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Flying Operations

B-1 OPERATING PROCEDURES

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This manual implements Department of the Air Force (DAF) policy directive (DAFPD) 11-2, *Aircrew Operations*; and DAFPD 11-4, *Aviation Service*. It applies to all B-1 units. This publication applies to all civilian employees and uniformed members of the Regular Air Force and the Air Force Reserve. It does not apply to the Air National Guard. Compliance with the attachments in this publication is mandatory. This manual requires the collection and/or maintenance of information protected by the Privacy Act of 1974, authorized by Title 37 United States Code (USC) Section 301a, *Incentive Pay*; aviation career; Public Law (PL) 92-204, Section 715, *Department of Defense Appropriations Act for 1972*; PL 92-570 *Department of Defense Appropriations Act for 1973*; PL 93-294, *Aviation Career Incentive Act of 1974*; and Executive Order 13478, *Amendments to Executive Order 9397 Relating to Federal Agency Use of Social*

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(ELLSWORTHAFB) Air Force Manual (AFMAN) 11-2B-1 Volume 3, dated 14 Dec 20, is supplemented as follows: This supplement incorporates 28th Bomb wing (28 BW) and Ellsworth Air Force Base (EAFB) procedures for operational procedures. It applies to aircrews, schedulers and all personnel in the 28 BW who support or conduct flight operations. Waivers to this instruction will be routed through Stan/Eval channels to 28th Operations Group (28 OG) Standardization and Evaluation (OGV) section. Any approved waivers will be routed to the 28 BW/CC within five (5) duty days. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with (IAW) Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS), available by linking to the Air Force Portal (**https://www.my.af.mil**). Send comments and suggested changes to this instruction on Air Force (AF) Form 847, *Recommendation for Change of Publication*, through channels, to 28 OG/OGV, 1956 Scott Drive, Ellsworth AFB, SD 57706-4710.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. Major changes include: Clarification to waiver authorities, changing the waiver authority for un-tiered requirements to the Operations Group (OG) Commander (OG/CC). Tiered waiver authorities were updated throughout the document. Removed low altitude requirements and procedures from all chapters in accordance with 8 AF/CC and HQ AFGSC FCIF BB20-01 B-1B low altitude (LOWAT) Restriction. Reorganized and removed multiple sections of **Chapter 2** that have existing Tactics, Techniques and Procedures (TTPs) in Air Force Tactics, Techniques, and Procedures (AFTTP) 3-3.B-1, *Combat Aircraft Fundamentals B-1*, primarily briefing and debriefing guidance. Publication requirements were clarified. Reorganized and removed multiple sections of **Chapter 3** that have existing tactics, techniques, and procedures in Allied Tactical Publication (ATP)-

3.3.4.2, *Air-to-Air Refueling;* Federal Aviation Administration (FAA) JO 7610.4V, *Special Operations*; Flight Information Publications (FLIP) AP/1B, *Military Training Routes*; Technical Order (T.O.) 1B-1B-1, *Flight Manual USAF Series B-1 Aircraft*; AFTTP 3-3.B-1 and AFI 11-214, *Air Operations Rules and Procedures.* Significantly reduced air refueling and formation guidance. Low altitude restrictions were added and lost wingman procedures moved to **Chapter 3** and reworded for clarity. Updated **Chapter 4** to reflect current SB-17 navigation system capability and terminology, as well as primary means of navigation in accordance with AFMAN 11-202V3, *Flight Operations*. Combined Chapter **5** and **6** into a single chapter. Updated **Chapter 5** to reflect current SB-17 terminology and removed content with existing TTPs in T.O. 1B-1B-1, AFI 11-214 and AFTTP 3-3.B-1. Reorganized and removed multiple sections of **Chapter 6** that have existing TTPs in AFTTP 3-3.B-1. Updated **Chapter 6** and **Table 6.2.** Traffic Pattern and Landing Limitations and Restrictions, incorporating HQ AFGSC FCIF BB19-01 B-1 Employment Restrictions. Changed supervision requirements for simulated engine out traffic patterns, allowing instructor pilots (IPs) and aircraft commanders to accomplish these without additional supervision. Formation restrictions and guidance were also significantly reduced.

(ELLSWORTHAFB) This supplement has been substantially revised and must be completely reviewed. Major changes include: (1) reformatted to adhere to the AFMAN 11-2B-V3 format; (2) added a Roles and Responsibilities section; (3) changed local area definition to 200NM; (4) removed local fuel requirements; (5) incorporated Flight Crew Information (FCIF) guidance for engine operations during induction icing and incentive flyers; (6) removed all low level guidance; (7) updated Search and Rescue (SAR) procedures; (8) added attachments for On Scene Commander Reference Guide, EAFB aircrew flight standards, Example Operational Risk Management (ORM) checklist and Bomber Task Force (BTF) and Long Range Sortie considerations.

Chapter 1

GENERAL GUIDANCE

1.1. Purpose. In conjunction with other governing directives, this manual prescribes operating procedures for B-1 aircraft under most circumstances. It is not a substitute for sound judgment or common sense. Aircrew may accomplish operations or procedures not specifically addressed if they enhance safe and/or effective mission accomplishment.

1.1. (ELLSWORTHAFB) Pupose.

1.1.1. **(Added-ELLSWORTHAFB)** General Policy.

1.1.1.1. **(Added-ELLSWORTHAFB)** Unit Standards. The B-1 community has established BONE standards that provide authoritative tactics, techniques and procedures (TTPs) for flying operations. Ellsworth Aircrew should not deviate from this guidance without sound judgement and careful consideration. These standards are published in **Attachment 12**, BONE Employment standards, in the Air Force TTP (AFTTP), 3-3 *Combat Aircraft Fundamentals B-1***.**

1.1.1.2. **(Added-ELLSWORTHAFB)** Applicable publications. Aircrew noting discrepancies in technical orders (T.O.s), guidance publications or local policy will inform the 28 OG/OGV and provide a draft AF 847 IAW 11-202V2 if applicable.

1.2. Roles and Responsibilities.

1.2. (ELLSWORTHAFB) Roles and Responsibilities.

1.2.1. **Commanders.** Commanders at their respective Tier levels are responsible for complying with guidance in this manual. **(T-2)**. B-1 flying unit wing commanders, delegated no lower than the OG/CC (or equivalent), are responsible for providing local operating guidance to supplement the requirements in **Chapter 7** of this manual. **(T-2)**.

1.2.2. **Pilot in Command (PIC) Authority.** Regardless of grade or rank, the PIC is responsible for, and is the final authority for the operation of the B-1 aircraft. **(T-2)**. Pilots will use best judgement to safely conduct flying operations. **(T-2)**.

1.2.3. **Supplements.** Comply with applicable supplements to all guidance referenced in this manual. **(T-2)**. Develop additional supplements in accordance with DAFI 33-360, Publications and Forms Management.

1.2.4. **(Added-ELLSWORTHAFB)** 28 OG/CC.

1.2.4.1. **(Added-ELLSWORTHAFB)** Is the waiver authority for all guidance in this supplement. The OG/CC or designated authority responsible for the daily flying operation approvals is “CHARLIE”.

1.2.4.2. **(Added-ELLSWORTHAFB)** Will designate a squadron responsible for all off-station operations, airshows or fly-overs.

1.2.4.3. **(Added-ELLSWORTHAFB)** Is the approval authority for the 28 BW incentive taxi-ride program (Busy Taxi) and incentive flights.

1.2.4.4. **(Added-ELLSWORTHAFB)** Will task the MPC tasked with planning HHD, BTFs or off station missions to provide the 28 BW/CP with all pertinent mission details, commander's critical information requests (CCIRs) and flight supervision contacts.

1.2.5. **(Added-ELLSWORTHAFB)** CHARLIE. Will approve all 28 BW cancellations.

1.2.6. **(Added-ELLSWORTHAFB)** 28 OG/OGV.

1.2.6.1. **(Added-ELLSWORTHAFB)** Will review this publication annually and update as directed by the OG/CC.

1.2.6.2. **(Added-ELLSWORTHAFB)** Will publish weight and balance information in the FCIF library volume VI. This data is dynamic and the source documents should be referenced on the OGV SharePoint or shared drive routinely.

1.2.6.3. **(Added-ELLSWORTHAFB)** Will maintain and update the Supervisor of Flying (SOF) log as directed. The SOF log is the primary source for daily operational flight data.

1.2.7. **(Added-ELLSWORTHAFB)** Bomb Squadron (BS)/CCs.

