

*International Civil Aviation Organization*

**WORKING PAPER**



ICAO

**Eighteenth Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/18) and Tenth Meeting of the Meteorological Services Working Group (MET/S WG/10)**

Web-conference, 27 to 31 July 2020

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**Agenda Item 3: Monitoring of meteorological information exchange**

**ASIA/PAC INTER-REGIONAL OPMET GATEWAY BACKUP EXERCISE  
BETWEEN IROG SINGAPORE AND IROG BANGKOK**

(Presented by Singapore)

**SUMMARY**

This paper presents the results of the second IROG backup exercise between IROG Singapore and IROG Bangkok as part of the IROGs' maintenance of business continuity during unforeseen events in the Region.

**1. INTRODUCTION**

1.1 The OPMET/M TF/3 Meeting in March 2005 established the procedures for dissemination of ASIA/PAC OPMET Data to WAFC London by IROG Bangkok in the event IROG Singapore experiences technical problems.

1.2 The MET/IE WG/15 Meeting agreed to consider a broader programme for IROG backup procedures in the Region given that other RODBs are also designated as IROGs for the APAC Region. In Workplan Activity 5.2, all IROGs were to review the IROG backup procedures to include all IROGs.

1.3 IROG Singapore and IROG Bangkok reviewed the existing procedures and agreed for a backup process between IROG Singapore and IROG Bangkok in the event IROG Bangkok experiences technical difficulties with prolonged downtime. The procedures were presented and adopted at the MET/IE WG/16 Meeting.

**2. DISCUSSION**

2.1 As part of the backup arrangement procedures, real-time backup exercises are to be conducted annually to validate the dissemination process for notification between IROG Singapore and IROG Bangkok, and to ensure that the procedures for handover and takeover of responsibility are functional.

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2.2 The second IROG backup exercise between IROG Singapore and IROG Bangkok in the event IROG Bangkok experiences technical difficulties with prolonged downtime was conducted on 16 October 2019.

2.3 During the exercise, IROG Singapore took over IROG Bangkok’s role in relaying the OPMET messages from ASIA/PAC to MID and from ASIA to AFI between 0200 UTC and 0800 UTC. Both IROGs monitored and recorded the reception and transmission of the OPMET messages (see Appendix A). A summary of the results is listed in Table 1 (below).

Type of Message	No. of Bulletins Received by IROG		No. of Bulletins Routed to MID/AFI by IROG Singapore	Successful Transmission Rate	No. of Bulletins Not Successfully Routed by IROG Singapore
	Bangkok	Singapore			
SA Bulletin	459	459	459	100%	0
FT Bulletin	70	70	70	100%	0
<b>Total</b>	529	529	529	100%	0

Table 1: Summary of the Reception and Transmission of OPMET Messages

### 3. CONCLUSION

3.1 IROG Singapore successfully routed 459 out of 459 (100%) METAR bulletins and 70 out of 70 (100%) TAF bulletins to MID/AFI during the exercise.

3.2 The exercise validated the dissemination process for notification between IROG Singapore and IROG Bangkok and the procedures for handover and takeover of responsibility are functional in the event IROG Bangkok experiences technical problems.

### 4. ACTION BY THE MEETING

4.1 The meeting is invited to discuss the following:

- a) the results of the IROG backup exercise; and
- b) the necessary follow-up issues arising from the exercise, if any.

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Appendix A: Reception and Transmission of the OPMET messages

METAR Bulletins

	TAAii	CCCC	YYGGgg	BBB	Recorded by IROG VTBB RX Time UTC	Recorded by IROG WSSS RX Time UTC	Recorded by IROG WSSS TX Time UTC to MID	Recorded by IROG WSSS TX Time UTC to AFI	Remark
					(hh:mm)	(hh:mm)	(hh:mm)	(hh:mm)	
1	SAAE31	VTBB	160200		2:06	2:06	2:06	2:06	
2	SAAE31	VTBB	160230		2:35	2:35	2:35	2:35	
3	SAAE31	VTBB	160300		3:06	3:06	3:06	3:06	
4	SAAE31	VTBB	160330		3:35	3:35	3:35	3:35	
5	SAAE31	VTBB	160400		4:05	4:05	4:05	4:05	
6	SAAE31	VTBB	160430		4:35	4:35	4:35	4:35	
7	SAAE31	VTBB	160500		5:07	5:07	5:07	5:07	
8	SAAE31	VTBB	160530		5:36	5:36	5:36	5:36	
9	SAAE31	VTBB	160600		6:06	6:06	6:06	6:06	
10	SAAE31	VTBB	160630		6:35	6:35	6:35	6:35	
11	SAAE31	VTBB	160700		7:05	7:05	7:05	7:05	
12	SAAE31	VTBB	160730		7:34	7:35	7:35	7:35	
13	SAAE32	VTBB	160200		2:06	2:06	2:06	2:06	
14	SAAE32	VTBB	160230		2:35	2:35	2:35	2:35	
15	SAAE32	VTBB	160300		3:06	3:06	3:06	3:06	
16	SAAE32	VTBB	160330		3:35	3:35	3:35	3:35	
17	SAAE32	VTBB	160400		4:05	4:05	4:05	4:05	
18	SAAE32	VTBB	160400	RRA	4:18	4:18	4:18	4:18	
19	SAAE32	VTBB	160430		4:35	4:35	4:35	4:35	
20	SAAE32	VTBB	160500		5:07	5:07	5:07	5:07	
21	SAAE32	VTBB	160530		5:36	5:36	5:36	5:36	
22	SAAE32	VTBB	160600		6:06	6:06	6:06	6:06	
23	SAAE32	VTBB	160630		6:35	6:35	6:35	6:35	
24	SAAE32	VTBB	160700		7:05	7:06	7:06	7:06	
25	SAAE32	VTBB	160730		7:35	7:35	7:35	7:35	
26	SAAE33	VTBB	160200		2:05	2:05	2:05	2:05	
27	SAAE33	VTBB	160300		3:05	3:05	3:05	3:05	
28	SAAE33	VTBB	160400		4:05	4:05	4:05	4:05	
29	SAAE33	VTBB	160500		5:06	5:06	5:07	5:07	
30	SAAE33	VTBB	160600		6:05	6:05	6:05	6:05	
31	SAAE33	VTBB	160700		7:05	7:05	7:05	7:05	
32	SAAE34	VTBB	160200		2:05	2:06	2:06	2:06	
33	SAAE34	VTBB	160230		2:35	2:35	2:35	2:35	
34	SAAE34	VTBB	160300		3:06	3:06	3:06	3:06	
35	SAAE34	VTBB	160330		3:35	3:35	3:35	3:35	
36	SAAE34	VTBB	160400		4:05	4:05	4:05	4:05	
37	SAAE34	VTBB	160400	RRA	4:06	4:06	4:06	4:06	
38	SAAE34	VTBB	160430		4:35	4:35	4:35	4:35	
39	SAAE34	VTBB	160430	RRA	4:37	4:37	4:37	4:37	
40	SAAE34	VTBB	160500		5:06	5:07	5:07	5:07	
41	SAAE34	VTBB	160530		5:36	5:36	5:36	5:36	
42	SAAE34	VTBB	160600		6:05	6:06	6:06	6:06	
43	SAAE34	VTBB	160630		6:35	6:35	6:35	6:35	
44	SAAE34	VTBB	160700		7:05	7:05	7:05	7:05	
45	SAAE34	VTBB	160730		7:35	7:35	7:35	7:35	
46	SAAU31	YBBN	160200		2:10	2:10	2:10		Not required for AFI
47	SAAU31	YBBN	160230		2:40	2:40	2:40		Not required for AFI
48	SAAU31	YBBN	160300		3:10	3:10	3:10		Not required for AFI
49	SAAU31	YBBN	160330		3:40	3:40	3:40		Not required for AFI

