BY ORDER OF THE COMMANDER,
3RD WING (PACAF)

WING INSTRUCTION 15-101

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Weather

WEATHER SUPPORT FOR THE 3RD WING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFPD 15-1, *Atmospheric and Space Environmental Support*, and establishes policies and procedures for weather operations in support of the 3rd Wing (3 WG). It applies to 3 WG members. It will be used in conjunction with: AFMANs 10-206, *Operational Reporting*; 15-111, *Surface Weather Observations*; 15-113, *Weather Radar Observations*; 15-124, *Meteorological Codes*; 15-129, *Aerospace Weather Operations, Processes and Procedures*; AFIs 10-229, *Responding to Severe Weather Events*; 32-1045, *Snow and Ice Control*; WGI 91-201, *Adverse Weather Notification Procedures*; 3 WG OPLAN 32-1045, *Snow Removal Plan*; 3rd Operations Support Squadron (3 OSS) OI 15-111, *Cooperative Weather Watch Procedures*; and Federal Aviation Administration (FAA) Directive 7110.10K, *Flight Services*. This publication does not apply to USAF Reserve and Air National Guard units and members.

1. General Information:

1.1. General. The mission of 3 OSS/OSW, the Combat Weather Flight, is to forecast and report weather phenomena relevant to aerospace mission accomplishment. Ultimately, weather capabilities should be used as a force multiplier in mission execution.

1.1.1. In support of its mission, 3 OSS/OSW has several critical tasks to perform and will:

1.1.1.1. Take and disseminate weather observations.

1.1.1.2. Ensure an accurate Elmendorf AFB Terminal Aerodrome Forecast (TAF) is always available.

1.1.1.3. Initiate meteorological force protection actions for Elmendorf AFB.

1.1.1.4. Assist mission planning and execution.

1.1.1.5. Assist wing leadership with mission execution and short-range planning.

1.1.1.6. Deploy personnel and meteorological equipment world-wide to support 3 WG taskings.

1.1.1.7. Coordinate all weather services provided to 3 WG.

1.1.2. Basic concepts and procedures required to accomplish the mission are outlined in Air Force and Major Air Command directives. This document establishes requirements and procedures for areas of weather support that must be coordinated at the local level to meet mission requirements. It consolidates weather support requirements and procedures for peacetime operations and eliminates the need for written agreements between the Combat Weather Flight and supported organizations. It does not cover weather support procedures for emergency or war operations, or certain other special operations or procedures which are covered in applicable plans or regulations.

1.2. Duty Priorities. The Combat Weather Flight will provide the best possible weather support in a timely manner. Since not all tasks can be done simultaneously, duties are prioritized according to mission requirements for efficient use of all resources (reference: AFMAN 15-129). Weather support will be provided according to the following prioritized listing:

1.2.1. Perform emergency war order and contingency tasks.

1.2.2. Respond to aircraft or ground emergencies.

1.2.3. Take and locally disseminate surface observations.

1.2.4. Respond to pilot-to-metro service (PMSV) and Global Airways contacts.

1.2.5. Disseminate observed weather warnings locally.

1.2.6. Disseminate pilot reports (PIREP) locally.

1.2.7. Transmit surface observations and PIREPs longline.

1.2.8. Provide flight weather briefings.

1.2.9. Provide mission control forecasts.

1.2.10. Provide routine telephone briefings.

1.2.11. Provide other briefings.

1.3. Responsibilities. The 3 OSS/OSW provides or coordinates all weather support required by the 3 WG. The 3 OSS/OSW also supports Air Mobility Command (AMC) aircraft operating in the local flying area when there is a forecaster on duty in the weather station (during non-duty hours all non-3 WG transient aircrews are supported by 11 OWS.

1.4. Release of Weather Information. Support to non-DoD agencies and the general public will be provided when coordinated by 3 WG Public Affairs (3 WG/PA) or the Freedom of Information Act Office (3 CS/SCBR-FOIA).

1.5. Terms Explained. Refer to attachment 1 for a summary of weather-related terms.

1.6. Weather Dissemination Formats. Refer to attachment 2 for details on the formats used to disseminate weather observations and forecasts.

2. Forecasting Services:

2.1. General. On 1 November 1997, the Elmendorf AFB Base Weather Station became the first Air Force weather station to implement Chief-of-Staff-of-the-Air-Force-directed Air Force Weather Reengineering. Responsibility for issuance of the terminal aerodrome forecast (TAF) and of forecast

weather watches, warnings, and advisories shifted from 3 OSS/OSW to the Alaska regional weather hub, the 11th Operational Weather Squadron (11 OWS). Flight weather briefing support is moving from the weather station into the flying squadrons operations areas. The goal of reengineering is to have most 3 WG aircrews supported by weather forecasters working in and briefing at the flying squadrons, with non-3 WG aircrews supported remotely by the Alaskan regional weather hub. A minimal forecast presence will be maintained in the weather station to support 3 WG operations not suited to on-site forecast support, such as Air Traffic Control and Supervisor of Flying (SOF) support. The weather station will also oversee operation of centrally located weather systems (such as the weather radar and automated weather data processing equipment).

2.2. Duty Hours. Weather forecasting services are generally available in the weather station during the duty hours of the SOF. Forecasting services are generally not available on weekends, holidays, and 3 WG down days. These hours will be adjusted to support the 3 WG flying schedule. The duty hours of dedicated forecast services in the flying squadrons is based on the squadron daily flying schedules. Forecast support will be provided any time required by 3 WG operations.

2.3. TAF Services. The 11 OWS is responsible for issuing and amending TAFs for all military airfields in Alaska. Unless otherwise specified in this document or support agreements with affected airfields, standard TAF code will be used (reference: AFMAN 15-124).

2.3.1. Elmendorf AFB TAF. The 11 OWS issues forecasts for Elmendorf AFB in standard TAF code using the location identifier PAED. The Elmendorf AFB TAF is issued every 8 hours and amended as necessary based on amendment criteria listed in attachment 3 (per 3 OSS/11 OWS Memorandum of Agreement). The TAF covers a 24-hour period, and is prepared and disseminated via the Automated Meteorological Information System. The 3 OSS/OSW reviews the TAF for proper encoding, horizontal consistency with other meteorological products, and sound meteorological thinking, time and mission permitting, during regularly scheduled forecaster shifts, and provides feedback to the 11 OWS during Meteorological Conference (METCON) calls and, as necessary, for mission accomplishment. The primary quality control function is performed within 11 OWS. In the event 11 OWS has a communication outage or evacuates, 3 OSS/OSW will assume TAF issuance responsibility for Elmendorf AFB. This may require recall of the standby forecaster, station chief, or flight commander, and could result in some time delay of subsequent TAF issuance if it occurs outside of routine forecaster duty hours.

2.3.1.1. Dissemination Times. The Elmendorf forecast is issued daily (including weekends and holidays) at **0400L, 1200L, and 2000L** (12Z, 20Z, and 04Z during Alaska Daylight Savings Time; 13Z, 21Z, and 05Z during Alaska Standard Time). The forecasts are transmitted over the Automated Meteorological Information System (AMIS) between 5 and 15 minutes after the hour (this ensures meteorological information from the latest hourly surface observation is included in the forecast).

2.3.1.2. TAF Preparation. The 11 OWS will develop and electronically save the TAF 30 minutes prior to dissemination. The 3 OSS/OSW should review the TAF prior to the TAF meteorological conference call discussion.

2.3.1.2.1. The METCON will take place Monday–Friday (excluding holidays and 3 WG down days), 30 minutes prior to the 1200L TAF dissemination time, and at other times as necessary. The 11 OWS forecaster will initiate the call, then all forecasters who wish to participate will dial the conference call "meet me" line at 552-5360. Other 3 WG person-

nel may listen in or participate in the METCON as long as they identify themselves and do not hinder or interfere with the discussion.

2.3.1.2.2. The METCON will follow an orderly format and will not simply re-hash information available on previously disseminated forecast bulletins. The focus will be on impact to operations and not just what is being forecast.

2.3.1.2.3. The 3 OSS/OSW has significant input into the TAF. Below is a breakdown of which agency maintains control of exact TAF entry criteria. This is based on flying operations and safety concerns in the short term, blended with the improved forecast skill (due to availability of higher quality forecast tools in a regional center) in the long-term. It's important to note that the following time windows deviate slightly from the windows specified by AFI 15-126. The weather flight's window is expanded by 1 hour based on longer sortie and mission duration in Alaska which requires 3 OSS/OSW to make longer duration forecasts that are generally required in Continental United States (CONUS).

2.3.1.2.3.1. The first 3 hours (1-3 hour) of the TAF may be dictated by 3 OSS/OSW. This is a moving window beginning at whatever the current time is and continuing for the next 3 hours. If a consensus forecast between 11 OWS and 3 OSS/OSW cannot be reached, then 3 OSS/OSW will dictate TAF content during those first 3 hours of the TAF.

2.3.1.2.3.2. The second three hours (3-6 hour) of the TAF are dictated by flying safety. If a consensus forecast cannot be achieved between 11 OWS and 3 OSS/OSW, the conditions most dangerous to flight safety (the lower ceiling/visibility, stronger winds, and so forth) will be encoded in the TAF.

2.3.1.2.3.3. The remaining hours (6-24 hour) of the TAF are controlled by 11 OWS. Meteorological input will still be considered from 3 OSS/OSW, but the final TAF content authority rests with 11 OWS.

2.3.1.2.4. The TAF will be updated electronically by 11 OWS prior to dissemination based on METCON input, 3 OSS/OSW will review the updated draft, and when final agreement is reached, the TAF will be disseminated.

2.3.1.3. Dissemination Backup. If the AMIS is not functioning properly, 11 OWS will transmit the forecast to 3 OSS/OSW via phone or fax and 3 OSS/OSW will disseminate it. As a secondary backup, in case 3 OSS/OSW cannot disseminate via AMIS, either 11 OWS or 3 OSS/ OSW will contact Air Force Weather Agency and arrange to issue the forecast via NIPRNET or other means as necessary. All weather agencies realize the operational need to get the TAF disseminated in the most timely manner possible.

2.3.1.4. Specification Criteria. Every regularly scheduled or amended TAF will specify the time of occurrence to the nearest hour (or minute, as appropriate), the duration, and intensity (when applicable), of expected weather conditions. The weather criteria listed in attachment 3 will be included if expected to occur during the forecast period.

2.3.1.5. Amendment Criteria. After a TAF is issued the weather does not always change exactly as forecast. Some amount of difference between forecast and observed conditions is both expected and acceptable, but if the difference becomes excessive and affects operations, then the forecast will be amended. Refer to attachment 3 for a list of weather thresholds

deemed operationally significant enough to warrant amending the TAF; these thresholds are referred to as amendment criteria.

2.3.1.5.1. Amendments for specification criteria or representativeness are done at the discretion of 3 OSS/OSW, but either 3 OSS/OSW or 11 OWS can disseminate them. Amendments for those criteria listed in attachment 3 (A3.2.) are the responsibility of 11 OWS. If 3 OSS/OSW requests 11 OWS to disseminate an amendment, the operational impact driving the amendment should be communicated to 11 OWS. Any time the TAF is to be amended either by 3 OSS/OSW or 11 OWS a phone call should precede dissemination. If time prohibits communication prior to dissemination the amending party will immediately follow through with a phone call.

2.3.1.5.2. The 3 OSS/OSW can amend the TAF during communication outages or when operational expediency requires it and 11 OWS is unable to issue the amendment quickly enough.