1.2.7.1. **(Added-ELLSWORTHAFB)** Will, as directed, appoint Points of Contact (POCs) for all off-station operations, airshows or fly-overs.

1.2.7.2. **(Added-ELLSWORTHAFB)** Will provide aircrew with all equipment required to meet regulation requirements in order to safely execute the tasked mission.

1.2.7.3. **(Added-ELLSWORTHAFB)** Will report any deviations to this supplement to the OG/CC as soon as practical.

1.2.8. **(Added-ELLSWORTHAFB)** 28th Operations Support Squadron (OSS)/CC, as directed, will task the 28 OSS/MPC with planning and coordinating missions IAW AFMAN 11-2B-1V3 and this supplement's mission planning requirements.

1.2.8.1. **(Added-ELLSWORTHAFB)** 28 OSS/Airspace Scheduling (OSXA) will update the following local range briefing guides per OSS/CC guidance: Powder River Training Complex (PRTC), Smokey Hill Range/Bison Military Operating Area (MOA), Hays MOA or as directed.

1.2.8.2. **(Added-ELLSWORTHAFB)** 28 OSS/OSL is responsible for all NVG-related training, procurement, maintenance, and storage.

1.2.8.3. **(Added-ELLSWORTHAFB)** 28 OSS/OSK will publish the 28 BW Munitions, Fuzing and Countermeasure Standards. This guidance will include standard fuse settings, scheduling nomenclature for weapon loads and notification timeline for weapon loads for both training and times of war and contingency operations

1.2.9. **(Added-ELLSWORTHAFB)** Mission Leads (MLs). Will report deviations from this supplement as soon as possible to the Top-3 or Sq/CC.

1.2.10. **(Added-ELLSWORTHAFB)** 28 BW/Command Post (CP).

1.2.10.1. **(Added-ELLSWORTHAFB)** During all local flying activities, the 28 BW/CP will monitor their primary Ultra High Frequency (UHF) 321.0 and the SOF discrete frequency (311.0).

1.2.10.2. **(Added-ELLSWORTHAFB)** The 28 BW/CP will be the primary point of contact for the 28 OG and all external agencies for all HHD directed sorties, off-station sorties, sorties outside of duty hours (defined as when a SOF is not present in the tower or alternate duty location), and as directed.

1.2.10.2.1. **(Added-ELLSWORTHAFB)** The CP will maintain Situational Awareness (SA) via all means available to include NIPR and SIPR flight following software, SATCOM, JREAP, HF radio, and maintaining communications with applicable AOCs and command posts for updates.

1.2.10.2.2. **(Added-ELLSWORTHAFB)** The CP will notify the designated flight supervision for all commander's critical information requirements (CCIRs).

1.2.10.2.3. **(Added-ELLSWORTHAFB)** The CP will take primary flight following duties after receiving the "passing 10 green" call and will terminate flight following when the aircraft enters the local area.

1.2.10.3. **(Added-ELLSWORTHAFB)** The CP will maintain current coordination/standby/recall rosters.

1.3. Waivers. Forward T-0, T-1, and T-2 waiver requests to the AFGSC, Director of Operations and Communications (AFGSC/A3/6) or Air Force Reserc Command (AFRC/A3D) for coordination with HAF or external agencies or for approval. Waivers are valid for one year from the approval date. In accordance with DAFI 33-360, T-3 waiver authority may be delegated to the group commander or equivalent. Information copies will be provided to AFGSC/A3T and AFRC/A3D.

1.4. Deviations. Deviations from these procedures require specific approval by the MAJCOM/A3 unless an urgent requirement or an aircraft emergency dictates otherwise. In that case, the pilot in command should take the appropriate action to safely recover the aircraft.

1.5. Supplements. Guidance for supplementing this publication is contained in DAFI 33-360 and **Chapter 7** of this instruction.

Chapter 2

MISSION PLANNING

2.1. Mission Planning Requirements. All missions must be planned in sufficient detail to ensure safe, effective employment. Mission leads (ML) are the final authority for mission planning, briefing and debriefing. **(T-3)**. Mission planning takes priority over other non-flying duties. Refer to AFTTP 3-3.B-1, for mission planning, briefing, and debriefing guidance as well as B-1 standards.

2.1. (ELLSWORTHAFB) Mission Planning Requirements.

2.1.1. **Chart Preparation.** Any planning charts in addition to current electronic flight bag products will be as required based on mission requirements.

2.1.1.1. At a minimum, aircrew planning to operate in military operations areas, restricted areas, or warning areas will have applicable area charts with the following annotations: area boundaries, emergency airfields and minimum safe altitudes (MSAs). **(T-3)**. Aircrew using a single MSA will clearly annotate it on the chart. Aircrew using multiple MSAs or local MSAs within the operating area will ensure that all are clearly defined and annotated on the chart. **(T-3)**. Aircrew restricted from low altitude or low altitude high speed (LAHS) operations in accordance with **paragraph 3.2.1** will also annotate a single training floor or multiple local training floors of at least 5,000 feet above ground level (AGL) or above sea level (ASL). **(T-3)**.

2.1.1.2. MSAs will be a minimum of 1,000 feet above the highest obstacle or terrain (rounded up to the next 100 feet) within the lateral limits of the operational area. **(T-3)**.

2.1.2. Fuel Planning. **Table 2.1** lists approved estimated fuel flows to use when planning fuel requirements. Refer to T.O. 1B-1B-1-1, *Performance Data USAF Series B-1 Aircraft*, for detailed fuel planning. **(T-3)**.

2.1.2.1. **(Added-ELLSWORTHAFB)** Alternate Requirements.

2.1.2.2. **(Added-ELLSWORTHAFB)** When determining AFMAN 11-202v3 alternate requirements, aircrew will not select alternates when the forecasted or observed crosswind exceeds 26 kts.

Table 2.1. Fuel Planning Factors (Reference T.O. 1B-1B-1-1).

Event	Fuel
Start Engines and Taxi	5,000 pounds/hour
Takeoff and Climb to Flight Level (FL) 200	12,000 pounds total (10 minutes or 70 nautical miles at 375,000 pounds gross weight (GW))
Combat Departure to FL 200	22,000 pounds total
Normal Cruise (can be used for fuel reserve calculations)	16,000-20,000 pounds/hour (depending on GW)
Air Refueling	20,000 pounds/hour
Medium Altitude Maneuvering/ Afterburner Air Refueling	25,000 pounds/hour
Dissimilar Air Combat Tactics	40,000 pounds /hour
Low Altitude Operations	38,000 pounds /hour
Transition	20,000 pounds /hour
Radar Pattern	4,000 pounds total (12 minutes)
Climb from Missed Approach to FL 200	4,000 pounds total (6 minutes / 40 nautical miles)
Max Endurance (for fuel reserve & hours of fuel on board)	12,000 pounds /hour (245,000 pounds GW at 10,000 feet mean sea level altitude)

2.2. Publication Requirements. Aircrew will maintain applicable B-1 T.O.s in accordance with AFI 11-202V2 AFGSCSUP, *Aircrew Standardization/Evaluation Program,* AFI 11-215, *Flight Manuals Program (FMP),* and AFGSCI 11-270, *Electronic Flight Bag Operations*. Except for in-flight aircrew publications listed in AFMAN 11-2B-1V2, *B-1 Aircrew Evaluation Criteria,* aircrew are not required to maintain T.O.s while on temporary duty or deployed.

2.2.1. **Local Aircrew Aids.** Units will develop locally produced in-flight guides to include:

2.2.1.1. Briefing guides (reference AFTTP 3-3.B-1). **(T-3)**.

2.2.1.2. Tabulated takeoff and landing data (TOLD), including emergency TOLD. **(T-3)**.

2.2.1.3. Weight and balance data for calculating local aircraft configurations. **(T-3)**.

2.2.1.4. Tabulated charts for service ceiling and optimum cruise. **(T-3)**.

2.2.1.5. Divert, alternate, and emergency airfield information including: runway data, approximate course, distance, estimated time enroute (ETE), coordinates, and fuel required. **(T-3)**.

2.2.1.6. Hung weapons procedures; jettison and bailout areas; hot brake procedures; and on scene commander procedures. **(T-3)**.

2.2.1.7. Other information deemed necessary by the units. **(T-3)**.

2.3. Briefing Requirements.

2.3.1. Mission Brief. All aircrew will attend the mission briefing. **(T-3)**. If any aircrew are unable to attend, the ML will ensure they are briefed prior to step. **(T-3)**.

