

International Civil Aviation Organization

ICAO

WORKING PAPER**Asia and Pacific (APAC)
Twentieth Meeting of the Meteorological Information
Exchange Working Group (MET/IE WG/20)**

Online, 28 to 30 March 2022

Agenda Item 5: Quality control, monitoring and management 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 fourth 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 to include conducting regular backup exercises. In Workplan Activity 5.2, all IROGs were required to review their respective IROG backup procedures. As IROG Singapore and IROG Bangkok serve as a back-up to one another, both IROGs reviewed their existing procedures which 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.

2.2 The fourth IROG backup exercise between IROG Singapore and IROG Bangkok in the event IROG Bangkok experiences technical difficulties with prolonged downtime was conducted on 29 September 2021.

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	522	522	522	100%	0
FT Bulletin	110	110	110	100%	0
Total	632	632	632	100%	0

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

3. CONCLUSION

3.1 IROG Singapore successfully routed 522 out of 522 (100%) METAR bulletins and 110 out of 110 (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.

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	290200		2:05	02:05	02:05	02:05	
2	SAAE31	VTBB	290230		2:35	02:35	02:35	02:35	
3	SAAE31	VTBB	290300		3:05	03:05	03:05	03:05	
4	SAAE31	VTBB	290330		3:35	03:35	03:35	03:35	
5	SAAE31	VTBB	290400		4:05	04:05	04:05	04:05	
6	SAAE31	VTBB	290400	RRA	4:05	04:05	04:05	04:05	
7	SAAE31	VTBB	290430		4:35	04:35	04:35	04:35	
8	SAAE31	VTBB	290500		5:05	05:05	05:05	05:05	
9	SAAE31	VTBB	290530		5:35	05:35	05:35	05:35	
10	SAAE31	VTBB	290600		6:05	06:05	06:05	06:05	
11	SAAE31	VTBB	290600	RRA	6:06	06:06	06:06	06:06	
12	SAAE31	VTBB	290630		6:35	06:35	06:35	06:35	
13	SAAE31	VTBB	290700		7:05	07:05	07:05	07:05	
14	SAAE31	VTBB	290730		7:35	07:35	07:35	07:35	
15	SAAE32	VTBB	290200		2:05	02:05	02:05	02:05	
16	SAAE32	VTBB	290230		2:35	02:35	02:35	02:35	
17	SAAE32	VTBB	290300		3:05	03:05	03:05	03:05	
18	SAAE32	VTBB	290330		3:35	03:35	03:35	03:35	
19	SAAE32	VTBB	290400		4:05	04:05	04:05	04:05	
20	SAAE32	VTBB	290430		4:35	04:35	04:35	04:35	
21	SAAE32	VTBB	290500		5:05	05:05	05:05	05:05	
22	SAAE32	VTBB	290530		5:35	05:35	05:35	05:35	
23	SAAE32	VTBB	290600		6:05	06:05	06:05	06:05	
24	SAAE32	VTBB	290630		6:35	06:35	06:35	06:35	
25	SAAE32	VTBB	290700		7:05	07:05	07:05	07:05	
26	SAAE32	VTBB	290730		7:35	07:35	07:35	07:35	
27	SAAE32	VTBB	290730	RRA	7:36	07:36	07:36	07:36	
28	SAAE32	VTBB	290730	RRB	7:41	07:41	07:41	07:41	
29	SAAE33	VTBB	290200		2:05	02:05	02:05	02:05	
30	SAAE33	VTBB	290300		3:05	03:05	03:05	03:05	
31	SAAE33	VTBB	290400		4:05	04:05	04:05	04:05	
32	SAAE33	VTBB	290500		5:05	05:05	05:05	05:05	
33	SAAE33	VTBB	290600		6:05	06:05	06:05	06:05	
34	SAAE33	VTBB	290700		7:05	07:05	07:05	07:05	
35	SAAE34	VTBB	290200	RRA	2:05	02:05	02:05	02:05	
36	SAAE34	VTBB	290200		2:05	02:05	02:05	02:05	
37	SAAE34	VTBB	290200	RRB	2:05	02:05	02:05	02:05	
38	SAAE34	VTBB	290230		2:35	02:35	02:35	02:35	
39	SAAE34	VTBB	290230	RRA	2:39	02:39	02:39	02:39	
40	SAAE34	VTBB	290230	RRB	2:40	02:40	02:40	02:40	
41	SAAE34	VTBB	290300		3:05	03:05	03:05	03:05	
42	SAAE34	VTBB	290330		3:35	03:35	03:35	03:35	
43	SAAE34	VTBB	290330	RRA	3:35	03:35	03:35	03:35	
44	SAAE34	VTBB	290330	RRB	3:35	03:35	03:35	03:35	
45	SAAE34	VTBB	290400		4:05	04:05	04:05	04:05	
46	SAAE34	VTBB	290430	RRA	4:35	04:35	04:35	04:35	
47	SAAE34	VTBB	290430		4:35	04:35	04:35	04:35	
48	SAAE34	VTBB	290430	RRB	4:35	04:35	04:35	04:35	

