

**BY ORDER OF THE COMMANDER
THULE AIR BASE**

**THULE AIR BASE INSTRUCTION
15-101**

23 JUNE 2021

Weather

WEATHER SUPPORT



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This instruction implements Air Force Policy Directive 15-1, *Air Force Weather Operations* and Air Force Manual (AFMAN) 15-129, *Air and Space Weather Operations*. This instruction establishes responsibilities and weather support processes and procedures for weather services, including weather forecasts; weather watches, warnings and advisories; space weather data; information dissemination; and reciprocal support. This instruction applies to units assigned to the 821st Air Base Group (ABG) and units attached to or supported by Thule Air Base (AB) to include contractors and personnel transiting in a temporary duty capacity, to include Air National Guard and Reserve entities. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction 33-322, *Records Management and Information Governance Program* and are disposed of in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. This publication may not be supplemented.

SUMMARY OF CHANGES

This document was completely revised and must be thoroughly reviewed. It now contains new detailed roles and responsibilities for base weather personnel and procedures regarding Thule AB Storm Conditions.

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Chapter 1

GENERAL INFORMATION

1.1. Scope. Thule Weather Operations (821 SPTS/OSW) provides and arranges weather services for the 821 ABG and other units assigned to Thule AB, Greenland. This document establishes requirements and procedures for areas of weather support, which are required to be coordinated at the local level to meet mission needs. It consolidates weather support requirements and procedures for peacetime operations and eliminates the need for written agreements between the weather unit and supported organizations, but does not cover procedures for emergency operations or other special operations/procedures that are covered in applicable base plans, regulations, or instructions.

1.2. Roles and Responsibilities.

1.2.1. 821 SPTS/OSW will:

1.2.1.1. Deliver the following by way of the duty forecaster: forecasting, flight weather briefings, and resource protection tasks for the Thule Defense Area (TDA), which includes Thule Main Base (TMB), 12th Space Warning Squadron (12 SWS), and Detachment 1, 23rd Space Operations Squadron (DET- 1).

1.2.1.2. Conduct Severe Weather Action Plan (SWAP) Operations for Arctic Storm Conditions at Thule AB. SWAP exercises are required to be conducted at least annually to ensure that procedures are working properly and that the base is prepared for real world storm conditions; real world events can be counted as the annual exercise. See **Paragraph 5** for Thule AB Arctic Storm Condition procedures.

1.2.1.3. Produce and disseminate a Terminal Aerodrome Forecast (TAF) for the airfield under the International Civil Aeronautical Organization (ICAO) identifier BGTL IAW AFI 15-128, *Weather Force Structure*, AFMAN 15-124, *Meteorological Codes*, AFMAN 15-129, *Air and Space Weather Operations*, and the Thule AB Installation Data Page (IDP) at https://15ows.us.af.mil/tech_ref/idp/index.cfm?icao=BGTL.

1.2.1.3.1. Each TAF provides a 30-hour forecast. Unless otherwise specified, weather elements in the body of the forecast text apply to the area within a 5 statute-mile (SM) radius of the Thule AB airfield, and are issued at the times listed in **Table 1.1**. The TAF is not issued during extended periods of airfield closure (i.e. more than 8 consecutive hours). The TAF will be disseminated using the Joint Environmental Toolkit (JET). Attachment 2 contains TAF specification and amendment criteria.

1.2.1.3.2. The TAF is issued up to 3 times per day, Monday through Friday, unless otherwise specified. Additional TAFs may also be issued to reflect current weather conditions and amendment criteria.

1.2.1.3.3. The TAF must be issued at least one hour prior but not more than 3 hours prior to the opening of the airfield. Refer to the IDP for more information.

1.2.1.3.4. LAST NO AMDS AFT YYGG NEXT YYGG: IAW AFMAN 15-124, this remark will be used when the airfield is closed for extended periods and a TAF is not required. The first YYGG is the date/time the airfield will close and the second YYGG group is the date/time of the next TAF that will be disseminated.

1.2.1.4. Perform augmentation of the airfield Automated Weather Observing System (AWOS) as required by AFMAN 15-111 and this instruction

Table 1.1. Thule AB TAF Issue Times.

| Atlantic Standard Time TAF Times | Atlantic Daylight Time TAF Times |
|---|---|
| 0600L (1000Z) | 0600L (0900Z) |
| 1400L (1800Z) | 1400L (1700Z) |
| 2200L (0200Z) | 2200L (0100Z) |

1.2.1.5. Provide Airfield Management Operations (AMOPS) with a daily 5-day weather forecast and copies of weather warnings during airfield operating hours.

1.2.1.6. Participate in the Cooperative Weather Watch Program, Limited Weather Observation Certification, prevailing visibility training, and other weather related duties IAW AFMAN 13-204 V3, *Air Traffic Control*, AFMAN 15-111, *Surface Weather Observations*, and local SOPs.

1.2.1.7. Provide weather forecasting and observing support as required.

1.2.1.8. Notify the Air Traffic Control (ATC) Tower immediately of any problems with airfield weather equipment or local communications equipment. This does not relieve weather personnel from the responsibility of reporting these outages to the Navigational Aid Communication Management Office (NCMO).

1.2.1.9. Issue and relay weather observations, forecasts, warnings, and advisories via telephone/hotline to ATC, AMOPS, Base Defense Operations Center (BDOC), and Alarm Center/Hilltop whenever airfield weather communications is out of service.

1.2.1.10. Conduct Limited Weather Observation Certification Familiarization and Prevailing Visibility Certification training for ATC personnel and annotate certification in training records. Annually review Limited Weather Observation and Prevailing Visibility Certification training programs with the Complex Chief Controller to ensure currency with existing regulations and update as required.

