

Annex V

**MINIMUM QUALITY CONTROL STANDARDS**

MQCS - III (Version 3, May 2000)

NOTE See specification for quality control Indicators Q<sub>1</sub> to Q<sub>20</sub> at the end of this appendix  
 $\Delta$  = space (ASCII 32)

Element	Error	Action
1	$i_T \neq \text{0-5 3-5}$	Correct manually, <u>otherwise <math>\Delta</math></u>
2	AAAA $\neq$ valid year	Correct manually otherwise reject
3	MM $\neq$ 01 - 12	Correct manually otherwise reject
4	YY $\neq$ valid day of month	Correct manually otherwise reject
5	G $\neq$ 00 - 23	Correct manually otherwise reject
6	Q $\neq$ 1, 3, 5, 7 Q = $\Delta$	Correct manually and Q <sub>20</sub> = 5, otherwise Q <sub>20</sub> = 4 Q <sub>20</sub> = 2
7	L <sub>a</sub> L <sub>a</sub> L <sub>a</sub> $\neq$ 000-900 L <sub>a</sub> L <sub>a</sub> L <sub>a</sub> = $\Delta\Delta\Delta$	Correct manually and Q <sub>20</sub> = 5, otherwise Q <sub>20</sub> = 4 Q <sub>20</sub> = 2
8	L <sub>o</sub> L <sub>o</sub> L <sub>o</sub> L <sub>o</sub> $\neq$ 0000-1800 L <sub>o</sub> L <sub>o</sub> L <sub>o</sub> L <sub>o</sub> = $\Delta\Delta\Delta\Delta$	Correct manually and Q <sub>20</sub> = 5, otherwise Q <sub>20</sub> = 4 Q <sub>20</sub> = 2
<b>But</b>	L <sub>a</sub> L <sub>a</sub> L <sub>a</sub> = L <sub>o</sub> L <sub>o</sub> L <sub>o</sub> L <sub>o</sub> = $\Delta\Delta\Delta(\Delta)$	Correct manually otherwise reject

**Time sequence checks**

	Change in latitude > 0.7° /hr	Correct manually otherwise Q <sub>20</sub> = 3
	Change in longitude > 0.7° /hr when lat. 00-39.9	Correct manually otherwise Q <sub>20</sub> = 3
	Change in longitude > 1.0° /hr when lat. 40-49.9	Correct manually otherwise Q <sub>20</sub> = 3
	Change in longitude > 1.4° /hr when lat. 50-59.9	Correct manually otherwise Q <sub>20</sub> = 3
	Change in longitude > 2.0° /hr when lat. 60-69.9	Correct manually otherwise Q <sub>20</sub> = 3
	Change in longitude > 2.7° /hr when lat. 70-79.9	Correct manually otherwise Q <sub>20</sub> = 3
9		No checking
10	h $\neq$ 0-9, $\Delta$ h = $\Delta$	Correct manually and Q <sub>1</sub> = 5, otherwise Q <sub>1</sub> = 4 Q <sub>1</sub> = 9
11	VV $\neq$ 90-99, $\Delta\Delta$ VV = $\Delta\Delta$	Correct manually and Q <sub>2</sub> = 5, otherwise Q <sub>2</sub> = 4 Q <sub>2</sub> = 9
12	N $\neq$ 0-9, $\Delta$ , / N < Nh	Correct manually and Q <sub>3</sub> = 5, otherwise Q <sub>3</sub> = 4 Correct manually and Q <sub>3</sub> = 5, otherwise Q <sub>3</sub> = 2
13	dd $\neq$ 00-36, 99, $\Delta\Delta$ dd = $\Delta\Delta$ , // <u>dd versus ff</u> dd = 00, ff 00  dd $\neq$ 00, ff = 00	Correct manually and Q <sub>4</sub> = 5, otherwise Q <sub>4</sub> = 4 Q <sub>4</sub> = 9  Correct manually and Q <sub>4</sub> or Q <sub>5</sub> = 5 otherwise Q <sub>4</sub> = Q <sub>5</sub> = 2  Correct manually and Q <sub>4</sub> or Q <sub>5</sub> = 5 otherwise Q <sub>4</sub> = Q <sub>5</sub> = 2
14	i <sub>w</sub> $\neq$ 0, 1, 3, 4	Correct manually, otherwise Q <sub>5</sub> = 4
15	ff > 80 knots ff = $\Delta\Delta$ , //	Correct manually and Q <sub>5</sub> = 5, otherwise Q <sub>5</sub> = 3 Q <sub>5</sub> = 9
16	S <sub>n</sub> $\neq$ 0, 1	Correct manually, otherwise Q <sub>6</sub> = 4
17	TTT = $\Delta\Delta\Delta$ , /// If -25 > TTT > 40 then when Lat. < 45.0 TTT < -25 TTT > 40 when Lat. >= 45.0 TTT < -25 TTT > 40	Q <sub>6</sub> = 9  Q <sub>6</sub> = 4 Q <sub>6</sub> = 3  Q <sub>6</sub> = 3 Q <sub>6</sub> = 4
<b>Element</b>	<b>Error</b>	<b>Action</b>