49	SAAE34	VTBB	290500		5:05	05:05	05:05	05:05	
50	SAAE34	VTBB	290500	RRA	5:10	05:10	05:10	05:10	
51	SAAE34	VTBB	290530		5:35	05:35	05:35	05:35	
52	SAAE34	VTBB	290530	RRA	5:40	05:40	05:40	05:40	
53	SAAE34	VTBB	290600		6:05	06:05	06:05	06:05	
54	SAAE34	VTBB	290630		6:35	06:35	06:35	06:35	
55	SAAE34	VTBB	290630	CCA	6:36	06:36	06:36	06:36	
56	SAAE34	VTBB	290630	RRA	6:36	06:36	06:36	06:36	
57	SAAE34	VTBB	290630	RRB	6:36	06:36	06:36	06:36	
58	SAAE34	VTBB	290630	RRC	6:36	06:36	06:36	06:36	
59	SAAE34	VTBB	290700		7:05	07:05	07:05	07:05	
60	SAAE34	VTBB	290730		7:35	07:35	07:35	07:35	
61	SAAU31	YBBN	290200		2:05	02:05	02:05		Not required for AFI
62	SAAU31	YBBN	290230		2:35	02:35	02:35		Not required for AFI
63	SAAU31	YBBN	290300		3:05	03:05	03:05		Not required for AFI
64	SAAU31	YBBN	290330		3:35	03:35	03:35		Not required for AFI
65	SAAU31	YBBN	290330	RRA	3:45	03:45	03:45		Not required for AFI
66	SAAU31	YBBN	290400		4:05	04:05	04:05		Not required for AFI
67	SAAU31	YBBN	290430		4:35	04:35	04:35		Not required for AFI
68	SAAU31	YBBN	290430	RRA	4:45	04:45	04:45		Not required for AFI
69	SAAU31	YBBN	290500		5:05	05:05	05:05		Not required for AFI
70	SAAU31	YBBN	290530		5:35	05:35	05:35		Not required for AFI
71	SAAU31	YBBN	290530	RRA	5:45	05:45	05:45		Not required for AFI
72	SAAU31	YBBN	290600		6:05	06:05	06:05		Not required for AFI
73	SAAU31	YBBN	290630		6:35	06:35	06:35		Not required for AFI
74	SAAU31	YBBN	290630	RRA	6:45	06:45	06:45		Not required for AFI
75	SAAU31	YBBN	290700		7:05	07:05	07:05		Not required for AFI
76	SAAU31	YBBN	290730		7:35	07:35	07:35		Not required for AFI
77	SAAU31	YBBN	290730	RRA	7:45	07:45	07:45		Not required for AFI
78	SAAU32	YBBN	290200		2:05	02:05	02:05		Not required for AFI
79	SAAU32	YBBN	290230		2:35	02:35	02:35		Not required for AFI
80	SAAU32	YBBN	290300		3:05	03:05	03:05		Not required for AFI
81	SAAU32	YBBN	290330		3:35	03:35	03:35		Not required for AFI
82	SAAU32	YBBN	290400		4:05	04:05	04:05		Not required for AFI
83	SAAU32	YBBN	290430		4:35	04:35	04:35		Not required for AFI
84	SAAU32	YBBN	290430	RRA	4:45	04:45	04:45		Not required for AFI
85	SAAU32	YBBN	290500		5:05	05:05	05:05		Not required for AFI
86	SAAU32	YBBN	290530		5:35	05:35	05:35		Not required for AFI
87	SAAU32	YBBN	290600		6:05	06:05	06:05		Not required for AFI
88	SAAU32	YBBN	290630		6:35	06:35	06:35		Not required for AFI
89	SAAU32	YBBN	290700		7:05	07:05	07:05		Not required for AFI
90	SAAU32	YBBN	290730		7:35	07:35	07:35		Not required for AFI
91	SAAU32	YBBN	290730	RRA	7:45	07:45	07:45		Not required for AFI
92	SAAU33	YBBN	290200		2:05	02:05	02:05		Not required for AFI
93	SAAU33	YBBN	290230		2:35	02:35	02:35		Not required for AFI
94	SAAU33	YBBN	290300		3:05	03:05	03:05		Not required for AFI
95	SAAU33	YBBN	290330		3:35	03:35	03:35		Not required for AFI
96	SAAU33	YBBN	290400		4:05	04:05	04:05		Not required for AFI
97	SAAU33	YBBN	290430		4:35	04:35	04:35		Not required for AFI
98	SAAU33	YBBN	290500		5:05	05:05	05:05		Not required for AFI
99	SAAU33	YBBN	290530		5:35	05:35	05:35		Not required for AFI
100	SAAU33	YBBN	290600		6:05	06:05	06:05		Not required for AFI
101	SAAU33	YBBN	290630		6:35	06:35	06:35		Not required for AFI
102	SAAU33	YBBN	290700		7:05	07:05	07:05		Not required for AFI
103	SAAU33	YBBN	290730		7:35	07:35	07:35		Not required for AFI
104	SAAU34	YBBN	290200		2:05	02:05	02:05		Not required for AFI

105	SAAU34	YBBN	290230		2:35	02:35	02:35		Not required for AFI
106	SAAU34	YBBN	290300		3:05	03:05	03:05		Not required for AFI
107	SAAU34	YBBN	290330		3:35	03:35	03:35		Not required for AFI
108	SAAU34	YBBN	290400		4:05	04:05	04:05		Not required for AFI
109	SAAU34	YBBN	290430		4:35	04:35	04:35		Not required for AFI
110	SAAU34	YBBN	290500		5:05	05:05	05:05		Not required for AFI
111	SAAU34	YBBN	290530		5:35	05:35	05:35		Not required for AFI
112	SAAU34	YBBN	290600		6:05	06:05	06:05		Not required for AFI
113	SAAU34	YBBN	290630		6:35	06:35	06:35		Not required for AFI
114	SAAU34	YBBN	290700		7:05	07:05	07:05		Not required for AFI
115	SAAU34	YBBN	290730		7:35	07:35	07:35		Not required for AFI
116	SAAU35	YBBN	290200		2:05	02:05	02:05		Not required for AFI
117	SAAU35	YBBN	290230		2:35	02:35	02:35		Not required for AFI
118	SAAU35	YBBN	290300		3:05	03:05	03:05		Not required for AFI
119	SAAU35	YBBN	290330		3:35	03:35	03:35		Not required for AFI
120	SAAU35	YBBN	290400		4:05	04:05	04:05		Not required for AFI
121	SAAU35	YBBN	290430		4:35	04:35	04:35		Not required for AFI
122	SAAU35	YBBN	290500		5:05	05:05	05:05		Not required for AFI
123	SAAU35	YBBN	290530		5:35	05:35	05:35		Not required for AFI
124	SAAU35	YBBN	290600		6:05	06:05	06:05		Not required for AFI
125	SAAU35	YBBN	290630		6:35	06:35	06:35		Not required for AFI
126	SAAU35	YBBN	290700		7:05	07:05	07:05		Not required for AFI
127	SAAU35	YBBN	290730		7:35	07:35	07:35		Not required for AFI
128	SAAU36	YBBN	290200		2:05	02:05	02:05		Not required for AFI
129	SAAU36	YBBN	290230		2:35	02:35	02:35		Not required for AFI
130	SAAU36	YBBN	290230	RRA	2:45	02:45	02:45		Not required for AFI
131	SAAU36	YBBN	290300		3:05	03:05	03:05		Not required for AFI
132	SAAU36	YBBN	290330		3:35	03:35	03:35		Not required for AFI
133	SAAU36	YBBN	290400		4:06	04:05	04:05		Not required for AFI
134	SAAU36	YBBN	290430		4:35	04:35	04:35		Not required for AFI
135	SAAU36	YBBN	290500		5:05	05:05	05:05		Not required for AFI
136	SAAU36	YBBN	290530		5:35	05:35	05:35		Not required for AFI
137	SAAU36	YBBN	290600		6:05	06:05	06:05		Not required for AFI
138	SAAU36	YBBN	290630		6:35	06:35	06:35		Not required for AFI
139	SAAU36	YBBN	290630	RRA	6:45	06:45	06:45		Not required for AFI
140	SAAU36	YBBN	290700		7:05	07:05	07:05		Not required for AFI
141	SAAU36	YBBN	290730		7:35	07:35	07:35		Not required for AFI
142	SACI31	ZBBB	290200		2:05	02:05	02:05	02:05	
143	SACI31	ZBBB	290230		2:35	02:35	02:35	02:35	
144	SACI31	ZBBB	290300		3:05	03:05	03:05	03:05	
145	SACI31	ZBBB	290330		3:35	03:35	03:35	03:35	
146	SACI31	ZBBB	290400		4:06	04:05	04:05	04:05	
147	SACI31	ZBBB	290430		4:35	04:35	04:35	04:35	
148	SACI31	ZBBB	290500		5:05	05:05	05:05	05:05	
149	SACI31	ZBBB	290530		5:35	05:35	05:35	05:35	
150	SACI31	ZBBB	290600		6:05	06:05	06:05	06:05	
151	SACI31	ZBBB	290630		6:36	06:35	06:35	06:35	
152	SACI31	ZBBB	290700		7:06	07:05	07:05	07:05	
153	SACI31	ZBBB	290730		7:35	07:35	07:35	07:35	
154	SACI32	ZBBB	290200		2:05	02:05	02:05	02:05	
155	SACI32	ZBBB	290300		3:05	03:05	03:05	03:05	
156	SACI32	ZBBB	290400		4:06	04:05	04:05	04:05	
157	SACI32	ZBBB	290500		5:05	05:05	05:05	05:05	
158	SACI32	ZBBB	290600		6:09	06:05	06:05	06:05	
159	SACI32	ZBBB	290700		7:06	07:05	07:05	07:05	
160	SACI41	ZBBB	290200		2:06	02:05	02:05	02:05	