1.2.1.11. Provide weather support upon request, to personnel conducting outdoor crane or platform (high-lift, bucket truck, etc.) operations. Crane/platform operators and/or supervisors are responsible for contacting Thule Weather Operations to request wind speed and/or direction prior to beginning crane/platform operations.

1.2.1.12. Release of weather information to non-DoD agencies or individuals and support to non-DoD agencies or the public will not be provided until the Peterson-Schriever Garrison Public Affairs Office (P-S GAR/PA) has given permission. Weather support can be provided if it is covered by letters of agreement or support documentation.

1.2.1.13. Notify Alarm Center of any Weather Warnings, Weather Advisories, and/or ABG/CC approved changes to Arctic Storm Conditions.

1.2.1.14. Email Alarm Center/Hilltop the updated monthly Thule Weather Operations Standby Roster.

1.2.1.15. Notify Alarm Center, BDOC, AMOPS, and the 15 OWS when Thule Weather Operations closes and opens.

1.2.1.16. Upon request, provide base agencies climatology reports and/or data.

1.2.1.17. Provide weather support to all on base agencies during times of emergency/crisis action response in accordance with Thule's Installation Emergency Management Plan 10-2 or other applicable plans or checklists.

1.2.1.18. Review annually and/or update as needed, all weather support plans, standard operating procedures, and the installation data page.

1.2.1.19. For any reason requiring Thule Weather Operations to relay tropical storm information, weather forecasters are required not to deviate from the National Hurricane Center (NHC) products located on the NHC webpage: <https://www.nhc.noaa.gov/>.

1.2.1.20. Be the eyes forward for the 15 OWS. Thule Weather Operations is required to collaborate at least once during the duty day with the 15 OWS. More than once per day collaboration may be needed during significant weather events expected or occurring on or around Thule AB. During non-duty hours, coordinate with the 15 OWS as needed and relay any equipment outages or expected changes to airfield operating hours.

1.2.1.21. Pre-deployment planning is not required as Thule Weather Operations has a non-deployable mission and non-deployable equipment.

1.2.1.22. Coordinate with SpOC/A36SF-E and maintain TAF Verification (TAFVER) and Weather Watch, Warning and Advisory Verification (WARNVER) programs IAW AFI 15-114, *Weather Technical Readiness Evaluation*.

1.2.2. AMOPS is required to provide Thule Weather Operations with copies of Flight Information Publications (FLIPs) and other flight-related publications as established by AFMAN 13-204 V3, *Air Traffic Control*.

1.2.3. ATC will:

1.2.3.1. Notify Thule Weather Operations when the facility opens or closes.

1.2.3.2. Notify Thule Weather Operations whenever the active runway differs from the established runway use program.

1.2.3.3. Notify Thule Weather Operations whenever airfield equipment or local weather communication devices (telephone/local computer, fax) are out of service.

1.2.3.4. Participate in a Cooperative Weather Watch Program. Inform Thule Weather Operations of the following:

1.2.3.4.1. Any observed differences between observed weather from the ATC tower and the official observation.

1.2.3.4.2. Significant increases or decreases in prevailing visibility. ATC is required to report changes in tower prevailing visibility to Thule Weather Operations when tower prevailing visibility decreases to less than or increases to equal or exceed 4 statute miles (6000 meters).

1.2.3.4.3. Formation or dissipation of fog.

1.2.3.4.4. Beginning or ending of precipitation.

1.2.3.4.5. Any obstruction to vision observed not currently reported.

1.2.3.5. Assist in obtaining Pilot Reports (PIREPs). Relay all PIREPs to the weather forecaster no later than 5 minutes after receipt. Solicit PIREPs from the first available aircraft IAW FAAO 7110.65 and as requested by the weather forecaster.

1.2.3.6. Provide 821 SPTS/OSW personnel with ATC indoctrination training.

1.2.4. Alarm Center will:

1.2.4.1. Contact the Thule Weather Operations Standby for any Weather Warning or Weather Advisory received when Thule Weather Operations is closed.

1.2.4.2. Send out Terrestrial Trunked Radio (TETRA) message with any Weather Warning, Weather Advisory, or Storm Condition update when received from Thule Weather Operations.

1.2.5. 15 OWS:

1.2.5.1. Coordinate with 821 SPTS/OSW and issue Weather Warning or Weather Advisory for Thule AB resource protection as required. Only select advisories will be issued by the 15 OWS during normal operations. During communication outages or other circumstances in which 821 SPTS/OSW personnel are unable to issue Weather Warnings or Weather Advisories, the 15 OWS will issue according to guidelines established on the Thule AB Installation Data Page. The 15 OWS will attempt to notify Thule Alarm Center/Hilltop at DSN 312-629-2860/2719/3840 or Commercial 719-474-3840 when this occurs.

1.2.5.2. Maintain 24/7 capability to backup TAF production for Thule AB and issue during 821 SPTS/OSW communication outages. The 15 OWS will be the backup TAF-issuing authority for Thule AB under the ICAO identifier BGTL, and will utilize JET for dissemination.

