	ZWWWZQZX
CHINA	ACC/FIC	HARBIN/TAIPING	ZYHB	J	ZYHBZQZX
CHINA	ACC/FIC	SHENYANG FIR	ZYSH	J	ZYSHZQZX
CHINA	ACC/FIC	DALIAN/ZHOUSHUIZI	ZYTL	J	ZYTLZQZX
CHINA	MWO	TAIBEI CITY/TAIBEI INTL AP	RCTP	J	RCTPYMYX
CHINA	MWO	HONG KONG/INTERNATIONAL	VHHH	J	VHHHYMYX
CHINA	MWO	BEIJING/CAPITAL	ZBAA	J	ZBAAYMYX
CHINA	MWO	GUANGZHOU/BAIYUN	ZGGG	J	ZGGGYMYX
CHINA	MWO	WUHAN/TIANHE	ZHHH	J	ZHHHYMYX
CHINA	MWO	HAIKOU/MEILAN	ZJHK	J	ZJHKYMYX
CHINA	MWO	XI'AN/XIANYANG	ZLXY	J	ZLXYMYX

STATE	UNIT TYPE	LOCATION NAME	LOC. ID.	TASK REQUIRED*	AFTN ADDRESS
CHINA	MWO	SHANGHAI/HONGQIAO	ZSSS	J	ZSSSYMYX
CHINA	MWO	CHENGDU/SHUANGLIU	ZUUU	J	ZUUUYMYX
CHINA	MWO	URUMQI/DIWOPU	ZWWW	J	ZWWWYMYX
CHINA	MWO	SHENYANG/TAOXIAN	ZYTX	J	ZYTXYMYX
DPR KOREA	ACC/FIC	PYONGYANG (FIR)	ZKKP	J	ZKPYMYX
DPR KOREA	MWO	SUNAN	ZKPY	J	ZKPYMYX
FIJI	RODB	NADI/INTL	NFFN	D J	NFFNYPYX
INDIA	ACC/FIC	CHENNAI (FIC)	VOMF	D	VOMFZQZX
INDIA	MWO	CHENNAI	VOMM	D	VOMMYMYX
INDONESIA	ACC/FIC	MAKASSAR/SULTAN HASANUDDIN	WAAA	D	WAAAZQZX
INDONESIA	ACC/FIC	JAKARTA	WIII	D	WIIIZQZX
INDONESIA	MWO	MAKASSAR/SULTAN HASANUDDIN	WAAA	D	WAAAYMYX
INDONESIA	MWO	JAKARTA INTL/SOEKARNO-HATTA	WIII	D	WIIIIYMYX
JAPAN	ACC/FIC	SAPPORO ACC	RJCG	J	RJCGZQZX
JAPAN	ACC/FIC	FUKUOKA ACC	RJDG	J	RJDGZQZX
JAPAN	ACC/FIC	TOKYO ACC	RJTG	J	RJTGZQZX
JAPAN	ACC/FIC	NAHA ACC	RORG	J	RORGZQZX
JAPAN	MWO	TOKYO (CITY)	RJTD	J	RJTDYMYX
JAPAN	RODB	TOKYO (CITY)	RJTD	D J	RODBYZX
JAPAN	VAAC	TOKYO (CITY)	RJTD	B C G K L M	RJTDYMYX
LAO PDR	ACC/FIC	VIENTIANE (WATTAY)	VLVT	J	VLVTZQZX
LAO PDR	MWO	VIENTIANE (WATTAY)	VLVT	J	VLVTYMYX
MALAYSIA	ACC/FIC	KOTA KINABALU ACC/FIC	WBFC	D	WBFCZQZX
MALAYSIA	ACC/FIC	KUALA LUMPUR ACC/FIC	WMFC	D	WMFCZQZX
MALAYSIA	MWO	SEPANG/KL INTERNATIONAL AIRPORT	WMKK	D	WMKKYMYX
MONGOLIA	ACC/FIC	ULAANBAATAR/CHINGGIS KHAAN	ZMUB	J	ZMUBZQZX
MONGOLIA	MWO	ULAANBAATAR/CHINGGIS KHAAN	ZMUB	J	ZMUBYMYX
MYANMAR	ACC/FIC	YANGON INTERNATIONAL	VYYY	D	VYYYZQZX
MYANMAR	MWO	YANGON INTERNATIONAL	VYYY	D	VYYYMYX
PAPUA NEW GUINEA	ACC/FIC	PORT MORESBY ACC/FIC/COM	AYPM	D	AYPMZGZX
PAPUA NEW GUINEA	MWO	PORT MORESBY ACC/FIC/COM	AYPM	D	AYPMYMYX
PHILIPPINES	ACC/FIC	MANILA (ACC/FIC/COM)	RPHI	D J	RPHIZRZX
PHILIPPINES	MWO	NINYO AQUINO INTERNATIONAL AIRPORT, MANILA	RPLL	D J	RPLLYMYX
REPUBLIC OF KOREA	ACC/FIC	INCHEON ACC	RKRR	J	RKRRZQZX
REPUBLIC OF KOREA	MWO	INCHEON INTL	RKSI	J	RKSIYMYX
RUSSIAN FEDERATION	ACC/FIC	CHULMAN	UELL	J	UELLZRZX
RUSSIAN FEDERATION	ACC/FIC	KHABAROVSK/NOVY	UHHH	J	UHHHZRZX
RUSSIAN FEDERATION	ACC/FIC	MAGADAN/SOKOL	UHMM	J	UHMMZRZX
RUSSIAN FEDERATION	ACC/FIC	PETROPAVLOVSK-KAMCHATSKY/YELIZOVO	UHPP	J	UHPPZRZX