2.3.1.1. **(Added-ELLSWORTHAFB)** Operational Risk Management (ORM). During mission planning, MLs will use the ORM checklist found in **Attachment 3** to this instruction to analyze and mitigate operational risk for all phases of the mission. Per SQ/CC discretion, the ORM checklist will be briefed during the mission step.

2.3.1.2. **(Added-ELLSWORTHAFB)** The ML (or MPC, if applicable) is responsible for coordinating with the appropriate airfield manager for all off-station transition. During mission planning, the aircraft commander will review the approaches to be flown.

2.3.2. Step Brief. Squadron supervision, normally the Operations Supervisor (Ops Sup), will brief crews at a minimum on the items in **paragraph 2.4.3.5** in AFI 11-418, *Operations Supervision*. **(T-3)**.

2.4. (Added-ELLSWORTHAFB) Airspace Deconfliction. Aircrews may share MOA airspace if deconfliction procedures are briefed. Link 16 may be used as the primary method of deconfliction if all aircraft are link players; however, aircrews must remain aware of latency and system altitude reporting sources.

2.5. (Added-ELLSWORTHAFB) Mission Planning Materials. Only certified mission planning software will be installed on mission planning computers. 28 OSS/OSKC is the Ellsworth AFB OPR for approved mission planning software.

2.6. (Added-ELLSWORTHAFB) Mission Planning Timeline.

2.6.1. **(Added-ELLSWORTHAFB)** Flight leads, mission leads and/or aircraft commanders and MPC chiefs (when MPC operations are in effect) are responsible for ensuring crew show time provides sufficient time to mission plan, brief, pre-flight, and safely execute the mission. The following define mission planning guidelines:

2.6.1.1. **(Added-ELLSWORTHAFB)** Standard mission planning is generally used for weapon sorties, AFMAN 11-2B-1V1 upgrade training sorties (MQT, FLUG, etc.) and AFI 11-202v2 evaluations. All crew members should be available to mission plan the day prior to a flight. Reduction of mission planning crews for formal training sorties requires SQ/Director of Operations (DO) approval.

2.6.1.2. **(Added-ELLSWORTHAFB)** Show-and-Go (SHAG) Sorties. SHAGs will not be utilized for actual weapon releases. Mission leads will ensure sufficient time prior to step to review products and brief the sortie. Squadrons should develop and periodically review SHAG mission planning products to ensure they include all required items in order to execute the mission objectives.

2.6.1.3. **(Added-ELLSWORTHAFB)** Mission Plan-Fly-Fly. Crew members may perform mission plan-fly-fly profiles. The same crew members must fly both sorties, or all crew members must be present for mission planning/briefings if a crew member is substituted.

2.6.1.4. **(Added-ELLSWORTHAFB)** Contingency Sorties. These sorties will generally use MPC developed products and show times will be as directed.

Chapter 3

NORMAL OPERATING PROCEDURES

3.1. Air Refueling. Air refueling operations are authorized along tracks (published or special) or anchors. In addition, aircrew may conduct enroute refueling (i.e., "random refueling") with air traffic control (ATC) approval. For information concerning air refueling airspace, rendezvous types, and air refueling operations procedures, refer to ATP 3.3.4.2, *AAR Refueling Doctrine*; FAA JO 7610.4V; *Flight Information Publications Area Planning 1B*; and T.O. 1B-1B-1.

3.2. Low Altitude. The low altitude environment is defined as 5,000 feet AGL/ASL and below. Departure, arrival, approach, transition, short periods cruising below 5,000 feet AGL/ASL, approved flyover profiles and dry clearing passes in accordance with **paragraph 5.3.2** are not considered low altitude. AFGSC/A3/6 must approve high speed flyover profiles. **(T-2)**.

3.2.1. B-1 Aircraft Structural Integrity Program (ASIP) defines low altitude, high speed flight as terrain following and visual contour in the low altitude environment. B-1 aircrew are prohibited from conducting LAHS operations. **(T-2)**. AFGSC/A3/6 further prohibits B-1 aircrew from conducting any low altitude operations. **(T-2)**. All approved low altitude and LAHS waivers will include any applicable operating restrictions or limitations. **Exception**: 337 Test and Evaluation Squadron (TES) aircrew using test coded aircraft are exempt from these low altitude and LAHS restrictions.

3.2.2. 337 TES aircrew are authorized to perform low altitude and LAHS operations in support of test and local training requirements. Aircrew must be current and qualified (or under the supervision of a current and qualified instructor) to perform any low altitude flight operations. **(T-2)**. The 337 TES/CC will specify the ground, simulator and flight training, as well as any local procedures for low altitude operations in accordance with governing AFIs and AFMANs. **(T-2)**. 337 TES low altitude training plans and local low altitude operating procedures will be forwarded to AFGSC/A3T. **(T-2)**.

3.3. Night Vision Goggles (NVGs). Each aircrew member whose duties require NVGs will preflight their NVGs in accordance with T.O. 12S10-2AVS9-2, *Technical Manual Image Intensifier Set, Night Vision Type AN/AVS-9,* and when available use the Hoffman ANV-20/20 or equivalent infinity focusing device. **(T-3)**.

3.3.1. **(Added-ELLSWORTHAFB)** NVGs. NVGs will be used on all night training sorties to the maximum extent possible.

3.4. Operations Checks (ops checks). At a minimum, aircrew will perform ops checks at level off after initial takeoff, before range entry, after range exit and following air refueling. **(T-3)**.

3.4.1. Aircrew should check the minimum following items during an ops check:

3.4.1.1. Hydraulic, electric, fuel, oxygen, engine systems. **(T-3)**.

3.4.1.2. Angle-of-attack indicators within 0.8 degrees. **(T-3)**.

3.4.1.3. Cabin Altitude. **(T-3)**.

3.5. Formation. Formation operations will be in accordance with AFI 11-214 and AFTTP 3-3.B-1.

3.5.1. Takeoff. The minimum takeoff interval from the same runway is 30 seconds or when the previous aircraft in the formation is airborne, whichever occurs first. Abort calls are mandatory when any formation member aborts the takeoff. **(T-2)**.

3.5.2. Blind Calls. Use the following procedures when visual and radar contact within the formation is lost:

3.5.2.1. When any aircrew member calls "blind," the other aircrew member(s) will immediately respond with “visual,” “tied,” or "blind." **(T-2)**. If blind, aircrew members will also report location and altitude. **(T-2)**. If visual or tied, they are responsible for deconfliction until the first crew regains contact and calls “visual” or “tied.” **(T-2)**.

3.5.2.2. When all aircrew members are blind, the flight lead will establish altitude separation. **(T-2)**. Aircrew members will maintain altitude separation until visual or radar contact is regained. **(T-2)**. The flight lead will call out the following events over the radio:

3.5.2.2.1. Initiation and roll out of all turns. **(T-2)**.

3.5.2.2.2. Start of any climbs or descents. **(T-2)**.

3.5.2.2.3. Passing each 5,000-foot altitude increment. **(T-2)**.

3.5.2.2.4. Level off. **(T-2)**.

3.5.2.3. When there is not a timely acknowledgment of the original "blind" call and altitude separation is in doubt, “KNOCK IT OFF” will also be called and executed in accordance with AFI 11-214. Use Lost Wingman procedures in **paragraph 3.5.3** if the situation warrants. **(T-2)**.

3.5.3. Lost Wingman Procedures. Aircrew will use the following procedures if they cannot maintain visual contact and ensure positive separation when flying visual formation. **(T-2)**. In any lost wingman situation, immediate separation of aircraft is priority. Upon losing visual contact with the lead aircraft, or if unable to maintain formation position due to disorientation, execute the applicable lost wingman procedure. **(T-2)**. The flight lead should direct a rejoin after execution.

3.5.3.1. In wings level flight (climbing, descending, or level) simultaneously transition to instruments, inform the lead aircraft, use 15 degrees of bank to turn 15 degrees away, and maintain the new heading for 15 seconds. **(T-2)**. Then return to the original heading and attempt to acquire the lead aircraft on radar while ensuring 500 feet minimum altitude separation. **(T-2)**. Return to formation with the flight lead’s permission or, if required, obtain a separate clearance from ATC. **(T-2)**.

3.5.3.2. On the outside of the turn (climbing, descending or level), transition to instruments, roll wings level, and inform lead. **(T-2)**. Continue straight ahead to ensure separation prior to resuming turn and attempt to acquire lead on radar. **(T-2)**. Ensure 500 feet minimum altitude separation. Return to formation with lead’s permission or, if required, obtain a separate clearance from ATC. **(T-2)**.