1.3. Duty Priorities. Duty priorities for Weather Station Operations are accomplished according to **Table 1.2.**

Table 1.2. Weather Duty Priorities.

| Order of Priority | Duties |
|--------------------------|---|
| 1 | Perform Emergency War Order (EWO) Taskings |
| 2 | Execute Weather Operations Evacuation |
| 3 | Respond to Aircraft/Ground Emergencies |
| 4 | Respond to Pilot to Dispatch request for weather via AMOPS |
| 5 | Answer Command Post (CP)/Hilltop, Control Tower, Secondary Crash Net Hotlines |
| 6 | Provide Weather Information to Air Traffic Control Tower Personnel |
| 7 | Conduct Severe Weather Action Plan (SWAP) Operations |
| 8 | Augment AN/FMQ-19 Observations |
| 9 | Produce the BGTL TAF |
| 10 | Disseminate Urgent Pilot Weather Reports (PIREPs) |
| 11 | Disseminate all other PIREPs |
| 12 | Perform Mission/Weather Watch Activities |
| 13 | Provide Briefings |
| 14 | Produce and disseminate the Thule 5-Day Weather Outlook |
| 15 | Weather Function Training |
| 16 | Accomplish Administrative Tasks |

Chapter 2

WEATHER STATION OPERATIONS

2.1. Duty Hours. Weather services are normally available Monday through Friday from 0400 to 1600 local time, unless the airfield closes early. Required manning may be altered based upon other operational requirements or use of the airfield outside of normal operating times. If the airfield is open outside published operating hours, a weather forecaster is required to be on duty one hour prior to airfield opening until the airfield closes. Thule Weather Operations personnel are required to be on duty during periods of Storm Condition Bravo, Charlie and Delta on TMB. For emergencies or severe/threatening weather situations, contact Alarm Center/Hilltop via extension x2860, x2719 or x3840 to reach the standby forecaster.

2.2. Weather Equipment. Thule Weather Operations currently has an AWOS (AN/FMQ-19), consisting of meteorological sensors on both the east-northeast (080°) end and west-southwest (260°) end of the runway. Thule AB also has wind and temperature sensors known as the Thule AB Meteorological Sensor Upgrade (TAMSU). There are ten sensor locations: 12 SWS, VORTAC, Shelter-7, Crescent Lake, Port, Tower, DET-1, the Terminal, South Mountain and Main Base. The TAMSU and AMOS systems are maintained by NCMO who are required to be notified at extension x3100 when either system is not operational. For backup procedures, the Kestrel Pocket Weather device is used by the duty forecaster to augment observations. The manual observing location used to back up the FMQ-19 is located on the south side (runway side) of building 619.

2.2.1. Equipment Limitations:

2.2.1.1. No lightning detection equipment is installed at Thule AB.

2.2.1.2. No Pilot to Metro Service (PMSV) equipment is installed at Thule Weather Operations. All PMSV contacts are conducted via telephone patch in coordination with AMOPS.

2.2.2. Additional Backup Equipment. A Tactical Meteorological Observing System, or TMOS, (AN/TMQ-53) may be used, if available, to provide weather information. This equipment will be sited and set up IAW the applicable T.O. and AFMAN 15-111 and maintained by Thule weather personnel.

2.3. Weather Warnings and Advisories (WWA). Weather Warnings and Advisories are issued when needed. See Chapters 3 and 4 for criteria and dissemination procedures.

2.4. 5-Day Weather Forecast. The duty forecaster is required to prepare and disseminate the 5-day weather forecast no later than 0700 local during normal operating hours, or as soon as possible if other duties are higher priority (see [Table 1.2](#)). The 5-day forecast is not required to be updated outside of normal operating hours. The 5-day weather forecast is not an amendable product, but may be updated at any time at the discretion of the duty forecaster.

2.5. Flight Weather Briefings. Flight weather briefings are provided when requested by transient aircrew. No military aircraft are assigned to Thule AB.

2.5.1. Thule Weather Operations provides the following to transient aircrew:

2.5.1.1. Current observation/forecast

2.5.1.2. Take-off/landing weather

2.5.1.3. Flight level winds

2.5.1.4. Flight level hazards

2.5.1.5. Any other weather data that the aircrew requests or the weather forecaster may find significant to the mission.

2.5.1.6. DD Form 175-1, *Flight Weather Briefing*. (Completed when requested by the aircrew).

2.5.2. Forecasters are required to conduct MISSIONWATCH before aircraft take-off and while aircraft is within the Thule AB controlled airspace. The forecaster is required to immediately notify ATC and AMOPS of any significant unforecasted change(s) in weather condition (e.g. WWA issued/cancelled or changes in TAF).

2.6. Staff Briefings. The 5-day weather forecast, as well as weather for Kangerlussuaq, Greenland and Baltimore, Maryland, are briefed at the bi-weekly 821 ABG Staff Meeting by 821 SPTS/OSW personnel.

2.7. Miscellaneous Briefings. Coordinate all other briefings through the Airfield Operations Flight Commander (AOF/CC) or the Thule Weather Operations Chief.

2.8. Airfield Operations Board (AOB). The Thule Weather Operations Chief or designated representatives are required to attend and brief pertinent weather information during the semi-annual AOB meeting IAW AFMAN 13-204 V3, *Air Traffic Control*.

2.9. Augment Weather Observations as Required IAW AFMAN 15-111. Thule Weather Operations will maintain situational awareness of the current weather conditions as well as the fixed base weather observing system sensed data and observations. When required, personnel will augment the observations.