2.3.1.5.3. Amendments will be valid from the previous cardinal hour, in relation to the actual time of transmission of the amendment, to the end of the original forecast period.

2.3.2. Long-Range Radar Sites (LRRS). The 11 OWS will issue and amend a TAF for a LRRS when 3 WG aircraft fly to that LRRS. The valid time of the TAF need only be long enough to support the mission, however the forecast needs to be issued in time for aircrew mission planning. Specification and amendment criteria will be in accordance with standard AF directives.

2.3.3. Eareckson AS (Shemya Island), Adak NAS, King Salmon AS, and Galena AS. The 11 OWS will issue and amend TAFs for Eareckson (PASY), Adak (PADK), King Salmon (PAKN/KQRC), and Galena (PAGA/KQRV) when 3 WG aircraft fly to or use these locations for operations.

2.4. Briefings:

2.4.1. Flight Weather Briefings. The 3 OSS/OSW forecasters provide flight weather briefings to 3 WG and transient aircrews during normal forecaster duty hours. The 3 OSS/OSW will adjust its duty hours as necessary to brief 3 WG aircrews for missions occurring at other times. The 3 WG aircrews have priority over non-3 WG aircrews for flight weather briefings. Contingency support for any aircrew has precedence over routine local flights (reference: AFMAN 15-129).

2.4.1.1. Base Weather Station Briefings. Transient (non-3 WG) aircrews will be briefed at the weather station during normal duty hours. The 3 WG aircrews will be briefed from the base weather station, either in person or via telephone and facsimile. The 11 OWS will brief transient aircrews via telephone and facsimile during non-duty hours. The 11 OWS will brief all transient aircrews who require remote briefing services via telephone and facsimile.

2.4.1.2. Out-of-Station Briefings. The 3 OSS/OSW can brief 3 WG aircrews at locations other than the weather station or flying squadron operations areas, per the preference of the supported unit. Units should strive for a minimum of a 24 hours advance notice to 3 OSS/OSW for out-of-station briefings in order to minimize the impact on other supported units. Every effort will be made to support short notice and non-3 WG out-of-station briefings and the 3 OSS Top 3 will handle these requests on a case-by-case basis. The intent is to maximize local flying opportunities while minimizing any negative impacts on other users of routine weather support from 3 OSS/OSW.

2.4.1.2.1. The 90th Fighter Squadron (90 FS) Briefings. The 3 OSS/OSW provides a combat weather cell for out-of-station weather support to the 90 FS for its entire mission needs, including staff briefings. Forecasters prepare and brief weather, electro-optical forecasts for precision guided munitions, and forecasts for night vision goggle operations, working on-site in 90 FS facilities.

2.4.1.2.2. The 517th Airlift Squadron (517 AS) Briefings. The 3 OSS/OSW provides a combat weather cell for out-of-station weather support to the 517 AS for its entire mission needs. Forecasters prepare and brief weather for the 517 AS, working on-site in 517 AS facilities.

2.4.1.2.3. The 12 FS, 19 FS, and 962nd Airborne Air Control Squadron (962 AACS) Briefings. The 3 OSS/OSW is not currently manned sufficiently to provide dedicated combat weather cells for the 12 FS, 19 FS, or 962 AACS. Weather support for the 12 FS and 19 FS is currently being provided from the base weather station, and weather support for the 962 AACS is being provided by the combat weather cell located in the 517 AS. Combat weather cells will be established in these flying squadrons operations areas when manning levels are sufficient to provide dedicated weather support.

2.4.2. Other Weather Briefings. The 3 OSS/OSW briefs the wing commander during 3 WG Standup meetings on weather affecting 3 WG operations, and supports the 3 WG Mission Planning Cell and Battle Staff during exercises, contingencies, and deployments. The 3 OSS/ OSW also provides non-flight weather briefings (for example, Instrument Refresher Course briefings) to 3 WG agencies, upon request.

2.5. In-flight Contacts. Reference: AFMAN 15-129.

2.5.1. Pilot-to-Metro Service (PMSV). PMSV is available 24 hours a day, 7 days a week, on the assigned frequency 346.6 MHz. Observers may relay weather observations and forecasts when a forecaster is not on duty. Aircrews are encouraged to relay PIREPs during PMSV contacts. PMSV range is approximately 200 nm from station at FL200. Range at lower altitudes is limited to the area south of the Alaska Range and north of the Chugach Range and Kenai Mountains, due to terrain interference. The 11 OWS also monitors this PMSV frequency, and will provide PMSV support when 3 OSS/OSW is minimally staffed and the duty observer is outdoors, beyond hearing range of the PMSV radio set.

2.5.2. Global Airways. High-frequency Global Airways telephone dispatches are available 24 hours a day, 7 days a week. The 11 OWS receives dispatches during all hours at DSN 552-2719. Aircrews are encouraged to relay PIREPs or air reports (AIREP) during Global Airways contacts.

2.5.3. Significant PIREPs. Aircrews are especially encouraged to report significant PIREPs. Significant PIREPs are transmitted both locally and longline and report one or more of the following phenomena, observed within 100 nm of Elmendorf AFB:

2.5.3.1. Tornadoes or funnel clouds.

2.5.3.2. Moderate or greater turbulence at or below FL200.

2.5.3.3. Any icing at or below FL200.

2.5.3.4. Hail.

2.5.3.5. Low-level wind shear.

2.5.3.6. Extensive dust storms.

2.5.3.7. Thunderstorms, squall lines, or any other significant convective activity.

2.5.4. Weather Change Notification. The 3 OSS/OSW will notify supported aircrews of any significant change to weather forecasts prior to and during mission execution. Weather updates may be relayed to airborne crews via the Air Traffic Control Tower, Airfield Management, or 3 WG Command Post.

2.6. Range and Military Operating Area (MOA) Forecasts. The 3 OSS/OSW will ensure forecasts for any range or MOA used by 3 WG aircrews are available. The 11 OWS issues alphanumeric forecasts for MOAs in use, and 3 OSS/OSW tailors these forecasts for 3 WG operational use. Forecasts are transmitted locally at least 3 hours prior to aircraft entering the range or MOA. An accurate mission schedule, including the range or MOA used and the time, needs to be available at least 12 hours prior to the mission in order for a high quality forecast to be developed.

2.7. Electro-Optical and Night Vision Goggle Support. Electro-optical forecasts for precision guided munitions and night vision goggle forecasts will be provided to 3 WG aircrews, upon request. Information about targets, times, and other mission specifics must be provided at least 3 hours prior to the mission. This service is routinely provided by the 3 OSS/OSW combat weather cell located in the 90 FS.

2.8. Digital Automated Information System (DAIS). Integration of weather support into DAIS is critical to the rapid dissemination of all operations-related information to and between the flying units on Elmendorf and to Alaska forward operating locations (FOL). DAIS attempts to integrate all operations-related information, including weather support, into a single usable interface for rapid dissemination. The 3 OSS/OSW will continue to support development and operation of DAIS.

3. Observing Services:

3.1. General. The most basic service provided by 3 OSS/OSW is weather observing support. This is the building block upon which all other weather services rest. Without a detailed and accurate assessment of current weather conditions, it's impossible to accurately forecast what the future conditions will be. Additionally, many flight and flightline operations depend directly on having favorable weather conditions at the time these activities are occurring. Accurate observations are required to sustain combat alert to fulfill our Alaska NORAD Region (ANR) tasking. These same observations are vital for flight operations to occur, and for Elmendorf AFB to function as an alternate airfield for the other military and civilian airfields in Alaska as agreed upon in support agreements between 3 WG and these other agencies. Elmendorf AFB is also required to disseminate weather observations longline into the Automated Weather Network for use by other weather stations, regional weather hubs, Air Force Weather Agency and other strategic weather centers, and for regional and global weather computer modeling. Standardization of all Air Force Weather observations is required to support the flying operations both at and beyond Elmendorf AFB, and many of the procedures followed locally are based on DoD and AF-level directives (reference: AFMAN 15-111).

3.2. Duty Hours. As manning allows, a 3 OSS/OSW weather observer is on duty 24 hours a day, 7 days a week.

3.3. Basic Weather Watch. Observers conduct a basic weather watch from the weather station at 11369 18th Street. The observer rechecks weather conditions at least every 20 minutes in addition to taking scheduled observations on each hour. Special or local observations are taken at other times, when special or local observation criteria are met (reference: AFMAN 15-111, paragraph. 1.7.5.2.

3.4. Modified Basic Weather Watch. The duty observer will recheck the weather at least every 5 to 10 minutes for special or local observation criteria when any of the following conditions are occurring or are forecast to occur within 2 hours: ceiling less than or equal to 3000 feet; visibility less than or equal to 3 statute miles (4800 meters); any form of precipitation; fog or mist; wind greater than or equal to 25 knots; crosswind to the active runway greater than or equal to 15 knots (reference: AFMAN 15-111, paragraph. 1.7.5.2).

3.5. Observation Site Limitations. The observation site is located outside on the runway side of the 11369 18th Street building. A low ridgeline north of Runway 05/23 blocks the observer's view toward the Knik Arm, the primary source of the fog which advects over the airfield. A large berm of plowed snow may block the view to the northeast (the main direction of fog approach) during winter months. Buildings obstruct the observer's view to the southeast, south, and southwest.

3.6. Cooperative Weather Watch. Air Traffic Control Tower personnel assist weather observers in monitoring weather conditions. They notify the duty observer of significant weather phenomena, including reduced prevailing and sector visibility, precipitation, thunderstorms or lightning, low cloud layers, and any other significant weather. Weather personnel will train air traffic controllers in cooperative weather watch observation techniques (reference: 3 OSS OI 15-111, *Cooperative Weather Watch Procedures*).

3.7. Dissemination of Observations. Observers record and disseminate observations in standard Aviation Routine (METAR) code.

3.7.1. Normal Dissemination Procedures. Observers disseminate observations locally and longline via the AMIS.

3.7.2. Back-up Dissemination Procedures. If the AMIS is inoperative, or in case of evacuation to the Alternate Observing Site at Fire Station #1 (11415 Fighter Drive), the following back-up procedures will be used to disseminate observations:

3.7.2.1. Back-up Local Dissemination. Observations will be telephoned to the 11 OWS forecaster, the Air Traffic Control Tower, 3 WG Command Post, and Airfield Management.

3.7.2.2. Back-up Longline Dissemination. Observations will be transmitted longline via the Air Force Weather Information Network (AFWIN) homepage, or telephoned to an observer at one of the following observation sites, listed in order of priority, who will transmit the observation: Eielson AFB (PAEI), Wheeler Army Air Field (PHHI), McChord AFB (KTCM), Fairchild AFB (KSKA), Travis AFB (KSUU), Edwards AFB (KEDW), Luke AFB (KLUF), Davis-Monthan AFB (KDMA), McConnell AFB (KIAB), Randolph AFB (KRND), Scott AFB (KBLV), Barksdale AFB (KBAD), Wright-Patterson AFB (KFFO), Dover AFB (KDOV), Tyndall AFB (KPAM), MacDill AFB (KMCF).

3.8. Observation Criteria. There are three types of weather observation: METAR, Aviation Special (SPECI), and LOCAL observations. METAR observations are the regular hourly observations transmitted both longline and locally which specify conditions as they exist at the time of the observation. If conditions change during the time between routine hourly observations and these conditions are

deemed significant enough to report to agencies both on and off base, a SPECI observation is taken. When conditions meeting SPECI criteria are first observed while taking the hourly METAR, the observation is called a "record special." There are additional thresholds deemed operationally significant at the local airfield which aren't significant enough to report beyond the local base; an observation for one of these criteria is called a LOCAL observation and is only disseminated on base. The criteria used to identify SPECI and LOCAL observations are listed in attachment 4.