STATE	UNIT TYPE	LOCATION NAME	LOC. ID.	TASK REQUIRED*	AFTN ADDRESS
RUSSIAN FEDERATION	ACC/FIC	IRKUTSK	UIII	J	UIIIZRZX
RUSSIAN FEDERATION	MWO	CHULMAN	UELL	J	UELLYMYX
RUSSIAN FEDERATION	MWO	KHABAROVSK/NOVY	UHHH	J	UHHHYMYX
RUSSIAN FEDERATION	MWO	MAGADAN/SOKOL	UHMM	J	UHMMYMYX
RUSSIAN FEDERATION	MWO	PETROPAVLOVSK-KAMCHATSKY/YELIZOVO	UHPP	J	UHPPYMYX
RUSSIAN FEDERATION	MWO	IRKUTSK	UIII	J	UIIIYMYX
SINGAPORE	ACC/FIC	SINGAPORE ACC/FIC	WSJC	D	WSJCZRZX
SINGAPORE	MWO	SINGAPORE/CHANGI	WSSS	D	WSSSYMYX
SINGAPORE	RODB	SINGAPORE/CHANGI	WSSS	D J	WSSSYZYX
SOLOMON ISLANDS	ACC/FIC	HONIARA (HENDERSON)	AGGH	D	AGGHYMYX
SOLOMON ISLANDS	MWO	HONIARA (HENDERSON)	AGGH	D	AGGHYMYX
SRI LANKA	ACC/FIC	KATUNAYAKE/BANDARANAIKE INTERNATIONAL AIRPORT COLOMBO	VCBI	D	VCBIZQZX
SRI LANKA	MWO	KATUNAYAKE/BANDARANAIKE INTERNATIONAL AIRPORT COLOMBO	VCBI	D	VCBIYMYX
THAILAND	MWO	BANGKOK/SUVARNABHUMI INTL AIRPORT	VTBS	D J	VTBSYMYX
THAILAND	RODB	BANGKOK (ACC/FIC/COM CENTRE)	VTBB	D J	VTBBYPYX
UNITED KINGDOM	W AFC	UK PDAI (GEN)	EGZZ	D J	EGZZMASI
UNITED STATES	W AFC	WASHINGTON (NWS NATIONAL MET CENTER), DC.	KWBC	D J	KWBCYMYX
VIET NAM	ACC/FIC	HA NOI/NOI BAI INTERNATIONAL	VVNB	D J	VVNBZRZX
VIET NAM	ACC/FIC	HO CHI MINH/TAN SON NHAT INTERNATIONAL	VVTS	D J	VVTSZRZX
VIET NAM	MWO	GIA LAM	VVGL	D J	VVGLYMYX
THAILAND	ACC/FIC	BANGKOK (ACC/FIC/COM CENTRE)	VTBB	D J	VTBBYPYX

Note: the list of AFTN addresses in the table above is subject to validation and updates by States/units concerned.