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50	SAAU31	YBBN	160400		4:10	4:10	4:10	Not required for AFI
51	SAAU31	YBBN	160430		4:40	4:40	4:40	Not required for AFI
52	SAAU31	YBBN	160500		5:10	5:10	5:10	Not required for AFI
53	SAAU31	YBBN	160530		5:40	5:40	5:40	Not required for AFI
54	SAAU31	YBBN	160600		6:10	6:10	6:10	Not required for AFI
55	SAAU31	YBBN	160630		6:40	6:40	6:40	Not required for AFI
56	SAAU31	YBBN	160700		7:10	7:10	7:10	Not required for AFI
57	SAAU31	YBBN	160730		7:40	7:40	7:40	Not required for AFI
58	SAAU32	YBBN	160200		2:10	2:10	2:10	Not required for AFI
59	SAAU32	YBBN	160230		2:40	2:40	2:40	Not required for AFI
60	SAAU32	YBBN	160300		3:10	3:10	3:10	Not required for AFI
61	SAAU32	YBBN	160330		3:40	3:40	3:40	Not required for AFI
62	SAAU32	YBBN	160400		4:10	4:10	4:10	Not required for AFI
63	SAAU32	YBBN	160430		4:40	4:40	4:40	Not required for AFI
64	SAAU32	YBBN	160500		5:10	5:10	5:10	Not required for AFI
65	SAAU32	YBBN	160530		5:40	5:40	5:40	Not required for AFI
66	SAAU32	YBBN	160600		6:10	6:10	6:10	Not required for AFI
67	SAAU32	YBBN	160630		6:40	6:40	6:40	Not required for AFI
68	SAAU32	YBBN	160630	RRA	6:40	6:40	6:40	Not required for AFI
69	SAAU32	YBBN	160700		7:10	7:10	7:10	Not required for AFI
70	SAAU32	YBBN	160700	RRA	7:10	7:10	7:10	Not required for AFI
71	SAAU32	YBBN	160730		7:40	7:40	7:40	Not required for AFI
72	SAAU33	YBBN	160200		2:10	2:10	2:10	Not required for AFI
73	SAAU33	YBBN	160230		2:40	2:40	2:40	Not required for AFI
74	SAAU33	YBBN	160300		3:10	3:10	3:10	Not required for AFI
75	SAAU33	YBBN	160330		3:40	3:40	3:40	Not required for AFI
76	SAAU33	YBBN	160400		4:10	4:10	4:10	Not required for AFI
77	SAAU33	YBBN	160430		4:40	4:40	4:40	Not required for AFI
78	SAAU33	YBBN	160500		5:10	5:10	5:10	Not required for AFI
79	SAAU33	YBBN	160530		5:40	5:40	5:40	Not required for AFI
80	SAAU33	YBBN	160600		6:10	6:10	6:10	Not required for AFI
81	SAAU33	YBBN	160630		6:40	6:40	6:40	Not required for AFI
82	SAAU33	YBBN	160700		7:10	7:10	7:10	Not required for AFI
83	SAAU33	YBBN	160730		7:40	7:40	7:40	Not required for AFI
84	SAAU34	YBBN	160200		2:10	2:10	2:10	Not required for AFI
85	SAAU34	YBBN	160230		2:40	2:40	2:40	Not required for AFI
86	SAAU34	YBBN	160300		3:10	3:10	3:10	Not required for AFI
87	SAAU34	YBBN	160330		3:40	3:40	3:40	Not required for AFI
88	SAAU34	YBBN	160400		4:10	4:10	4:10	Not required for AFI
89	SAAU34	YBBN	160430		4:40	4:40	4:40	Not required for AFI
90	SAAU34	YBBN	160500		5:10	5:10	5:10	Not required for AFI
91	SAAU34	YBBN	160530		5:40	5:40	5:40	Not required for AFI
92	SAAU34	YBBN	160600		6:10	6:10	6:10	Not required for AFI
93	SAAU34	YBBN	160630		6:40	6:40	6:40	Not required for AFI
94	SAAU34	YBBN	160700		7:10	7:10	7:10	Not required for AFI
95	SAAU34	YBBN	160730		7:40	7:40	7:40	Not required for AFI
96	SAAU35	YBBN	160200		2:10	2:10	2:10	Not required for AFI
97	SAAU35	YBBN	160230		2:40	2:40	2:40	Not required for AFI
98	SAAU35	YBBN	160300		3:10	3:10	3:10	Not required for AFI
99	SAAU35	YBBN	160330		3:40	3:40	3:40	Not required for AFI
100	SAAU35	YBBN	160400		4:10	4:10	4:10	Not required for AFI
101	SAAU35	YBBN	160430		4:40	4:40	4:40	Not required for AFI
102	SAAU35	YBBN	160500		5:10	5:10	5:10	Not required for AFI
103	SAAU35	YBBN	160530		5:40	5:40	5:40	Not required for AFI