3.9. Runway Visual Range (RVR) Reporting. RVR values will be reported on local dissemination. The 3 OSS/OSW does not have 10 minute averaging capability, therefore "RVRNO" will be reported on longline dissemination.

4. Weather Watches, Warnings, and Advisories:

4.1. General. Weather conditions that pose a serious threat to life or government property are monitored closely by 3 OSS/OSW and 11 OWS. Forecast watches, warnings, and advisories are issued by the 11 OWS and coordinated with 3 OSS/OSW personnel. Observed warnings are issued by the 3 OSS/OSW duty observer. Elmendorf AFB watches, warnings, and advisories are valid for the area within a 5 nm radius of the weather station, unless otherwise specified in the criteria. In the event of an 11 OWS communications failure or evacuation, 3 OSS/OSW is responsible for issuing forecast watches, warnings, and advisories.

4.2. Weather Watches. A weather watch is a special notice issued to customers to alert them that conditions *are favorable* for the formation of hazardous weather at Elmendorf AFB or the surrounding area. This hazardous weather may be of such intensity as to pose a hazard to life or property, and the customer may need to take protective action. The issuance of a watch provides enough lead time for customers to review their action plans and prepare themselves to take action in the event a warning is issued.

4.3. Weather Warnings. A weather warning is an urgent notice issued when a specific severe weather condition is occurring or will occur shortly at Elmendorf AFB or the surrounding area. The severe weather conditions are of such intensity that customers may need to initiate protective measures to prevent the loss of life or damage to property.

4.4. Weather Advisories. A weather advisory is a special notice issued when a specific weather condition will be or is currently affecting Elmendorf AFB or the surrounding area. The weather condition could affect operations, but generally doesn't pose a risk to life.

4.5. Weather Watch, Warning, and Advisory Criteria. Weather watch, warning, and advisory criteria, desired lead times, and operational impacts are listed in attachments 5-7.

4.6. Dissemination and Notification of Watches, Warnings, and Advisories. Weather watches, warnings, and advisories will be disseminated via the Automated Meteorological Information System. The 11 OWS will notify 3 OSS/OSW, the ATC Tower, 3 WG Command Post, Airfield Operations, and the 3 OSS Top-3 upon issuance or cancellation of a forecast weather watch, warning, or advisory. The duty observer will notify the 11 OWS forecaster, the ATC Tower, 3 WG Command Post, Airfield Operations, and the 3 OSS Top-3 upon issuance or cancellation of an observed weather warning. Only one watch, warning, or advisory may be in effect at a time, but each may designate multiple criteria. Warnings and advisories may be extended, canceled, or superseded with another warning or advisory, if necessary.

4.7. Alert Methods/Back-Ups:

4.7.1. AMIS. The AMIS will alert customers when a watch, warning, or advisory has been issued or canceled. Issuance or cancellation will be telephoned to 3 OSS/OSW, 11 OWS, the ATC Tower, 3 WG Command Post, and Airfield Management if the AMIS is inoperative.

4.7.2. Secondary Crash Net. Airfield Management will activate the Secondary Crash Net to alert key agencies on base of the issuance or cancellation of a weather watch or warning. Weather conditions associated with weather advisories are not considered a threat to life or property and are therefore not disseminated via the Secondary Crash Net. Agencies on the Secondary Crash Net are listed in attachment 8.

4.7.3. Telephone. The 3 WG Command Post will alert appropriate agencies via telephone of the issuance or cancellation of a weather watch, warning, or advisory. Agencies on the telephone notification list are listed in attachment 8.

5. Responding to Severe Weather Events:

5.1. General. This section implements procedures directed by AFI 10-229, *Responding to Severe Weather Events*. Significant changes to previous weather support provided to 3 WG include establishment of the severe weather actions team (SWAT), and requirements for annual SWAT meetings and periodic exercises of the weather watch, warning, and advisory system. OPREP-3 reporting procedures for severe weather are also clarified.

5.2. Severe Weather Response Working Group. The 3rd Wing Commander will chair severe weather response working group (SWRWG) meetings on an annual basis, or more frequently as appropriate. The SWRWG meetings will address Elmendorf's severe weather preparedness, capabilities, requirements, and procedures. The SWRWG will be composed of all base agencies with severe weather notification requirements, those responsible for developing protective action plans, and those responsible for forecasting or disseminating the information.

5.2.1. The SWRWG will be composed of representatives of those units listed in attachment 9.

5.2.2. The SWRWG meetings will address the following issues:

5.2.2.1. Identification of user requirements. This will be the driving force for establishing severe weather notification requirements, taking into account present day observing and forecasting capabilities. Critical weather thresholds, desired notification lead time prior to severe weather events, and acceptable levels of false alarms will be addressed.

5.2.2.2. Dissemination procedures. The adequacy of primary and backup notification systems and procedures will be discussed, and if found inadequate, solutions will be pursued. One hundred percent accurate severe weather warnings, even if possible, are meaningless if those affected aren't notified in time to take protective action.

5.2.2.3. Protective action procedures and resources. The procedures and resources used to mitigate severe weather threats will be discussed. If procedures are insufficient to mitigate the threat, responsible agencies will work together to develop and implement solutions. If insufficient resources are available, a corrective plan will be developed. This is an excellent opportunity to apply operational risk management (ORM) principles to determine where to focus time, energy, and funds to better protect our personnel and assets.

5.2.2.4. Awareness. The severe weather awareness posture of the base populace will be discussed. Appropriate methods of educating personnel and dependents will be determined,

appropriate office of primary responsibility (OPR) will be assigned, and timelines for education and training established.

5.3. Severe Weather Exercises. At least semi-annually, 3 WG will exercise its severe weather response functions. Exercises should be tailored to upcoming seasonal weather concerns. Notification timeliness and response capabilities will be evaluated for all affected agencies. Exercises will test both primary and backup dissemination systems. Severe weather exercises will be integrated with other 3 WG exercises, such as Major Accident Response Exercises MARE), to the maximum extent possible.

5.4. OPREP-3 Reporting. When winds 50 knots or greater (including gusts), hail 3/4 inch or greater, or tornadoes occur at Elmendorf AFB, regardless of the extent of damage, OPREP-3 reporting procedures will be followed (reference. AFMAN 10-206, *Operational Reporting*, and AFI 10-229, *Responding to Severe Weather Events*.

5.4.1. When any of the above conditions occur, 3 OSS/OSW will provide the Command Post (3 WG/CP) with the following information to generate an OPREP-3 report:

5.4.1.1. The actual severe weather conditions experienced.

5.4.1.2. The forecast valid at the time of the occurrence to include any watches or warnings issued.

5.4.1.3. The operational status of meteorological equipment (for example, radar, wind sensors, and so forth) at the time of the event.

5.4.2. OPREP-3 reporting will also be considered for any weather occurrence that severely impacts 3 WG operations or readiness. Items such as work stoppages due to heavy snowfall, extremely cold equivalent chill temperatures, or flight limitations due to extremely high surface pressure off the calibration scale of aircraft altimeters, should be considered for reporting to higher headquarters even if not specifically mentioned by Air Force guidance on OPREP-3 reporting.

6. Other Environmental Support. The 3 OSS/OSW is the point of contact for other support items related to natural environmental impacts on 3 WG operations.

6.1. National Airborne Operations Center (NAOC) Support. The 3 OSS/OSW will provide weather support as documented in 3 WG OPLAN 84-90.

6.2. Toxic Corridors. The primary source of toxic corridor support to Elmendorf AFB is Bioenvironmental Engineering (3 AMDS/SGPB), which uses the AFTOX 4.1 program. The 3 OSS/ OSW will provide weather information to Bioenvironmental immediately, upon request, for the purpose of running AFTOX, and provide backup toxic corridor calculation support, if needed. The 3 OSS/OSW can calculate toxic corridors using either the manual "quick and dirty" method (AWS/TR-80/003, Revised April 1989), or the AFTOX program. The manual method is suitable for rapid calculation and for use during power outages. The AFTOX program requires a few minutes to input data, but provides a more refined calculation. The 3 OSS/OSW does not have the capability to print AFTOX output since the AFTOX software is too old to be supported by modern computers and printers.

6.3. Space Shuttle Support. The 3 OSS/OSW will provide emergency landing site (ELS) support to the Space Shuttle if ever required. Special forecasting, observing, and toxic corridor calculation support will be provided in the event of ELS activation at Elmendorf AFB.

6.4. Space Environment Support. The 3 OSS/OSW is the 3 WG focal point for space weather concerns. We are in a period of increasing solar activity, which may negatively impact various military and civilian satellites in Earth orbit, and may disrupt use of electronic communications and computing systems. The 3 OSS/OSW will engage the various space weather support agencies on behalf of 3 WG to obtain support as necessary to ensure minimal impact on 3 WG operations.

6.5. Volcanic Eruption Support. The 3 OSS/OSW is the liaison between 3 WG and the Alaska Volcano Observatory and Volcanic Ash Working Group. The 3 OSS/OSW will ensure wing leadership is immediately notified of any volcanic eruption or anticipated eruption which could affect Elmendorf AFB or the local area.

6.6. Tsunami Support. The 3 OSS/OSW is the liaison between 3 WG and the Palmer Tsunami Warning Center. The 3 OSS/OSW will ensure 3 WG leadership is immediately notified of any tsunami expected to affect Elmendorf AFB or the local area.

7. Reciprocal Support:

7.1. General. The agencies listed in this paragraph will provide services to 3 OSS/OSW as described below. These services will enable 3 OSS/OSW to provide a continued high standard of support to the 3 WG flying customers.

7.2. Command Post (3 WG/CP). The 3 WG Command Post will:

7.2.1. Alert mission-critical base agencies of issued and canceled weather watches, warnings, and advisories via telephone.

7.2.2. Place telephone calls from aircrew through to 3 OSS/OSW for weather briefing updates.

7.2.3. Notify 3 OSS/OSW of all alerts and recalls.

7.2.4. Notify 3 OSS/OSAM when the 3 WG Battle Staff is activated.

7.2.5. Notify 3 OSS/OSW when the 3 WG Disaster Control Group is activated.

7.2.6. Relay all PIREPs and AIREPs received to 3 OSS/OSW.

7.2.7. Notify 3 OSS/OSW of any LRRS, range, or MOA closures or subsequent reopenings.

7.2.8. Notify 3 OSS/OSW of any adverse weather impacts on missions to radar sites, ranges, or MOAs.

7.2.9. Prepare weather related OPREP-3 reports for the commander based on inputs from 3 OSS/OSW in accordance with AFMAN 10-206 and AFI 10-229.