## TTT versus humidity parameters

	TTT < WB (wet bulb)	Correct manually and $Q_6 = 5$ , otherwise $Q_6 = Q_{19} = 2$
	TTT < DP (dew point)	Correct manually and $Q_6 = Q_7 = 5$ , otherwise $Q_6 = Q_7 = 2$
18	$S_n S_t \neq 0, 1, 2, 5, 6, 7, 9$	Correct manually, otherwise $Q_7 = 4$
19	DP > WB	Correct manually and $Q_7 = 5$ , otherwise $Q_7 = Q_{19} = 2$
	DP > TTT	Correct manually and $Q_7 = 5$ , otherwise $Q_7 = Q_6 = 2$
	WB = DP = $\Delta\Delta\Delta$	$Q_7 = 9$
20	930 > PPPP > 1050 hPa	Correct manually and $Q_8 = 51, 3$ and, if corrected, otherwise $Q_8$
= 53	870 > PPPP > 1070 hPa	Correct manually and $Q_8 = 5$ , otherwise $Q_8 = 4$
	PPPP = $\Delta\Delta\Delta\Delta$	$Q_8 = 9$
21	ww = 22-24, 26, 36-39, 48, 49, 56, 57, 66-79, 83-88, 93, 94 and latitude <20°	Correct manually and $Q_9 = 5$ , otherwise $Q_9 = 4$
	<del>ww = <math>\Delta\Delta</math>, //</del>	<del><math>Q_9 = 9</math></del>
22, 23	$W_1 = W_2 = 7$ and latitude <20°	Correct manually and $Q_9 = 5$ , otherwise $Q_9 = 4$
	$W_1 < W_2$	Correct manually and $Q_9 = 5$ , otherwise $Q_9 = 4$
	$W_1 = W_2 = \Delta$ , /	$Q_9 = 9$
24,25,		
26,27	$N = 0, \Delta, 9$ and $N_h C_L C_M C_H \neq \Delta$	Correct manually and $Q_3 = 5$ , otherwise $Q_3 = 4$
28	$S_n S_s \neq 0, 1$	Correct manually otherwise $Q_{10} = 4$
29	$T_w T_w T_w = \Delta\Delta\Delta$ , ///	$Q_{10} = 9$
	if $-2.0 > T_w T_w T_w > 37.0$ then	
	when Lat. < 45.0	
	$T_w T_w T_w < -2.0$	Control manually and $Q_{10} = 5$ , otherwise $Q_{10} = 4$
	$T_w T_w T_w > 37.0$	Control manually and $Q_{10} = 5$ , otherwise $Q_{10} = 3$
	when Lat. $\geq 45.0$	
	$T_w T_w T_w < -2.0$	Control manually and $Q_{10} = 5$ , otherwise $Q_{10} = 3$
	$T_w T_w T_w > 37.0$	Control manually and $Q_{10} = 5$ , otherwise $Q_{10} = 4$
30	Indicator $\neq 0-7, \Delta$	Correct manually, make it $\Delta$ if not correctable
31	Indicator $\neq 0-9, \Delta$	Correct manually, make it $\Delta$ if not correctable
32	$20 < P_w P_w < 30$	$Q_{11} = 3$
	$P_w P_w \geq 30$ and $\neq 99$	$Q_{11} = 4$
	$P_w P_w = \Delta\Delta$ , //	$Q_{11} = 9$
33	$35 < H_w H_w < 50$	$Q_{12} = 3$
	$H_w H_w \geq 50$	$Q_{12} = 4$
	$H_w H_w = \Delta\Delta$ , //	$Q_{12} = 9$
34	$d_{w1} d_{w1} \neq 00-36, 99, \Delta\Delta$	Correct manually and $Q_{13} = 5$ , otherwise $Q_{13} = 4$
	$swell_1 = swell_2 = \Delta$	$Q_{13} = 9$
35	$25 < P_{w1} P_{w1} < 30$	$Q_{13} = 3$
	$P_{w1} P_{w1} \geq 30$ and $\neq 99$	$Q_{13} = 4$
36	$35 < H_{w1} H_{w1} < 50$	$Q_{13} = 3$
	$H_{w1} H_{w1} \geq 50$	$Q_{13} = 4$
37	$I_s \neq 1-5, \Delta$	Correct manually, otherwise $\Delta$
38	$E_s E_s \neq 00-99, \Delta\Delta$	Correct manually, otherwise $\Delta\Delta$
39	$R_s \neq 0-4, \Delta$	Correct manually, otherwise $\Delta$
40	Source $\neq 0-6$	Correct manually, otherwise $\Delta$
41	Platform $\neq 0-9$	Correct manually, otherwise $\Delta$
42	No call sign	Insert manually, otherwise reject
43	No country code	Insert manually
44		No Quality Control
45	$Q \neq 0-6, 9$	Correct manually, otherwise $\Delta$
46	$i_x \neq 1-7$	Correct manually, otherwise $\Delta$
47	$i_R = 0-2$ and $RRR = 000, ///, \Delta\Delta\Delta$	Correct manually, otherwise $Q_{14} = 4$
	$i_R = 3$ and $RRR \neq 000, ///, \Delta\Delta\Delta$	Correct manually, otherwise $Q_{14} = 2$
	$i_R = 4$ and $RRR \neq ///, \Delta\Delta\Delta$	Correct manually, otherwise $Q_{14} = 2$
	<del><math>i_R \neq 0-4</math></del>	<del>Correct manually, otherwise <math>Q_{14} = 4</math></del>
Element	Error	Action