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104	SAAU35	YBBN	160600		6:10	6:10	6:10		Not required for AFI
105	SAAU35	YBBN	160630		6:40	6:40	6:40		Not required for AFI
106	SAAU35	YBBN	160700		7:10	7:10	7:10		Not required for AFI
107	SAAU35	YBBN	160730		7:40	7:40	7:40		Not required for AFI
108	SACI31	ZBBB	160200		2:06	2:05	2:05	2:05	
109	SACI31	ZBBB	160230		2:36	2:35	2:35	2:35	
110	SACI31	ZBBB	160300		3:06	3:05	3:05	3:05	
111	SACI31	ZBBB	160330		3:35	3:35	3:35	3:35	
112	SACI31	ZBBB	160400		4:05	4:05	4:05	4:05	
113	SACI31	ZBBB	160430		4:35	4:35	4:35	4:35	
114	SACI31	ZBBB	160500		5:05	5:05	5:05	5:05	
115	SACI31	ZBBB	160530		5:35	5:35	5:35	5:35	
116	SACI31	ZBBB	160600		6:05	6:05	6:05	6:05	
117	SACI31	ZBBB	160630		6:36	6:35	6:35	6:35	
118	SACI31	ZBBB	160700		7:06	7:05	7:05	7:05	
119	SACI31	ZBBB	160730		7:35	7:35	7:35	7:35	
120	SACI32	ZBBB	160200		2:05	2:05	2:05	2:05	
121	SACI32	ZBBB	160300		3:06	3:05	3:05	3:05	
122	SACI32	ZBBB	160400		4:05	4:05	4:05	4:05	
123	SACI32	ZBBB	160500		5:06	5:05	5:05	5:05	
124	SACI32	ZBBB	160600		6:06	6:05	6:05	6:05	
125	SACI32	ZBBB	160700		7:07	7:05	7:05	7:05	
126	SACI41	ZBBB	160200		2:06	2:05	2:05	2:05	
127	SACI41	ZBBB	160300		3:06	3:05	3:05	3:05	
128	SACI41	ZBBB	160400		4:05	4:05	4:05	4:05	
129	SACI41	ZBBB	160500		5:06	5:05	5:05	5:05	
130	SACI41	ZBBB	160600		6:06	6:05	6:05	6:05	
131	SACI41	ZBBB	160700		7:07	7:05	7:05	7:05	
132	SAHK31	VHHH	160200		2:08	2:08	2:08	2:08	
133	SAHK31	VHHH	160230		2:36	2:36	2:36	2:36	
134	SAHK31	VHHH	160300		3:06	3:06	3:06	3:06	
135	SAHK31	VHHH	160330		3:36	3:36	3:36	3:36	
136	SAHK31	VHHH	160400		4:06	4:06	4:06	4:06	
137	SAHK31	VHHH	160430		4:36	4:36	4:36	4:36	
138	SAHK31	VHHH	160500		5:06	5:06	5:07	5:07	
139	SAHK31	VHHH	160530		5:36	5:36	5:36	5:36	
140	SAHK31	VHHH	160600		6:06	6:06	6:06	6:06	
141	SAHK31	VHHH	160600	CCA	6:54	6:54	6:54	6:54	
142	SAHK31	VHHH	160630		6:36	6:36	6:36	6:36	
143	SAHK31	VHHH	160700		7:06	7:06	7:06	7:06	
144	SAHK31	VHHH	160730		7:36	7:36	7:36	7:36	
145	SAID31	WIII	160200		2:10	2:10	2:10	2:10	
146	SAID31	WIII	160200		2:10	2:10	2:10	2:10	
147	SAID31	WIII	160230		2:40	2:40	2:40	2:40	
148	SAID31	WIII	160230		2:40	2:40	2:40	2:40	
149	SAID31	WIII	160230		2:53	2:53	2:53	2:53	
150	SAID31	WIII	160300		3:10	3:10	3:10	3:10	
151	SAID31	WIII	160300		3:10	3:10	3:10	3:10	
152	SAID31	WIII	160330		3:40	3:40	3:40	3:40	
153	SAID31	WIII	160330		3:40	3:40	3:40	3:40	
154	SAID31	WIII	160400		4:10	4:10	4:10	4:10	
155	SAID31	WIII	160400		4:10	4:10	4:10	4:10	
156	SAID31	WIII	160400		4:13	4:13	4:13	4:13	
157	SAID31	WIII	160400		4:20	4:19	4:19	4:19	
158	SAID31	WIII	160400		4:24	4:24	4:24	4:24	
159	SAID31	WIII	160400		4:24	4:24	4:24	4:24	
160	SAID31	WIII	160400		4:24	4:24	4:24	4:24	
161	SAID31	WIII	160500		5:07	5:07	5:07	5:07	