*Tasks required for VAAC back-up test

TASK ID.	TIME UTC	TASK DESCRIPTION
A	0100	VAAC Darwin will request VAAC Tokyo to commence back-up services
B	Sequential	VAAC Tokyo will issue a VAA (commencement of test) for VAAC Darwin area of responsibility
C	Sequential	VAAC Tokyo will issue a VAA (test) for VAAC Darwin area of responsibility
D	Sequential	MWOs/ACCs/FICs in VAAC Darwin area of responsibility and RODBs/WAFCs will respond to VAAC Darwin (using email) to confirm receipt or non-receipt of test VAA issued by VAAC Tokyo for the VAAC Darwin area of responsibility
E	0130	VAAC Darwin will notify VAAC Tokyo of intent to resume normal operations
F	0145	VAAC Darwin will issue a VAA (cessation of test) for VAAC Darwin area of responsibility
G	0200	VAAC Tokyo will request VAAC Darwin to commence back-up services
H	Sequential	VAAC Darwin will issue a VAA (commencement of test) for VAAC Tokyo area of responsibility
I	Sequential	VAAC Darwin will issue a VAA (test) for VAAC Tokyo area of responsibility
J	Sequential	MWOs/ACCs/FICs in VAAC Tokyo area of responsibility and RODBs/WAFCs will respond to VAAC Tokyo (using email) to confirm receipt or non-receipt of test VAA issued by VAAC Darwin for the VAAC Tokyo area of responsibility
K	0230	VAAC Tokyo will notify VAAC Darwin of intent to resume normal operations

L	0245	VAAC Tokyo will issue a VAA (cessation of test) for VAAC Tokyo area of responsibility
M	0100 - 0245	VAAC Tokyo and VAAC Darwin will maintain a log of events

Attachment 4- Acknowledgement of receipt from the participants

STATE	UNIT TYPE	LOCATION NAME	AFTN ADDRESS	RESPONSIBLE VAAC	RESULT*
AUSTRALIA	ACC/FIC	BRISBANE/BRISBANE INTL	YBBNZQZX	DARWIN	-
AUSTRALIA	ACC/FIC	MELBOURNE ACC/FIC	YMMMZQZX	DARWIN	-
AUSTRALIA	RODB	BRISBANE (FIR/FIC/ACC/COM/MET/NOF)	YBBBYPYX	-	Y
CAMBODIA	ACC/FIC	PHNOM PENH	VDPPZRZX	TOKYO	-
CAMBODIA	MWO	PHNOM PENH	VDPPYMYX	TOKYO	-
CHINA	ACC/FIC	TAIBEI CITY/TAIBEI INTL AP	RCTPZQZX	TOKYO	-
CHINA	ACC/FIC	HONG KONG FIR	VHHKZQZX	TOKYO	-
CHINA	ACC/FIC	HUHHOT/BAITA	ZBHHZQZX	TOKYO	N
CHINA	ACC/FIC	HULUNBEIER/HAILAR	ZBLAZQZX	TOKYO	-
CHINA	ACC/FIC	BEIJING FIR	ZBPEZQZX	TOKYO	-
CHINA	ACC/FIC	TAIYUAN/WUSU	ZBYNZQZX	TOKYO	N
CHINA	ACC/FIC	CHANGSHA CITY	ZGCSZQZX	TOKYO	N
CHINA	ACC/FIC	GUILIN/LIANGJIANG	ZGKLZQZX	TOKYO	N
CHINA	ACC/FIC	NANNING/WUXU	ZGNNZQZX	TOKYO	N
CHINA	ACC/FIC	GUANGZHOU FIR	ZGZUZQZX	TOKYO	-
CHINA	ACC/FIC	WUHAN FIR	ZHWHZQZX	TOKYO	-
CHINA	ACC/FIC	SANYA FIR/ACC	ZJSAZQZX	TOKYO	-
CHINA	ACC/FIC	LANZHOU CITY	ZLANZQZX	TOKYO	Y from RJTD
CHINA	ACC/FIC	LANZHOU FIR	ZLHWZQZX	TOKYO	-
CHINA	ACC/FIC	XI'AN CITY	ZLSNZQZX	TOKYO	-
CHINA	ACC/FIC	KUNMING FIR	ZPKMZQZX	TOKYO	-
CHINA	ACC/FIC	XIAMEN/GAOQI	ZSAMZQZX	TOKYO	Y from RJTD
CHINA	ACC/FIC	NANCHANG/CHANGBEI	ZSCNZQZX	TOKYO	N
CHINA	ACC/FIC	SHANGHAI FIR	ZSHAZQZX	TOKYO	-
CHINA	ACC/FIC	NANJING/LUKOU	ZSNJZQZX	TOKYO	N
CHINA	ACC/FIC	HEFEI/XINQIAO	ZSOFZQZX	TOKYO	N
CHINA	ACC/FIC	QINGDAO/LIUTING	ZSQDZQZX	TOKYO	N
CHINA	ACC/FIC	JINAN CITY	ZSTNZQZX	TOKYO	N
CHINA	ACC/FIC	CHONGQING/JIANGBEI	ZUCKZQZX	TOKYO	-
CHINA	ACC/FIC	CHENGDU CITY	ZUDSZQZX	TOKYO	-
CHINA	ACC/FIC	URUMQI FIR	ZWUQZQZX	TOKYO	-
CHINA	ACC/FIC	URUMQI/DIWOPU	ZWWWZQZX	TOKYO	-
CHINA	ACC/FIC	HARBIN/TAIPING	ZYHBZQZX	TOKYO	N
CHINA	ACC/FIC	SHENYANG FIR	ZYSHZQZX	TOKYO	-
CHINA	ACC/FIC	DALIAN/ZHOUSHUIZI	ZYTLZQZX	TOKYO	N
CHINA	MWO	TAIBEI CITY/TAIBEI INTL AP	RCTPYMYX	TOKYO	-