161	SACI41	ZBBB	290300		3:06	03:05	03:05	03:05
162	SACI41	ZBBB	290400		4:06	04:05	04:05	04:05
163	SACI41	ZBBB	290500		5:06	05:05	05:05	05:05
164	SACI41	ZBBB	290600		6:09	06:05	06:05	06:05
165	SACI41	ZBBB	290600	CCA	6:11	06:10	06:10	06:10
166	SACI41	ZBBB	290700		7:06	07:05	07:05	07:05
167	SACI74	ZSQZ	290200		2:01	02:00	02:00	02:00
168	SACI74	ZSQZ	290300		3:01	03:00	03:00	03:00
169	SACI74	ZSQZ	290400		4:01	04:01	04:01	04:01
170	SACI74	ZSQZ	290500		5:01	05:01	05:01	05:01
171	SACI74	ZSQZ	290600		6:01	06:00	06:00	06:00
172	SACI74	ZSQZ	290700		7:02	07:00	07:00	07:00
173	SAHK31	VHHH	290200		2:09	02:09	02:09	02:09
174	SAHK31	VHHH	290230		2:36	02:36	02:36	02:36
175	SAHK31	VHHH	290300		3:09	03:09	03:09	03:09
176	SAHK31	VHHH	290330		3:36	03:36	03:36	03:36
177	SAHK31	VHHH	290400		4:10	04:09	04:09	04:09
178	SAHK31	VHHH	290400	RRA	4:15	04:15	04:15	04:15
179	SAHK31	VHHH	290400	RRB	4:15	04:15	04:15	04:15
180	SAHK31	VHHH	290400	RRC	4:15	04:15	04:15	04:15
181	SAHK31	VHHH	290400	RRD	4:15	04:15	04:15	04:15
182	SAHK31	VHHH	290400	RRE	4:15	04:15	04:15	04:15
183	SAHK31	VHHH	290400	RRF	4:15	04:15	04:15	04:15
184	SAHK31	VHHH	290430		4:36	04:36	04:36	04:36
185	SAHK31	VHHH	290500		5:09	05:09	05:09	05:09
186	SAHK31	VHHH	290530		5:36	05:36	05:36	05:36
187	SAHK31	VHHH	290600		6:10	06:10	06:10	06:10
188	SAHK31	VHHH	290600	RRA	6:15	06:15	06:15	06:15
189	SAHK31	VHHH	290600	RRB	6:15	06:15	06:15	06:15
190	SAHK31	VHHH	290600	RRC	6:15	06:15	06:15	06:15
191	SAHK31	VHHH	290600	RRD	6:15	06:15	06:15	06:15
192	SAHK31	VHHH	290600	RRE	6:15	06:15	06:15	06:15
193	SAHK31	VHHH	290600	RRF	6:15	06:15	06:15	06:15
194	SAHK31	VHHH	290630		6:36	06:36	06:36	06:36
195	SAHK31	VHHH	290700		7:09	07:09	07:09	07:09
196	SAHK31	VHHH	290730		7:36	07:36	07:36	07:36
197	SAID31	WIII	290200		2:10	02:10	02:10	02:10
198	SAID31	WIII	290230		2:40	02:40	02:40	02:40
199	SAID31	WIII	290300		3:10	03:10	03:10	03:10
200	SAID31	WIII	290330		3:40	03:40	03:40	03:40
201	SAID31	WIII	290400		4:10	04:10	04:10	04:10
202	SAID31	WIII	290430		4:40	04:40	04:40	04:40
203	SAID31	WIII	290500		5:10	05:10	05:10	05:10
204	SAID31	WIII	290530		5:40	05:40	05:40	05:40
205	SAID31	WIII	290600		6:10	06:10	06:10	06:10
206	SAID31	WIII	290630		6:40	06:40	06:40	06:40
207	SAID31	WIII	290700		7:10	07:10	07:10	07:10
208	SAID31	WIII	290730		7:40	07:40	07:40	07:40
209	SAID32	WIII	290200		2:10	02:10	02:10	02:10
210	SAID32	WIII	290230		2:40	02:40	02:40	02:40
211	SAID32	WIII	290230		2:49	02:49	02:49	02:49
212	SAID32	WIII	290230		2:50	02:50	02:50	02:50
213	SAID32	WIII	290300		3:10	03:10	03:10	03:10
214	SAID32	WIII	290330		3:40	03:40	03:40	03:40
215	SAID32	WIII	290400		4:10	04:10	04:10	04:10
216	SAID32	WIII	290430		4:40	04:40	04:40	04:40