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162	SAID31	WIII	160500	5:10	5:10	5:10	5:10
163	SAID31	WIII	160500	5:10	5:10	5:10	5:10
164	SAID31	WIII	160500	5:18	5:18	5:18	5:18
165	SAID31	WIII	160500	5:25	5:25	5:25	5:25
166	SAID31	WIII	160500	5:25	5:26	5:26	5:26
167	SAID31	WIII	160500	5:25	5:26	5:26	5:26
168	SAID31	WIII	160530	5:34	5:34	5:34	5:34
169	SAID31	WIII	160530	5:40	5:40	5:40	5:40
170	SAID31	WIII	160530	5:56	5:55	5:55	5:55
171	SAID31	WIII	160530	5:56	5:55	5:55	5:55
172	SAID31	WIII	160530	5:56	5:56	5:56	5:56
173	SAID31	WIII	160600	6:04	6:04	6:04	6:04
174	SAID31	WIII	160600	6:10	6:10	6:10	6:10
175	SAID31	WIII	160600	6:10	6:10	6:10	6:10
176	SAID31	WIII	160600	6:12	6:12	6:12	6:12
177	SAID31	WIII	160600	6:26	6:26	6:26	6:26
178	SAID31	WIII	160600	6:26	6:26	6:26	6:26
179	SAID31	WIII	160600	6:26	6:26	6:26	6:26
180	SAID31	WIII	160630	6:34	6:34	6:34	6:34
181	SAID31	WIII	160630	6:40	6:40	6:40	6:40
182	SAID31	WIII	160630	6:56	6:56	6:56	6:56
183	SAID31	WIII	160630	6:56	6:56	6:56	6:56
184	SAID31	WIII	160700	7:04	7:04	7:04	7:04
185	SAID31	WIII	160700	7:06	7:06	7:06	7:06
186	SAID31	WIII	160700	7:10	7:10	7:10	7:10
187	SAID31	WIII	160700	7:27	7:27	7:27	7:27
188	SAID31	WIII	160700	7:27	7:27	7:27	7:27
189	SAID31	WIII	160700	7:27	7:27	7:27	7:27
190	SAID31	WIII	160730	7:34	7:34	7:34	7:34
191	SAID31	WIII	160730	7:40	7:40	7:40	7:40
192	SAID31	WIII	160730	7:57	7:57	7:57	7:57
193	SAID31	WIII	160730	7:57	7:57	7:57	7:57
194	SAID31	WIII	160730	7:57	7:57	7:57	7:57
195	SAID32	WIII	160200	2:10	2:10	2:10	2:10
196	SAID32	WIII	160230	2:40	2:40	2:40	2:40
197	SAID32	WIII	160300	3:10	3:10	3:10	3:10
198	SAID32	WIII	160330	3:40	3:40	3:40	3:40
199	SAID32	WIII	160400	4:10	4:10	4:10	4:10
200	SAID32	WIII	160400	4:24	4:24	4:24	4:24
201	SAID32	WIII	160400	4:24	4:24	4:24	4:24
202	SAID32	WIII	160400	4:25	4:25	4:25	4:25
203	SAID32	WIII	160500	5:10	5:10	5:10	5:10
204	SAID32	WIII	160500	5:25	5:26	5:26	5:26
205	SAID32	WIII	160500	5:26	5:26	5:26	5:26
206	SAID32	WIII	160500	5:26	5:26	5:26	5:26
207	SAID32	WIII	160530	5:40	5:40	5:40	5:40
208	SAID32	WIII	160530	5:56	5:56	5:56	5:56
209	SAID32	WIII	160530	5:56	5:56	5:56	5:56
210	SAID32	WIII	160530	5:56	5:57	5:57	5:57
211	SAID32	WIII	160600	6:10	6:10	6:10	6:10
212	SAID32	WIII	160600	6:25	6:26	6:26	6:26
213	SAID32	WIII	160600	6:26	6:26	6:26	6:26
214	SAID32	WIII	160600	6:27	6:27	6:27	6:27
215	SAID32	WIII	160630	6:40	6:40	6:40	6:40

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216	SAID32	WIII	160630	6:56	6:56	6:56	6:56
217	SAID32	WIII	160630	6:57	6:56	6:56	6:56
218	SAID32	WIII	160630	6:57	6:57	6:57	6:57
219	SAID32	WIII	160700	7:05	7:05	7:05	7:05
220	SAID32	WIII	160700	7:10	7:10	7:10	7:10
221	SAID32	WIII	160700	7:27	7:27	7:27	7:27
222	SAID32	WIII	160700	7:27	7:27	7:27	7:27
223	SAID32	WIII	160700	7:27	7:27	7:27	7:27
224	SAID32	WIII	160730	7:40	7:40	7:40	7:40
225	SAID32	WIII	160730	7:40	7:40	7:40	7:40
226	SAID32	WIII	160730	7:57	7:57	7:57	7:57
227	SAID32	WIII	160730	7:57	7:57	7:57	7:57
228	SAID32	WIII	160730	7:57	7:57	7:57	7:57
229	SAID33	WIII	160200	2:10	2:10	2:10	2:10
230	SAID33	WIII	160200	2:10	2:10	2:10	2:10
231	SAID33	WIII	160200	2:10	2:22	2:22	2:22
232	SAID33	WIII	160230	2:40	2:40	2:40	2:40
233	SAID33	WIII	160230	2:40	2:40	2:40	2:40
234	SAID33	WIII	160300	3:10	3:10	3:10	3:10
235	SAID33	WIII	160300	3:10	3:10	3:10	3:10
236	SAID33	WIII	160300	3:10	3:10	3:10	3:10
237	SAID33	WIII	160330	3:40	3:40	3:40	3:40
238	SAID33	WIII	160330	3:40	3:40	3:40	3:40
239	SAID33	WIII	160330	3:42	3:42	3:42	3:42
240	SAID33	WIII	160400	4:10	4:10	4:10	4:10
241	SAID33	WIII	160400	4:10	4:10	4:10	4:10
242	SAID33	WIII	160400	4:25	4:25	4:25	4:25
243	SAID33	WIII	160400	4:25	4:25	4:25	4:25
244	SAID33	WIII	160500	5:07	5:07	5:07	5:07
245	SAID33	WIII	160500	5:10	5:10	5:10	5:10
246	SAID33	WIII	160500	5:14	5:14	5:14	5:14
247	SAID33	WIII	160500	5:15	5:15	5:15	5:15
248	SAID33	WIII	160500	5:19	5:19	5:19	5:19
249	SAID33	WIII	160500	5:23	5:24	5:24	5:24
250	SAID33	WIII	160500	5:26	5:26	5:26	5:26
251	SAID33	WIII	160500	5:26	5:26	5:26	5:26
252	SAID33	WIII	160500	5:26	5:26	5:26	5:26
253	SAID33	WIII	160530	5:34	5:34	5:34	5:34
254	SAID33	WIII	160530	5:40	5:40	5:40	5:40
255	SAID33	WIII	160530	5:56	5:56	5:56	5:56
256	SAID33	WIII	160600	6:04	6:04	6:04	6:04
257	SAID33	WIII	160600	6:10	6:10	6:10	6:10
258	SAID33	WIII	160600	6:14	6:14	6:14	6:14
259	SAID33	WIII	160600	6:26	6:26	6:26	6:26
260	SAID33	WIII	160600	6:26	6:26	6:26	6:26
261	SAID33	WIII	160600	6:27	6:27	6:27	6:27
262	SAID33	WIII	160630	6:34	6:34	6:34	6:34
263	SAID33	WIII	160630	6:40	6:40	6:40	6:40
264	SAID33	WIII	160700	7:04	7:04	7:04	7:04
265	SAID33	WIII	160700	7:04	7:04	7:04	7:04
266	SAID33	WIII	160700	7:10	7:10	7:10	7:10
267	SAID33	WIII	160700	7:27	7:27	7:27	7:27
268	SAID33	WIII	160700	7:27	7:27	7:27	7:27
269	SAID33	WIII	160730	7:34	7:34	7:34	7:34
270	SAID33	WIII	160730	7:40	7:40	7:40	7:40
271	SAID33	WIII	160730	7:57	7:57	7:57	7:57
272	SAIN31	VABB	160700	7:05	7:05	7:05	7:05
273	SAIN31	VABB	160700	RRA	7:12	7:12	7:12