CHINA	MWO	HONG KONG/INTERNATIONAL	VHHHYMYX	TOKYO	-
CHINA	MWO	BEIJING/CAPITAL	ZBAAYMYX	TOKYO	Y
CHINA	MWO	GUANGZHOU/BAIYUN	ZGGGYMYX	TOKYO	Y
CHINA	MWO	WUHAN/TIANHE	ZHHHYMYX	TOKYO	Y
CHINA	MWO	HAIKOU/MEILAN	ZJHKYMYX	TOKYO	Y
CHINA	MWO	XI'AN/XIANYANG	ZLXYMYX	TOKYO	Y
CHINA	MWO	SHANGHAI/HONGQIAO	ZSSSYMYX	TOKYO	Y
CHINA	MWO	CHENGDU/SHUANGLIU	ZUUUYMYX	TOKYO	Y
CHINA	MWO	URUMQI/DIWOPU	ZWWWYMYX	TOKYO	Y
CHINA	MWO	SHENYANG/TAOXIAN	ZYTXMYX	TOKYO	Y
DPR KOREA	ACC/FIC	PYONGYANG (FIR)	ZKPYMYX	TOKYO	-
DPR KOREA	MWO	SUNAN	ZKPYMYX	TOKYO	-
FIJI	RODB	NADI/INTL	NFFNYPYX	-	-
INDIA	ACC/FIC	CHENNAI (FIC)	VOMFZQZX	DARWIN	-
INDIA	MWO	CHENNAI	VOMMYMYX	DARWIN	-
INDONESIA	ACC/FIC	MAKASSAR/SULTAN HASANUDDIN	WAAAZQZX	DARWIN	-
INDONESIA	ACC/FIC	JAKARTA	WIIIZQZX	DARWIN	-
INDONESIA	MWO	MAKASSAR/SULTAN HASANUDDIN	WAAAYMYX	DARWIN	-
INDONESIA	MWO	JAKARTA INTL/SOEKARNO-HATTA	WIIYMYX	DARWIN	-
JAPAN	ACC/FIC	SAPPORO ACC	RJCGZQZX	TOKYO	Y
JAPAN	ACC/FIC	FUKUOKA ACC	RJDGZQZX	TOKYO	Y
JAPAN	ACC/FIC	TOKYO ACC	RJTGZQZX	TOKYO	Y
JAPAN	ACC/FIC	NAHA ACC	RORGZQZX	TOKYO	Y
JAPAN	MWO	TOKYO (CITY)	RJTDYMYX	TOKYO	Y
JAPAN	RODB	TOKYO (CITY)	RODBZYX	-	Y
JAPAN	VAAC	TOKYO (CITY)	RJTDYMYX	TOKYO	Y
LAO PDR	ACC/FIC	VIENTIANE (WATTAY)	VLVTZQZX	TOKYO	-
LAO PDR	MWO	VIENTIANE (WATTAY)	VLVYMYX	TOKYO	-
MALAYSIA	ACC/FIC	KOTA KINABALU ACC/FIC	WBFCZQZX	DARWIN	-
MALAYSIA	ACC/FIC	KUALA LUMPUR ACC/FIC	WMFCZQZX	DARWIN	-
MALAYSIA	MWO	SEPANG/KL INTERNATIONAL AIRPORT	WMKKYMYX	DARWIN	Y
MONGOLIA	ACC/FIC	ULAANBAATAR/CHINGGIS KHAAN	ZMUBZQZX	TOKYO	-
MONGOLIA	MWO	ULAANBAATAR/CHINGGIS KHAAN	ZMUBYMYX	TOKYO	-
MYANMAR	ACC/FIC	YANGON INTERNATIONAL	VYYYZQZX	DARWIN	-
MYANMAR	MWO	YANGON INTERNATIONAL	VYYYMYX	DARWIN	-
PAPUA NEW GUINEA	ACC/FIC	PORT MORESBY ACC/FIC/COM	AYPMZGZX	DARWIN	-
PAPUA NEW GUINEA	MWO	PORT MORESBY ACC/FIC/COM	AYPMYMYX	DARWIN	-
PHILIPPINES	ACC/FIC	MANILA (ACC/FIC/COM)	RPHIZRZX	TOKYO	-
PHILIPPINES	MWO	NINYO AQUINO INTERNATIONAL AIRPORT, MANILA	RPLLYMYX	TOKYO	Y
REPUBLIC OF KOREA	ACC/FIC	INCHEON ACC	RKRRZQZX	TOKYO	-
REPUBLIC OF KOREA	MWO	INCHEON INTL	RKSIYMYX	TOKYO	Y
RUSSIAN FEDERATION	ACC/FIC	CHULMAN	UELLZRZX	TOKYO	-
RUSSIAN FEDERATION	ACC/FIC	KHABAROVSK/NOVY	UHHZRZX	TOKYO	-
RUSSIAN	ACC/FIC	MAGADAN/SOKOL	UHMMZRZX	TOKYO	-