7.3. Airfield Management (3 OSS/OSAM). Airfield Management will:

7.3.1. Provide surface condition/runway condition reading data to 3 OSS/OSW.

7.3.2. Notify 3 OSS/OSW of aircraft mishaps and emergencies.

7.3.3. Include appropriate weather information in the flight information publications (FLIP).

7.3.4. Alert mission-critical base agencies of issued and canceled weather warnings via the Secondary Crash Net.

7.3.5. Notify 3 OSS/OSW of all VIP (DV Code 4 and higher) arrivals.

7.3.6. Notify 3 OSS/OSW when the 3 WG Battle Staff is activated.

7.4. Air Traffic Control Tower (3 OSS/OSAT). ATC Tower personnel will:

7.4.1. Notify 3 OSS/OSW of any runway changes or of switching to another wind sensor due to outage.

7.4.2. Provide a cooperative weather watch as described in paragraph 3.4, this instruction.

7.4.3. Schedule ATC Tower personnel for cooperative weather watch certification training.

7.4.4. Provide air traffic control indoctrination training to 3 OSS/OSW personnel, upon request.

7.5. METNAV (3 CS/SCMGAM). METNAV will provide or arrange for 24-hour maintenance service for the following equipment:

7.5.1. FMQ-13 wind measuring set.

7.5.2. FMQ-8 temperature and dewpoint measuring set.

7.5.3. AN/GMQ-32 transmissometer.

7.5.4. RVR-400 runway visual range set.

7.5.5. IP-1456/GMQ-34 laser beam ceilometer.

7.5.6. ML-658 digital barometer.

7.5.7. ML-331 aneroid barometer.

7.5.8. Sling psychrometer.

7.5.9. TMQ-34 tactical observing set.

7.5.10. GMQ-33 tactical laser beam ceilometer.

7.5.11. TMQ-36 tactical wind set.

7.6. Radar Maintenance (3 CS/SCMGAA). Radar maintenance will provide or arrange for 24-hour maintenance service for the WSR-88D Next Generation Radar (NEXRAD).

7.7. Radio Maintenance (3 CS/SCMGAR). Radio maintenance will provide or arrange for 24-hour maintenance service for the PMSV radio.

7.8. The 3rd Wing Flying Squadrons. The 3 WG aircrews will relay PIREPs to 3 OSS/OSW upon encountering any operationally significant weather in flight over Alaska. PIREPs may be communicated via the PMSV radio, ATC Tower, 3 WG Command Post, or Global Airways.

7.9. The 3rd CES Fire Station #1 (11415 Fighter Drive). Fire Station #1 will provide an alternate observing site facility in its control room. Telephone access and a local area network feed are required for this support. Additionally, the Elmendorf AFB Duty Weather Observer from 3 OSS/OSW will need frequent access to the flightline in order to perform observing duties. The 3 OSS/OSW will make every effort to minimize its footprint and impact on the Fire Station, because whatever causes a weather station evacuation would very likely increase the activity level in the control room.

7.10. The 3rd Wing Plans and Inspections (3 WG/XP). Will plan and conduct semi-annual exercises of 3 WG severe weather response capabilities.

DOUGLAS M. FRASER, Colonel, USAF
Commander

Attachment 1

TERMS EXPLAINED

Terms

ABV--Above.

AC--Altocumulus; mid-level cumuliform clouds indicating atmospheric instability.

ACSL--Altocumulus Standing Lenticularis; clouds that have the appearance of lenses or almonds. The outlines are often very sharp as a result of airflow over the mountains or due to waves in the airflow down-wind from a mountain barrier. Very often associated with turbulence.

ACFT--Aircraft.

AER--Approach End of Runway.

AFWA--Air Force Weather Agency, located at Offutt AFB, NE.

AFWIN--Air Force Weather Information Network.

AGL--Above Ground Level.

AIREP--Air Report; in-flight report which advises weather units of hazardous weather.

ALG--Along.

ALQDS--All Quadrants.

ALTN--Alternate (airfield).

Altocumulus--Mid-level cumuliform clouds indicating atmospheric instability.

Altostratus--Mid-level layer clouds.

ALSTG--Altimeter Setting; the setting at which the aircraft altimeter should be set to reflect the current barometric pressure.

AMD--Amendment; a reissuance of the TAF, not at the standard issue time, because the forecaster's weather prognosis has changed.

AOS--Alternate Observing Site.

AR--Air Refueling.

AS--Altostratus; mid-level layer clouds.

ATC--Air Traffic Control.

AURBO--Aurora Borealis; light display in the night sky at northern latitudes caused by magnetic disturbances in the upper atmosphere.

BC--Patches (describing fog).

BECMG--Becoming.

BKN--Broken (describing clouds); sky coverage 5/8 to 7/8.

BLO--Below.

BLSN--Blowing Snow; snow blowing from drifts or the ground, reducing visibility.

BMCT--Beginning Morning Civil Twilight; the time when the sun rises to 6 degrees below the horizon.

BMNT--Beginning Morning Nautical Twilight; the time when the sun rises to 12 degrees below the horizon.

BR--Mist (abbreviation of French word “Brume”); restricts visibility to no less than 1000 meters (5/8 sm).

BWS--Base Weather Station.

BWW--Basic Weather Watch.

C--Celsius.

CA--Cloud-to-Air (lightning strike).

CAT--Clear Air Turbulence.

CB--Cumulonimbus (cloud); cumuliform cloud with great vertical structure and extent, indicating a thunderstorm.

CBMAM--Cumulonimbus Mammatus (cloud); cumulonimbus cloud with large, round protuberances on the underside, indicating severe turbulence on underside of cirrus anvil.

CC--Cloud-to-Cloud (lightning strike).

CI--Cirrus; high, thin, often wispy clouds composed of ice crystals.

CIG--Ceiling; more than 4/8 sky coverage of clouds.

CIG RGD--Ceiling Ragged; ceiling cannot be defined at a uniform altitude.

Cirrus--High, thin, often wispy clouds composed of ice crystals.

CG--Cloud-to-Ground (lightning strike).

CLR--Clear; free of clouds.

COR--Correction; observation or forecast which was retransmitted because of an error.

Crosswind--Wind component perpendicular to the runway.

CU--Cumulus; low, billowing, cumuliform clouds formed by rising air.

Cumuliform--In the form of a cumulus cloud; caused by rising air due to atmospheric instability.

Cumulonimbus--Cumuliform cloud with great vertical structure and extent, indicating a thunderstorm.

Cumulus--Low, billowing, cumuliform clouds formed by rising air.

CWC--Combat Weather Cell; a small cell of combat weather flight personnel providing dedicated weather support in flying squadron operations areas.

CWF--Combat Weather Flight; a combat-ready flight dedicated to providing weather support to customers in a larger unit.

CWT--Combat Weather Team; a small team of weather personnel who provide specialized support to a fighting unit.

CWW--Continuous Weather Watch; the assistance of non-weather personnel in evaluating weather conditions.

DER--Departure End of Runway

DMSP--Defense Meteorological Satellite Program; generally refers to any of the military polar orbiting weather satellites.

DR--Drifting.

DRSN--Drifting Snow; snow which moves at no more than 6 feet above the surface, reducing visibility.

DSNT--Distant.

DU--Dust.

DURC--During Climb.

DURD--During Descent.

DZ--Drizzle.

E--East.

ECT--Equivalent Chill Temperature; apparent temperature with wind chill taken into account.

EECT--Ending Evening Civil Twilight; the time when the sun sets to 6 degrees below the horizon.

EENT--Ending Evening Nautical Twilight; the time when the sun sets to 12 degrees below the horizon.

ENE--East-northeast.

ESE--East-southeast.

ESTMD--Estimated (measurement).

EXTRM--Extreme.

F--Fahrenheit.

FC--Funnel Cloud; a column of rotating winds that *does not* make contact with the earth's surface.

+FC--Tornado; a column of violently rotating winds protruding from the base of a large and intense thunderstorm and in contact with the earth's surface.

FCST--Forecast.

FEW--Few; any clouds present to 2/8 sky coverage when describing clouds.

FG--Fog; restricts visibility to less than 1000 meters (5/8 sm).

FL--Flight Level.

FLIP--Flight Information Publication.

FM--From; when used in a TAF, indicates rapid forecast weather change.

FMH--Federal Meteorological Handbook.

FRQ--Frequent.

Freezing Precipitation--Liquid precipitation that freezes upon contact with a surface.

Frozen Precipitation--Precipitation that reaches the surface already frozen.

FT--Feet.

FU--Smoke.

FZ--Freezing.

FZDZ--Freezing Drizzle.

FZRA--Freezing Rain.

G--Gust.

GOES--Geostationary Operational Environmental Satellite.

GR--Graupel or Hail; larger than 5 mm in diameter.

GS--Hail or Snow Pellets; smaller than 5 mm in diameter.

HZ--Haze.

IC--In-cloud (lightning strike) or Ice Crystals.

ICAO--International Civil Aviation Organization.

ICG--Icing; ice which accumulates on an aircraft surface.

IFR--Instrumental Flight Rules; ceiling less than 1,000 feet and/or visibility less than 1 sm.

ILL--Illumination (of the moon).

IR--Ice on Runway.

ISOLD--Isolated.

KT--Knot; nautical mile per hour, equaling approximately 1.11 statute miles per hour.

KTS--Knots; plural of "knot."

L--Local (time).

LGT--Light.

LLWS--Low-Level Wind Shear; drastic change in wind speed or direction with height near the surface.

LOCAL--Local observation; an observation only disseminated to base agencies, but not longline to other bases.

LOCAL Dissemination--Observation or forecast disseminated to base agencies viewed over the Local Weather Dissemination System (LWDS).

Longline Dissemination--Observation or forecast disseminated globally for viewing outside local dissemination system.

LRRS--Long-range Radar Site.

LSR--Loose Snow on Runway.

LTG--Lightning (IC, in cloud; CC, cloud to cloud; CG, cloud to ground; CA, cloud to air).

MDT--Moderate.

METAR--Hourly surface weather observation.

METCON--Meteorological Conference; discussion among forecasters of atmospheric indicators.

METNAV--Meteorological and Navigational.

METWATCH--Meteorological Watch; the process of monitoring and evaluating the observed and forecasted weather conditions for a given area of responsibility.

MI--Shallow (describing fog).

MOA--Military Operating Area.

MOV--Moving.

MR--Moon Rise.

MS--Moon Set.

MSL--Mean Sea Level.

MTNS--Mountains.

MVFR--Marginal Visual Flight Rules; ceiling 1,000 feet or greater but less than 3,000 feet and/ or visibility 1 sm or greater but less than 3 sm.

MXD--Mixed (describing icing).

N--North.

NE--Northeast.

NNE--North-northeast.

NNW--North-northwest.

NOAA--National Oceanographic and Atmospheric Administration.

NM--Nautical Mile; approximately 1.11 times a statute mile.

NTFS--New Tactical Forecast System.

NWS--National Weather Service; a branch of NOAA.

OBS--Observation.

OCNL--Occasional.

OMTNS--Over Mountains.

OVC--Overcast (describing clouds); 8/8 sky coverage.

OHD--Overhead.

OVR--Over.

PA--Pressure Altitude; the altitude above or below the level at which the altimeter setting would equal 29.92 inches of mercury, standard atmospheric pressure.

PAED--ICAO identifier for Elmendorf AFB.

PL--Ice Pellets or Sleet.

PIREP--Pilot Report; weather observations from airborne or recently-landed aircrew of in-flight conditions.

PMSV--Pilot-to-Metro Service.

PRESFR--Pressure Falling Rapidly.

PRESRR--Pressure Rising Rapidly.

PROG--Prognosis.

PY--Spray.

QNH--Altimeter Setting; the setting at which the aircraft altimeter should be set to reflect the current barometric pressure.

RA--Rain.

RCR--Runway Condition Reading.

RCRNR--Runway Condition Reading Not Reported.

RMK--Remark.

RS--Record Special (observation); an observation which meets special observation criteria but is taken at the regular hourly time.