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274	SAIN31	VABB	160730		7:35	7:36	7:36	7:36
275	SAIN32	VIDP	160200		2:06	2:06	2:06	2:06
276	SAIN32	VIDP	160200	RRA	2:11	2:11	2:11	2:11
277	SAIN32	VIDP	160200	RRB	2:16	2:16	2:16	2:16
278	SAIN32	VIDP	160230		2:36	2:36	2:36	2:36
279	SAIN32	VIDP	160230	RRB	2:46	2:46	2:46	2:46
280	SAIN32	VIDP	160300		3:06	3:06	3:06	3:06
281	SAIN32	VIDP	160330		3:36	3:36	3:36	3:36
282	SAIN32	VIDP	160330	RRA	3:46	3:46	3:46	3:46
283	SAIN32	VIDP	160400		4:06	4:06	4:06	4:06
284	SAIN32	VIDP	160400	RRA	4:11	4:11	4:11	4:11
285	SAIN32	VIDP	160430		4:36	4:36	4:36	4:36
286	SAIN32	VIDP	160430	RRA	4:41	5:48	5:48	5:48
287	SAIN32	VIDP	160500		5:06	5:06	5:06	5:06
288	SAIN32	VIDP	160530		5:36	5:36	5:36	5:36
289	SAIN32	VIDP	160600		6:06	6:06	6:06	6:06
290	SAIN32	VIDP	160600	RRA	6:16	6:16	6:16	6:16
291	SAIN32	VIDP	160630		6:36	6:36	6:36	6:36
292	SAIN32	VIDP	160630	RRA	6:41	6:41	6:41	6:41
293	SAIN32	VIDP	160700		7:06	7:06	7:06	7:06
294	SAIN32	VIDP	160730		7:36	7:36	7:36	7:36
295	SAIN32	VIDP	160730	RRA	7:41	7:41	7:41	7:41
296	SAIN33	VECC	160200		2:05	2:05	2:05	2:05
297	SAIN33	VECC	160200	RRA	2:15	2:15	2:15	2:15
298	SAIN33	VECC	160230		2:35	2:35	2:35	2:35
299	SAIN33	VECC	160230	RRA	2:55	2:55	2:55	2:55
300	SAIN33	VECC	160300		3:06	3:05	3:05	3:05
301	SAIN33	VECC	160300	RRA	3:25	3:25	3:25	3:25
302	SAIN33	VECC	160330		3:35	3:35	3:35	3:35
303	SAIN33	VECC	160400		4:05	4:06	4:06	4:06
304	SAIN33	VECC	160430		4:36	4:36	4:36	4:36
305	SAIN33	VECC	160500		5:05	5:05	5:05	5:05
306	SAIN33	VECC	160530		5:36	5:35	5:35	5:35
307	SAIN33	VECC	160600		6:09	6:09	6:09	6:09
308	SAIN33	VECC	160600	RRA	6:15	6:15	6:15	6:15
309	SAIN33	VECC	160630		6:35	6:35	6:35	6:35
310	SAIN33	VECC	160630	RRA	6:45	6:45	6:45	6:45
311	SAIN33	VECC	160700		7:06	7:06	7:06	7:06
312	SAIN33	VECC	160730		7:36	7:36	7:36	7:36
313	SAJP31	RJTD	160200		2:06	2:07	2:07	2:07
314	SAJP31	RJTD	160300		3:06	3:06	3:06	3:06
315	SAJP31	RJTD	160400		4:06	4:07	4:07	4:07
316	SAJP31	RJTD	160500		5:06	5:07	5:07	5:07
317	SAJP31	RJTD	160600		6:06	6:07	6:07	6:07
318	SAJP31	RJTD	160700		7:06	7:06	7:07	7:07
319	SAJP32	RJTD	160200		2:06	2:07	2:07	2:07
320	SAJP32	RJTD	160200	RRA	2:06	2:07	2:07	2:07
321	SAJP32	RJTD	160300		3:06	3:06	3:06	3:06
322	SAJP32	RJTD	160300	RRA	3:06	3:06	3:06	3:06
323	SAJP32	RJTD	160400		4:06	4:07	4:07	4:07
324	SAJP32	RJTD	160400	RRA	4:06	4:07	4:07	4:07
325	SAJP32	RJTD	160500		5:06	5:07	5:07	5:07
326	SAJP32	RJTD	160500	RRA	5:06	5:07	5:07	5:07
327	SAJP32	RJTD	160600		6:06	6:07	6:07	6:07