Chapter 3

WEATHER WARNINGS

3.1. General. Weather Warnings are issued at Thule AB for the protection of life and resources, when required, 24 hours per day, 365 days per year. Warnings are issued IAW AFMAN 15-129, *Air and Space Weather Operations*

3.2. Weather Warning Criteria. Weather Warnings are issued for the following criteria:

3.2.1. On-Base: Winds ≥ 30 knots but < 65 knots within 5NM of Thule with one hour desired lead-time.

3.2.1.1. Actions taken by the Thule AB:

3.2.1.1.1. Close all hangar doors.

3.2.1.1.2. All personnel advised of risk; protect equipment where necessary.

3.2.1.1.3. Cancel outdoor activities at the discretion of 821 ABG leadership.

3.2.2. On-Base: Winds ≥ 65 knots within 5 NM of Thule with one hour desired lead- time.

3.2.2.1. Actions taken by the Thule AB:

3.2.2.1.1. All personnel advised to remain indoors and limit outdoor movement; protect equipment where necessary.

3.2.2.1.2. Hangar aircraft.

3.2.3. Off-Base: Winds ≥ 65 knots with one hour desired lead-time.

3.2.3.1. Action taken by Thule AB:

3.2.3.1.1. All personnel advised to remain indoors and limit outdoor movement; protect equipment where necessary.

3.2.4. On/Off-Base: Freezing Precipitation with one hour desired lead-time.

3.2.4.1. Action taken by the Thule AB:

3.2.4.1.1. All personnel advised to take necessary preventive actions; protect equipment where necessary.

3.3. Dissemination of Weather Warnings. All Weather Warnings are issued using Joint Environmental Toolkit (JET), or on AF Form 3807, *Watch/Warning Notification and Verification*, in a numbered sequence in order of being issued, and disseminated/updated to the following:

3.3.1. AMOPS via email, extension x2717, or hand carried (only during airfield open hours).

3.3.2. 12 SWS MWOC via email, hotline, or extension x5225.

3.3.3. BDOC via e-mail, hotline, or extension x3234, for public announcement.

3.3.4. ATC via email, hotline, or extension x2670 (only during airfield open hours).

3.3.5. Alarm Center/Hilltop via email or extension x2719 or x3840.

3.3.6. DET-1 via e-mail, or extension x6211, x2126, or x2814.

3.3.7. Update weather slides on the Thule Forecast weather channel only during operational hours.

3.3.8. Thule Weather Operations will send an email notification to all required agencies.

Chapter 4

WEATHER ADVISORIES

4.1. General. Weather advisories for Thule AB are issued for aviation purposes and to alert personnel to hazardous weather conditions as required. Advisories are issued IAW AFMAN 15-129, *Air and Space Weather Operations* and per the 15 OWS/Thule IDP.

4.2. Weather Advisory Criteria. Weather advisories are issued for the following observed conditions:

4.2.1. Turbulence - Moderate or greater from surface to 10,000 feet MSL within a 5 NM radius of the airfield, when observed by local aircraft, or at forecaster discretion. This advisory is issued only during times when the airfield is open.

4.2.2. Icing - Moderate or greater from surface to 10,000 MSL within a 5 NM radius of the airfield, when observed by local aircraft, or at forecaster discretion. This advisory is issued only during times when the airfield is open.

4.2.3. Low Level Wind Shear below 2,000 feet for the airfield, when observed by local aircraft, or at forecaster discretion. This advisory is only issued during times when the airfield is open.

4.2.4. Visibility less than 3,200 meters with sustained winds greater than or equal to 20 knots. This is only issued by the 15 OWS when Thule Weather Operations is closed. This is to notify the stand-by forecaster in advance of Storm Condition Bravo. Once notified the stand-by forecaster is required to report to the weather station and remain long enough to gain situational awareness. The forecaster will activate SWAP as required.

4.2.5. Ambient Air Temperature of equal to or less than -13°F (-25°C). With the Ambient Air Temperature of equal to or less than $-13^{\circ}\text{F}/-25^{\circ}\text{C}$ personnel are allowed to leave their vehicle idling when going into buildings for a short period of time (e.g. eating meals/going into the BX). This also serves to notify base personnel of potentially dangerous wind chill conditions. No other bioenvironmental information is required on a regular basis.

4.3. Dissemination of Weather Advisories. All weather advisories are issued using JET, or documented on AF Form 3806, *Weather Watch Advisory Log*, in a numbered sequence in order of being issued, and disseminated to the following:

4.3.1. AMOPS via email, extension x2717, or hand carried (only during airfield open hours).

4.3.2. MWOC/12 SWS via email, hotline, or extension x5225.

4.3.3. BDOC via e-mail, hotline, or extension x3234, for public announcement.

4.3.4. ATC via email, hotline, or extension x2670 (only during airfield open hours).

4.3.5. Alarm Center/Hilltop via email or extension x2719 or x3840.

4.3.6. DET-1 via e-mail or extension x6211, x2126, or x2814.

4.3.7. Update weather slides on the Thule Forecast weather channel only during operational hours.

4.3.8. Regardless of operating hours, Thule Weather Operations sends an email notification to all required agencies.

4.3.8.1. Temperature Advisory only: notify base personnel by sending a TETRA text message to base personnel as Alarm Center/Hilltop does not send messages for advisories.

4.3.8.2. For aviation advisories (turbulence, icing, and low-level wind shear), only notify AMOPS and ATC via phone or e-mail. It is not necessary to notify other agencies.

4.4. Communication Outages. Applies for all weather products disseminated by Thule Weather Operations.

4.4.1. In the event of computer system outages, telephones are used as the back-up dissemination system. For longline distribution, call a weather station (via DSN, the 15 OWS or any other Air Force Weather Station) and ask if they are able to transmit the (Observation or WWA) for Thule AB.

4.4.2. If both computer and telephone systems are down, Thule Weather Operations does not have the capability to transmit data until one of these systems is returned to service. Should this happen, Thule Weather Operations will:

4.4.2.1. Document all Weather Warnings on AF Form 3807 during outages.

4.4.2.2. Document all Weather Advisories on AF Form 3806 during outages.

4.4.2.3. Document all weather observations on AF Form 3803/3813 during outages.

Chapter 5

ARCTIC STORM CONDITIONS

5.1. General. Arctic Storm conditions are determined by both wind speed and visibility criteria, which are expected to cause impacts to mission capability and/or a threat to personnel and resources. The purpose of these procedures is to ensure continuity of weather station operations during, or in anticipation of, arctic storm conditions in the TDA.