RTD--Routine Delay.

RTE--Route.

RVR--Runway Visual Range; visual range measured on an airfield by a piece of equipment that transmits a beam of light to a receiver, then measures the proportion of the beam that was not intercepted by visibility obstructions.

RVRNO--Runway Visual Range Not Available; RVR instruments inoperative.

S--South.

SA--Record (observation).

SC--Stratocumulus; long, low, rolling cumuliform clouds, often occurring behind a cold front.

SCT--Scattered; 3/8 to 4/8 sky coverage when describing clouds.

SE--Southeast.

SEV--Severe.

SH--Shower; intermittent precipitation of variable intensity, originating from a cumuliform cloud.

SHRA--Rain Shower.

SHSN--Snow Shower.

SKC--Sky Clear.

SLP--Sea Level Pressure; barometric pressure adjusted for altitude as if a station's elevation were lowered to sea level.

SLR--Slush on Runway.

SM--Statute Miles.

SN--Snow.

SP--Special (observation).

SPECI--Special (observation).

SR--Sunrise.

SS--Sunset.

SSE--South-southeast.

SSW--South-southwest.

ST--Stratus; layer-type low clouds.

STNRY--Stationary.

Stratocumulus--Long, low, rolling cumuliform clouds, often occurring behind a cold front.

Stratus--Layer-type low clouds.

SW--Southwest.

TAF--Terminal Aerodrome Forecast; the official forecast for an airfield, usually issued for the following 24 hours.

TCU--Towering Cumulus; cumulus cloud with great vertical extent, but less vertically extensive than a cumulonimbus.

TEMPO--Temporary (used in a TAF, describing intermittent conditions).

TS--Thunderstorm.

+TS--Severe Thunderstorm; wind gusts at least 50 kts and/or hail at least æ inch in diameter.

TSRA--Thunderstorm with Rain.

TURB--Turbulence; atmospheric waves or shear which cause difficulty in controlling an aircraft.

TURBC--Turbulence; atmospheric waves or shear which cause difficulty in controlling an aircraft.

UNKN--Unknown.

UTC--Coordinated Universal Time; universal time standard around the globe, equivalent to local time at Greenwich, England (same as Zulu time).

VC--Vicinity.

VCSH--Showers Vicinity.

VFR--Visual Flight Rules; ceiling at least 3,000 feet and visibility at least 3 sm.

VIRGA--Precipitation which does not reach the ground.

VRB--Variable.

VIS--Visibility; distance one can see around at least half the aerodrome.

VSBY--Visibility; distance one can see around at least half the aerodrome.

VV--Vertical Visibility.

W--West.

WNW--West-northwest.

WSW--West-southwest.

WA--Weather Advisory; a special notice issued when a specific weather condition will be or is currently affecting Elmendorf AFB or the surrounding area within 5 nm.

WND--Wind.

WR--Wet Runway.

WSHFT--Wind Shift.

WSU--Weather Support Unit; unit which provides tailored weather support to a specific mission.

WSW--West-southwest.

WW--Weather Warning; an urgent notice issued when a specific severe weather condition will occur shortly at Elmendorf AFB or the surrounding area within 5 nm; or, Weather Watch; a special notice issued to customers to alert them that conditions *are favorable* for the formation of hazardous weather in the local area.

WX--Weather.

XWND--Crosswind; wind component perpendicular to the runway.

Z--Zulu (time); indicates a universal time around the globe, equivalent to local time at Greenwich, England (same as UTC).

- --Light rate of fall or intensity.

+ --Heavy rate of fall or intensity.

Attachment 2

WEATHER DISSEMINATION FORMATS

A2.1. Observations. The following are examples of weather observations disseminated locally and longline, followed by an explanation of the code (in order of appearance):

A2.1.1. Local:

PAED METAR 1155Z COR 03006KT 15 -RA FEW003 SCT015 BKN060 OVC110 11/09 ALSTG 30.06 RMK LOW ST DSNT N-E-S ALG MTNS PA +85 55/WTH COR 1213

A2.1.1.1. PAED --ICAO identifier for Elmendorf AFB; identifies location where observation was taken.

A2.1.1.2. METAR --Indicates observation was taken using international METAR code.

A2.1.1.3. 1155Z --Time of observation in Zulu (UTC).

A2.1.1.4. COR --Indicates observation was corrected.

A2.1.1.5. 03006KT --Surface wind direction in magnetic degrees (030 degrees) and speed in knots (6 knots).

A2.1.1.6. 15 --Prevailing visibility in statute miles.

A2.1.1.7. -RA --Significant weather occurring at time of observation (light rain).

A2.1.1.8. FEW003 SCT015 BKN060 OVC110 --Sky coverage and altitude of clouds in hundreds of feet AGL (few at 300 feet AGL, scattered at 1,500 feet AGL, broken at 6,000 feet AGL, overcast at 11,000 feet AGL).

A2.1.1.9. 11/09 --Temperature/dewpoint in degrees Celsius (temperature 11C, dewpoint 9C).

A2.1.1.10. ALSTG 30.06 --Altimeter setting in inches of mercury.

A2.1.1.11. RMK LOW ST DSNT N-E-S ALG MTNS PA +85 --Remarks (low stratus distant north through east through south along mountains, pressure altitude +85 feet).

A2.1.1.12. 55/WTH --Time of dissemination in minutes after the hour/initials of observer (time 0055Z, initials WTH).

A2.1.1.13. COR 1213 --Time of correction in Zulu (UTC) (1213Z).

A2.1.2. Longline:

PAED 231155 COR 05006KT 15SM -RA FEW003 SCT015 BKN060 OVC110 11/09 A3006 RMK SLP180 LOW ST DSNT N-E-S ALG MTNS 60005 70028 8/57/ 9/44/ 58020 WR// COR 1213

A2.1.2.1. PAED --ICAO identifier for Elmendorf AFB; identifies location where observation was taken.

A2.1.2.2. 231155 --Date and time of observation in Zulu (UTC) (date 23, time 1155Z).

A2.1.2.3. COR --Indicates observation was corrected.

A2.1.2.4. 05006KT --Surface wind direction in true degrees (050 degrees) and speed in knots (6 knots).

A2.1.2.5. 15SM --Prevailing visibility in statute miles.

A2.1.2.6. -RA --Significant weather occurring at time of observation (light rain).

A2.1.2.7. FEW003 SCT015 BKN060 OVC110 --Sky coverage and altitude of clouds in hundreds of feet AGL (few at 300 feet AGL, scattered at 1,500 feet AGL, broken at 6,000 feet AGL, overcast at 11,000 feet AGL).

A2.1.2.8. 11/09 --Temperature/dewpoint in degrees Celsius (temperature 11C, dewpoint 9C).

A2.1.2.9. A3006 --Altimeter setting in inches of mercury (30.06 inches).

A2.1.2.10. RMK SLP180 LOW ST DSNT N-E-S ALG MTNS --Remarks (sea level pressure 1018.0 millibars, low stratus distant north through east through south along mountains).

A2.1.2.11. 60005 --3-hour precipitation total group (**0005** indicates precipitation total in hundredths of inches, or 0.05 inches).

A2.1.2.12. 70028 --24-hour precipitation total group (**0028** indicates precipitation total in hundredths of inches, or 0.28 inches).

A2.1.2.13. 8/57/ --Cloud type group (**5** indicates low cloud type 5, stratocumulus; **7** indicates mid-level cloud type 7, altocumulus; / indicates high cloud type, invisible because of overcast at mid-level).

A2.1.2.14. 9/44/ --Cloud coverage group (the first **4** indicates 4/8 coverage of low clouds; the second **4** indicates 4/8 coverage of mid-level clouds).

A2.1.2.15. 58020 --3-hour pressure change group (**8** indicates pressure tendency, steady or increasing, then decreasing; **020** indicates 3-hour pressure change in tenths of hectopascals, or a decrease of 2.0 hectopascals).

A2.1.2.16. WR// --Runway condition and braking action (in this case, wet runway, braking action not reported).

A2.1.2.17. COR 1213 --Time of correction in Zulu (UTC) (1213Z).

A2.2. Terminal Aerodrome Forecasts (TAF). The following are examples of TAFs disseminated locally and longline, followed by an explanation of the code (in order of appearance): **NOTE: A particular type of code will be described only once, despite appearing repeatedly in the TAF; for example, encoded wind speed and direction appears 6 times, but only the first wind group will be decoded, the rest following the same pattern.**

A2.2.1. Local:

PAED FCST AMD COR 21-20 16005G15KT 7 -SHRA SCT050 BKN070 OVC095 LGT RIME ICG 070-100 LGT TURB 010-060 ALSTG29.64INS 340V330

TEMPO 23-03 14015G25KT LGT-MDT CAT SFC-060

BECMG 02-03 32012KT 7 VCSHRA FEW005 BKN035 BKN050 BKN080 LGT RIME ICG 060-100 LGT TURB 010-060 ALSTG29.60INS

BECMG 04-05 22009KT 7 VCSHRA SCT012 BKN025 OVC050 LGT RIME ICG 040-100 ALSTG29.67INS

BECMG 08-09 30009KT 7 NSW FEW012 SCT025 BKN050 BKN090 OVC200 LGT RIME ICG 050-100 ALSTG29.70INS

BECMG 16-17 01009KT 7 VCSHRA SCT030 SCT060 BKN090 BKN200 LGT MXD ICG 090-100 LGT TURB 010-100 ALSTG29.75INS T13/00Z T09/16Z AMD 2115 COR 2126

A2.2.1.1. PAED --ICAO identifier for Elmendorf AFB; identifies location for which forecast is valid.

A2.2.1.2. FCST --Identifies product as a forecast.

A2.2.1.3. AMD --Indicates forecast was amended.

A2.2.1.4. COR --Indicates a correction was made to the forecast.

A2.2.1.5. 21-20 --Time in Zulu (UTC) hours for which the forecast is valid (2100Z until 2000Z the following day).

A2.2.1.6. 16005G15KT --Forecast surface wind direction in magnetic degrees (160 degrees) and speed in knots (5 knots, gusting to 15 knots) for the initial valid period of the TAF.

A2.2.1.7. 7 --Forecast prevailing visibility in statute miles (cannot be forecast more than 7 sm; thus, **7** indicates 7 sm or greater) for the initial valid period of the TAF.

A2.2.1.8. -SHRA --Forecast significant weather for the initial valid period of the TAF (light rain showers).

A2.2.1.9. SCT050 BKN070 OVC095 --Forecast sky coverage and altitude of clouds in hundreds of feet AGL for the initial valid period of the TAF (scattered at 5,000 feet AGL, broken at 7,000 feet AGL, overcast at 9,500 feet AGL).

A2.2.1.10. LGT RIME ICG 070-100 --Forecast icing for the initial valid period of the TAF, with layers in hundreds of feet AGL (light rime icing from 7,000 feet AGL to 10,000 feet AGL).

A2.2.1.11. LGT TURB 010-060 --Forecast turbulence for the initial valid period of the TAF, with layers in hundreds of feet AGL (light turbulence from 1,000 feet AGL to 6,000 feet AGL).

A2.2.1.12. ALSTG29.64INS --Forecast minimum altimeter setting in inches of mercury for the initial valid period of the TAF (29.64 inches).

A2.2.1.13. 340V330 --Indicates forecast wind direction variability in magnetic degrees, always read clockwise (wind direction varying from 340 degrees to 330 degrees).