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328	SAJP32	RJTD	160600	RRA	6:06	6:07	6:07	6:07	
329	SAJP32	RJTD	160700		7:06	7:06	7:07	7:07	
330	SAJP32	RJTD	160700	RRA	7:06	7:06	7:06	7:06	
331	SAJP38	RJTD	160200		2:06	2:07	2:07	2:07	
332	SAJP38	RJTD	160200	RRA	2:06	2:07	2:07	2:07	
333	SAJP38	RJTD	160300		3:06	3:06	3:06	3:06	
334	SAJP38	RJTD	160300	RRA	3:06	3:06	3:06	3:06	
335	SAJP38	RJTD	160400		4:06	4:07	4:07	4:07	
336	SAJP38	RJTD	160400	RRA	4:06	4:07	4:07	4:07	
337	SAJP38	RJTD	160500		5:06	5:07	5:07	5:07	
338	SAJP38	RJTD	160500	RRA	5:06	5:07	5:07	5:07	
339	SAJP38	RJTD	160600		6:06	6:07	6:07	6:07	
340	SAJP38	RJTD	160600	RRA	6:06	6:07	6:07	6:07	
341	SAJP38	RJTD	160700		7:07	7:06	7:07	7:07	
342	SAJP38	RJTD	160700	RRA	7:07	7:07	7:07	7:07	
343	SAKO31	RKSI	160200		2:04	2:04	2:04	2:04	
344	SAKO31	RKSI	160230		2:34	2:34	2:34	2:34	
345	SAKO31	RKSI	160300		3:04	3:04	3:04	3:04	
346	SAKO31	RKSI	160330		3:34	3:34	3:34	3:34	
347	SAKO31	RKSI	160400		4:04	4:04	4:04	4:04	
348	SAKO31	RKSI	160430		4:34	4:34	4:34	4:34	
349	SAKO31	RKSI	160500		5:04	5:04	5:04	5:04	
350	SAKO31	RKSI	160530		5:34	5:34	5:34	5:34	
351	SAKO31	RKSI	160600		6:04	6:04	6:04	6:04	
352	SAKO31	RKSI	160630		6:34	6:34	6:34	6:34	
353	SAKO31	RKSI	160700		7:04	7:04	7:04	7:04	
354	SAKO31	RKSI	160730		7:34	7:34	7:34	7:34	
355	SAMS31	WMKK	160200		2:08	2:08	2:08	2:08	
356	SAMS31	WMKK	160230		2:38	2:38	2:38	2:38	
357	SAMS31	WMKK	160300		3:08	3:08	3:08	3:08	
358	SAMS31	WMKK	160300	RRA	3:10	3:10	3:10	3:10	
359	SAMS31	WMKK	160330		3:38	3:38	3:38	3:38	
360	SAMS31	WMKK	160400		4:08	4:08	4:08	4:08	
361	SAMS31	WMKK	160430		4:38	4:38	4:38	4:38	
362	SAMS31	WMKK	160500		5:08	5:08	5:08	5:08	
363	SAMS31	WMKK	160530		5:38	5:38	5:38	5:38	
364	SAMS31	WMKK	160530	RRA	5:42	5:42	5:42	5:42	
365	SAMS31	WMKK	160530	CCA	5:46	5:46	5:46	5:46	
366	SAMS31	WMKK	160530	CCB	5:56	5:56	5:56	5:56	
367	SAMS31	WMKK	160600		6:08	6:08	6:08	6:08	
368	SAMS31	WMKK	160630		6:38	6:38	6:38	6:38	
369	SAMS31	WMKK	160700		7:08	7:08	7:08	7:08	
370	SAMS31	WMKK	160730		7:38	7:38	7:38	7:38	
371	SAMS38	WMKK	160200		2:08	2:08	2:08	2:08	
372	SAMS38	WMKK	160200	RRA	2:16	2:16	2:16	2:16	
373	SAMS38	WMKK	160200	CCA	2:36	2:36	2:36	2:36	
374	SAMS38	WMKK	160300		3:08	3:08	3:08	3:08	
375	SAMS38	WMKK	160400		4:08	4:08	4:08	4:08	
376	SAMS38	WMKK	160500		5:08	5:08	5:08	5:08	
377	SAMS38	WMKK	160600		6:08	6:08	6:08	6:08	
378	SAMS38	WMKK	160700		7:08	7:08	7:08	7:08	
379	SANG31	YBBN	160200		2:10	2:10	2:10		Not required for AFI
380	SANG31	YBBN	160200	RRA	2:20	2:20	2:20		Not required for AFI
381	SANG31	YBBN	160300		3:10	3:10	3:10		Not required for AFI
382	SANG31	YBBN	160400		4:10	4:10	4:10		Not required for AFI
383	SANG31	YBBN	160400	RRA	4:20	4:20	4:20		Not required for AFI
384	SANG31	YBBN	160500		5:10	5:10	5:10		Not required for AFI
385	SANG31	YBBN	160500	RRA	5:20	5:20	5:20		Not required for AFI