217	SAID32	WIII	290500		5:10	05:10	05:10	05:10
218	SAID32	WIII	290530		5:40	05:40	05:40	05:40
219	SAID32	WIII	290600		6:10	06:10	06:10	06:10
220	SAID32	WIII	290600		6:25	06:25	06:25	06:25
221	SAID32	WIII	290630		6:40	06:40	06:40	06:40
222	SAID32	WIII	290700		7:10	07:10	07:10	07:10
223	SAID32	WIII	290730		7:40	07:40	07:40	07:40
224	SAID33	WIII	290200		2:10	02:10	02:10	02:10
225	SAID33	WIII	290230		2:40	02:40	02:40	02:40
226	SAID33	WIII	290300		3:10	03:10	03:10	03:10
227	SAID33	WIII	290330		3:40	03:40	03:40	03:40
228	SAID33	WIII	290400		4:10	04:10	04:10	04:10
229	SAID33	WIII	290430		4:40	04:40	04:40	04:40
230	SAID33	WIII	290500		5:10	05:10	05:10	05:10
231	SAID33	WIII	290530		5:40	05:40	05:40	05:40
232	SAID33	WIII	290530		5:40	05:40	05:40	05:40
233	SAID33	WIII	290600		6:10	06:10	06:10	06:10
234	SAID33	WIII	290630		6:40	06:40	06:40	06:40
235	SAID33	WIII	290700		7:10	07:10	07:10	07:10
236	SAID33	WIII	290730		7:40	07:40	07:40	07:40
237	SAIN31	VABB	290200		2:08	02:08	02:08	02:08
238	SAIN31	VABB	290230		2:38	02:38	02:38	02:38
239	SAIN31	VABB	290230	RRA	2:41	02:41	02:41	02:41
240	SAIN31	VABB	290300		3:08	03:08	03:08	03:08
241	SAIN31	VABB	290330		3:38	03:38	03:38	03:38
242	SAIN31	VABB	290400		4:08	04:08	04:08	04:08
243	SAIN31	VABB	290430		4:38	04:37	04:37	04:37
244	SAIN31	VABB	290430	RRA	4:40	04:40	04:40	04:40
245	SAIN31	VABB	290500		5:08	05:08	05:08	05:08
246	SAIN31	VABB	290530		5:43	05:41	05:41	05:41
247	SAIN31	VABB	290600		6:08	06:08	06:08	06:08
248	SAIN31	VABB	290630		6:38	06:38	06:38	06:38
249	SAIN31	VABB	290700		7:08	07:08	07:08	07:08
250	SAIN31	VABB	290700	RRA	7:32	07:32	07:32	07:32
251	SAIN31	VABB	290730		7:38	07:38	07:38	07:38
252	SAIN32	VIDP	290200		2:06	02:05	02:05	02:05
253	SAIN32	VIDP	290200	RRA	2:10	02:10	02:10	02:10
254	SAIN32	VIDP	290200	RRB	2:15	02:15	02:15	02:15
255	SAIN32	VIDP	290230		2:35	02:35	02:35	02:35
256	SAIN32	VIDP	290230	RRB	2:46	02:45	02:45	02:45
257	SAIN32	VIDP	290300		3:06	03:05	03:05	03:05
258	SAIN32	VIDP	290300	RRA	3:11	03:10	03:10	03:10
259	SAIN32	VIDP	290330		3:35	03:35	03:35	03:35
260	SAIN32	VIDP	290330	RRA	3:41	03:40	03:40	03:40
261	SAIN32	VIDP	290330	RRB	3:45	03:45	03:45	03:45
262	SAIN32	VIDP	290400		4:06	04:05	04:05	04:05
263	SAIN32	VIDP	290400	RRA	4:10	04:10	04:10	04:10
264	SAIN32	VIDP	290430		4:35	04:35	04:35	04:35
265	SAIN32	VIDP	290500		5:06	05:05	05:05	05:05
266	SAIN32	VIDP	290500	RRA	5:10	05:10	05:10	05:10
267	SAIN32	VIDP	290500	RRB	5:16	05:15	05:15	05:15
268	SAIN32	VIDP	290530		5:36	05:35	05:35	05:35
269	SAIN32	VIDP	290530	RRA	5:41	05:40	05:40	05:40
270	SAIN32	VIDP	290600		6:06	06:05	06:05	06:05
271	SAIN32	VIDP	290600	RRA	6:16	06:15	06:15	06:15
272	SAIN32	VIDP	290630		6:36	06:35	06:35	06:35

273	SAIN32	VIDP	290700		7:06	07:06	07:06	07:06
274	SAIN32	VIDP	290700	RRB	7:16	07:15	07:15	07:15
275	SAIN32	VIDP	290730		7:36	07:35	07:35	07:35
276	SAIN32	VIDP	290730	RRA	7:40	07:40	07:40	07:40
277	SAIN32	VIDP	290730	RRB	7:46	07:45	07:45	07:45
278	SAIN33	VECC	290200		2:05	02:05	02:05	02:05
279	SAIN33	VECC	290230		2:35	02:35	02:35	02:35
280	SAIN33	VECC	290230	CCA	2:38	02:38	02:38	02:38
281	SAIN33	VECC	290300		3:06	03:05	03:05	03:05
282	SAIN33	VECC	290330		3:35	03:35	03:35	03:35
283	SAIN33	VECC	290400		4:06	04:05	04:05	04:05
284	SAIN33	VECC	290430		4:35	04:35	04:35	04:35
285	SAIN33	VECC	290500		5:06	05:05	05:05	05:05
286	SAIN33	VECC	290500	RRA	5:15	05:15	05:15	05:15
287	SAIN33	VECC	290530		5:36	05:35	05:35	05:35
288	SAIN33	VECC	290600		6:06	06:05	06:05	06:05
289	SAIN33	VECC	290600	RRA	6:15	06:15	06:15	06:15
290	SAIN33	VECC	290630		6:35	06:35	06:35	06:35
291	SAIN33	VECC	290700		7:06	07:05	07:05	07:05
292	SAIN33	VECC	290730		7:35	07:35	07:35	07:35
293	SAIN33	VECC	290730	CCA	7:36	07:36	07:36	07:36
294	SAJP31	RJTD	290200		2:06	02:06	02:06	02:06
295	SAJP31	RJTD	290300		3:07	03:06	03:06	03:06
296	SAJP31	RJTD	290400		4:07	04:06	04:06	04:06
297	SAJP31	RJTD	290500		5:06	05:06	05:06	05:06
298	SAJP31	RJTD	290600		6:06	06:06	06:06	06:06
299	SAJP31	RJTD	290700		7:06	07:06	07:06	07:06
300	SAJP32	RJTD	290200		2:07	02:06	02:06	02:06
301	SAJP32	RJTD	290200	RRA	2:07	02:06	02:06	02:06
302	SAJP32	RJTD	290300		3:07	03:06	03:06	03:06
303	SAJP32	RJTD	290300	RRA	3:07	03:06	03:06	03:06
304	SAJP32	RJTD	290400		4:07	04:06	04:06	04:06
305	SAJP32	RJTD	290400	RRA	4:07	04:06	04:06	04:06
306	SAJP32	RJTD	290500		5:06	05:06	05:06	05:06
307	SAJP32	RJTD	290500	RRA	5:07	05:06	05:06	05:06
308	SAJP32	RJTD	290600		6:06	06:06	06:06	06:06
309	SAJP32	RJTD	290600	RRA	6:07	06:06	06:06	06:06
310	SAJP32	RJTD	290700		7:07	07:06	07:06	07:06
311	SAJP32	RJTD	290700	RRA	7:07	07:06	07:06	07:06
312	SAJP38	RJTD	290200		2:07	02:06	02:06	02:06
313	SAJP38	RJTD	290200	RRA	2:07	02:06	02:06	02:06
314	SAJP38	RJTD	290300		3:07	03:06	03:06	03:06
315	SAJP38	RJTD	290300	RRA	3:07	03:06	03:06	03:06
316	SAJP38	RJTD	290400		4:07	04:06	04:06	04:06
317	SAJP38	RJTD	290400	RRA	4:07	04:06	04:06	04:06
318	SAJP38	RJTD	290500		5:07	05:06	05:06	05:06
319	SAJP38	RJTD	290500	RRA	5:07	05:06	05:06	05:06
320	SAJP38	RJTD	290600		6:07	06:06	06:06	06:06
321	SAJP38	RJTD	290600	RRA	6:07	06:06	06:06	06:06
322	SAJP38	RJTD	290700		7:07	07:06	07:06	07:06
323	SAJP38	RJTD	290700	RRA	7:07	07:06	07:06	07:06
324	SAKO31	RKSI	290200		2:05	02:04	02:04	02:04
325	SAKO31	RKSI	290230		2:35	02:34	02:34	02:34
326	SAKO31	RKSI	290300		3:05	03:05	03:05	03:05
327	SAKO31	RKSI	290330		3:35	03:34	03:34	03:34
328	SAKO31	RKSI	290400		4:05	04:05	04:05	04:05