5.2. Arctic Storm Condition Levels:

5.2.1. Storm Normal: No Severe weather is forecasted.

5.2.2. Storm Alpha: The potential exists for higher storm conditions within 12 hours and is valid until further notice (UFN).

5.2.3. Storm Bravo: Both of the following criteria exist and are valid UFN:

5.2.3.1. On Base: Sustained wind speeds greater than 20 knots and prevailing visibility less than 1 mile.

5.2.3.2. Off-Base: Sustained wind speeds greater than 25 knots and prevailing visibility less than or equal to 1/4 mile (40 road markers).

5.2.4. Storm Charlie: Both of the following criteria exist and are valid UFN:

5.2.4.1. On Base: Sustained wind speeds greater than 35 knots and prevailing visibility less than 1/2 mile.

5.2.4.2. Off-Base: Sustained wind speeds greater than 35 knots and prevailing visibility less than or equal to 1/16 mile (10 road markers).

5.2.5. Storm Delta: Both of the following criteria exist and are valid UFN:

5.2.5.1. On Base: Sustained wind speeds greater than 50 knots and prevailing visibility less than 100 yards.

5.2.5.2. Off-Base: Sustained wind speeds greater than 50 knots and prevailing visibility less than or equal to 50 yards (5 road markers).

5.3. Arctic Storm Procedures:

5.3.1. Storm condition declaration responsibility.

5.3.1.1. The 821 SPTS/OSW duty forecaster has the sole responsibility for the upgrade to Storm Condition Alpha, or downgrade to Storm Condition Normal for *all* locations. The forecaster will coordinate ABG/CC approval for these changes.

5.3.1.2. The 821 SPTS/OSW has the sole responsibility for gaining approval from the ABG/CC for all upgrades to, and downgrades from Storm Condition Bravo, Charlie or Delta for *TMB*. The duty forecaster is responsible for notifying Alarm Center of all upgrades and/or downgrades in the current Storm Condition at TMB and make all required notifications.

5.3.1.3. The 12 SWS/CC and 23 SOPS, DET-1/CC or designated representative, has the sole responsibility for the upgrade to, or downgrade from all Storm Conditions above Storm Condition Alpha for their respective areas.

5.3.2. Storm Condition Guidelines:

5.3.2.1. All storm conditions will remain valid until they are either upgraded or downgraded by proper authority.

5.3.2.2. No location is allowed to be in a lower storm condition than the condition at TMB; i.e., if TMB is in Bravo, all locations are required to reflect the same condition (or higher). However, when conditions lower (improve) on TMB, it is the responsibility of the off-base location to observe and recommend moving to a lower condition as required.

5.3.3. Standard Notification Process:

5.3.3.1. 821 SPTS/OSW will send an email, with subject “Storm Condition Update”, to the Storm Condition Distribution List, maintained by 821 SPTS/OSW. See [Figure 5.1](#) for email template.

Figure 5.1. Email Template for Storm Condition Update.

| | |
|--|-------|
| From: 821 SPTS/OSW Weather Org | |
| To: <i>Storm Condition Distribution List</i> | |
| Subject: Storm Condition Update | |
| The following Storm Conditions are in effect as of dd/hhmm L (dd/hhmm Z) : | |
| 12 SWS | ALPHA |
| SMTN | ALPHA |
| DET-1 | ALPHA |
| NMTN | ALPHA |
| Main Base | ALPHA |
| Road Conditions | |
| 12 SWS | OPEN |
| SMTN | OPEN |
| DET-1 | OPEN |
| NMTN | OPEN |
| Main Base | OPEN |

5.3.3.2. Update the Storm Condition on the TAMSU.

5.3.3.3. Make advisory calls IAW the storm event notification procedures, [Attachment 4](#).

5.3.4. Storm Condition Notification Process for downgrading from Storm Condition Charlie:

5.3.4.1. When two hours have passed and weather conditions are continuing to improve, the duty forecaster is required to contact the ABG/CC for downgrade approval. The duty forecaster will notify Alarm Center of the approved recommendation so they can begin coordinating snow removal procedures.

5.3.4.2. Alarm Center will coordinate with Snowbird and other agencies to determine when conditions outside are safe for personnel movement.

5.3.4.3. TMB will be kept in Storm Condition Charlie until notified by Alarm Center that it is safe to return to Storm Condition Bravo or lower. The duty forecaster will contact the ABG/CC for final approval and execute standard downgrade notifications.

5.3.5. Declaration of Off-Base Storm Conditions

5.3.5.1. 12 SWS and DET-1: The 821 SPTS/OSW duty forecaster has the sole responsibility for the upgrade to Storm Condition Alpha, or downgrade to Storm Condition Normal for all locations. All other storm condition upgrades and/or downgrades are handled internally by these organizations through Alarm Center. If the weather forecaster is on duty, he/she will update the storm condition on the TAMSU computer, send a notification email using the Storm Condition Update template (**Figure 5.1**), and make all required phone call notifications. Once all notifications are made, listen for BDOC to make an announcement on the PA system; if no announcement is made, call BDOC to ensure they received the updated information.

5.3.5.2. South Mountain Storm Condition must follow the *higher* conditions of DET-1 or Main Base.

5.3.5.3. North Mountain Storm Condition must follow the *same* as Main Base.

5.3.6. Additional Information:

5.3.6.1. All available certified weather personnel will work rotating shifts to ensure that Thule Weather Operations is continuously manned when TMB is in Storm Condition Bravo or higher. The Weather Operations Chief will establish a schedule for shift rotation.

