



ICAO

*International Civil Aviation Organization***INFORMATION PAPER****Nineteenth Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/19)****Eleventh Meeting of the Meteorological Services Working Group (MET/S WG/11)**

Web-conference, 22 to 26 March 2021

Agenda Item 1: Volcanic ash advisory centre (VAAC) backup tests**VAAC DARWIN AND WELLINGTON BACKUP TEST**

(Presented by New Zealand)

SUMMARY

This paper describes the outcome of a back-up test completed between VAACs Wellington and Darwin on 18 December 2020. In addition to the test forming part of a routine process between the VAACs, it included a third stakeholder, Airways Corporation New Zealand (Airways NZ). Airways NZ was included to assist VAAC Wellington in mimicking VAAC Darwin, allowing the use of the Darwin WMO header when providing a back-up on their behalf. The paper also describes the responses received by both VAACs, with recommendations for next steps on how to continually improve the handover process.

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) conduct back-up tests at least annually.

1.2 VAACs Darwin and Wellington completed a back-up test on 18 December 2020, which ran between 0100 and 0230UTC. In the lead up to the test, both VAACs agreed to include Airways NZ in the back-up test.

1.3 Airways NZ on-forwarded the test Volcanic Ash Advisory (VAA) that VAAC Wellington issued on behalf of VAAC Darwin using their WMO header (FVAUii ADRM DDGGgg). This step is an interim solution until VAAC Wellington is able to complete the same process with their existing forecasting tools, which requires changes to existing software.

2. DISCUSSION

ICAO METP WG-MOG IAVW Decision

2.1 During the 2019 ICAO Meteorology Panel (METP) Working Group Meteorological Operations International Airways Volcano Watch work stream (WG-MOG IAVW) meeting there was a discussion on the consistency of services between the VAACs. Back-up operations and back-up headers were discussed as there was some variation in how back-up services were provided. There was a mixture of different header variations used by the VAAC providing back-up which recipients of these advisories might not be aware of, so the group agreed on a change to ensure consistency.

2.2 The decision was:

That VAACs, when acting in a back-up capacity to another VAAC:

Shall use the same product and location ID in the bulletin header as used by the VAAC they are backing up (with header number ii as appropriate), and

Shall add a comment in the remarks section of the VAA when providing back-up to notify users in the form of "Issued by VAAC nnnnn on behalf of VAAC nnnnn"

2.3 This decision meant that a couple of VAACs were required to update their systems to accommodate these changes. VAAC Wellington enlisted the support from Airways NZ to allow them to disseminate products using the VAAC Darwin header to mimic VAAC Darwin operations.

Back-up Test 18 December 2020

2.4 At 0100UTC, VAAC Darwin requested back-up services from VAAC Wellington. This involved the VAAC Wellington forecaster creating the back-up VAA notice and then emailing a copy of the VAA to the Airways NZ duty officer. Airways NZ then disseminated the VAA using the header FVAU04 ADRM via the AFTN and AMHS connections. At 0130UTC, VAAC Darwin advised VAAC Wellington that they had resumed responsibility of their area.

2.5 At 0145UTC, VAAC Wellington requested back-up services from VAAC Darwin. This involved the VAAC Darwin team issuing a back-up VAAC notice to users under the FVPS01 NZKL header. At 02:15UTC, VAAC Wellington notified VAAC Darwin of the intent to resume normal operations.

2.6 The AFTN address lists for the test are included in Attachment A.

2.7 Both VAACs communicated using a dedicated Microsoft Team's channel, which has proved useful during regular operations, and will very soon replace the WhatsApp approach to collaboration. Microsoft Teams allows both VAACs to conduct conference calls and screen share in real time, as shown in Attachment B.

2.8 VAAC Wellington received receipt responses from Bangkok RODB, VAAC Toulouse and VAAC Montreal, confirming they had received the VAA bulletin FVPS01 NZKL issued by VAAC Darwin.

2.9 VAAC Darwin received responses from Bangkok RODB, Thailand’s MWO, VAAC Toulouse and VAAC Montreal, confirming they had received the VAA bulletin FVAU04 ADRM issued by VAAC Wellington.

2.10 The inclusion of Airways NZ helped VAAC Wellington meet the VAAC back-up requirements agreed by the WG-MOG IAVW work stream, in allowing the VAA to be issued using the VAAC Darwin VAA bulletin header FVAU04 ADRM.

