

Aviation Meteorological Forecaster Competency 3

Warn of Hazardous Weather Phenomena

Aerodrome Warnings AMF AC 3.1.5 and 3.2

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PURPOSE OF THIS PRESENTATION

At the end of this presentation you will be able to:

- Know the specific weather phenomena for which Aerodrome warnings need to be issued
- Know their associated format.



AERODROME WARNINGS DUE TO LOW CLOUD AND POOR VISIBILITY (AMF AC 3.1.5)

- Note that:

NO Aerodrome warnings are issued because of low cloud and poor visibility unless agreed locally with the airport concerned.



Aerodrome Warning for wind, sand and dust storm (AMF AC 3.1.5)

An Aerodrome warning is issued when there is:

- Heavy SS (sandstorm) less than 1000m or SA (sand)
- Sandstorm (SS)
- dust storm
- rising sand or dust
- strong surface wind and gusts



16 October 2014 – Aerodrome Warning

- Using the observation (METAR) and the validity times in the TAF that corresponded to the dust storm an Aerodrome Warning was issued in the following format:
- FABL AD WRNG1 VALID 181100/181300 HVY DU OBS AT 1100Z=
- The onset time and visibility of the Aerodrome warning was chosen to be the time when the observation of poor visibility on dust was given on the METAR
- FABL 161230Z 21025G35KT 9999 SCT050 18/02 Q1010 NOSIG=
- Based on the 12:30Z METAR, the Aerodrome Warning was then cancelled at 12:35 as follows:
- FABL CNL AD WRNG1 VALID 181100/181300=



Weather phenomena requiring Aerodrome warnings with CB and Thunderstorms (AMF AC 3.1.5)

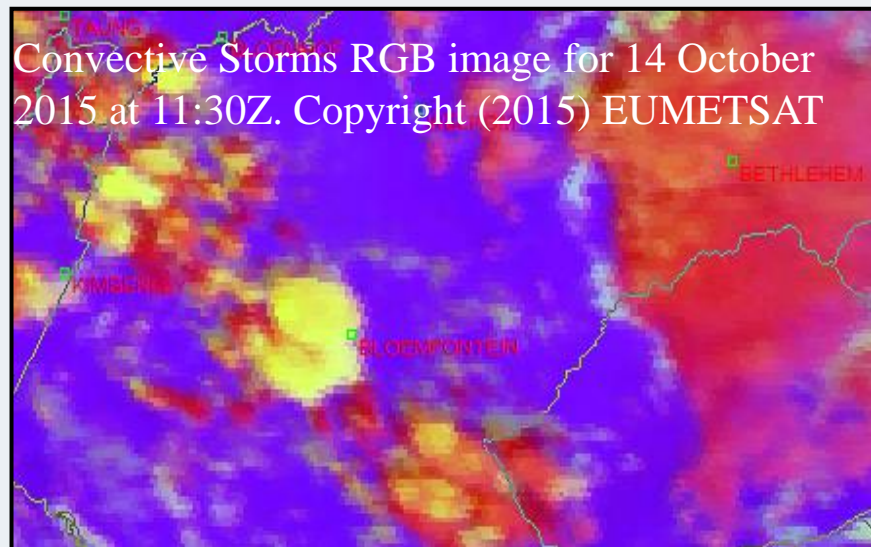
- Aerodrome warnings with **specific reference to thunderstorms** should relate to the occurrence or expected occurrence of one or more of the following phenomena:
- Thunderstorm (TS)
- Hail (GR)
- Squall (SQ)
- any other phenomena as agreed locally.

NB: thunderstorms, microburst's, funnel cloud (tornado or waterspout) and gust fronts can also lead to wind shear warnings and need to be monitored at all times.

Example of Aerodrome Warning (AMF AC 3.1.5 and 3.2)

- The following are phenomena related to CB and Thunderstorms that warrant the issue of an Aerodrome warning (TS/GR or SQ)
- FAOR AD WRNG 1 VALID 041200/041500 HVY **TS** (or **GR** or **SQ**) OBS AT 1200Z (or FCST) INTSF/WKN/NC=
- CNL AD WRNG 1 041200/041500

Aerodrome Warning Bloemfontein (AMF AC 3.1.5 and 3.2)



FABL 141130Z 36018G31KT 9999

FEW070TCU 32/07 Q1013

NOSIG=

FABL 141200Z 36016KT 7000

BLDU NSC 30/05 Q1012 TEMPO

5000 TSRA FEW070CB=

FABL AD WRNG1 VALID 141130/141245 HVY TS OBS AT 1130Z

NC=

Aerodrome Warning AMF AC 3.1.5 based on VA Pilot Report (PIREP)

- Aerodrome warnings should relate to the occurrence or expected occurrence of Volcanic Ash
- Occurrence in this case based on Sat image and Pilot Report

Pilot Report recieved:

UAZA46 FACT 181330

AIREP1 FACT VA CLOUD REPORTED OVER AND IN VICINITY OF AERODROME FL110/FL130 AND IN PATCHES FL135/FL150 OVER WELLINGTON/CAPE TOWN/YZERFONTEIN/ FALSE BAY TO CAPE AGULHAS=

Aerodrome warning issued based on pilot report:

FACT AD WRNG 1 VALID 181330/190600 VA OBS AT 1330Z NC=



Aerodrome Warning and TC example (AMF AC 3.1.5)

Aerodrome warnings should relate to the occurrence or expected occurrence of:

- Tropical Cyclone:
- FQBR AD WRNG 1 VALID 090800/091000 TC IDAI
OBS AT 0800Z INTSF=
- CNL AD WRNG 2 090800/091000Z



Aerodrome Warning Phenomena (AMF AC 3.1.5)

The following phenomena need to be warned for in Aerodrome warnings unless local agreements exist of others

- Snow (SN) (including the expected or observed snow accumulation)
- freezing precipitation (FZRA) or (FZDZ)
- hoar frost or rime (RIME)
- Frost (FROST)

Examples of Aerodrome warnings

FABL AD WRNG 1 VALID 150400/150700
HVY FZRA OBS AT 0400Z WKN=

FABL AD WRNG 1 VALID 180600/180800
HVY FZDZ OBS AT 0600Z NC=

FABL AD WRNG 1 VALID 130400/130700
HVY RIME OBS AT 0400Z WKN=

FABL AD WRNG 1 VALID 121500/121700
HVY SN 2CM OBS AT 1500Z INTSF=

FABL AD WRNG 1 VALID 090400/090600
HVY FROST OBS AT 0400Z WKN=



**South African
Weather Service**