5.3.6.2. When Storm Condition Delta appears to be approaching, all available weather personnel should be recalled to Thule Weather Operations if not already in place. All certified weather operations forecasters will remain at building 619 until TMB returns to Storm Condition Charlie.

5.3.6.3. Storm Condition Duty Functions and Extended Duty Hours:

5.3.6.3.1. During Storm Condition Charlie, the forecaster on duty is responsible for coordinating transportation with Alarm Center/Hilltop for incoming forecaster at least one hour prior to shift change.

5.4. Severe Weather Damage Reporting. Thule Weather Operations will coordinate severe weather damage reports with the 821 ABG/CC through the 821 SPTS Chain of Command. Severe weather damage reports from 12 SWS MWOC will be coordinated with the 821 ABG for weather related Operational Report 3 (OPREP-3) and Commander's Critical Incident Report (CCIR), however, MWOC is responsible for submitting reports to the Buckley Command Post (BCP). Weather related OPREP-3s and CCIRs will be routed to the Colorado Springs Regional Command Post (CSRCP) by the 821 ABG as appropriate.

5.4.1. The CSRCP provides OPREP-3s/CCIRs to Higher Headquarters as soon as possible and provides Thule Weather Operations with unclassified copies of applicable weather related OPREPs. **NOTE:** The 21 SW/CP is the releasing authority for OPREP- 3s.

5.4.2. Thule Weather Operations provides damage reports and any unclassified copies of weather related OPREPs/CCIRs to the 15 OWS.

5.4.3. Information required to be provided by Thule Weather Operations to the CSRCP includes:

5.4.3.1. Actual severe weather conditions experienced.

5.4.3.2. The valid forecast at the time of the occurrence to include any Weather Warning(s) that was/were issued.

5.4.3.3. Operational status of meteorological equipment (wind sensors, etc.).

5.4.3.4. Any other pertinent information (damage reports, visual confirmations, etc.)

Chapter 6

ALTERNATE OPERATING LOCATION (AOL)

6.1. General. The purpose of these procedures is to ensure continuity of weather station operations during a real world evacuation.

6.2. Real-World Evacuation procedures:

6.2.1. In the event of a real-world building (Bldg) evacuation, all personnel move to either the short-term evacuation location (across the street from Bldg. 619), or to the long-term AOL (Bldg 363, BDOC, Shift Sergeant Office, DSN 629-3424/COM 719-474-3840 extension x3424). In the event of a Shelter-In-Place scenario, all personnel move to the West end of Bldg 619.

6.2.1.1. The current AOL affords Thule Weather Operations with limited operational capabilities.

6.2.1.1.1. All weather data is internet-based only.

6.2.1.1.2. Thule Weather Operations personnel follow duty specific Standard Operating Procedures (SOPs) and Evacuation Checklists in order to resume services at the alternate location as soon as possible. Some weather services/support are provided, but require a case-by-case assessment dependent on communication line status, equipment status, etc. Expect most services to be degraded (weather products, pilot briefings, etc.) due to limited facilities and loss of dedicated data services and various data types (one minute observations, etc.).

6.2.1.1.3. The AOL is not located in plain sight of the runway.

6.2.1.2. Exercise Evacuations. For flight/base safety reasons Thule Weather Operations conducts all evacuation exercises outside of duty hours, and requires all personnel to be certified/re-certified on evacuation and back-up procedures on an annual basis.

Chapter 7

BACK-UP PROCEDURES

7.1. 15 OWS. Per 15 OWS/Thule Weather Operations IDP, when weather operations at Thule AB are interrupted (e.g., power outage, natural disaster, etc.); all Thule AB weather responsibilities are transferred to the 15 OWS until Thule AB is prepared to resume operations.

7.2. Thule Weather Operations. Support resumes from the alternate weather operations site with the 15 OWS assuming responsibilities during the interim period. For longer interruptions, Thule Weather Operations coordinates required support with the 15 OWS and other organizations as required.

DAVID G. HANSON, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

Air Force Manual 10-206, *Operational Reporting*, 18 June 2018

Air Force Instruction 33-322, *Records Management and Information Governance Program*, 22 March 2020

Air Force Instruction 10-2501, *Emergency Management Program*, 10 March 2020

Air Force Manual 13-204 V3, *Air Traffic Control*, 22 July 2020

Air Force Policy Directive 15-1, *Weather Operations*, 14 November 2019

Air Force Instruction 15-114, *Weather Technical Readiness Evaluation*, 16 March 2017

Air Force Instruction 15-128, *Weather Force Structure*, 21 June 2019

Air Force Manual 15-111, *Surface Weather Observations*, 12 March 2019

Air Force Manual 15-124, *Meteorological Codes*, 16 January 2019

Air Force Manual 15-129, *Air and Space Weather Operations*, 09 July 2020

Prescribed Forms

None

Adopted Forms

Air Force Form 847, *Recommendation for Change of Publication*, 22 September 2009

Air Force Form 3806, *Weather Watch Advisory Log*, 01 January 1992

Air Force Form 3807, *Watch/Warning Notification and Verification*, 1 January 1992