329	SAKO31	RKSI	290430		4:35	04:34	04:34	04:34
330	SAKO31	RKSI	290500		5:05	05:05	05:05	05:05
331	SAKO31	RKSI	290530		5:35	05:35	05:35	05:35
332	SAKO31	RKSI	290600		6:04	06:04	06:04	06:04
333	SAKO31	RKSI	290630		6:35	06:34	06:34	06:34
334	SAKO31	RKSI	290700		7:05	07:05	07:05	07:05
335	SAMS31	WMKK	290200		2:08	02:08	02:08	02:08
336	SAMS31	WMKK	290200	RRA	2:10	02:10	02:10	02:10
337	SAMS31	WMKK	290200	CCA	2:30	02:30	02:30	02:30
338	SAMS31	WMKK	290200	RRB	2:38	02:38	02:38	02:38
339	SAMS31	WMKK	290200	CCB	2:42	02:42	02:42	02:42
340	SAMS31	WMKK	290230		2:38	02:38	02:38	02:38
341	SAMS31	WMKK	290230	RRA	2:44	02:44	02:44	02:44
342	SAMS31	WMKK	290300		3:08	03:08	03:08	03:08
343	SAMS31	WMKK	290300	RRA	3:10	03:10	03:10	03:10
344	SAMS31	WMKK	290300	RRB	3:18	03:18	03:18	03:18
345	SAMS31	WMKK	290330		3:38	03:38	03:38	03:38
346	SAMS31	WMKK	290330	RRA	3:40	03:40	03:40	03:40
347	SAMS31	WMKK	290330	RRB	3:58	03:58	03:58	03:58
348	SAMS31	WMKK	290400		4:08	04:08	04:08	04:08
349	SAMS31	WMKK	290400	RRA	5:04	05:04	05:04	05:04
350	SAMS31	WMKK	290430		4:38	04:38	04:38	04:38
351	SAMS31	WMKK	290430	RRA	4:40	04:40	04:40	04:40
352	SAMS31	WMKK	290430	RRB	5:04	05:04	05:04	05:04
353	SAMS31	WMKK	290500		5:08	05:08	05:08	05:08
354	SAMS31	WMKK	290500	RRA	5:22	05:22	05:22	05:22
355	SAMS31	WMKK	290530		5:38	05:38	05:38	05:38
356	SAMS31	WMKK	290530	RRA	5:50	05:50	05:50	05:50
357	SAMS31	WMKK	290600		6:08	06:08	06:08	06:08
358	SAMS31	WMKK	290600	CCA	6:12	06:12	06:12	06:12
359	SAMS31	WMKK	290600	RRA	6:12	06:12	06:12	06:12
360	SAMS31	WMKK	290600	RRB	6:24	06:24	06:24	06:24
361	SAMS31	WMKK	290600	CCB	6:54	06:54	06:54	06:54
362	SAMS31	WMKK	290630		6:38	06:38	06:38	06:38
363	SAMS31	WMKK	290630	RRA	6:46	06:46	06:46	06:46
364	SAMS31	WMKK	290630	CCA	7:02	07:02	07:02	07:02
365	SAMS31	WMKK	290630	RRB	7:08	07:08	07:08	07:08
366	SAMS31	WMKK	290700		7:08	07:08	07:08	07:08
367	SAMS31	WMKK	290700	RRA	7:14	07:14	07:14	07:14
368	SAMS31	WMKK	290730		7:38	07:38	07:38	07:38
369	SAMS31	WMKK	290730	RRA	7:48	07:48	07:48	07:48
370	SAMS32	WMKK	290200		2:08	02:08	02:08	02:08
371	SAMS32	WMKK	290200	RRA	2:10	02:10	02:10	02:10
372	SAMS32	WMKK	290200	RRA	2:16	02:16	02:16	02:16
373	SAMS32	WMKK	290200	CCA	2:42	02:42	02:42	02:42
374	SAMS32	WMKK	290300		3:08	03:08	03:08	03:08
375	SAMS32	WMKK	290300	RRA	3:10	03:10	03:10	03:10
376	SAMS32	WMKK	290300	RRA	3:12	03:12	03:12	03:12
377	SAMS32	WMKK	290300	RRB	3:18	03:18	03:18	03:18
378	SAMS32	WMKK	290400		4:08	04:08	04:08	04:08
379	SAMS32	WMKK	290400	RRA	4:10	04:10	04:10	04:10
380	SAMS32	WMKK	290400	RRA	5:04	05:04	05:04	05:04
381	SAMS32	WMKK	290500		5:08	05:08	05:08	05:08
382	SAMS32	WMKK	290500	RRA	5:22	05:22	05:22	05:22
383	SAMS32	WMKK	290600		6:08	06:08	06:08	06:08
384	SAMS32	WMKK	290600	CCA	6:12	06:12	06:12	06:12