2.11 Both VAACs agree that the low number of users confirming receipt of the VAA sent by VAAC Wellington and VAAC Darwin will require a review of the AFTN addresses in Attachment A to ensure they are current. Once this is complete both VAACs will complete a follow up test.

2.12 It is recognised that the notification of the 18 December back-up test to users was short and this may have impacted on numbers of participants.

2.13 Furthermore, VAACs Wellington and Darwin would like to inform the meeting that prior to the 2021 VAAC back-up test, an email notification will be sent to the members of the MET-S and MET-IE at least 1 week prior to the test taking place. The intent is to ensure that all operational participants are aware of the test and that their participation in the test is vital to guarantee a fully functioning service.

3. ACTION BY THE MEETING

3.1 Note the information contained in this paper.

Attachment A: VAAC Back-up Test AFTN List

Address list for VAAC Darwin VAAs:

AGGHYMYX, AGGHZQZX, AYPMZQZX, AYPYANGM, AYPYANGO, AYPYMYX,
EGLLSITV, EGZZMASI, EGZZMPAC, EGZZVANW, KLGBPACO, KWBCYMYX,
LSZHSWRW, NFFNYPYX, NZAAANZO, NZKLYMYX, RJAANCAO, RJAANCAO,
RJTDYPYX, RJTDYMYX, RKSIIYPYX, RPHIZQZX, RPLLYMYX, VCBIZQZX,
VCBIYMYX, VHHHCPAO, VHHHYMYX, VOMFZQZX, VOMMYMYX, VOMMZQZO,
VTBBYPYX, VTBBZQZX, VTBDYMYX, VTBSYMYX, VVGLYMYX, VVNBZQZX,
VVTSZQZX, VVTSZRZX, VYFZQZX, VYIYMYX, VYIYZQZX, WAAAYMYX,
WAAAZQZX, WAAFZQZX, WADDYMYF, WADDYMYX, WADDYOYX, WBFZQZX,
WBKKYMYX, WBKKZQZO, WIIFZQZX, WIIYMYX, WMFZQZX, WMKMASD,
WMKKYMYX, WMKKZQZX, WRRRYNYX, WSJZQZX, WSSSIAO, WSSSYMYX,
WSSSYZYK, WSSSYZYX, YBBBVOZM, YBBBYPYX, YBBBZRZA, YBBBZRZB,
YBBBZRZG, YBBBZRZX, YBRFYMYX, YMHFYMYX, YMMLJSTX, YMMZRZA,
YMMZRZB, YMMZRZG, YMMZRZX, YMRFYMYX, YPDNZAZX, YPDNZGZA,
YPDNZTZX, YPRFYMYX, YPRMYMYX, YPTNZAZX, YPTNZAZX, YPTNZTZX,
YSRFYMYX, YSSYQFAM, YSSYWZAX

Address list for VAAC Wellington VAAs:

VTBBYPYX, YBBBYPYX, WSSSYZYX, RJTDYPYX, NFFNYPYX, YPDMYMYX,
NFFNYMYX, NTAAYMYX, AGGHYMYX, PHNLYMYX, EGZZMASI, EGZZVANW,
KWBCYMYX, EGGZZMMID, EGZZMPAC, NWBBYMYX, NZAAANZM, NZZZBVXX,
YBBBVOZM, YBZZMANX,

Attachment B: MS Teams discussion

18 /0100Z VAAC Darwin initiates TEST backup

RN
VAAC Darwin
Hi VAAC Wellington. VAAC Darwin is requesting TEST backup.

TB
VAAC Wellington
Hi VAAC Darwin. Confirm receipt. Sending test message now.