3.5.3.3. On the inside of the turn (climbing, descending or level), transition to instruments to maintain established bank angle, reduce airspeed by 10 Knots Indicated Airspeed (KIAS) to ensure clearance, and inform lead. **(T-2)**. Lead will simultaneously roll wings level, maintain airspeed, and acknowledge wingman's call with wings level, heading and altitude. **(T-2)**. If lead acknowledges the lost wingman call and confirms lead aircraft is wings level, the wingman will, after 15 seconds, roll wings level, establish 500 feet minimum altitude separation, turn to lead's reference heading and attempt to acquire lead on radar. **(T-2)**. If lead does not acknowledge loss of visual contact, maintain established bank angle, establish 500 feet altitude separation, roll out on new heading, attempt to acquire lead on radar, and with lead's permission reform into trail formation position. **(T-2)**. If radar or visual contact cannot be reestablished, obtain separate clearance from ATC. **(T-2)**.

3.5.4. No Radio (NORDO) Procedures.

3.5.4.1. During visual meteorological conditions (VMC), if the lead aircraft is NORDO, lead will inform the wingman with a wing rock. **(T-2)**. The wingman will acknowledge with a wing rock and move to the inner limits of fluid. **(T-2)**. The wingman will take the lead and the NORDO aircraft will move aft to establish fluid on the new lead. **(T-2)**.

3.5.4.2. During VMC, if a wingman is NORDO, the wingman will move to the inner limits of fluid and give lead a wing rock. **(T-2)**. Lead will acknowledge with a wing rock and terminates maneuvering in accordance with AFI 11-214. **(T-2)**.

3.5.4.3. The recognition of a no radio situation in instrument meteorological conditions may be difficult. Aircraft should remain in current formation position using all available means of deconfliction including radar, air-to-air Tactical Air Navigation (TACAN), Link-16 and altitude separation to the maximum extent possible. On arrival at the destination or divert base the formation should proceed to an intial approach fix (IAF) with the NORDO aircraft in trail stacked down at the IAF altitude and the other aircraft 1,000 feet above. At the IAF, the NORDO aircraft will execute the approach while the other aircraft will remain in holding, terminate Military Assumes Responsibility for Separation of Aircraft (MARSA) with ATC, and coordinate for their own approach. **(T-2)**.

3.6. (Added-ELLSWORTHAFB) Scheduling.

3.6.1. **(Added-ELLSWORTHAFB)** Squadrons will schedule sorties within published airfield hours. Deviations require OG/CC approval.

3.6.2. **(Added-ELLSWORTHAFB)** Patriot Excalibur (PEX) is the primary source of the flying schedule.

3.6.3. **(Added-ELLSWORTHAFB)** During BASH Phase II squadrons will not schedule sorties from one hour prior to one hour after sunset or sunrise without 28 OG/CC approval.

3.6.4. **(Added-ELLSWORTHAFB)** Off Station Transition

3.6.4.1. **(Added-ELLSWORTHAFB)** Whenever possible, off-station pattern work will be annotated on the flying schedule and coordinated during the weekly scheduling meeting. Off-station transition not on the schedule requires the operations supervisor (TOP 3) approval and CHARLIE notification. Approved off-station transition fields are any DoD installation and the following civilian fields: Casper/Natrona (KCPR), Joe Foss Field (KFSD, low approaches only), Billings (KBIL), and Rapid City Regional (KRAP, low approaches only).

3.6.4.2. **(Added-ELLSWORTHAFB)** Rapid City Regional is considered local area and does not require CHARLIE notification or TOP 3 approval.

3.6.5. **(Added-ELLSWORTHAFB)** Incentive Flights and busy taxi scheduling**.** Due to the increased weather egress considerations, no incentive flights will be scheduled from 1 November to 31 March. All incentive flights and busy taxis will be annotated on the flying schedule and briefed during the weekly 21-165 brief.

3.6.6. **(Added-ELLSWORTHAFB)** The 28 OG/CC or SQ/CC determine aircraft that require an OCF in coordination with the Aircraft Maintenance Unit (AMU) or the 28th Aircraft Maintenance Squadron (AMXS) supervision. An OCF may be scheduled for aircraft after extended downtime (over 30 days) or extensive maintenance which does not require a Functional Check Flight (FCF). OCFs:

3.6.6.1. **(Added-ELLSWORTHAFB)** Require one IP, one IWSO, and two other qualified crewmembers (a pilot and a WSO).

3.6.6.2. **(Added-ELLSWORTHAFB)** Will not employ or carry weapons unless required to complete the OCF. Fuel loads will be restricted to the minimum necessary to complete the OCF and return to base with adequate reserves.

3.6.6.3. **(Added-ELLSWORTHAFB)** Normally be flown in daylight Visual Meteorological Conditions (VMC). OCFs may be accomplished during hours of darkness if VMC exist at the departure field and failure or malfunction of the component or system to be checked would not affect operation of the aircraft at night or in IMC.

3.6.6.4. **(Added-ELLSWORTHAFB)** Will include a post-flight review of the OCF checklist and aircraft forms with Maintenance Quality Assurance (QA) and aircrew during debrief to ensure all requirements were accomplished.

3.6.7. **(Added-ELLSWORTHAFB)** Warrior Flybys. All Warrior Flybys will be annotated on the flying schedule. Warrior Flybys will be coordinated and flown IAW EAFBI 11-250 and AFI 11-209 AFGSC Sup. Aircrews will advise SOF NLT 10 minutes prior to the Time of Target (TOT).

3.6.8. **(Added-ELLSWORTHAFB)** Aircrew Flight Equipment. Aircrews will wear or carry the following during flight: flight suit, flight gloves, flight boots, harness, helmet, knife with hook blade, ID tags and eyeglasses (if applicable).

3.6.8.1. **(Added-ELLSWORTHAFB)** Survival Vests Wear. Aircrews will wear survival vests on combat sorties, ocean crossing sorties and as directed by exercise ROE, SPINS or SQ/CC.

3.6.8.2. **(Added-ELLSWORTHAFB)** Winter/Cold Weather. In addition to items in **paragraph 3.6.7**, from 1 November to 31 March, or when temperatures along the route of flight are expected to be less than 15 degrees Fahrenheit (-9 degrees Celsius), aircrew will also wear or carry:

3.6.8.2.1. **(Added-ELLSWORTHAFB)** Winter weight flight jacket

3.6.8.2.2. **(Added-ELLSWORTHAFB)** Thermal underwear (aramid or cotton)

3.6.8.2.3. **(Added-ELLSWORTHAFB)** Winter flying gloves

3.6.8.2.4. **(Added-ELLSWORTHAFB)** Winter weight flight boots (not required but highly encouraged)

3.6.8.3. **(Added-ELLSWORTHAFB)** Overwater. Reference AFMAN 11-302V2 for guidance.

3.7. (Added-ELLSWORTHAFB) Ground Operations.

3.7.1. **(Added-ELLSWORTHAFB)** No Taxi Conditions. In addition to T.O. 1B-1B-1 guidance, aircrew should not taxi with any of the following malfunctions: brake (dragging, hung, hot etc.), tire (deflated or blown), Nose Wheel Steering (NWS) failure, hydraulic leak, or fuel leak.

3.7.2. **(Added-ELLSWORTHAFB)** Aircraft Chock Locations.

3.7.2.1. **(Added-ELLSWORTHAFB)** A set of nosewheel chocks and fire bottle are located in the EOR for runway 13 and 31.

3.7.2.2. **(Added-ELLSWORTHAFB)** In the event of a hydraulic system failure resulting in loss of brakes, aircrew are encouraged to chock the aircraft after it has come to a complete stop if the potential exists for the aircraft to begin rolling and the aircrew deems it is safe to do so.

3.7.3. **(Added-ELLSWORTHAFB)** Static Display Guidelines.

3.7.3.1. **(Added-ELLSWORTHAFB)** Local. For on-station tours and displays, aircrew will meet the following requirements:

3.7.3.2. **(Added-ELLSWORTHAFB)** . Public Affairs (PA) Coordinated, contact the PA Officer (385-5056) for location and special instructions.

3.7.3.3. **(Added-ELLSWORTHAFB)** Not coordinated with PA (i.e. family tours), aircrew will contact the Maintenance Operations Center (MOC) (385-4879) with the following information:

3.7.3.3.1. **(Added-ELLSWORTHAFB)** Location of tour.