48	RRR $\neq$ 001 - 999 and $i_R = 1, 2$	Correct manually and $Q_{14} = 5$ , otherwise $Q_{14} = 2$
49	$t_R$ 0-9	Correct manually and $Q_{14} = 5$ , otherwise $Q_{14} = 4$
50	<del><math>s_R - s_W</math></del> $\neq$ 0, 1, 2, 5, 6, 7, 9	Correct manually, otherwise $Q_{19} = 4$
51	WB < DP	Correct manually and $Q_{19} = 5$ , otherwise $Q_{19} = Q_7 = 2$
	WB = ///, $\Delta\Delta\Delta$	$Q_{19} = 9$
	WB > TTT	Correct manually and $Q_{19} = 5$ , otherwise $Q_{19} = Q_6 = 2$
52	$a \neq$ 0-8, $\Delta$	Correct manually and $Q_{15} = 5$ , otherwise $Q_{15} = 4$
	$a = 4$ and $ppp \neq$ 000	Correct manually and $Q_{15} = 5$ , otherwise $Q_{15} = Q_{16} = 2$
	$a = \Delta$	$Q_{15} = 9$
53	<del><math>ppp &gt;</math></del> $150 < ppp \leq 250$	Correct manually and $Q_{16} =$ <del>51, 3 and if corrected</del> otherwise
$Q_{16} =$ <del>5, 3</del>	$ppp > 250$	Correct manually and $Q_{16} = 5$ otherwise $Q_{16} = 4$
	$ppp = \Delta\Delta\Delta$	$Q_{16} = 9$
54	$D_s \neq$ 0-9, $\Delta$	Correct manually and $Q_{17} = 5$ , otherwise $Q_{17} = 4$
	$D_s = \Delta, /$	$Q_{17} = 9$
55	$V_s \neq$ 0-9, $\Delta$	Correct manually and $Q_{18} = 5$ , otherwise $Q_{18} = 4$
	$V_s = \Delta, /$	$Q_{18} = 9$
56	$d_{w2}d_{w2} \neq$ 00-36, 99	Correct manually and $Q_{13} = 5$ , otherwise $Q_{13} = 4$
57	$25 < P_{w2}P_{w2} < 30$	$Q_{13} = 3$
	$P_{w2}P_{w2} \geq 30$ and $\neq$ 99	$Q_{13} = 4$
58	$35 < H_{w2}H_{w2} < 50$	$Q_{13} = 3$
	$H_{w2}H_{w2} \geq 50$	$Q_{13} = 4$
59	$c_i \neq$ 0-9, $\Delta$	Correct manually, otherwise $\Delta$
60	$s_i \neq$ 0-9, $\Delta$	Correct manually, otherwise $\Delta$
61	$b_i \neq$ 0-9, $\Delta$	Correct manually, otherwise $\Delta$
62	$D_i \neq$ 0-9, $\Delta$	Correct manually, otherwise $\Delta$
63	$z_i \neq$ 0-9, $\Delta$	Correct manually, otherwise $\Delta$

### Specifications for quality control Indicators $Q_1$ to $Q_{20}$

0	No quality control (QC) has been performed on this element
1	QC has been performed; element appears to be correct
2	QC has been performed; element appears to be inconsistent with other elements
3	QC has been performed; element appears to be doubtful
4	QC has been performed; element appears to be erroneous
5	The value has been changed as a result of QC
<del>6, 7</del>	<del>Reserved for GCCs</del>
<del>6-8</del>	<del>Reserve</del>
9	The value of the element is missing

#### Use of flag 6:

The GCCs will set the flag to 6 if the flag has been set to 1 by the Contributing member and the GCCs find it not in accordance with the MQCS

#### Use of flag 7:

The GCCs will set the flag to 7 if the flag had been set to 5 by the Contributing member and the GCCs find it no in accordance with the MQCS