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386	SANG31	YBBN	160600		6:10	6:10	6:10		Not required for AFI
387	SANG31	YBBN	160700		7:10	7:10	7:10		Not required for AFI
388	SANG31	YBBN	160700	RRA	7:20	7:20	7:20		Not required for AFI
389	SANZ31	NZKL	160200		2:07	2:07	2:07		Not required for AFI
390	SANZ31	NZKL	160230		2:37	2:37	2:37		Not required for AFI
391	SANZ31	NZKL	160300		3:07	3:07	3:07		Not required for AFI
392	SANZ31	NZKL	160330		3:37	3:37	3:37		Not required for AFI
393	SANZ31	NZKL	160337	CCA	3:37	3:37	3:37		Not required for AFI
394	SANZ31	NZKL	160400		4:07	4:07	4:07		Not required for AFI
395	SANZ31	NZKL	160430		4:37	4:37	4:37		Not required for AFI
396	SANZ31	NZKL	160500		5:07	5:07	5:07		Not required for AFI
397	SANZ31	NZKL	160530		5:37	5:37	5:37		Not required for AFI
398	SANZ31	NZKL	160600		6:07	6:07	6:07		Not required for AFI
399	SANZ31	NZKL	160630		6:37	6:37	6:37		Not required for AFI
400	SANZ31	NZKL	160700		7:07	7:07	7:07		Not required for AFI
401	SANZ31	NZKL	160730		7:37	7:37	7:37		Not required for AFI
402	SAPK31	OPKC	160159		2:06	2:07	2:07	2:07	Not required for AFI
403	SAPK31	OPKC	160229		2:38	2:38	2:38	2:38	
404	SAPK31	OPKC	160259		3:05	3:05	3:05	3:05	
405	SAPK31	OPKC	160330		3:36	3:36	3:36	3:36	
406	SAPK31	OPKC	160355	RRA	4:04	4:04	4:04	4:04	
407	SAPK31	OPKC	160400		4:02	4:02	4:02	4:02	
408	SAPK31	OPKC	160430		4:34	4:34	4:34	4:34	
409	SAPK31	OPKC	160500		5:02	5:02	5:02	5:02	
410	SAPK31	OPKC	160600		5:59	5:59	5:59	5:59	
411	SAPK31	OPKC	160629		6:32	6:32	6:32	6:32	
412	SAPK31	OPKC	160655	RRA	7:01	7:01	7:01	7:01	
413	SAPK31	OPKC	160700		7:01	7:01	7:01	7:01	
414	SAPK31	OPKC	160730		7:32	7:32	7:32	7:32	
415	SAPS31	NFFN	160200		2:15	2:15	2:15		Not required for AFI
416	SAPS31	NFFN	160300		3:15	3:15	3:15		Not required for AFI
417	SAPS31	NFFN	160400		4:15	4:15	4:15		Not required for AFI
418	SAPS31	NFFN	160500		5:15	5:15	5:15		Not required for AFI
419	SAPS31	NFFN	160600		6:15	6:15	6:15		Not required for AFI
420	SAPS31	NFFN	160700		7:15	7:15	7:15		Not required for AFI
421	SAPS32	NFFN	160200		2:15	2:15	2:15		Not required for AFI
422	SAPS32	NFFN	160300		3:15	3:15	3:15		Not required for AFI
423	SAPS32	NFFN	160400		4:15	4:15	4:15		Not required for AFI
424	SAPS32	NFFN	160500		5:15	5:15	5:15		Not required for AFI
425	SAPS32	NFFN	160600		6:15	6:15	6:15		Not required for AFI
426	SAPS32	NFFN	160700		7:15	7:15	7:15		Not required for AFI
427	SASB31	VCCC	160210		2:20	2:20	2:20	2:20	
428	SASB31	VCCC	160310		3:20	3:20	3:20	3:20	
429	SASB31	VCCC	160410		4:20	4:20	4:20	4:20	
430	SASB31	VCCC	160510		5:20	5:20	5:20	5:20	
431	SASB31	VCCC	160610		6:20	6:20	6:20	6:20	
432	SASB31	VCCC	160710		7:20	7:20	7:20	7:20	
433	SATH31	VTBB	160200		2:05	2:05	2:05	2:05	
434	SATH31	VTBB	160300		3:05	3:05	3:05	3:05	
435	SATH31	VTBB	160400		4:05	4:05	4:05	4:05	
436	SATH31	VTBB	160500		5:05	5:06	5:07	5:07	
437	SATH31	VTBB	160600		6:05	6:05	6:05	6:05	
438	SATH31	VTBB	160600	RRA	6:10	6:10	6:10	6:10	
439	SATH31	VTBB	160700		7:05	7:05	7:05	7:05	

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440	SATH32	VTBB	160200		2:05	2:05	2:05	2:05
441	SATH32	VTBB	160200	RRA	2:30	2:30	2:30	2:30
442	SATH32	VTBB	160300		3:05	3:05	3:05	3:05
443	SATH32	VTBB	160300	RRA	3:29	3:29	3:29	3:29
444	SATH32	VTBB	160400		4:05	4:05	4:05	4:05
445	SATH32	VTBB	160400	RRA	4:07	4:07	4:07	4:07
446	SATH32	VTBB	160400	RRB	4:07	4:30	4:30	4:30
447	SATH32	VTBB	160500		5:05	5:05	5:06	5:06
448	SATH32	VTBB	160500	RRA	5:30	5:30	5:30	5:30
449	SATH32	VTBB	160600		6:05	6:05	6:05	6:05
450	SATH32	VTBB	160600	CCA	6:08	6:08	6:08	6:08
451	SATH32	VTBB	160600	RRA	6:32	6:32	6:32	6:32
452	SATH32	VTBB	160700		7:05	7:05	7:05	7:05
453	SATH32	VTBB	160700	RRA	7:30	7:31	7:31	7:31
454	SATH33	VTBB	160200		2:05	2:05	2:05	2:05
455	SATH33	VTBB	160300		3:05	3:05	3:05	3:05
456	SATH33	VTBB	160400		4:05	4:05	4:05	4:05
457	SATH33	VTBB	160500		5:06	5:07	5:07	5:07
458	SATH33	VTBB	160600		6:05	6:06	6:06	6:06
459	SATH33	VTBB	160700		7:05	7:05	7:05	7:05