FEDERATION					
RUSSIAN FEDERATION	ACC/FIC	PETROPAVLOVSK- KAMCHATSKY/YELIZOVO	UHPPZRZX	TOKYO	Y
RUSSIAN FEDERATION	ACC/FIC	IRKUTSK	UIIIZRZX	TOKYO	-
RUSSIAN FEDERATION	MWO	CHULMAN	UELLYMYX	TOKYO	-
RUSSIAN FEDERATION	MWO	KHABAROVSK/NOVY	UHHHYMYX	TOKYO	-
RUSSIAN FEDERATION	MWO	MAGADAN/SOKOL	UHMMYMYX	TOKYO	-
RUSSIAN FEDERATION	MWO	PETROPAVLOVSK- KAMCHATSKY/YELIZOVO	UHPPYMYX	TOKYO	-
RUSSIAN FEDERATION	MWO	IRKUTSK	UIIIYMYX	TOKYO	-
SINGAPORE	ACC/FIC	SINGAPORE ACC/FIC	WSJCZRZX	DARWIN	-
SINGAPORE	MWO	SINGAPORE/CHANGI	WSSSYMYX	DARWIN	-
SINGAPORE	RODB	SINGAPORE/CHANGI	WSSSYZYX	TOKYO	Y
SOLOMON ISLANDS	ACC/FIC	HONIARA (HENDERSON)	AGGHYMYX	DARWIN	-
SOLOMON ISLANDS	MWO	HONIARA (HENDERSON)	AGGHYMYX	DARWIN	-
SRI LANKA	ACC/FIC	KATUNAYAKE/BANDARANAIKE INTERNATIONAL AIRPORT COLOMBO	VCBIZQZX	DARWIN	-
SRI LANKA	MWO	KATUNAYAKE/BANDARANAIKE INTERNATIONAL AIRPORT COLOMBO	VCBIYMYX	DARWIN	-
THAILAND	MWO	BANGKOK/SUARNABHUMI INTL AIRPORT	VTBSYMYX	TOKYO	Y
THAILAND	RODB	BANGKOK (ACC/FIC/COM CENTRE)	VTBBYPYX	TOKYO	Y
UNITED KINGDOM	W AFC	UK PDAI (GEN)	EGZZMASI	TOKYO	-
UNITED STATES	W AFC	WASHINGTON (NWS NATIONAL MET CENTER), DC.	KWBCYMYX	TOKYO	Y
UNITED STATES	AFWA	2WS WXI AFWA METSAT	KWBCYMYX	DARWIN	Y
UNITED STATES	VAAC	VAAC Washington	KWBCYMYX	DARWIN	Y
VIET NAM	ACC/FIC	HA NOI/NOI BAI INTERNATIONAL	VVNBZRZX	TOKYO	-
VIET NAM	ACC/FIC	HO CHI MINH/TAN SON NHAT INTERNATIONAL	VVTSZRZX	TOKYO	Y
VIET NAM	MWO	GIA LAM	VVGLYMYX	TOKYO	Y
THAILAND	ACC/FIC	BANGKOK (ACC/FIC/COM CENTRE)	VTBBYPYX	TOKYO	-

* RESULT Y: received N: not received -: no reply obtained

2WS WXI AFWA METSAT RECEIVED MESSAGE.

THANK YOU. USAF

FDC Brisbane – receipt of test advisory