3.7.3.3.2. **(Added-ELLSWORTHAFB)** Name of escort.

3.7.3.3.3. **(Added-ELLSWORTHAFB)** Number of people in the tour.

3.7.3.4. **(Added-ELLSWORTHAFB)** Aircrew must contact the following agencies when scheduling flight line tours/displays and before entering the flight line.

3.7.3.5. **(Added-ELLSWORTHAFB)** Airfield Management/Base Operations (385-1052).

3.7.3.6. **(Added-ELLSWORTHAFB)** Law Enforcement Desk (385-4001).

3.7.3.7. **(Added-ELLSWORTHAFB)** Aircrew require written approval from PA for visitors to use cameras and video.

3.7.3.8. **(Added-ELLSWORTHAFB)** Aircrew must ensure no classified material or sensitive equipment is photographed or videotaped.

3.7.3.9. **(Added-ELLSWORTHAFB)** If any pictures will be released to the public, then PA must review them.

3.7.3.10. **(Added-ELLSWORTHAFB)** Aircrew providing a flight line tour must not display their line badge during photographs.

3.7.3.11. **(Added-ELLSWORTHAFB)** Off station static displays will comply with AFMAN 11-218 taxi and towing clearance guidance.

3.7.3.12. **(Added-ELLSWORTHAFB)** The aircraft ejection seats must be safed prior to permitting visitors into the cockpit. Maintenance should use zip ties or safety wire to safe the aircraft ejections seats if non-aircrew members will be inside the cockpit.

3.7.4. **(Added-ELLSWORTHAFB)** Weather.

3.7.4.1. **(Added-ELLSWORTHAFB)** Lightning.

3.7.4.1.1. **(Added-ELLSWORTHAFB)** If lightning is outside of 5 NM, aircrew may shutdown and leave the aircraft for another form of shelter (vehicle/building).

3.7.4.1.2. **(Added-ELLSWORTHAFB)** If lightning is within 5 NM, aircrew will remain inside the aircraft.

3.7.4.1.3. **(Added-ELLSWORTHAFB)** Aircrew may continue to operate engines or Auxiliary Power Units (APUs).

3.7.4.1.4. **(Added-ELLSWORTHAFB)** The decision to shut down or remain on power rests with the aircraft commander.

3.7.4.1.5. **(Added-ELLSWORTHAFB)** If lightning is within 5 NM and other more severe weather conditions are present or forecast (e.g. tornadoes), then the aircrew may leave the aircraft for other shelter.

3.7.4.1.6. **(Added-ELLSWORTHAFB)** If lightning strikes the aircraft, aircrew will completely shutdown. The decision to egress the aircraft while lightning is within 5 NM is up to the aircraft commander and will take into consideration the closest shelter location, anticipated duration of the lightning condition, and additional hazards associated with the storm.

3.7.4.2. **(Added-ELLSWORTHAFB)** Cold Weather Operations.

3.7.4.2.1. **(Added-ELLSWORTHAFB)** Deicing.

3.7.4.2.1.1. **(Added-ELLSWORTHAFB)** Deicing can be done on the south ramp, 60/70/80/90/100 rows, Live Ordnance Loading Area (LOLA), north hammerhead, south hammerhead, taxiway alpha south, alert pad, hot cargo pad, and taxiway delta west.

3.7.4.2.1.2. **(Added-ELLSWORTHAFB)** If the aircraft was deiced, cycle parking brake, flaps/slats, and flight controls to ensure proper operation and freedom of movement prior to taxi.

3.7.4.2.2. **(Added-ELLSWORTHAFB)** Preconditioning of ADGs.

3.7.4.2.2.1. **(Added-ELLSWORTHAFB)** When outside air temperature is 0°F to 40°F, precondition the Accessory Drive Gearboxes (ADGs) by running the APUs uncoupled for 2 minutes. When outside air temperature is 0°F or below, precondition the ADGs by running the APUs uncoupled for 4 minutes. For both instances, after coupling ADGs wait approximately 1 minute prior to bringing generators on line. Do not run APUs more than 5 minutes without electrical power.

3.7.4.2.3. **(Added-ELLSWORTHAFB)** Engine Operation during Induction Icing.

3.7.4.2.3.1. **(Added-ELLSWORTHAFB)** Visible moisture will be locally defined as rain/drizzle, freezing rain/drizzle, snow or when visibility is less than 2 SM. This is more restrictive than 1B-1B-1 guidance and will be used for the "Visible Moisture (Note 3)" Section of the B-1 icing envelope table of the T.O..

3.7.4.2.3.2. **(Added-ELLSWORTHAFB)** . In addition to induction icing guidance in T.O. 1B-1B-1, Ellsworth aircrew will observe the following restrictions. Aircrew will not operate engines under the following conditions unless flying in support of an exercise, on a HHD mission, or specifically waived by the 28 OG/CC:

3.7.4.2.3.2.1. **(Added-ELLSWORTHAFB)** Freezing fog, freezing drizzle or freezing rain.

3.7.4.2.3.2.2. **(Added-ELLSWORTHAFB)** Any time a 3 minute observation interval is required by T.O.. 1B-1B-1.

3.7.4.2.3.3. **(Added-ELLSWORTHAFB)** The Aircraft Commander will designate an aircrew member to monitor timing of inlet checks when in the induction icing potential zone to ensure time limits are not exceeded.

3.7.4.2.3.4. **(Added-ELLSWORTHAFB)** Conditions defined in this paragraph do not preclude crews from accomplishing approaches and landings. If conditions deteriorate into the 3 minute zone or other situations where aircrew will not run engines, crews will do one approach to a full stop, taxi into the End of Runway (EOR) and shut down completely.

3.7.4.2.3.5. **(Added-ELLSWORTHAFB)** Aircrew may taxi to final parking or the hot pits without an engine inlet check in the EOR if landing in the 10 minute or 15 minute zone as defined in T.O.. 1B-1B-1.

3.7.5. **(Added-ELLSWORTHAFB)** Engine Running Crew Change (ERCC) / Hot Pit Refueling.

3.7.5.1. **(Added-ELLSWORTHAFB)** Aircraft commanders will complete the AF 781 to include sortie duration, fuel, write-ups, and brief the on-coming pilot.

3.7.5.2. **(Added-ELLSWORTHAFB)** Squadron schedulers will annotate all ERCC or Hot Pit sorties on the weekly flying schedule.

3.7.5.3. **(Added-ELLSWORTHAFB)** During an ERCC or Hot Pit aircrew will stow all loose items, ensure all pockets and flight bags are zipped, and wear gloves and helmet or headset.

3.7.6. **(Added-ELLSWORTHAFB)** Bird Avoidance.

3.7.6.1. **(Added-ELLSWORTHAFB)** Aircrew will use all means available to determine the Bird Watch Condition (BWC) for all approaches. They will follow procedures in the EAFB BASH plan for the applicable BWC.

3.7.6.2. **(Added-ELLSWORTHAFB)** For all activities other than approaches, aircrew will not enter the low-altitude structure (5,000' AGL) in airspace where the relative risk is level "Moderate" or "Severe" without receiving Top 3 or CHARLIE approval respectively.

3.7.6.3. **(Added-ELLSWORTHAFB)** During BASH Phase II. Aircrew will not takeoff, land or accomplish pattern work from one hour prior to one hour after sunset or sunrise without CHARLIE approval.

3.7.7. **(Added-ELLSWORTHAFB)** Taxi-Ride and Incentive Programs.

3.7.7.1. **(Added-ELLSWORTHAFB)** Busy Taxis. Reference Incentive Taxi-Ride Program in AFI 11-401 AFGSC supplement **paragraph A2.5.2.1.4** for guidance (Also referenced in 28 BW In-Flight Guide).

3.7.7.2. **(Added-ELLSWORTHAFB)** Incentive Flights. Reference Incentive Flights guidance in AFI 11-401 AFGSC supplement **paragraph A2.5.1** (Also referenced in 28 BW In-Flight Guide). In addition: incentive flyers:

3.7.7.2.1. **(Added-ELLSWORTHAFB)** May taxi the aircraft to the hammerhead but will transition to the Defensive System Operator (DSO) seat before takeoff.

3.7.7.2.2. **(Added-ELLSWORTHAFB)** Will sit in the DSO seat for takeoff, landing and any flight less than 10K feet MSL. The incentive flyer may sit in the left pilot seat for any high-altitude maneuvering if a current instructor pilot occupies the right pilot seat. The incentive flyer will transition back to the DSO seat before descending back through 10K feet MSL.