18/0106Z – VAAC Wellington VAA

ACTIVE Volcanic Ash Advisory
Rcvd Dec 18 01:06:40

```
1 FVAU04 ADRM 180100
2 VA ADVISORY
3 STATUS: TEST
4 DTG: 20201218/0100Z
5 VAAC: DARWIN
6 VOLCANO: TEST 999999
7 PSN: N1000 E10000
8 AREA: UNKNOWN
9 SUMMIT ELEV: 9999M
10 ADVISORY NR: 2020/2
11 INFO SOURCE: TEST TEST TEST
12 AVIATION COLOUR CODE: NIL
13 ERUPTION DETAILS: TEST TEST TEST
14 OBS VA DTG: 18/0000Z
15 OBS VA CLD:=20
16 FCST VA CLD +6 HR: 18/0600Z NO VA EXP
17 FCST VA CLD +12 HR: 18/1200Z NO VA EXP
18 FCST VA CLD +18 HR: 18/1800Z NO VA EXP
19 RMK: THIS IS A TEST ADVISORY ISSUED BY WELLINGTON VAAC FOR
20 THE DARWIN VAAC AREA OF RESPONSIBILITY SOUTH OF LATITUDE
21 20S. PLEASE ACKNOWLEDGE RECEIPT OF THIS ADVISORY BY SENDING
22 AN EMAIL TO DARWIN.VAAC AT BOM.GOV.AU
23 NXT ADVISORY: NO FURTHER ADVISORIES
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TB
VAAC Wellington
Airways NZ have issued the VAA via AFTN. Could you check for a copy, and paste it into this chat for us?

RN
VAAC Darwin
Thanks will do as such

MET/IE WG/19 & MET/S WG/11 – IP/xx
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12:13
FVAU04 ADRM 180100
VA ADVISORY
STATUS: TEST
DTG: 20201218/0100Z
VAAC: DARWIN
VOLCANO: TEST 999999
PSN: N1000 E10000
AREA: UNKNOWN
SUMMIT ELEV: 9999M
ADVISORY NR: 2020/2
INFO SOURCE: TEST TEST TEST
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS: TEST TEST TEST
OBS VA DTG: 18/0000Z
OBS VA CLD:=20
FCST VA CLD +6 HR: 18/0600Z NO VA EXP
FCST VA CLD +12 HR: 18/1200Z NO VA EXP
FCST VA CLD +18 HR: 18/1800Z NO VA EXP
RMK: THIS IS A TEST ADVISORY ISSUED BY WELLINGTON VAAC FOR
THE DARWIN VAAC AREA OF RESPONSIBILITY SOUTH OF LATITUDE
20S. PLEASE ACKNOWLEDGE RECEIPT OF THIS ADVISORY BY SENDING
AN EMAIL TO DARWIN.VAAC AT BOM.GOV.AU
NXT ADVISORY: NO FURTHER ADVISORIES

The screenshot shows a chat interface with five messages. The participants are VAAC Wellington (TB) and VAAC Darwin (RN). The messages are as follows:

- VAAC Wellington (TB):** Thanks
- VAAC Darwin (RN):** Hi VAAC Wellington , VAAC Darwin is resuming normal operation for TEST backup.
- VAAC Wellington (TB):** Roger that.
- VAAC Wellington (TB):** Hi VAAC Darwin. VAAC Wellington is requesting TEST backup.
and could you also please paste a copy of the VAA you send into this chat
- VAAC Darwin (RN):** Hi VAAC Wellington , confirmed , sending TEST message now.

18/0150Z

MET/IE WG/19 & MET/S WG/11 – IP/xx
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12:53



FVPS01 NZKL 180150
VA ADVISORY
STATUS: TEST
DTG: 20201218/0150Z
VAAC: WELLINGTON
VOLCANO: TEST 999999
PSN: N1000 E10000
AREA: UNKNOWN
SUMMIT ELEV: 9999M
ADVISORY NR: 2020/9
INFO SOURCE: TEST TEST TEST
AVIATION COLOUR CODE: NIL
ERUPTION DETAILS: TEST TEST TEST
OBS VA DTG: 18/0150Z
OBS VA CLD:
FCST VA CLD +6 HR: 18/0750Z NO VA EXP
FCST VA CLD +12 HR: 18/1350Z NO VA EXP
FCST VA CLD +18 HR: 18/1950Z NO VA EXP
RMK: THIS IS A TEST ADVISORY ISSUED BY DARWIN VAAC FOR THE
VAAC WELLINGTON AREA OF RESPONSIBILITY. PLEASE ACKNOWLEDGE
RECEIPT OF THIS ADVISORY BY SENDING AN EMAIL TO VAAC AT
METSERVICE.COM
NXT ADVISORY: NO FURTHER ADVISORIES=

TB

VAAC Wellington

Hi VAAC Darwin, VAAC Wellington is resuming normal operation now.
Thanks, and have a nice day.

RN

VAAC Darwin

Thank you and that concludes the test , goodday.