Department of Defense Form 175-1, *Flight Weather Briefing*, 1 October 2002

Acronyms and Abbreviations

AB—Air Base

AMOPS—Airfield Management Operations

AOB—Airfield Operations Board

AOL—Alternate Operating Location

ATC—Air Traffic Control

BDOC—Base Defense Operations Center

CCIR—Commander's Critical Incident Report

CSRCP—Colorado Springs Regional Command Post

EWO—Emergency War Order

FLIPs—Flight Information Publications
IDP—Installation Data Page
JET—Joint Environmental Toolkit
MSL—Mean Sea Level
MWOC—Missile Warning Operations Center
NCMO—Navigational Aid Communication Management Office
NHC—National Hurricane Center
OPREP-3—Operational Report 3
OWS—Operational Weather Squadron
PIREPs—Pilot Reports
PMSV—Pilot to Metro Service
RVR—Runway Visual Range
SOPs—Standard Operating Procedures
SWAP—Severe Weather Action Plan
TAF—Terminal Aerodrome Forecast
TAMSU—Thule AB Meteorological Sensor Upgrade
TETRA—Terrestrial Trunked Radio
TDA—Thule Defense Area
TMB—Thule Main Base
UFN—Until Further Notice
WWA—Weather Warnings and Advisories

Attachment 2

TERMINAL AERODROME FORECAST (TAF) SPECIFICATION AND AMENDMENT CRITERIA

A2.1. SPECIFICATION CRITERIA. The TAF is required to specify the time of occurrence, the duration, and the intensity (if applicable) when one or more of the following are expected to occur:

A2.1.1. Icing and Turbulence (for weather category II aircraft, refer to 557 WW/TN 15-001, *Meteorological Techniques*, Chapter 2, Table 2-5), not associated with thunderstorms from the surface to 10,000 ft. AGL. The beginning or ending of icing and/or turbulence first meets, exceeds, or decreases to less than moderate (or greater) thresholds and was not specified in the forecast.

A2.1.2. Thunderstorms forecasted start or end time.

A2.1.3. Ceiling or Visibility passes through the following categories: (Note: Categories are determined by the lower of the ceiling or visibility elements.)

Table A2.1. Ceiling and Visibility Feet and Meters Elements.

| Ceiling (Feet) | Visibility (Meters) |
|----------------|---------------------|
| 2,000 | 5000 |
| 1,000 | 3200 |
| 800 | 800 |
| 300 | |

A2.1.4. Change in Wind Speed of 10 knots or more, and/or a change in wind direction of greater than 30 degrees and the predominant wind speed or gusts are expected to be 15 knots or greater.

A2.2. AMENDMENT CRITERIA. The TAF is required to be amended whenever one or more of the following conditions occurs and is expected to occur for more than 30 minutes, but is not specified in the latest forecast.

A2.2.1. Icing and Turbulence (for weather category II aircraft, refer to 557 WW/TN 15-001, Chapter 2, Table 2-5), not associated with thunderstorms from the surface to 10,000 ft. AGL. The beginning or ending of icing and/or turbulence first meets, exceeds, or decreases to less than moderate (or greater) thresholds and was not specified in the forecast.

A2.2.2. Altimeter Setting meets or exceeds 31.00 INS and was not specified in the forecast, Altimeter setting, if above, drops below 31.00 INS and was not specified during the forecast period. Altimeter setting drops below 28.00 INS and was not specified in the forecast Altimeter setting, if below 28.00 INS, increases above 28.00 INS and was not specified in the forecast.

A2.2.3. Thunderstorms incorrect forecast start or end time.

A2.2.4. Specification of Temporary Conditions. Forecast conditions specified as temporary become predominant conditions. Forecast conditions specified as temporary do not occur during the cardinal hour as forecast. Forecast conditions specified as temporary are no longer expected to occur.

A2.2.5. Ceiling or Visibility passes through the following categories: (Note: Categories are determined by the lower of the ceiling or visibility elements.)

Table A2.2. Ceiling and Visibility Feet and Meters.

| Ceiling (Feet) | Visibility (Meters) |
|-----------------------|----------------------------|
| 2,000 | 5000 |
| 1,000 | 3200 |
| 800 | 800 |
| 300 | |

A2.2.6. Start or End of a Weather Warning not specified in the original TAF.

A2.2.7. Change in Wind Speed of 10 knots or more, and/or a change in wind direction of greater than 30 degrees and the predominant wind speed or gusts are expected to be 15 knots or greater.

A2.2.8. Changes to Predominant Conditions. Forecast change conditions occur before the beginning of the specified period of change and are expected to persist Forecast change conditions do not occur within 30 minutes after the specified time. Forecast change conditions are no longer expected to occur.

A2.2.9. Representative Conditions. Forecast conditions are not considered representative of existing or forecast conditions and amending the forecast improves safety, flight planning, operations efficiency, or assistance to in-flight aircraft.

Attachment 3**SPECIAL AND LOCAL OBSERVATION CRITERIA**

A3.1. SPECIAL CRITERIA. A special observation is required to be taken when any of the following occurs:

A3.1.1. Visibility. The prevailing visibility decreases to less than, or increases to equal or exceeds the following values in miles (meters): 3 (5000), 2 ¼ (4000), 2 (3200), 1 7/8 (3000), 1 ¾ (2800), 1 ½ (2400), 1 3/8 (2200), 1 ¼ (2000), 1 1/8 (1800), 1 (1600), ¾ (1200), 5/8 (1000), ½ (0800).

A3.1.2. Ceiling. The ceiling forms below, decreases to less than, or increases to equal or exceed the following values: (feet) 3000, 2000, 1500, 1200, 1100, 1000, 900, 800, 700, 600, 500, 400, 300.

A3.1.3. Sky Condition. A layer of clouds or obscuring phenomena aloft is observed below 1200 feet and no layer was reported below 1200 feet in the previous observation.

A3.1.4. Wind Shift. Wind direction changes by 45 degrees or more in less than 15 minutes and the wind speed is 10 knots or more throughout the wind shift.

A3.1.5. Squall. When a strong wind characterized by a sudden onset in which the wind speed increases by at least 16 knots and is sustained at 22 knots or more for at least 1 minute.