A2.2.1.14. TEMPO 23-03 --Change group indicating the succeeding encoded weather is forecast to occur in frequent or infrequent temporary fluctuations between the indicated times in Zulu (UTC) hours (2300Z until 0300Z); none will last for more than 1 hour at a time, and in the aggregate will not cover more than half the period.

A2.2.1.15. LGT-MDT CAT SFC-060 --Forecast clear air turbulence valid for the change group, with layers in hundreds of feet AGL (light to moderate clear air turbulence from surface to 6,000 feet AGL).

A2.2.1.16. BECMG 02-03 --Change group indicating conditions are forecast to change at a regular or irregular rate to the succeeding encoded weather between the indicated times in Zulu (UTC) hours (0200Z to 0300Z; conditions described by the succeeding code will predominate by 0300Z).

A2.2.1.17. VCSHRA --Forecast significant weather valid for the change group (rain showers vicinity)

A2.2.1.18. NSW -- no significant weather forecast for the change group; given only when the previous change group forecasts significant weather.

A2.2.1.19. LGT MXD ICG 090-100 --Forecast icing valid for the change group, with layers in hundreds of feet AGL (light mixed icing from 9,000 feet AGL to 10,000 feet AGL).

A2.2.1.20. T13/00Z --Maximum temperature forecast in degrees Celsius/time of occurrence in Zulu (UTC) hours (maximum temperature 13C occurring at 0000Z).

A2.2.1.21. T09/16Z --Minimum temperature forecast in degrees Celsius/time of occurrence in Zulu (UTC) hours (maximum temperature 09C occurring at 1600Z).

A2.2.1.22. AMD 2115 --Time in Zulu (UTC) TAF was amended (2115Z).

A2.2.1.23. COR 2126 --Time in Zulu (UTC) TAF was corrected (2126Z).

A2.2.2. Longline:

PAED TAF AMD COR 232120 18005G15KT 9999 -SHRA SCT050 BKN070 OVC090 620703 510105 QNH2964INS 360V350

TEMPO 2303 16015G25KT 8000 -SHRA 520006

BECMG 0203 34012KT 9999 VCSHRA FEW005 BKN035 BKN050 BKN080 620604 510105 QNH2960INS

BECMG 0405 24009KT VCSHRA SCT012 BKN025 OVC050 620406 QNH2967INS

BECMG 0809 32009KT 9999 NSW FEW012 SCT025 BKN050 BKN090 OVC200 620505 QNH2970INS

BECMG 1617 03009KT 9999 VCSHRA SCT030 SCT060 BKN090 BKN200 610901 510109 QNH2975INS T13/00Z T09/16Z AMD 2115 COR 2126

A2.2.2.1. PAED --ICAO identifier for Elmendorf AFB; identifies location for which forecast is valid.

A2.2.2.2. TAF --Identifies product as a terminal aerodrome forecast.

A2.2.2.3. AMD --Indicates forecast was amended.

A2.2.2.4. COR --Indicates a correction was made to the forecast.

A2.2.2.5. 232120 --Date and time in Zulu (UTC) hours for which the forecast is valid (date 23, valid time 2100Z until 2000Z the following day).

A2.2.2.6. 18005G15KT --Forecast surface wind direction in true degrees (180 degrees) and speed in knots (5 knots, gusting to 15 knots) for the initial valid period of the TAF.

A2.2.2.7. 9999 --Forecast prevailing visibility in meters (9999 indicates unrestricted visibility) for the initial valid period of the TAF.

A2.2.2.8. -SHRA --Forecast significant weather for the initial valid period of the TAF (light rain showers).

A2.2.2.9. SCT050 BKN070 OVC095 --Forecast sky coverage and altitude of clouds in hundreds of feet AGL for the initial valid period of the TAF (scattered at 5,000 feet AGL, broken at 7,000 feet AGL, overcast at 9,500 feet AGL).

A2.2.2.10. 620703 --Icing group, indicated by the first number (**6**), forecasting light rime icing, indicated by the second number (**2**) (see listing below.), having a base of 7,000 feet AGL, indicated by the third, fourth, and fifth numbers (**070**, in hundreds of feet AGL), and a layer thickness of 3,000 feet, indicated by the sixth number (**3**, in thousands of feet).

Code Figure	Type of Icing
0	No Icing
1	Light Mixed Icing
2	Light Rime Icing
3	Light Clear Icing
4	Moderate Mixed Icing
5	Moderate Rime Icing
6	Moderate Clear Icing
7	Severe Mixed Icing
8	Severe Rime Icing
9	Severe Clear Icing

A2.2.2.11. 510105 --Turbulence group, indicated by the first number (**5**), forecasting light turbulence, indicated by the second number (**1**) (see listing below), having a base of 1,000 feet AGL, indicated by the third, fourth, and fifth numbers (**010**, in hundreds of feet AGL), and a layer thickness of 5,000 feet, indicated by the sixth number (**5**, in thousands of feet).

Code Figure	Type of Turbulence
0	None
1	Light Turbulence
2	Moderate Turbulence in Clear Air, Occasional
3	Moderate Turbulence in Clear Air, Frequent
4	Moderate Turbulence in Cloud, Occasional
5	Moderate Turbulence in Cloud, Frequent
6	Severe Turbulence in Clear Air, Occasional
7	Severe Turbulence in Clear Air, Frequent
8	Severe Turbulence in Cloud, Occasional
9	Severe Turbulence in Cloud, Frequent
X	Extreme Turbulence

A2.2.2.12. QNH2964INS --Forecast minimum altimeter setting in inches of mercury for the initial valid period of the TAF (29.64 inches).

A2.2.2.13. 360V350 --Indicates forecast wind direction variance in true degrees, always read clockwise (wind direction varying from 360 degrees to 350 degrees).

A2.2.2.14. TEMPO 2303 --Change group indicating the succeeding encoded weather is forecast to occur in frequent or infrequent temporary fluctuations between the indicated times in Zulu (UTC) hours (2300Z until 0300Z); none will last for more than 1 hour at a time, and in the aggregate will not cover more than half the period.

A2.2.2.15. 8000 --Forecast prevailing visibility in meters (8000 meters is equivalent to 5 sm) valid for the change group.

A2.2.2.16. BECMG 0203 --Change group indicating conditions are forecast to change at a regular or irregular rate to the succeeding encoded weather between the indicated times in Zulu (UTC) hours (0200Z to 0300Z; conditions described by the succeeding code will predominate by 0300Z).

A2.2.2.17. VCSHRA --Forecast significant weather valid for the change group (rain showers vicinity).

A2.2.2.18. NSW --No significant weather forecast for the change group; given only when the previous change group forecasts significant weather.

A2.2.2.19. T13/00Z --Maximum temperature forecast in degrees Celsius/time of occurrence in Zulu (UTC) hours (maximum temperature 13C occurring at 0000Z).

A2.2.2.20. T09/16Z --Minimum temperature forecast in degrees Celsius/time of occurrence in Zulu (UTC) hours (maximum temperature 09C occurring at 1600Z).

A2.2.2.21. AMD 2115 --Time in Zulu (UTC) TAF was amended (2115Z).

A2.2.2.22. COR 2126 --Time in Zulu (UTC) TAF was corrected (2126Z).

Attachment 3

TERMINAL AERODROME FORECAST CRITERIA

A3.1. Specification Criteria. The terminal aerodrome forecast (TAF) will specify the time of occurrence and duration when one or more of the following are expected to occur:

A3.1.1. Ceiling increases to, exceeds, or decreases to less than any of the following values: 3,500, 3,000, 1,500, 1,000, 700, 500, 300, or 200 feet.

A3.1.2. Visibility increases to, exceeds, or decreases to less than any of the following values: 5, 3, 2, 1 1/2, 1, 1/2 statute miles (8,000, 4,800, 3,200, 2,400, 1,600, or 800 meters respectively).

A3.1.3. A change in wind speed of 10 knots or more, or a change in wind direction of 30 degrees when the predominant wind speed (including gusts) is expected to be over 15 knots.

A3.1.4. Precipitation.

A3.1.5. Thunderstorms.

A3.1.6. Icing or turbulence (for CAT II aircraft), not associated with thunderstorms, from the surface to 10,000 feet above mean sea level (MSL).

A3.1.7. Non-convective low-level wind shear.

A3.1.8. Any locally established weather warning or weather advisory criteria that can be specified.

A3.2. Amendment Criteria. The TAF will be amended whenever one of the following conditions occurs or is expected to occur for more than 30 minutes, and is not correctly forecast by the next whole hour:

A3.2.1. Ceiling increases to, exceeds, or decreases to less than any of the following values: 3,000, 1,000, 300, or 200 feet.

A3.2.2. Visibility increases to, exceeds, or decreases to less than any of the following values: 3, 2, 1, 1/2 statute miles (4,800, 3,200, 1,600, or 800 meters respectively).

A3.2.3. The difference between the predominant wind speed (or gust) and the forecast wind speed (or gust) is 10 knots or more, or the direction changes by more than 30 degrees when the predominant wind speed (including gusts) is expected to be over 15 knots.

A3.2.4. Freezing precipitation begins or ends.

A3.2.5. Icing or turbulence from surface to 10,000 feet above MSL, not associated with thunderstorms, which first meets, exceeds, or decreases to below moderate or greater thresholds (for CAT II aircraft).

A3.2.6. Non-convective low-level wind shear begins or ends.

A3.2.7. The beginning or ending of precipitation which can be specified in the TAF that causes a weather warning or weather advisory to be issued, canceled, or amended.

A3.2.8. Stratus or fog move into or out of the airfield vicinity.

A3.2.9. A weather warning or weather advisory is issued, canceled, or amended and is not correctly reflected in the current TAF.

Attachment 4

OBSERVATION CRITERIA

A4.1. Special Observation Criteria. A special observation will be taken when one or more of the following occur:

A4.1.1. Ceiling height or visibility distance decreases to less than, or increases to equal or exceed, any of the following values (see list below):

Special Observation Criteria	Criteria Directed By	Additional Operational Impact/Comments
3,000 Ft Ceiling	AFMAN 15-111, Para 2.7.1.1.	F-15 alternate required if cig< 3,000 feet
1,500 Ft Ceiling	AFMAN 15-111 Para 2.7.1.2	Pilot WX Cat E Takeoff/Landing Min
1,000 Ft Ceiling	AFMAN 15-111 Para 2.7.1.3	None
700 Ft Ceiling	AFMAN 15-111 Para 2.7.1.4 and DoD FLIP Vol 1	Pilot WX Cat D Takeoff/Landing Min
600 Ft Ceiling	AFMAN 15-111 Para 2.7.1.7 and DoD FLIP Vol 1	GPS Approach
500 Ft Ceiling	AFMAN 15-111 Para 2.7.1.5 and DoD FLIP Vol 1	Pilot WX Cat C Takeoff/Landing Min
400 Ft Ceiling	AFMAN 15-111 Para 2.7.1.7 and DoD FLIP Vol 1	None
300 Ft Ceiling	AFMAN 15-111 Para 2.7.1.6	Pilot WX Cat B Takeoff/Landing Min

200 Ft Ceiling	AFMAN 15-111 Para 2.7.1.7 and DoD FLIP Vol 1	None
100 Ft Ceiling	AFMAN 15-111 Para 2.7.1.7 and DoD FLIP Vol 1	Pilot WX Cat A Takeoff/Landing Min
3 Statute Miles Visibility	AFMAN 15-111 Para 2.7.3.1	Pilot WX Cat E Takeoff/Landing Min; F-15 Alternate required if vis < 3 sm
2 1/4 Statute Miles Visibility	AFMAN 15-111 Para 2.7.3.4 and DoD FLIP Vol 1	None
2 Statute Miles Visibility	AFMAN 15-111 Para 2.7.3.2 and DoD FLIP Vol 1	Pilot WX Cat D Takeoff/Landing Min
1 3/4 Statute Miles Visibility	AFMAN 15-111 Para 2.7.3.4 and DoD FLIP Vol 1	None
1 1/2 Statute Miles Visibility	AFMAN 15-111 Para 2.7.3.4 and DoD FLIP Vol 1	Pilot WX Cat C Takeoff/Landing Min
1 1/4 Statute Miles Visibility	AFMAN 15-111 Para 2.7.3.4 and DoD FLIP Vol 1	None
1 Statute Mile Visibility	AFMAN 15-111 Para 2.7.3.3	Pilot WX Cat B Takeoff/Landing Min
3/4 Statute Mile Visibility	AFMAN 15-111 Para 2.7.3.4 and DoD FLIP Vol 1	None

1/2 Statute Mile Visibility	AFMAN 15-111 Para 2.7.3.4 and DoD FLIP Vol 1	None
1/4 Statute Mile Visibility	AFMAN 15-111 Para 2.7.3.4 and DoD FLIP Vol 1	Pilot WX Cat A Takeoff/Landing Min

A4.1.2. A layer of clouds or obscuring phenomena aloft is present below 700 feet and no layer was reported below 700 feet in the preceding METAR or SPECI observation (reference: AFMAN 15-111, paragraph 2.7.2. and DoD FLIP Vol 1).