3.7.7.2.3. **(Added-ELLSWORTHAFB)** May sit in the left pilot seat for the "Rushmore Arrival". This is the only exception to the 10K feet restriction, and the aircraft commander will ensure that appropriate time and consideration is given after the arrival for the incentive flyer to transition back to the DSO seat before landing.

3.7.8. **(Added-ELLSWORTHAFB)** Overheated / Hot Brakes.

3.7.8.1. **(Added-ELLSWORTHAFB)** Aircrews will declare an emergency for a hot brake situation (BRAKE TEMP light illuminated indicating brake temperature exceeding 600 degrees). The fire department will control the situation until the ground emergency is terminated. The north and south hammerheads are designated as hot brake inspection areas.

3.7.8.2. **(Added-ELLSWORTHAFB)** If the Central Integrated Test System (CITS) shows temperatures of 720 degrees or greater, shutdown and egress the aircraft. Chock the nose gear tires, time and conditions permitting.

3.7.8.3. **(Added-ELLSWORTHAFB)** Aircrews returning with known or suspected dragging brakes will roll out the length of the runway, exit, and stop in the departure end hammerhead to monitor brake temps.

3.7.8.4. **(Added-ELLSWORTHAFB)** If the BRAKE TEMP light illuminates on landing roll, declare a ground emergency, and hold in the nearest hammerhead until the fire department clears the aircraft to proceed.

3.7.8.5. **(Added-ELLSWORTHAFB)** Dragging or Hung Brakes: One or more brakes with temperatures significantly higher than other brakes may be an indication of a dragging or hung brake(s). If the aircrew suspects dragging brakes, stop taxiing as soon as possible and follow technical order guidance. Taxiing to a hot brake area may not be feasible since the brake(s) may continue to overheat and cause additional aircraft damage.

3.7.8.6. **(Added-ELLSWORTHAFB)** IAW T.O. 1B-1B-6, maintenance personnel are required to perform landing gear and anti-skid inspections if brake temperatures exceed 600º. If brake temperatures exceed 600º (via CITS or BRAKE TEMP light) aircrews will notify maintenance personnel and anticipate shutting down engines.

3.8. (Added-ELLSWORTHAFB) In-Flight Operations.

3.8.1. **(Added-ELLSWORTHAFB)** Aircrew Duties. Use the Bone Standards and the additional EAFB flight standards in **Attachment 3** in all phases of flight unless briefed otherwise.

3.8.2. **(Added-ELLSWORTHAFB)** Reduced Lighting. Aircrew will not use reduced lighting in the local area. Reduced lighting operations may be conducted in accordance with AFMAN 11-202v3 and appropriate range/restricted area guide. Reduced lighting is defined as the lack of strobe and position lights for any phase of flight. Normal operations will include positions lights in Bright/Steady. Operations with lights in Dim/Steady is only authorized with CHARLIE approval.

3.8.3. **(Added-ELLSWORTHAFB)** Over-G indication procedures.

3.8.3.1. **(Added-ELLSWORTHAFB)** In the event CITS flags an over-g the following guidance applies:

3.8.3.1.1. **(Added-ELLSWORTHAFB)** If the pilots are able to confirm that actual G load remained within T.O. 1B-1B-1 limits (e.g. they were looking at the G meter at the time CITS flagged the over-g) it is not an over-g. .Crews may continue the mission as planned.

3.8.3.1.2. **(Added-ELLSWORTHAFB)** Crews will report to SOF on check-in a "CITS Flagged Over-G" with actual G observed. SOF will relay to MOC and CITS data will be analyzed before the aircraft flies again to confirm pilot observations were correct.

3.8.3.1.3. **(Added-ELLSWORTHAFB)** If the pilots are unable to confirm the actual G at the time CITS flagged the over-g then crews will follow over-g guidance in this document **paragraph 6.13.2.3**.

3.8.4. **(Added-ELLSWORTHAFB)** Abnormal Procedures. As soon as possible, crews will advise the SOF of their situation and any requests for assistance as time and conditions permit.

3.8.5. **(Added-ELLSWORTHAFB)** Air Abort Conditions. In addition to T.O. 1B-1B-1 guidance, aircrew will abort the mission and return to base if any of the following events are known or suspected to have occurred in-flight: physiological incident, over-g, un-commanded flight control input, hung ordnance, bird strike, lightning strike or aircraft damage.

3.8.6. **(Added-ELLSWORTHAFB)** Bailout and Jettison Areas. Reference EAFB 11-250.

3.8.7. **(Added-ELLSWORTHAFB)** Post Non-Combat Ejection Search and Rescue (SAR) Procedures.

3.8.7.1. **(Added-ELLSWORTHAFB)** Immediate Actions. If able, attempt to contact the Ellsworth Command Post at 605-385-3800 via any means available (cell phone, resident phone, etc.).

3.8.7.2. **(Added-ELLSWORTHAFB)** Survivor 3-Hour Actions. If weather is extreme, recovery may be delayed. If needed, use inflated life raft as a shelter. Don the Emergency Survival Shelter Sleep System in the survival kit. Turn on the survival kit Electronic Device Beacon and leave on until recovery is in the area. Continue to try and make contact with Ellsworth command post. Be prepared to use signaling devices for rescue.

3.8.8. **(Added-ELLSWORTHAFB)** Fuel Jettison Procedures.

3.8.8.1. **(Added-ELLSWORTHAFB)** During an in-flight emergency (IFE) aircrews may jettison fuel without prior approval if necessary to safely recover the aircraft.

3.8.8.2. **(Added-ELLSWORTHAFB)** In non-emergencies, aircrews will jettison fuel only with CHARLIE approval and in coordination with the applicable Air Traffic Control (ATC) Center. If possible, fuel jettison should be conducted at or above FL 200 and over unpopulated areas. Crews will notify ATC of location and altitude prior to commencing and upon termination of fuel jettison procedures.

3.8.8.3. **(Added-ELLSWORTHAFB)** After landing, aircrews will provide the following information to 28 BW Command Post: time, type aircraft, type fuel, jettison coordinates, altitude, airspeed, quantity, reason, rate (ppm), outside air temperature, wind direction and velocity.

3.8.9. **(Added-ELLSWORTHAFB)** Before Landing.

3.8.9.1. **(Added-ELLSWORTHAFB)** Upon entering the local area or completion of local MOA/Air Refueling (AR) activity, aircrew will provide the SOF with sortie effectiveness, estimated land time, fuel remaining, estimated pattern activity and maintenance status.

3.8.9.2. **(Added-ELLSWORTHAFB)** Use the following guidance to determine sortie effectiveness:

3.8.9.2.1. **(Added-ELLSWORTHAFB)** A sortie should be considered Ready Aircrew Program (RAP) effective if a tactical profile was accomplished in accordance with the current RAP Tasking Memorandum (RTM). RAP effective sorties will be logged as Yes/No for the entire crew.

3.8.9.2.2. **(Added-ELLSWORTHAFB)** An effective training sortie is defined as having completed planned upgrade training or evaluations dictated by the 11-2B-1V1/2, 11-202V1/2 or approved syllabus. This also includes accomplishing a currency item as outlined in the 11-2B-1V1 and current RTM or lucrative training opportunities such as actual weapon release or package integration. (e.g. FLUG/MML, AC/SML, MQT, Night AR, Actual Weapon Release). Sortie training effectiveness should be considered for each crewmember.

3.8.10. **(Added-ELLSWORTHAFB)** Fuel Tracking. Aircraft Commanders will log fuel usage of every sortie in PEX. Squadron Aircraft Commander upgrade academics will include instructions on the correct procedures to enter the data in PEX.

3.8.11. **(Added-ELLSWORTHAFB)** Beyond Line of Sight (BLOS) tracking. Mission leads will make every attempt to check JREAP, SATCOM and Link-16 status during all local flights. Squadron Duty Officers (SDOs) will document BLOS tracking status in the SOF log. Any airborne discrepancies should be passed to the SOF in conjunction with the aircraft maintenance status.

3.8.12. **(Added-ELLSWORTHAFB)** Diverts.

3.8.12.1. **(Added-ELLSWORTHAFB)** When conditions permit, aircrew will notify the SOF, 28 BW Command Post and squadron leadership of the divert. Include the following information: reason for the divert, route of flight, Estimated Time of Arrival (ETA), fuel on board, fuel reserve at the Initial Approach Fix (IAF) of the divert base, aircraft maintenance status, departure time, and tail number.

