International Civil Aviation Organization

WORKING PAPER

Twenty-fifth Meeting of the Meteorology Sub-group (MET SG/25)

Online, 18 – 22 October 2021

Agenda Item 4: Air navigation deficiencies

OUTCOMES OF THE "MINI" PACIFIC SIGMET TEST

(Presented by New Zealand)

SUMMARY

This paper presents the outcomes of a recent one-off SIGMET test, held to provide an opportunity for South Pacific-based Meteorological Watch Offices to practice the issuance of test format SIGMETs.

1. INTRODUCTION

1.1 The ICAO APAC Annual SIGMET Test has historically had mixed results for the South Pacific based Meteorological Watch Offices (MWOs). Some MWOs have not participated due to not being aware of the test or due to other operational activities taking precedent. When test SIGMETs are issued, there have been some occasions where there are issues with the information in the headers or with the format of the message itself. Additionally, the SIGMET test also functions as a VAA and TCA test, and there have also been some problems with the priority indicator of some of these, along with dissemination to all RODBs.

1.2 As part of the work of the Pacific Island Aviation Weather Services Panel on deficiency resolution and the recent work of the Meteorological Services ad hoc group on deficiency identification and resolution, it was decided that a small SIGMET test would be useful to give Pacific MWOs an opportunity to practice test SIGMET issuance, with additional support as required. Some South Pacific MWOs hold deficiencies regarding the provision of SIGMETs, meaning this test is an additional opportunity to refine and improve their SIGMET issuance processes.

1.3 It was decided that the SIGMET test would be for WV SIGMETs only, meaning that VAACs that cover the Pacific area would also be invited to participate. One significant difference in this SIGMET test compared with the ICAO Annual SIGMET Test is that MWOs were required to respond via test SIGMET to *all* VAAs they received (or expected to receive), if that VAAC's area of responsibility covers some part of the MWO's FIR.

2. DISCUSSION

Mini Pacific SIGMET Test Procedures

2.1 Participating VAACs (Washington, Darwin, and Wellington) issued a test VAA at 0100 UTC on 17 August 2021, requesting participating MWOs to issue a test WV SIGMET to acknowledge receipt. As per the ICAO Annual SIGMET Test, if an MWO *did not* receive a test VAA from an associated VAAC by 0130 UTC, then a test SIGMET should be issued to indicate this.

2.2 APAC RODBs and the two WAFCs were then requested to provide confirmation of the receipt of the test SIGMETs and VAAs issued during the test.

2.3 Participating MWOs and their associated VAACs for this test were as follows:

MWO	**FIR(s)**	**Associated VAAC(s)**
Nadi	NFFF	Wellington, Washington
Papua New Guinea	AYPM	Darwin
	ANAU	Wellington, Washington
Tahiti	NTTT	Wellington, Washington
Solomon Islands	AGGG	Wellington, Darwin
Honolulu	KZAK	Wellington, Darwin, Washington

Table 2: Participating MWOs and VAACs

Mini Pacific SIGMET Test Results

2.4 Table 2 (below) indicates the VAA receipt by each MWO, as indicated by the test SIGMETs issued during the test.

	VAAC Darwin	**VAAC Washington**	**VAAC Wellington**
MWO Nadi	Not required	Not received	Received
MWO Tahiti	Not required	Not received	Received
MWO Honiara	Not received*	Not required	Not received**
MWO Honolulu	Received	Received	Not ingested – to be fixed.
MWO Port Moresby	TBC	TBC	TBC

Table 2: Test VAA receipt by MWOs
* VAA addressing issue now resolved by VAAC Darwin.
** VAA addressing issue currently being investigated by VAAC Wellington.

2.5 Table 3 (below) indicates the receipt of test VAAs and SIGMETs at each of the WAFCs and APAC RODBs.

	WAFC London	WAFC Washington	Bangkok RODB	Brisbane RODB	Singapore RODB	Tokyo RODB	Nadi RODB
VAAC Wellington	Received	TBC – likely received	Received	Received	Received	Received	Received
VAAC Darwin	Received	TBC – likely received	Received	Received	Received	Received	Received
VAAC Washington	Received	TBC – likely received	Not received	Received	Received	Received	Not received
Nadi FIR	1/1 Received	1/1 Received	1/1 Received	1/1 Received	1/1 Received	1/1 Received	1/1 Received
Tahiti FIR	Not ingested*	2/2 Received	2/2 Received	2/2 Received	2/2 Received	2/2 Received	2/2 Received
Honiara FIR	Not received	2/2 Received	2/2 Received	2/2 Received	Not received	2/2 Received	2/2 Received
Honolulu FIR	3/3 Received	3/3 Received	3/3 Received	3/3 Received	3/3 Received	3/3 Received	3/3 Received
Port Moresby FIR	Not received**	Not received*	Not received**	Not received**	Not received**	Not received***	Not received*
Nauru FIR	Not received**	Not received**	Not received**	Not received**	Not received**	Not received**	Not received**

Table 3: Test VAA and SIGMET receipt by APAC RODBs and WAFCs.
* Issue with SIGMET validity time format, not reflective of operational SIGMETs.
** SIGMET issuance to be confirmed – being followed up.

Opportunities for Improvement

2.6 It is understood that systems set up to issue test SIGMETs may not exactly mimic those used for operational SIGMETs, when those two systems are separate. Therefore, it is not presumed the opportunities for improvement identified will apply equally to both test and operational systems (if systems are separate). However, participants are urged to check systems for issuing both test and operational SIGMETs to ensure that priority indicators, distribution lists and formatting are correct.

2.7 Five opportunities for improvement were identified for the participants when reviewing the results of the mini Pacific SIGMET test.

a) Ensure that correct format for validity time is used – this must be 6 digits (DDGGggZ), otherwise it will be rejected by the SADIS gateway and unlikely to be ingested in all downstream systems.

b) VAACs and MWOs ensure that the priority indicator used is FF – even for ‘test’ SIGMETs or VAAs.

c) Check that distribution lists for SIGMETs & VAAs includes all five APAC RODBs (some messages are not being received directly by RODBs or in some cases, at all). VAAs should also include addresses for the WAFCs (SIGMETs will be on-forwarded by the RODBs to the WAFCs).

d) Use of extra characters in the SIGMET form – e.g. use of a full stop can cause issues with IWXXM translation or system ingestion. (Attn: ICAO annual SIGMET test procedure writers)

e) The location code for Port Moresby FIR is different in APAC eANP Vol 1 (FIR code **AYPM** - Table ATM I-1) and in APAC eANP Vol 2 (FIR code **AYPY** in TABLE MET II-1 and in App D Regional SIGMET Guide). Need to determine which is correct and make appropriate amendments. (Attn: ICAO APAC Office)

2.8 Further coordination is ongoing with MWO Port Moresby to determine why issued SIGMETs for the Port Moresby and Nauru FIRs are not reaching the APAC RODBs.

2.9 It was found during this test that some MWOs were not necessarily set up to ingest VAAs from *all* the VAACs whose area of responsibility covers some part of that MWO's FIR. This may be something that the ICAO Annual SIGMET test organisers would like to consider as part of the test process, to ensure that MWOs receive VAAs from *all* associated VAACs.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) Consider adopting the opportunity for improvement in paragraph 2.7 part e) as an urgent action to be addressed by the ICAO Secretariat, including reviewing other relevant ICAO documentation to determine if they also include an error with regards to the Port Moresby FIR location code;
b) consider whether to expand the ICAO annual SIGMET Test to require MWOs to issue a test SIGMET for each test VAA received by an associated VAAC; and
c) propose any other actions as required.

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