A4.1.3. Funnel cloud or tornado begins, ends, or moves out of sight (reference: AFMAN 15-111, paragraph 2.7.4).

A4.1.4. Thunderstorm begins or ends (thunder not having occurred for 15 minutes) (reference:. AFMAN 15-111, paragraph 2.7.5).

A4.1.5. Precipitation begins or ends (reference: AFMAN 15-111, paragraph 2.7.6.4).

A4.1.6. Hail begins or ends (reference: AFMAN 15-111, paragraph 2.7.6.1).

A4.1.7. Freezing precipitation or ice pellets begin, end, or change intensity (reference: AFMAN 15-111, paragraphs 2.7.6.2. and 2.7.6.3).

A4.1.8. The average 2-minute wind speed suddenly increases by at least 16 knots to exceed 22 knots for at least 1 minute, or the wind direction changes by 45 degrees or more within 15 minutes with sustained winds (or gusts) of 10 knots or more throughout the wind shift (reference: AFMAN 15-111, paragraphs 2.7.7. and 2.7.8).

A4.1.9. Volcanic ash is observed (reference: AFMAN 15-111, paragraph 2.7.12.2).

A4.1.10. A new runway condition (other than dry) is reported (reference: AFMAN 15-111, paragraph 2.7.9).

A4.1.11. Tower prevailing visibility differs from weather observing site visibility by a reportable value (reference: AFMAN 15-111, paragraph 2.7.10).

A4.1.12. A real-world nuclear accident occurs (reference: AFMAN 15-111, paragraph 2.7.12.1).

A4.1.13. Any meteorological event which, in the observer's opinion, is critical to the safety of aircraft operations (reference: AFMAN 15-111, paragraph 2.7.12.3).

A4.2. Local Observation Criteria. Local observations are only disseminated locally, not longline. A local observation will be taken when one or more of the following occur:

A4.2.1. Air Force One is scheduled to arrive at or depart from Elmendorf AFB. A local observation will be taken 10 minutes before both of these events.

A4.2.2. The observer sights or is notified of an aircraft mishap.

A4.2.3. The active runway changes.

A4.2.4. Ceiling height or visibility distance decreases to less than, or increases to equal or exceed 3,500 foot ceiling or 5 statute miles visibility (DoD FLIP Vol 1 decision criteria for Standard Terminal Arrivals required by SOF)

A4.2.5. The RVR decreases to less than, or of below, increases to equal or exceed 6,000, 5,000, 4,000, 2,400, 1,800, 1,600, or 1,200 feet.

A4.2.6. ECT decreases to less than -30 Fahrenheit, -40 Fahrenheit, or -50 Fahrenheit.

A4.2.7. The observer is notified of a toxic chemical spill, actual or exercise.

A4.2.8. The altimeter setting has changed .01 inches or more since the last observation within 35 minutes.

A4.2.9. Any meteorological event occurs which, in the observer's opinion, is critical to the safety of local operations.

Attachment 5

WEATHER WATCH CRITERIA

A5.1. Weather Watches. Weather watches are provided to supported agencies to alert them of the potential for severe weather conditions of such intensity as to pose a hazard to life or property and for which they may need to take protective action. All watches have an associated warning that will be issued when severe weather conditions are imminent, and protective actions are generally taken upon issuance of the warning. The 3 OSS Top 3 will coordinate the airfield response to significant weather as appropriate and deconflict actions taken by airfield users in order to maximize mission effectiveness. See list below for weather watch criteria, desired lead time windows, governing directives and related guidance, and required protective actions for each criteria. The desired lead time windows specify both the minimum and maximum desired lead times. A certain minimum lead time is required to perform protective actions, however, issuing watches too far ahead of time can result in unnecessary false alarms--the desired lead time window thus tries to capture the best compromise between these opposing challenges.

Weather Watch Criteria/ Desired Lead Time	**Governing Directives/ Related Guidance**	**Additional Supported Agency/Protective Action Comments**
Lightning within 5 nm 1-2 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.1.; AFOSH Standards 91-66, 91-100; Local policy (formerly 3WGI 10-207)	- MOC notifies maintenance personnel via radio. - Normal operations continue but personnel will be prepared to implement lightning warning procedures without delay. - Fuel cell maintenance personnel will initiate action to ensure operations are suspended by the time the severe weather is within 5 nm.
Wind - 50 Knots or Greater 4-6 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.2.	- Review high wind warning procedures.

Hail (3/4Inch or Greater) 4-6 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.2.	- Review hail warning procedures.
Tornado 1-2 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.2.	- Review tornado warning procedures.
Freezing Precipitation 4-6 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.2.; AFI 32-1045, para 2.2.4.3.; 3WG OPLAN 32-1045	- Review freezing precipitation warning procedures. - Snow Control Center will be notified of potential degradation of runway and taxiway conditions.
Winter Storm (snowfall of 4 inches or more within 12 hours at Elmendorf AFB, Fort Richardson, or Kulis ANGB and immediate vicinity) 12-24 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.2.; AFI 32-1045, para 2.2.4.3.; 3WG OPLAN 32-1045	- Review winter storm warning procedures. - Snow Control Center will be notified of potential degradation of runway and taxiway conditions.
Blizzard (sustained 30 knot winds, and visibility reduced below 1/2 nm due to snow and blowing snow at Elmendorf AFB, Fort Richardson, or Kulis ANGB and immediate vicinity)	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.2.; AFI 32-1045, para 2.2.4.3.; 3WG OPLAN 32-1045	- Review blizzard warning procedures. - Snow Control Center will be notified of potential degradation of runway and taxiway conditions.

12-24 Hours

Attachment 6

WEATHER WARNING CRITERIA

A6.1. Weather Warnings. Weather warnings are provided to supported agencies to alert them of severe weather conditions of such intensity as to pose a hazard to life or property and for which they must take protective action. Protective actions are taken upon issuance a warning. The 3 OSS Top 3 will coordinate the airfield response to significant weather as appropriate and deconflict actions taken by airfield users in order to maximize mission effectiveness. See list below for weather warning criteria, desired lead time windows, governing directives, and required protective actions for each criteria. The desired lead time windows specify both the minimum and maximum desired lead times. A certain minimum lead time is required to perform protective actions, however, issuing watches too far ahead of time can result in unnecessary false alarms--the desired lead time window thus tries to capture the best compromise between these opposing challenges.

Weather Warning Criteria/ Desired Lead Time	**Governing Directives/ Related Guidance**	**Additional Supported Agency/Protective Action Comments**
Lightning within 5 nm When observed	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.3.8.; AFOSH Standards 91-66, 91-100; Local policy (formerly 3WGI 10-207).	- MOC will notify maintenance personnel via radio. - Production supervisors will stop all fuel, oil, and oxygen servicing. - Petroleum, oil, and lubricants (POL) will stop dispatching. - All explosive operations including weapons loading and delivery will stop. - All routine and non-essential maintenance on the open ramp will stop. - OG and LG personnel will take cover inside buildings and vehicles until the storm is outside the 5 nm limit.

		- Enclosed hangar maintenance may continue, however, nose dock aircraft maintenance will stop and personnel will remain clear due to the exposure of the aircraft tail to lightning. - 3 SVS will ensure personnel and dependents participating in outdoor activities at such places as golf course, pool, stables, child development centers, and so forth, are notified of danger. - 3 WG GIANT VOICE may be activated to warn all base personnel of lightning within 5 nm.
Winds – 50 knots or greater (including gusts); direction and maximum expected windspeed will be specified. 2-3 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.3.2.; Local policy (formerly 3WGI 10-207)	- All hangar doors will be closed. - F-15 aircraft will be hangared or moored in accordance with applicable technical data. - As many C-130 aircraft will be hangared as possible; the rest will be positioned with their noses into the wind and the nose landing gear moored. - 3 CE Readiness Flight will operate the Mobile Command Post for emergency response only.

		- 3 CE Fire Protection Flight will curtail all unnecessary vehicle movement. - 3 CE Housing Flight will cancel all housing inspections, curtail vehicle operations, and limit all outdoor activities. - WHEN WINDS EXCEED 60 KNOTS (including gusts): F-15 aircraft canopies will be closed and locked in accordance with applicable technical data. - WHEN WINDS EXCEED 65 KNOTS (including gusts), the following will be done to all E-3 aircraft left outside: lower lobe doors will be closed, SF-6 cart removed, all aerospace ground equipment (AGE) removed, aircraft fueled to maximum and oriented nose into the anticipated wind. - 3 CE Fire Chief, or designated representative, will authorize all vehicle movement.
Winds – 35 to 49 knots (including gusts); direction and maximum expected	AFMAN 15-129, para 2.4.3.2.; Local policy (formerly 3WGI 10-207)	- The owning Squadron Maintenance Officer or Superintendent must approve aircraft deicing operations.

windspeed will be specified. 1-2 Hours	- F-15 aircraft not fully fueled or have engines removed will be moored or hangared as required by applicable technical data. - Hand loading of missiles will be ceased. - Alert aircraft and aircraft requiring maintenance have priority on available hangar space. - C-130 and E-3 aircraft flaps, engine cowlings, covers, doors, and fuel loads will be configured as required by applicable technical data. - Flight line will be cleared of all support equipment not in use. - 3 CE Fire Protection Flight will house all vehicles inside, giving emergency response vehicles priority over support vehicles. - Fire Station windows and overhead doors will be closed and secured. - 3 CE Operations Flight will suspend all aerial bucket truck operations.