3.8.12.2. **(Added-ELLSWORTHAFB)** Enroute to the divert base, aircrew will contact the divert base command post, SOF, or pilot-dispatch and pass the following information: type of aircraft, hung/retained weapons, ETA, fuel on board, maintenance assistance required, and number of crewmembers. Coordinate landing authority and special instructions, if required. Request the latest airfield status, Notices to Airman (NOTAMS), and weather.

3.8.12.3. **(Added-ELLSWORTHAFB)** After landing, aircrew will coordinate with transient alert or maintenance for fuel, proposed departure date/time, and maintenance or servicing. Crews will also secure communication kits and classified materials at an appropriate/certified location. Immediately after arrival, crews will notify their squadron leadership and provide the takeoff and landing times (from AFTO 781), crew rest start and completion times, aircraft status, crew location, and contact phone number. Squadron leadership will pass this information to MOC and 28 BW Command Post (DSN 675-3800).

3.8.12.4. **(Added-ELLSWORTHAFB)** Prior to departure from off station location, crews will pass proposed departure time and planned arrival time to squadron leadership and/or Top-3 who will pass the information to the 28 BW Command Post.

3.8.13. **(Added-ELLSWORTHAFB)** Off-station Operations.

3.8.13.1. **(Added-ELLSWORTHAFB)** Off-station operations are defined as any aircraft flight operations not taking off from or landing at Ellsworth AFB that still fall under OPCON of the 28 BW/CC.

3.8.13.2. **(Added-ELLSWORTHAFB)** For Bomber Task Force or other long duration missions reference **Attachment 4** for planning and operational considerations.

3.8.13.3. **(Added-ELLSWORTHAFB)** The POC should coordinate through the Sq/CC or Director of Operations (DO) a minimum of one week prior to the sortie.

3.8.13.4. **(Added-ELLSWORTHAFB)** The POC will brief the OG/CC and BW/CC on the off-station plan as part of the weekly scheduling process or as directed.

3.8.13.5. **(Added-ELLSWORTHAFB)** Aircrews executing off-station missions and airshows will meet the following requirements:

3.8.13.5.1. **(Added-ELLSWORTHAFB)** Review and comply with AFMAN 11-202V3 and AFGSC supplement mission planning and unfamiliar field guidance.

3.8.13.5.2. **(Added-ELLSWORTHAFB)** Aircrew will arrange for proper storage for all classified material.

3.8.13.5.3. **(Added-ELLSWORTHAFB)** Aircrews will report daily to squadron leadership and the 28 BW Command Post with the following information: call sign, location, event, daily flight schedule and planned duration, changes to previous day's flight schedule or duration, aircraft maintenance status, personnel issues, and remarks (any additional information the aircraft commander/Detachment Commander (DETCO) deems appropriate). If no activity is planned, the aircraft commander/DETCO will submit a report which indicates that. Any events of a critical nature shall be reported immediately.

3.8.13.5.4. **(Added-ELLSWORTHAFB)** Be current in aircraft servicing and marshalling procedures.

3.8.13.5.5. **(Added-ELLSWORTHAFB)** Aircraft Commanders will:

3.8.13.5.5.1. **(Added-ELLSWORTHAFB)** Determine restrictions and obstacles not identified in FLIP by contacting the destination airport manager, airport director, or base operations.

3.8.13.5.5.2. **(Added-ELLSWORTHAFB)** Ensure approved fuel is available.

3.8.13.5.5.3. **(Added-ELLSWORTHAFB)** Ensure an electrical starting unit (AC: 115/200v, 3 phase, 90kva; DC: 28v, 1500 amp, 72kw) is available.

3.8.13.5.5.4. **(Added-ELLSWORTHAFB)** Ensure a universal tow bar and tug are available.

3.8.13.5.5.5. **(Added-ELLSWORTHAFB)** Before departing Ellsworth AFB, the aircraft commander will confirm a maintenance divert kit and a B-1 tow bar adapter are loaded on the aircraft.

3.8.14. **(Added-ELLSWORTHAFB)** Customs Procedures for B-1 Aircraft.

3.8.14.1. **(Added-ELLSWORTHAFB)** Outbound Aircraft. For information regarding customs clearance at overseas destinations, refer the DoD Foreign Clearance Guide. Contact the customs program manager for further information, as required.

3.8.14.2. **(Added-ELLSWORTHAFB)** Inbound Aircraft. Aircrew and aircraft will clear customs at the first port of entry encountered upon returning to U.S. territory. If Ellsworth AFB is the initial port of entry, contact command post at least two (2) hours before landing to notify Security Forces (SFS)/customs officials to meet the aircraft upon arrival.

3.8.14.3. **(Added-ELLSWORTHAFB)** Crews will not leave the aircraft or remove baggage or personal effects until cleared to by a customs official. Galley waste, except for hazardous containers such as aerosol cans, will be double bagged and turned over to customs officials for incineration.

3.8.14.4. **(Added-ELLSWORTHAFB)** The aircraft commander is responsible for providing the customs official with the following: customs Form 7507, General Declaration for Customs (Outward/Inward), customs Form 6059B, Customs Declarations (Individual) for each crew member, flight orders that include all crewmember names, and a permit to proceed (if provided at another base).

Chapter 4

INSTRUMENT PROCEDURES

4.1. Approach Category. The B-1 is approach Category E in Table 4.2 of AFMAN 11-202V3. Use approach Category D minimums in an emergency or divert situation where no Category E minimums are published and the following criteria are met:

4.1.1. A straight-in approach is flown.

4.1.2. The aircraft GW allows final approach airspeed of 165 KIAS or less.

4.1.3. Fly the missed approach segment of the approach, at 255 knots True Airspeed (KTAS) or less. **(T-2)**. Aircrews should know that at high pressure altitudes and temperatures, normal missed approach procedures might allow the aircraft to exceed 255 KTAS and in turn place the aircraft outside the obstacle clearance guaranteed in the missed approach segment. Units may request MAJCOM assistance to have Category E minimums published for airfields used on a recurring basis for emergency or divert practice approach work.

4.2. Primary Means of Navigation. B-1 Aircrew will only use approved primary means of navigation. **(T-2)**. The B-1 is approved to use BLENDED, global positioning system (GPS) ONLY or inertial navigation unit (INU) ONLY navigation solutions for area navigation (RNAV) or basic area navigation airspace or routes. The B-1 is not certified to fly Required Navigation Performance (RNP), RNAV, Lateral Navigation (LNAV), Vertical Navigation (VNAV), Localizer Performance with Vertical Guidance (LPV), or Baro-VNAV terminal procedures (approaches, departures, or arrivals). **(T-2)**. See **Table 4.1** for a complete list of B-1 Communication, Navigation, Surveillance (CNS) and Air Traffic Management (ATM) approved operations.

Table 4.1. B-1 CNS/ATM Operational Approvals.

Airspace or Equipment Type	Certified	Operational Approval	Training Required
Frequency modulation Immunity	Yes	Yes	No
8.33 Radios	Yes	Yes	No
Elementary Mode S	No	No	No
Enhanced Mode S	No	No	N/A
TCAS Version 7	No	No	N/A
RNAV/GPS Approaches	No	No	N/A
RNAV/RNP Approaches	No	No	N/A
LNAV/VNAV	No	No	N/A
LPV	No	No	N/A
RVSM (Reduced Vertical Separations Minima)	No	No	N/A
RNAV 10	Yes	Yes	Yes
RNAV 5	Yes	Yes	Yes
RNAV 2	No	No	N/A
RNAV 1	No	No	N/A
RNP 4	No	No	N/A
Basic RNP 1	No	No	N/A
RNP Approach	No	No	N/A
RNP Approach w/Baro-VNAV	No	No	N/A
RNP AR Approach	No	No	N/A
NAT-HLA/MNPS (North Atlantic-High-High Level Altitudes/Minimum Navigation Performance Standard)	No	No	N/A
Remote Oceanic	No	No	N/A
Note: 1. SB-17B modified aircraft will be Elementary Mode S capable.			

4.3. Simulated Instrument Flight. Aircrew will not use any vision-restricting devices to simulate instrument flight. **(T-3)**.

4.4. Airborne Instrument Landing Approach (AILA). Aircrew may practice AILAs provided:

4.4.1. A published approach procedure is used with a designated final approach fix (FAF). This does not restrict accomplishing an AILA when cleared for a visual approach from the radar pattern.

4.4.2. ATC clearance is obtained for the specific approach procedures selected. **(T-0)**

4.4.3. The appropriate ATC facility has been advised that an airborne directed radar approach will be flown in conjunction with the requested approach. **(T-3)**.