385	SAMS32	WMKK	290600	RRA	6:12	06:12	06:12	06:12
386	SAMS32	WMKK	290600	RRA	6:18	06:18	06:18	06:18
387	SAMS32	WMKK	290600	RRB	6:24	06:24	06:24	06:24
388	SAMS32	WMKK	290600	CCB	6:54	06:54	06:54	06:54
389	SAMS32	WMKK	290700		7:08	07:08	07:08	07:08
390	SAMS32	WMKK	290700	RRA	7:14	07:14	07:14	07:14
391	SAMS33	WMKK	290200		2:08	02:08	02:08	02:08
392	SAMS33	WMKK	290200	RRA	2:16	02:16	02:16	02:16
393	SAMS33	WMKK	290300		3:08	03:08	03:08	03:08
394	SAMS33	WMKK	290300	RRA	3:10	03:10	03:10	03:10
395	SAMS33	WMKK	290300	RRA	3:12	03:12	03:12	03:12
396	SAMS33	WMKK	290300	RRB	3:18	03:18	03:18	03:18
397	SAMS33	WMKK	290400		4:08	04:08	04:08	04:08
398	SAMS33	WMKK	290400	RRA	4:14	04:14	04:14	04:14
399	SAMS33	WMKK	290500		5:08	05:08	05:08	05:08
400	SAMS33	WMKK	290500	RRA	5:16	05:16	05:16	05:16
401	SAMS33	WMKK	290600		6:08	06:08	06:08	06:08
402	SAMS33	WMKK	290600	RRA	6:18	06:18	06:18	06:18
403	SAMS33	WMKK	290700		7:08	07:08	07:08	07:08
404	SAMS33	WMKK	290700	RRA	7:14	07:14	07:14	07:14
405	SAMS38	WMKK	290200		2:08	02:08	02:08	02:08
406	SAMS38	WMKK	290200	RRA	2:16	02:16	02:16	02:16
407	SAMS38	WMKK	290300		3:08	03:08	03:08	03:08
408	SAMS38	WMKK	290300	CCA	3:10	03:10	03:10	03:10
409	SAMS38	WMKK	290300	RRA	3:12	03:12	03:12	03:12
410	SAMS38	WMKK	290400		4:08	04:08	04:08	04:08
411	SAMS38	WMKK	290400	RRA	4:14	04:14	04:14	04:14
412	SAMS38	WMKK	290500		5:08	05:08	05:08	05:08
413	SAMS38	WMKK	290500	RRA	5:16	05:16	05:16	05:16
414	SAMS38	WMKK	290600		6:08	06:08	06:08	06:08
415	SAMS38	WMKK	290600	RRA	6:18	06:18	06:18	06:18
416	SAMS38	WMKK	290700		7:08	07:08	07:08	07:08
417	SAMS38	WMKK	290700	RRA	7:14	07:14	07:14	07:14
418	SANG31	YBBN	290200		2:05	02:05	02:05	Not required for AFI
419	SANG31	YBBN	290200	RRA	2:15	02:15	02:15	Not required for AFI
420	SANG31	YBBN	290300		3:05	03:05	03:05	Not required for AFI
421	SANG31	YBBN	290400		4:05	04:05	04:05	Not required for AFI
422	SANG31	YBBN	290500		5:05	05:05	05:05	Not required for AFI
423	SANG31	YBBN	290600		6:05	06:05	06:05	Not required for AFI
424	SANG31	YBBN	290600	RRA	6:15	06:15	06:15	Not required for AFI
425	SANG31	YBBN	290700		7:05	07:05	07:05	Not required for AFI
426	SANZ31	NZKL	290200		2:07	02:07	02:07	Not required for AFI
427	SANZ31	NZKL	290230		2:38	02:37	02:37	Not required for AFI
428	SANZ31	NZKL	290300		3:07	03:07	03:07	Not required for AFI
429	SANZ31	NZKL	290330		3:38	03:37	03:37	Not required for AFI
430	SANZ31	NZKL	290400		4:07	04:07	04:07	Not required for AFI
431	SANZ31	NZKL	290430		4:38	04:37	04:37	Not required for AFI
432	SANZ31	NZKL	290500		5:07	05:07	05:07	Not required for AFI
433	SANZ31	NZKL	290530		5:37	05:37	05:37	Not required for AFI
434	SANZ31	NZKL	290600		6:07	06:07	06:07	Not required for AFI
435	SANZ31	NZKL	290630		6:38	06:38	06:38	Not required for AFI
436	SANZ31	NZKL	290700		7:07	07:07	07:07	Not required for AFI
437	SANZ31	NZKL	290730		7:38	07:37	07:37	Not required for AFI
438	SANZ32	NZKL	290200		2:07	02:07	02:07	Not required for AFI
439	SANZ32	NZKL	290230		2:37	02:37	02:37	Not required for AFI
440	SANZ32	NZKL	290300		3:07	03:07	03:07	Not required for AFI

441	SANZ32	NZKL	290330		3:38	03:37	03:37		Not required for AFI
442	SANZ32	NZKL	290400		4:07	04:07	04:07		Not required for AFI
443	SANZ32	NZKL	290430		4:38	04:37	04:37		Not required for AFI
444	SANZ32	NZKL	290500		5:07	05:07	05:07		Not required for AFI
445	SANZ32	NZKL	290530		5:37	05:37	05:37		Not required for AFI
446	SANZ32	NZKL	290600		6:07	06:07	06:07		Not required for AFI
447	SANZ32	NZKL	290630		6:38	06:38	06:38		Not required for AFI
448	SANZ32	NZKL	290700		7:07	07:07	07:07		Not required for AFI
449	SANZ32	NZKL	290730		7:38	07:37	07:37		Not required for AFI
450	SAPK31	OPKC	290200		2:02	02:01	02:01	02:01	
451	SAPK31	OPKC	290230		2:31	02:31	02:31	02:31	
452	SAPK31	OPKC	290300		3:01	03:01	03:01	03:01	
453	SAPK31	OPKC	290330		3:31	03:31	03:31	03:31	
454	SAPK31	OPKC	290330	RRA	3:35	03:33	03:33	03:33	
455	SAPK31	OPKC	290400		4:01	04:03	04:03	04:03	
456	SAPK31	OPKC	290430		4:34	04:31	04:31	04:31	
457	SAPK31	OPKC	290500		5:01	05:01	05:01	05:01	
458	SAPK31	OPKC	290530		5:31	05:31	05:31	05:31	
459	SAPK31	OPKC	290530	RRA	5:34	05:33	05:33	05:33	
460	SAPK31	OPKC	290600		6:01	06:01	06:01	06:01	
461	SAPK31	OPKC	290600	RRA	6:03	06:03	06:03	06:03	
462	SAPK31	OPKC	290630		6:31	06:31	06:31	06:31	
463	SAPK31	OPKC	290700		7:02	07:01	07:01	07:01	
464	SAPK31	OPKC	290730		7:31	07:31	07:31	07:31	
465	SAPK31	OPKC	290730	RRA	7:37	07:37	07:37	07:37	
466	SAPS31	NFFN	290200		2:15	02:15	02:15		Not required for AFI
467	SAPS31	NFFN	290300		3:15	03:15	03:15		Not required for AFI
468	SAPS31	NFFN	290400		4:15	04:15	04:15		Not required for AFI
469	SAPS31	NFFN	290500		5:15	05:15	05:15		Not required for AFI
470	SAPS31	NFFN	290600		6:15	06:15	06:15		Not required for AFI
471	SAPS31	NFFN	290700		7:15	07:15	07:15		Not required for AFI
472	SAPS32	NFFN	290200		2:03	02:03	02:03		Not required for AFI
473	SAPS32	NFFN	290300		3:03	03:02	03:02		Not required for AFI
474	SAPS32	NFFN	290400		4:03	04:03	04:03		Not required for AFI
475	SAPS32	NFFN	290500		5:03	05:03	05:03		Not required for AFI
476	SAPS32	NFFN	290600		6:03	06:03	06:03		Not required for AFI
477	SAPS32	NFFN	290700		7:03	07:03	07:03		Not required for AFI
478	SAPS33	NFFN	290200		2:15	02:15	02:15		Not required for AFI
479	SAPS33	NFFN	290300		3:02	03:02	03:02		Not required for AFI
480	SAPS33	NFFN	290400		4:02	04:02	04:02		Not required for AFI
481	SAPS33	NFFN	290500		5:02	05:02	05:02		Not required for AFI
482	SAPS33	NFFN	290600		6:02	06:02	06:02		Not required for AFI
483	SAPS33	NFFN	290700		7:02	07:02	07:02		Not required for AFI
484	SASB31	VCCC	290210		2:20	02:20	02:20	02:20	
485	SASB31	VCCC	290310		3:21	03:21	03:21	03:21	
486	SASB31	VCCC	290410		4:21	04:20	04:20	04:20	
487	SASB31	VCCC	290510		5:20	05:20	05:20	05:20	
488	SASB31	VCCC	290510	RRA	6:03	06:03	06:03	06:03	
489	SASB31	VCCC	290610		6:20	06:20	06:20	06:20	
490	SASB31	VCCC	290710		7:21	07:21	07:21	07:21	
491	SATH31	VTBB	290200		2:05	02:05	02:05	02:05	
492	SATH31	VTBB	290200	RRA	2:07	02:07	02:07	02:07	
493	SATH31	VTBB	290300		3:05	03:05	03:05	03:05	
494	SATH31	VTBB	290400		4:05	04:05	04:05	04:05	
495	SATH31	VTBB	290400	RRA	4:05	04:05	04:05	04:05	
496	SATH31	VTBB	290500		5:05	05:05	05:05	05:05	

