

***NATIONAL WEATHER SERVICE
PRODUCT/SERVICE DESCRIPTION DOCUMENT (PDD)
TYPE: Official Product
DATE: April 24, 2003***

SIGNIFICANT METEOROLOGICAL INFORMATION (SIGMET)

Part 1 - Mission Connection

1. Product/Service Description:

SIGMETs are concise, brief descriptions of the development and occurrence or expected occurrence in time and space of specified en-route weather phenomena which may affect the safety of all aircraft operations. A SIGMET advises of non-convective weather, except as shown below, that is potentially hazardous to all aircraft:

- a. Severe icing not associated with thunderstorms
- b. Severe or extreme turbulence or clear air turbulence (CAT) not associated with thunderstorms
- c. Dust storms or sandstorms lowering surface or in-flight visibilities to below 3 miles

and of:

- a. Volcanic ash
- b. Tropical Cyclones

In Alaska, Hawaii, Guam, and International Oceanic Flight Information Regions (FIRs), SIGMETs are also issued for the following convective related potential hazards:

- a. Tornadoes
- b. Lines of thunderstorms
- c. Embedded thunderstorms
- d. Hail greater than or equal to inch in diameter

Convective activity implies the likely presence of severe turbulence, severe icing and low-level wind shear. SIGMETs advising of convection in the conterminous U.S. are issued as Convective SIGMET Bulletins and are described in a separate Product Description Document.

2. Purpose/Intended Use:

SIGMETs are intended for dissemination to all pilots to enhance safety. They are issued in support of Federal Aviation Administration (FAA) air traffic controllers and the National Airspace System (NAS).

3. Audience:

The target audience for the product includes: general and commercial aviation, military and government agencies.

4. **Presentation Format:**

NWS disseminates the SIGMET in text, bulletin format using approved ICAO contractions. Text and graphical SIGMETs are also available from the Aviation Weather Center (AWC) website - <http://aviationweather.gov/>. NWS has four Meteorological Watch Offices which issue SIGMETs: the National Centers for Environmental Prediction Aviation Weather Center (AWC), Alaskan Aviation Weather Unit (AAWU), the Honolulu Forecast Office and the Guam Forecast Office. These four Offices transmit SIGMETs using World Meteorological Organization (WMO) Bulletin Headers. The first two letters in the WMO Bulletin Headers differ by Office and signify the type of SIGMET as described in the following sentences. AWC issues non-convective SIGMETs, SIGMETs for Volcanic Ash, SIGMETs for Tropical Cyclones, and SIGMETs for convection in International Oceanic FIRs using the WMO Bulletin Header “WS” (Convective SIGMETs issued by AWC for the conterminous U.S. have a non-standard WMO Bulletin Header, are in a different format, and are described in a separate Product Description Document). AAWU issues all SIGMETs under the WMO Bulletin header “WS.” Honolulu and Guam issue non-convective SIGMETs and SIGMETs for convection under the WMO Bulletin Header “WS,” SIGMETs for volcanic ash under the Bulletin header “WV,” and SIGMETs for tropical cyclones under the bulletin header “WC.”

5. **Feedback Method:**

The National Weather Service (NWS) is constantly seeking to improve its products based on user feedback. Customers can provide continuous feedback through the AWC Webmaster via <http://aviationweather.gov/>, the AAWU Webmaster at <http://aawu.arh.noaa.gov/>, through the Honolulu Forecast Office Webmaster at <http://www.prh.noaa.gov/pr/hnl/>, and through the Guam Forecast Office Webmaster at <http://www.prh.noaa.gov/pr/guam/>. Customers may also contact the Aviation Weather Services Branch, National Weather Service Headquarters (NWSH) via the e-mail link below. The AWC, AAWU, Honolulu and Guam Forecast Offices, and the NWSH also obtain feedback the e-mail link (below) to the Aviation Weather Services Branch, National Weather Service Headquarters (NWSH).

Technical and policy questions, and comments regarding SIGMETs may be addressed to:

National Weather Service
Attn: Richard Stone W/OS23
Aviation Weather Services Program Manager
1325 East-West Highway
Silver Spring, MD 20910
e-mail: Richard.stone@noaa.gov.

Part 2 - Technical

1. **Format and Science Basis:**

SIGMETs are identified by an alphabetical designator. SIGMETs issued by the AWC for CONUS and the Atlantic and Caribbean FIRS use the designators NOVEMBER through YANKEE excluding SIERRA and TANGO. Designators for SIGMETs issued for the Pacific basin are as follows: the AWC uses ALFA to HOTEL, the AAWU uses INDIA through MIKE, the Guam Forecast Office uses NOVEMBER through ROMEO, and the Honolulu Forecast Office uses SIERRA through ZULU.” Examples of SIGMET format may be found on the

Aviation Weather Center website at:

http://aviationweather.gov/awc/domestic_sigmet.html.

2. Availability:

AWC, AAWU, and the Honolulu and Guam Forecast Offices transmit unscheduled SIGMET products that are valid for 4 hours. International SIGMETs for conditions that are associated with tropical storms and volcanic ash are valid for 6 hours. Unscheduled updates and corrections are issued as necessary. Customers can receive the product via the Internet, NOAAPORT, and the WAFS and SADIS Satellite Distribution Networks. Additional information on NWS aviation product dissemination is available at:

<http://weather.gov/om/disemsys.shtml>.

3. Additional Information:

A description of SIGMET policy, area of responsibility, abbreviations and definitions, standards and guidelines, and methods of product dissemination are located in NWS Instruction 10-810 and 10-811 which is available via the Internet at:

http://www.nws.noaa.gov/directives/010/operation_services.htm.

Convective SIGMET (CONUS) information can be found in the National Catalogue of NWS Products website:

<http://products.weather.gov/>.