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TAF Bulletins

					Recorded by IROG VTBB RX Time UTC	Recorded by IROG WSSS RX Time UTC	Recorded by IROG WSSS TX Time UTC to MID	Recorded by IROG WSSS TX Time UTC to AFI	Remark
	TTAAii	CCCC	YYGGgg	BBB	(hh:mm)	(hh:mm)	(hh:mm)	(hh:mm)	
1	FTAE31	VTBB	160500		5:35	5:36	5:36	5:36	
2	FTAE32	VTBB	160500		5:36	5:36	5:36	5:36	
3	FTAE33	VTBB	160500		5:35	5:36	5:36	5:36	
4	FTAE34	VTBB	152300	AAA	2:38	2:38	2:38	2:38	
5	FTAE34	VTBB	160500		5:36	5:36	5:36	5:36	
6	FTAU31	YBBN	160500		5:06	5:06	5:07		Not required for AFI
7	FTAU31	YBBN	160500		5:07	5:07	5:07		Not required for AFI
8	FTAU31	YBBN	160500		5:22	5:24	5:24		Not required for AFI
9	FTAU31	YBBN	160500		5:35	5:35	5:35		Not required for AFI
10	FTAU31	YBBN	160700		7:05	7:05	7:05		Not required for AFI
11	FTAU32	YBBN	160200		2:09	2:09	2:09		Not required for AFI
12	FTAU32	YBBN	160400		4:06	4:06	4:06		Not required for AFI
13	FTAU32	YBBN	160500		5:16	5:16	5:16		Not required for AFI
14	FTAU32	YBBN	160500		5:17	5:16	5:16		Not required for AFI
15	FTAU32	YBBN	160500		5:35	5:35	5:35		Not required for AFI
16	FTAU32	YBBN	160500	RRA	5:35	5:35	5:35		Not required for AFI
17	FTAU32	YBBN	160700		7:41	7:41	7:41		Not required for AFI
18	FTAU32	YBBN	160700		7:42	7:42	7:42		Not required for AFI
19	FTAU33	YBBN	160400		4:19	4:19	4:19		Not required for AFI
20	FTAU33	YBBN	160400		4:24	4:24	4:24		Not required for AFI
21	FTAU33	YBBN	160400		4:49	4:49	4:49		Not required for AFI
22	FTAU33	YBBN	160500		5:20	5:20	5:20		Not required for AFI
23	FTAU33	YBBN	160500		5:35	5:35	5:35		Not required for AFI
24	FTAU34	YBBN	160400		4:23	4:23	4:23		Not required for AFI
25	FTAU34	YBBN	160400		4:58	4:58	4:58		Not required for AFI
26	FTAU34	YBBN	160500		5:00	5:00	5:00		Not required for AFI
27	FTAU34	YBBN	160500		5:16	5:16	5:16		Not required for AFI
28	FTAU35	YBBN	160700		7:00	7:00	7:00		Not required for AFI
29	FTCI31	ZBBB	160400		4:01	4:00	4:00	4:00	
30	FTCI32	ZBBB	160400		4:01	4:00	4:00	4:00	
31	FTCI32	ZBBB	160500	RRA	5:01	5:00	5:00	5:00	
32	FTCI41	ZBBB	160400		4:01	4:00	4:00	4:00	
33	FTHK31	VHHH	160500		5:20	5:20	5:20	5:20	
34	FTHK31	VHHH	160500	RRA	5:20	5:20	5:20	5:20	
35	FTIN31	VABB	160500	RRA	6:41	6:42	6:42	6:42	
36	FTIN31	VABB	160500	RRB	6:42	6:42	6:42	6:42	
37	FTIN32	VABB	160500	RRA	6:44	6:44	6:44	6:44	
38	FTIN32	VABB	160500	RRB	6:44	6:44	6:44	6:44	
39	FTJP31	RJTD	160500		5:27	5:27	5:28	5:28	
40	FTJP31	RJTD	160500	AAA	6:52	6:52	6:52	6:52	
41	FTJP32	RJTD	160500		5:27	5:27	5:28	5:28	
42	FTJP32	RJTD	160500	RRA	5:27	5:27	5:28	5:28	
43	FTJP38	RJTD	160500		5:27	5:27	5:28	5:28	
44	FTJP38	RJTD	160500	RRA	5:27	5:27	5:28	5:28	
45	FTJP38	RJTD	160500	RRB	5:27	5:27	5:28	5:28	
46	FTKO31	RKSI	160500		5:05	5:05	5:05	5:05	
47	FTKO31	RKSI	160500	RRA	5:11	5:11	5:11	5:11	
48	FTNG31	YBBN	160400		4:45	4:45	4:45		Not required for AFI

MET/IE WG/18 & MET/S WG/10 – WP/28

**Agenda Item 3**

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49	FTNG31	YBBN	160500	RRA	5:15	5:15	5:15		Not required for AFI
50	FTNZ31	NZKL	152300	AAA	2:36	2:36	2:36		Not required for AFI
51	FTNZ31	NZKL	160236	AAA	4:10	2:36	2:36		Not required for AFI
52	FTNZ31	NZKL	160409	AAA	5:06	4:09	4:09		Not required for AFI
53	FTNZ31	NZKL	160500		5:06	5:05	5:05		Not required for AFI
54	FTNZ31	NZKL	160505		4:09	5:06	5:06		Not required for AFI
55	FTNZ32	NZKL	160409	AAA	4:10	4:09	4:09		Not required for AFI
56	FTPK31	OPKC	160400		4:03	4:03	4:03		Not required for AFI
57	FTPS31	NFFN	160500		5:30	5:30	5:30		Not required for AFI
58	FTPS31	NFFN	160500	RRA	5:33	5:33	5:33		Not required for AFI
59	FTPS31	NFFN	160500	RRB	5:34	5:34	5:34		Not required for AFI
60	FTPS31	NFFN	160500	RRC	5:34	5:34	5:34		Not required for AFI
61	FTPS31	NFFN	160500	RRD	5:34	5:34	5:34		Not required for AFI
62	FTPS31	NFFN	160500	RRE	5:39	5:39	5:39		Not required for AFI
63	FTSR31	WSSS	160500		5:10	5:10	5:10	5:10	From WSSS
64	FTSR32	WSSS	160500		5:10	5:10	5:10	5:10	From WSSS
65	FTSR33	WSSS	160500		5:11	5:11	5:11	5:11	From WSSS
66	FTTH31	VTBB	160500		5:35	5:36	5:36	5:36	
67	FTTH32	VTBB	160500		5:36	5:36	5:36	5:36	
68	FTTH32	VTBB	160500	PAA	5:36	5:36	5:36	5:36	
69	FTTH33	VTBB	160500		5:35	5:35	5:35	5:35	
70	FTTM31	YBBN	160700		7:00	7:00	7:00		Not required for AFI