497	SATH31	VTBB	290600		6:05	06:05	06:05	06:05
498	SATH31	VTBB	290700		7:05	07:05	07:05	07:05
499	SATH32	VTBB	290200		2:05	02:05	02:05	02:05
500	SATH32	VTBB	290300		3:05	03:05	03:05	03:05
501	SATH32	VTBB	290400	RRA	4:05	04:05	04:05	04:05
502	SATH32	VTBB	290400		4:05	04:05	04:05	04:05
503	SATH32	VTBB	290500		5:05	05:05	05:05	05:05
504	SATH32	VTBB	290600		6:05	06:05	06:05	06:05
505	SATH32	VTBB	290700		7:05	07:05	07:05	07:05
506	SATH33	VTBB	290200		2:05	02:05	02:05	02:05
507	SATH33	VTBB	290300		3:05	03:05	03:05	03:05
508	SATH33	VTBB	290400		4:05	04:05	04:05	04:05
509	SATH33	VTBB	290400	RRA	4:05	04:05	04:05	04:05
510	SATH33	VTBB	290500		5:05	05:05	05:05	05:05
511	SATH33	VTBB	290600		6:05	06:05	06:05	06:05
512	SATH33	VTBB	290600	RRA	6:08	06:08	06:08	06:08
513	SATH33	VTBB	290600	RRB	6:10	06:10	06:10	06:10
514	SATH33	VTBB	290700		7:05	07:05	07:05	07:05
515	SAXX31	VQPR	290400		3:57	03:57	03:57	03:57
516	SAXX31	VQPR	290430		4:28	04:28	04:28	04:28
517	SAXX31	VQPR	290500		5:06	05:05	05:05	05:05
518	SAXX31	VQPR	290530		5:24	05:24	05:24	05:24
519	SAXX31	VQPR	290600		5:57	05:57	05:57	05:57
520	SAXX31	VQPR	290630		6:28	06:28	06:28	06:28
521	SAXX31	VQPR	290700		6:55	06:55	06:55	06:55
522	SAXX31	VQPR	290800		7:56	07:56	07:56	07:56

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
	TAAii	CCCC	YYGGgg	BBB	(hh:mm)	(hh:mm)	(hh:mm)	(hh:mm)	
1	FTAE31	VTBB	290500		5:35	05:35	05:35	05:35	
2	FTAE32	VTBB	290500		5:35	05:35	05:35	05:35	
3	FTAE32	VTBB	290500	AAA	7:25	07:25	07:25	07:25	
4	FTAE33	VTBB	290500		5:35	05:35	05:35	05:35	
5	FTAE34	VTBB	290500		5:35	05:35	05:35	05:35	
6	FTAU31	YBBN	290200		2:07	02:06	02:06		Not required for AFI
7	FTAU31	YBBN	290200		2:18	02:18	02:18		Not required for AFI
8	FTAU31	YBBN	290200		2:21	02:21	02:21		Not required for AFI
9	FTAU31	YBBN	290200		2:35	02:34	02:34		Not required for AFI
10	FTAU31	YBBN	290200		2:35	02:35	02:35		Not required for AFI
11	FTAU31	YBBN	290200	RRA	2:35	02:35	02:35		Not required for AFI
12	FTAU31	YBBN	290200		2:59	02:59	02:59		Not required for AFI
13	FTAU31	YBBN	290300		3:07	03:07	03:07		Not required for AFI
14	FTAU31	YBBN	290300		3:24	03:23	03:23		Not required for AFI
15	FTAU31	YBBN	290400		4:02	04:02	04:02		Not required for AFI
16	FTAU31	YBBN	290400		4:56	04:56	04:56		Not required for AFI
17	FTAU31	YBBN	290500		5:08	05:08	05:08		Not required for AFI
18	FTAU31	YBBN	290500		5:12	05:12	05:12		Not required for AFI
19	FTAU31	YBBN	290500		5:14	05:14	05:14		Not required for AFI
20	FTAU31	YBBN	290500		5:25	05:25	05:25		Not required for AFI
21	FTAU31	YBBN	290500		5:35	05:35	05:35		Not required for AFI
22	FTAU31	YBBN	290500	RRA	5:35	05:35	05:35		Not required for AFI
23	FTAU31	YBBN	290600		6:13	06:12	06:12		Not required for AFI
24	FTAU31	YBBN	290700		7:08	07:08	07:08		Not required for AFI
25	FTAU31	YBBN	290700		7:17	07:16	07:16		Not required for AFI
26	FTAU31	YBBN	290700		7:38	07:38	07:38		Not required for AFI
27	FTAU32	YBBN	290200		2:01	02:00	02:00		Not required for AFI
28	FTAU32	YBBN	290200		2:32	02:32	02:32		Not required for AFI
29	FTAU32	YBBN	290500		5:04	05:03	05:03		Not required for AFI
30	FTAU32	YBBN	290500		5:14	05:14	05:14		Not required for AFI
31	FTAU32	YBBN	290500		5:35	05:35	05:35		Not required for AFI
32	FTAU32	YBBN	290500	RRA	5:35	05:35	05:35		Not required for AFI
33	FTAU32	YBBN	290600	RRA	6:05	06:05	06:05		Not required for AFI
34	FTAU32	YBBN	290700		7:44	07:43	07:43		Not required for AFI
35	FTAU33	YBBN	290200		2:25	02:25	02:25		Not required for AFI
36	FTAU33	YBBN	290300		3:11	03:11	03:11		Not required for AFI
37	FTAU33	YBBN	290400		4:02	04:02	04:02		Not required for AFI
38	FTAU33	YBBN	290500		5:11	05:11	05:11		Not required for AFI
39	FTAU33	YBBN	290500		5:17	05:16	05:16		Not required for AFI
40	FTAU33	YBBN	290500		5:20	05:20	05:20		Not required for AFI
41	FTAU33	YBBN	290500		5:21	05:21	05:21		Not required for AFI
42	FTAU33	YBBN	290500		5:35	05:35	05:35		Not required for AFI
43	FTAU33	YBBN	290700		7:17	07:17	07:17		Not required for AFI
44	FTAU33	YBBN	290700		7:49	07:49	07:49		Not required for AFI
45	FTAU33	YBBN	290700		7:51	07:50	07:50		Not required for AFI
46	FTAU34	YBBN	290500	RRA	5:10	05:10	05:10		Not required for AFI
47	FTAU35	YBBN	290700		7:00	07:00	07:00		Not required for AFI
48	FTAU36	YBBN	290200		2:17	02:16	02:16		Not required for AFI
49	FTAU36	YBBN	290200		2:35	02:35	02:35		Not required for AFI
50	FTAU36	YBBN	290200	RRA	2:55	02:55	02:55		Not required for AFI