A3.1.6. Volcanic Eruption. When eruption or volcanic ash cloud is first noted.

A3.1.7. Thunderstorm. When a thunderstorm first begins or ends. Note a SPECI is not required to report the beginning of a new thunderstorm if one is currently reported.

A3.1.8. Precipitation. Note: Except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type (e.g., drizzle changing to snow grains) or the beginning or ending of one type while another is in progress (e.g., snow changing to rain and snow).

A3.1.8.1. Hail. Begins or ends.

A3.1.8.2. Freezing Precipitation. Begins, ends, or changes in intensity.

A3.1.8.3. Ice Pellets. Begins, ends, or changes in intensity.

A3.1.8.4. Any Other Type of Precipitation. Begins or Ends.

A3.1.9. Tornado, Funnel Cloud, or Waterspout. When observed, disappears from sight, or ends.

A3.1.10. Upon Resumption of Observing Function. A special (SPECI) observation is required to be taken within 15 minutes after the weather forecaster returns to duty following a break in continuous hourly observing coverage or augmentation at the observing location unless a METAR observation is filed during that 15-minute period.

A3.1.10.1. Only applies when augmenting the observation.

A3.1.11. Any Other Meteorological Situation. Situations which, in the opinion of the weather observer/forecaster, are critical to local operations. Also, upon request by the weather operations supervisor.

A3.1.12. Aircraft Mishap. Take an aircraft mishap SPECI immediately following notification or sighting of an aircraft mishap at or near the observing unless there has been an intervening observation.

A3.1.13. Runway Visual Range. RVR is calculated by the AWOS. It will take/prompt the observer for a SPECI when the RVR for the active runway decreases to less than or, if below, increases to equal or exceed (meters): P1500 (unlimited), 1500, 1300, 750, 600, 400, 300, 200. NOTE: RVR is reported as **RVRNO** if unavailable from the AWOS.

A3.2. LOCAL CRITERIA. A local observation is required to be taken and disseminated locally (only) for the following criteria:

A3.2.1. Aircraft Mishap. Immediately following notification of an aircraft emergency/mishap or sighting of an aircraft mishap at or near the station, unless there has been an intervening hourly recorded. Record on AF Form 3813, *Surface Weather Observations (METAR/SPECI)*.

A3.2.1.1. These observations consist of elements normally included in a record observation and are identified as "(ACFT MISHAP)". This remark is *not* disseminated locally or via longline.

A3.2.1.2. Local observations are not required for in-flight emergencies. In-flight emergencies should alert the observer to recheck the weather to ensure maximum support to the aircraft in distress.

A3.2.2. Altimeter Settings. At a frequency not to exceed 35 minutes, when there has been a change of 0.01 inches since the last locally disseminated value. This observation may be taken and disseminated as a "single element" local observation and is not recorded on the AF Form 3813. It is only required when air traffic control personnel are on duty.

A3.2.3. Any Other Meteorological Situation. Situations are determined based upon the discretion of the on-duty weather observer/forecaster considering significant impacts to local operations or upon request by the weather operations supervisor.

Attachment 4

STORM EVENT NOTIFICATION PROCEDURES

A4.1. Storm Event Log and Procedures:

A4.1.1. Date/Time (L). Enter the date and time in DD/HHMM format. Example 29 Sept 2014 at 1901L would be 29/1901L.

A4.1.2. Area. Check the area(s) for the Storm Condition.

A4.1.3. Storm Condition. Select the Storm Condition from the drop down menu.

A4.1.4. Notification Times/Initials. Input the time and initials after completing the following:

A4.1.4.1. Call 821 ABG/CC at extension x2311

A4.1.4.2. Update current Storm Conditions on the Thule Weather Channel via the TAMSU.

A4.1.4.3. Call Alarm Center at extension x2860

A4.1.4.4. Call BDOC at extension x3234 or via the hotline.

A4.1.4.5. Call 12 SWS at extension x5225 or via the hotline.

A4.1.4.6. Call DET-1 at extension x6211, x2126, or x2814.

A4.1.4.7. Call AMOPs at extension x2503 or x2717, or notify in person during times when the airfield is open.

A4.1.4.8. Send a Storm Condition Update email to the STORMCON e-mail distribution list.

A4.1.4.9. The 821 SPTS/OSW duty forecaster has the sole responsibility for the upgrade to Storm Condition Alpha, or downgrade to Storm Condition Normal for *all* locations at the discretion of the ABG/CC.

A4.1.4.10. For upgrade to or downgrade from Storm Condition Bravo, Charlie or Delta for TMB, the duty forecaster will make all recommendations to the ABG/CC and initiate notifications to all agencies if approved.

A4.1.4.11. The 12 SWS/CC and 23 SOPS, DET-1/CC or designated representative has the sole responsibility for the upgrade to, or downgrade from all Storm Conditions above Storm Condition Alpha for their respective area.

A4.1.4.11.1. When notified of Storm Condition changes for 12 SWS/DET-1, the duty forecaster will follow the notification steps above with the exception of calling the agency that initiated the change.

A4.2. End Time. Note the time that the selected storm condition ended.

A4.3. Total Time. Enter the number of hours and minutes for the duration of the selected storm condition for TMB.

A4.4. Max Winds On Base. Enter the maximum winds that occurred on base, using data primarily from the AWOS, or the Port, Terminal, Main Base, or Tower TAMSU sensor data in the event the AWOS data is unavailable.

A4.5. Max Winds Off-Base. Enter the maximum winds that occurred off-base, using data from the 12 SWS, VORTAC, Shelter 7, Crescent, DET-1, or South Mountain TAMSU sensors.