Hail (3/4 Inch or Greater) 2-3 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.2.	- MOC will notify maintenance personnel via radio. - All routine and non-essential maintenance on the open ramp will prepare for immediate stop. - OG and LG personnel will be ready to take cover inside buildings or vehicles. - Nose dock arcft maintenance will be prepared for immediate stop. - 3 SVS will ensure personnel and dependents participating in outdoor activities at such places as golf course, pool, stables, child development centers, and so forth, are notified of danger. - 3 WG GIANT VOICE may be activated to warn all base personnel of hail danger.
Tornado 30 Min - 1 Hour	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.5.1.2.	- Time permitting, take all actions for lightning, 50 knot winds and hail. - 3 WG GIANT VOICE may be activated to direct personnel and dependents to take shelter.
Freezing Precipitation 2-3 Hours	AFI 10-229, atch 1; AFMAN 15-129, para	- Cancel or delay takeoff during observed freezing

	2.4.3.6.; 3WI 91-201, AFI 32-1045, para 2.2.4.3.; 3WG OPLAN 32-1045	precipitation event. - Supervisor of Flying and Base Operations review current snow control requirements and prepare for prolonged reduced runway and taxiway conditions. - Snow Control Center will be notified of probable degradation of runway and taxiway conditions. - Security Police Law Enforcement Desk Sergeant will notify 3 SPTG/CC when adverse weather conditions affect safe travel to, from, or on Elmendorf; 3 SPTG/CC will in turn recommend mission essential reporting, delayed reporting, or early release to the 3 WG/CC; personnel will be notified via normal chain of command, and 3 WG/PA will contact local media.
Winter Storm (snowfall of 4 inches or more within 12 hours at Elmendorf AFB, Fort Richardson, or Kulis ANGB and immediate	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.3.5.; 3WI 91-201; AFI 32-1045, para 2.2.4.3.; 3WG OPLAN 32-1045	- Supervisor of Flying and Base Operations review current snow control requirements and prepare for prolonged reduced runway and taxiway conditions.

vicinity) 2-4 Hours		-Snow Control Center will be notified of probable degradation of runway and taxiway conditions. - Security Police Law Enforcement Desk Sergeant will notify 3 SPTG/CC when adverse weather conditions affect safe travel to, from, or on Elmendorf; 3 SPTG/CC will in turn recommend mission essential reporting, delayed reporting, or early release to the 3 WG/CC; personnel will be notified via normal chain of command, and 3 WG/PA will contact local media.
Blizzard (sustained 30 knot winds, and visibility reduced below 1/2 nm due to snow and blowing snow at Elmendorf AFB, Fort Richardson, or Kulis ANGB and immediate vicinity) 2-4 Hours	AFI 10-229, atch 1; AFMAN 15-129, para 2.4.3.7.; 3WI 91-201; AFI 32-1045, para 2.2.4.3.; 3WG OPLAN 32-1045	- Supervisor of Flying and Base Operations review current snow control requirements and prepare for prolonged reduced runway and taxiway conditions. - Snow Control Center will be notified of probable degradation of runway and taxiway conditions. - Security Police Law Enforcement Desk Sergeant will notify 3 SPTG/CC when

		adverse weather conditions affect safe travel to, from, or on Elmendorf; 3 SPTG/CC will in turn recommend mission essential reporting, delayed reporting, or early release to the 3 WG/CC; personnel will be notified via normal chain of command, and 3 WG/PA will contact local media.
Equivalent Chill Temperature -20F to -29F When observed	3WI 91-201, Local policy (formerly 3WGI 10-207)	- Squadron Maintenance Officer or Maintenance Superintendent must approve all outside activity. - Buddy system will be implemented for all personnel performing duty outside (not including personnel working inside C-130 or E-3 aircraft or inside heater-equipped vehicles). - Alert aircraft and aircraft requiring maintenance have priority for hangar space. - Security Police Law Enforcement Desk Sergeant will notify 3 SPTG/CC when adverse weather conditions affect safe travel to, from, or on Elmendorf; 3 SPTG/CC

		will in turn recommend mission essential reporting, delayed reporting, or early release to the 3 WG/CC; personnel will be notified via normal chain of command, and 3 WG/PA will contact local media.
Equivalent Chill Temperature -30F to -39F When observed	3WI 91-201, Local policy (formerly 3WGI 10-207)	- All outside activity must be approved by the squadron commander, or designated representative. - 3 OG/CC will decide whether flying will continue, and consider one-launch days. - Security Police Law Enforcement Desk Sergeant will notify 3 SPTG/CC when adverse weather conditions affect safe travel to, from, or on Elmendorf; 3 SPTG/CC will in turn recommend mission essential reporting, delayed reporting, or early release to the 3 WG/CC; personnel will be notified via normal chain of command, and 3 WG/PA will contact local media.

Equivalent Chill Temperature -40F To -49F When observed	3WI 91-201, Local policy (formerly 3WGI 10-207)	- All outside activity must be approved by group cmdrs or designated representatives. - 3 OG/CC will halt all locally scheduled flying. - 3 LG will ensure all outdoor maintenance training, outdoor aircraft maintenance qualification program courses, and outdoor field training detachment courses are canceled. - A liberal leave policy will be in effect for civilian personnel. - Base Chapel will provide standby for emergency issue of food from Elmendorf Food Pantry. - Social Actions will cancel all classes. - Essential services such as billeting, food service, Child Development Centers, and School Age Care Program, will be maintained for mission essential personnel, but other activities such as worship services will be canceled. - Security Police Law Enforcement Desk Sergeant will notify 3 SPTG/CC when adverse weather conditions

		affect safe travel to, from, or on Elmendorf; 3 SPTG/CC will in turn recommend mission essential reporting, delayed reporting, or early release to the 3 WG/CC; personnel will be notified via normal chain of command, and 3 WG/PA will contact local media.
Equivalent Chill Temperature -50F or Colder When observed	3WI 91-201, Local policy (formerly 3WGI 10-207)	- 3 OG/CC will consider everyone in group as nonessential unless specifically identified by squadron commanders. - 3 LG/CC will ensure 24-hour capability for fuels and parts ordering and delivery is maintained, and ensure no H-1 heaters are dispatched off the flightline without LG/CC approval. - 3 LG/CC will ensure all indoor training, indoor aircraft maintenance qualification program courses, and indoor field training detachment courses are canceled. - Security Police Law Enforcement Desk Sergeant will notify 3 SPTG/CC when

adverse weather conditions affect safe travel to, from, or on Elmendorf; 3 SPTG/CC will recommend mission essential reporting, delayed reporting, or early release to 3 WG/CC; personnel will be notified via chain of command; 3 WG/PA will contact local media.

Attachment 7

WEATHER ADVISORY CRITERIA

A7.1. Weather Advisories. Weather advisories are provided to supported agencies to alert them of weather conditions that could affect their operations. The 3 OSS Top 3 will coordinate the airfield response to significant weather as appropriate and deconflict actions taken by airfield users in order to maximize mission effectiveness. See listing below for weather advisory criteria, desired lead time windows, governing directives, and required protective actions for each criteria. The desired lead time windows specify both the minimum and maximum desired lead times. A certain minimum lead time is required to perform protective actions, however, issuing watches too far ahead of time can result in unnecessary false alarms--the desired lead time window thus tries to capture the best compromise between these opposing challenges.

Weather Warning Criteria/ Desired Lead Time	**Governing Directives/ Related Guidance**	**Additional Supported Agency/Protective Action Comments**
Wind 25-34 knots (including gusts); direction and maximum expected windspeed will be specified. 1-2 Hours	(Formerly 3WGI 10-207, paras 2.1.2.2. and 2.5.2.1.); Local policy	- Loose equipment will be secured and maintenance stands not in use will be lowered and removed from the flight line. - Production supervisors nose radomes are secured; the 3 OG/ CC or designated representative must approve any work with the radomes open, unless the aircraft is in a hangar. - High reach baskets will not be used for aircraft maintenance, unless directed by the Squadron Maintenance Officer or Maint.Superintendent. - 3 CE Readiness and Fire

		Protection Flights will secure loose equipment stored outside. - 3 CE Operations Flight will dispatch personnel to survey the base for potential flying debris and secure loose equipment and materials at outside job sites.
Heavy Snow (2 inches or more accumulation within 12 hours). 1-2 Hours	AFI 32-1045, para. 2.2.4.3.; 3WG OPLAN 32-1045	- Affects flightline snow control; 2 inches within 12 hours is the maximum rate of snowfall they can keep up with and maintain current runway and taxiway conditions, more than this and f lightline conditions will become degraded. - Supervisor of Flying and Base Operations review current snow control requirements and prepare for prolonged reduced runway and taxiway conditions. - Snow Control Center will be notified of probable degradation of runway and taxiway conditions.

Attachment 8

WEATHER WATCH, WARNING, AND ADVISORY NOTIFICATION

A8.1. Notification. See listing below for local agencies notified of the issuance or cancellation of weather watches, warnings, or advisories via automated meteorological information system (AMIS), secondary crash net (SCN), or telephone.

Notified Via NTFS	**Notified Via Secondary Crash Net ***	**Notified via Telephone**
3 OSS/OSW	3 WG/CC	3 WG/CC
Cope Thunder	3 SPTG/CC	3 OG/CC
3 WG MOC	3 OSS/OSW	3 SPTG/CC
3 WG Command Post	Fire Department	3 LG/CC
12 FS	Security Forces	CAC
19 FS	Security Forces	3 OSS Top 3
90 FS	3 WG Command Post	3 CS 24 Hour Desk
517 AS	EOD	JCS NAOC
962 AACS	AMCC	ITAS Subscribers (see below)
ROCC	Disaster Readiness	
AMCC	Barrier Maintenance	
Aero Club	Rescue and Recovery	

RCC	Flight Surgeon
CAC	Bioenvironmental
Cope Thunder MOC	3 WG Safety
Army C-12 Detachment	Emergency Room
Kulis ANGB	Mortuary Affairs
PAED ATC Tower	3 WG/PA
PAED GCA	
Alternate ATC Tower	
PANC RAPCON	
Airfield Management	

***Weather warning issuance/cancellation notification only.**

A8.2. Airfield Management (3 OSS/OSAM) notifies the listed agencies via SCN. Agencies will be notified of weather watch and warning issuance or cancellation only. Weather advisories are not disseminated via the SCN.

A8.3. Elmendorf Command Center (3 WG/CP) notifies the listed agencies of weather watch, warning, or advisory issuance or cancellation via telephone. 3rd Wing Maintenance Operations Center (MOC) will be notified of the issuance or cancellation of equivalent chill temperature (ECT) warnings only.

A8.4. The following agencies are the current users of the Immediate Telephone Alert System (ITAS) which is activated by 3 WG/CP during telephone notification: Base Operations, Weather Flight, 3 WG/ PA, 3 MDG/ER, 3 WG/MOC, 962 AACS, 3 CS. 3 CES Service Desk, 632 AMSS/ AMCC, 381 IS, Taxi Dispatch, Crash Recovery, Transient Alert, In-Flight Kitchen, Fuels Control, RCC, Chaplain.

Attachment 9

SEVERE WEATHER RESPONSE WORKING GROUP MEMBERS

A9.1. The following 3 WG agencies are members of the Severe Weather Response Working Group:

3 WG

3 WG/CP

3 WG/XP

3 OG

3 OSS

3 OSS/OSW

3 OSS/OSA

12 FS

19 FS

90 FS

517 AS

962 AACS

3 LG

3 SPTG

3 MDG

A9.2. The following tenant units are highly encouraged to participate in Severe Weather Response Working Group activities, as directed by AFI 10-229, *Responding to Severe Weather Events*:

381 IS

632 AMSS

Alaska Regional Flight Center (ARFC)

Army and Air Force Exchange Service (AAFES)

Civil Air Patrol (CAP)

Defense Logistics Agency (DLA)

Defense Commissary Agency (DeDA)