51	FTAU36	YBBN	290300		3:43	03:42	03:42		Not required for AFI
52	FTAU36	YBBN	290400		4:02	04:02	04:02		Not required for AFI
53	FTAU36	YBBN	290500		5:06	05:05	05:05		Not required for AFI
54	FTAU36	YBBN	290500		5:06	05:06	05:06		Not required for AFI
55	FTAU36	YBBN	290500		5:12	05:12	05:12		Not required for AFI
56	FTAU36	YBBN	290500		5:28	05:27	05:27		Not required for AFI
57	FTAU36	YBBN	290500		5:35	05:35	05:35		Not required for AFI
58	FTAU36	YBBN	290600		6:19	06:19	06:19		Not required for AFI
59	FTAU36	YBBN	290600		6:40	06:40	06:40		Not required for AFI
60	FTAU36	YBBN	290700		7:06	07:05	07:05		Not required for AFI
61	FTAU36	YBBN	290700		7:09	07:08	07:08		Not required for AFI
62	FTAU36	YBBN	290700		7:26	07:26	07:26		Not required for AFI
63	FTCI31	ZBBB	290400		4:00	04:00	04:00	04:00	
64	FTCI32	ZBBB	290400		4:01	04:00	04:00	04:00	
65	FTCI32	ZBBB	290440	RRA	4:41	04:40	04:40	04:40	
66	FTCI32	ZBBB	290441	RRB	4:42	04:41	04:41	04:41	
67	FTCI41	ZBBB	290400		4:01	04:00	04:00	04:00	
68	FTHK31	VHHH	290500		5:20	05:20	05:20	05:20	
69	FTHK31	VHHH	290500	RRA	5:20	05:20	05:20	05:20	
70	FTHK31	VHHH	290500	AAA	6:50	06:50	06:50	06:50	
71	FTIN31	VABB	290500	RRA	5:39	05:39	05:39	05:39	
72	FTIN31	VABB	290500	RRB	5:40	05:39	05:39	05:39	
73	FTIN32	VABB	290500	RRA	5:42	05:42	05:42	05:42	
74	FTIN32	VABB	290500	RRB	5:43	05:42	05:42	05:42	
75	FTJP31	RJTD	290500		5:27	05:27	05:27	05:27	
76	FTJP32	RJTD	290500		5:27	05:27	05:27	05:27	
77	FTJP32	RJTD	290500	RRA	5:27	05:27	05:27	05:27	
78	FTJP38	RJTD	282300	AAA	2:07	02:07	02:07	02:07	
79	FTJP38	RJTD	282300	AAB	2:57	02:56	02:56	02:56	
80	FTJP38	RJTD	290500		5:27	05:27	05:27	05:27	
81	FTJP38	RJTD	290500	RRA	5:27	05:27	05:27	05:27	
82	FTJP38	RJTD	290500	RRB	5:27	05:27	05:27	05:27	
83	FTJP38	RJTD	290500	AAA	7:51	07:50	07:50	07:50	
84	FTKO31	RKSI	290130	AAA	2:02	02:01	02:01	02:01	
85	FTKO31	RKSI	290500		5:06	05:06	05:06	05:06	
86	FTKO31	RKSI	290500	RRA	5:08	05:08	05:08	05:08	
87	FTKO31	RKSI	290710	AAA	7:09	07:09	07:09	07:09	
88	FTMS40	WMKK	282300	AAA	3:33	03:33	03:33	03:33	
89	FTMS40	WMKK	290500		5:04	04:45	04:45	04:45	
90	FTNG31	YBBN	290500	RRA	5:05	05:05	05:05		Not required for AFI
91	FTNG31	YBBN	290600	RRA	6:55	06:55	06:55		Not required for AFI
92	FTNZ31	NZKL	290500		5:10	05:10	05:10		Not required for AFI
93	FTNZ31	NZKL	290510		5:11	05:11	05:11		Not required for AFI
94	FTPK31	OPKC	290400		4:01	04:00	04:00	04:00	
95	FTPK31	OPKC	290400	RRA	4:01	04:03	04:03	04:03	
96	FTPK31	OPKC	290400	RRB	4:05	04:03	04:03	04:03	
97	FTPK31	OPKC	290400	RRC	4:14	04:14	04:14	04:14	
98	FTPS31	NFFN	290500		5:45	05:45	05:45		Not required for AFI
99	FTPS32	NFFN	290500		5:14	05:13	05:13		Not required for AFI
100	FTPS33	NFFN	290500		5:29	05:29	05:29		Not required for AFI
101	F TSR31	WSSS	290500		5:06	05:05	05:05	05:05	
102	F TSR31	WSSS	290500	AAA	8:00	08:00	08:00	08:00	
103	F TSR32	WSSS	282300	AAA	2:45	02:45	02:45	02:45	
104	F TSR32	WSSS	290500		5:07	05:07	05:07	05:07	
105	F TSR33	WSSS	282300	AAA	3:55	03:54	03:54	03:54	
106	F TSR33	WSSS	290500		5:08	05:08	05:08	05:08	

107	FITH31	VTBB	290500	5:35	05:35	05:35	05:35	
108	FITH32	VTBB	290500	5:35	05:35	05:35	05:35	
109	FITH33	VTBB	290500	5:35	05:35	05:35	05:35	
110	FTTM31	YBBN	290500	5:35	05:35	05:35		Not required for AFI