4.4.4. VMC must prevail from the FAF to the missed approach point or decision height. **(T-3)**. Aircrew will only fly AILAs under lower weather conditions during emergency situations where no other compatible approach is available. **(T-3)**.

4.4.5. Aircrew will terminate AILA and resume pilot navigation any time it becomes apparent that the aircraft will exceed published approach parameters. **(T-3)**.

Chapter 5

WEAPONS EMPLOYMENT

5.1. Planning Guidance. Units will ensure aircrews have current range information prior to flight. **(T-3)**. Reference AFI 11-214 for air-to-surface training procedures and AFMAN 11-2B-1V1, *B-1 Aircrew Training,* for certifications and scoring criteria.

5.1. (ELLSWORTHAFB) Weapons Employment.

5.1.1. **(Added-ELLSWORTHAFB)** Ground Weapon Checks. Crews will accomplish a pre-flight weapons check for any sorties with weapons loaded. The Offensive System Officer (OSO) will visually check each bay to ensure it matches the pre-planned weapon configuration. Crews will check at least one weapon per bay for correct fuse setting and solenoid configurations.

5.1.2. **(Added-ELLSWORTHAFB)** 28 OSS/OSKC will maintain the 28 BW Munitions, Fuzing and Countermeasure Standards. This guidance will include standard fuse settings, scheduling nomenclature for weapon loads, and notification timeline for weapon loads for both training and times of war and contingency operations.

5.1.3. **(Added-ELLSWORTHAFB)** MBW Weapon Corrections. The following range corrections will be applied to all Mk-82A/BDU-50A releases.

5.1.3.1. **(Added-ELLSWORTHAFB)** High Drag: -150 feet.

5.1.3.2. **(Added-ELLSWORTHAFB)** Low Drag: +450 feet

5.2. Target and Guided Weapon Checks.

5.2.1. Accomplish the bomb steer or launch acceptability regions (LAR) system checks with live or inert weapons over open water or sparsely populated areas to the maximum extent possible. **(T-3)**.

5.2.2. For combat operations, aircrew may accomplish bomb steer and/or LAR system checks with live weapons with the following restrictions:

5.2.2.1. The check(s) are briefed and meet local instructions and/or special instructions (SPINS) requirements. **(T-3)**.

5.2.2.2. All aircrew are at their primary duty stations during the check(s). **(T-3)**.

5.2.2.3. The offensive systems officer (OSO) verbalizes all switch positions while running the pre-release and release checklists and the defensive systems officer (DSO) confirms the switch positions. **(T-3)**.

5.2.2.4. For modifiable ballistics weapons (MBW), the OSO will return the NUC LOCK/UNLOCK switch to LOCK and/or the CONV ARM/SAFE switch to SAFE no later than 1+20 time-to-go until release. **(T-3)**.

5.2.2.5. For guided weapons, the CONV ARM/SAFE switch will remain in the SAFE position for the LAR check. **(T-3)**. The OSO NUC LOCK/UNLOCK switch may be checked in the UNLOCK position and the pilot WEAPON SWITCH may be checked in the RELEASE position granted the LAR check is accomplished outside the weapon LAR and the MSL AUTO/MAN switch is not placed in AUTO.

5.2.2.6. If applicable, the crew will disable the target(s) once the check(s) are complete. **(T-3)**.

5.2.2.7. Stores bay doors will remain closed throughout the check(s). **(T-3)**.

5.3. Actual Weapons Employment Training.

5.3.1. Aircrew will only release weapons on approved weapon ranges or release areas. **(T-2)**.

5.3.2. Aircrew are authorized to execute a dry clearing pass below 5,000 AGL/ASL when required by range procedures and in accordance with **AFI 11-214**. Aircrew will not operate lower than MSA or exceed 360 KIAS below 5,000 AGL/ASL. **(T-2)**. Aircrew will not attempt any actual or simulated weapons releases below 5,000 AGL/ASL. **(T-2)**.

5.3.3. Aircrew may accomplish pre-release checklist items prior to release when carrying weapons. However, the bomb release mode switch and the missile launch mode switch will both remain in MANUAL until release clearance is received, within range boundaries, and the aircrew is ready to release weapons. **(T-2)**.

5.4. Hung Weapons.

5.4. (ELLSWORTHAFB) Hung Weapon Procedures.

5.4.1. If hung weapon conditions are experienced, and the crew determines jettison of the weapon(s) is the best course of action, contact the range control officer for authorization to jettison hung weapons in a suitable area (pending local guidance).

5.4.2. For contingency operations, aircrew will jettison hung weapons in accordance with SPINS and/or unit guidance.

5.4.3. If hung weapons are not jettisoned, the crew will accomplish the *Post Release/Abort Checklist* and return to home station or other suitable landing base. **(T-3)**. Crews will avoid over-flight of populated areas and adhere to local hung stores procedures and guidance. **(T-3)**.

5.4.4. **(Added-ELLSWORTHAFB)** Aircrew will consider any live or inert weapon that does not separate from the aircraft following an attempted release a Hung Weapon. Weapons not released due to being blocked, a swing arm malfunction, or a slow switch status following squib fire are considered retained if the "hung" state is removed and the fault clears following corrective action by the OSO. Confirm hung status on the Weapon Tab (Data Expand Area on Tac Display) or AFS [DAB] page.

5.4.5. **(Added-ELLSWORTHAFB)** If able, confirm with the range controlling agency that the weapon did not release.

5.4.6. **(Added-ELLSWORTHAFB)** Do not attempt further releases from the affected bay unless the fault clears and no additional HUNG indications exist.

5.4.7. **(Added-ELLSWORTHAFB)** Accomplish Post Release/Abort checklist and reference T.O.. 1B-1B-1 Section III Hung Weapons pages. If doors remain open, close doors manually.

5.4.8. **(Added-ELLSWORTHAFB)** Proceed directly to home station. Avoid overflight of heavily populated areas.

5.4.8.1. **(Added-ELLSWORTHAFB)** At 30 minutes prior to landing, provide the SOF with:

5.4.8.2. **(Added-ELLSWORTHAFB)** Type, quantity, status, and condition of ordnance.

5.4.8.3. **(Added-ELLSWORTHAFB)** Location of weapons on aircraft.

5.4.8.4. **(Added-ELLSWORTHAFB)** Present location.

5.4.8.5. **(Added-ELLSWORTHAFB)** ETA.

5.4.8.6. **(Added-ELLSWORTHAFB)** Fuel.

5.4.8.7. **(Added-ELLSWORTHAFB)** Intentions.

5.4.8.8. **(Added-ELLSWORTHAFB)** Declare an IFE with approach for all hung weapons. Advise Tower of landing with hung store(s). Complete one straight-in approach to a full stop.

5.4.9. **(Added-ELLSWORTHAFB)** Live weapons:

5.4.9.1. **(Added-ELLSWORTHAFB)** Taxi to the north hammerhead (via back taxi if landing on runway 13). Taxiway Foxtrot is the alternate area.

5.4.9.2. **(Added-ELLSWORTHAFB)** When qualified weapons loaders arrive at the aircraft, start APUs and shut down engines. The aircrew (with the exception of the aircraft commander) will exit the aircraft and cordon area in the second maintenance vehicle and proceed to the vicinity of Spot 80 until the aircraft is safed. No actions toward safing or checking status of weapons will be accomplished until the cordon area is sterile of all personnel not participating in the safing procedure. The aircrew (and all non-participating personnel) will notify the expediter and/or SOF when they are outside the cordon area via ground emergency radio or UHF 311.0. Once the cordon area is clear of non-participating personnel, weapons status will be determined by the weapons personnel and the aircraft commander.

5.4.9.3. **(Added-ELLSWORTHAFB)** If weapons load technicians have inspected the aircraft and confirmed the aircraft is safe (either no ordnance present or the hung ordnance is secured), the crew may return to the aircraft. The aircraft can be towed or engines restarted and taxied to the parking spot. Crews should be cognizant of any safing pins installed by maintenance and should not taxi if pins/streamers could cause a FOD hazard to motors. At crew discretion (with Squadron Top 3 approval), if maintenance confirms no ordnance is present, engines may be restarted and further training conducted.

5.4.9.4. **(Added-ELLSWORTHAFB)** If an unsafe weapon configuration is detected, the senior weapons loader will advise the aircraft commander to abandon aircraft. The aircraft commander will shut down APUs and abandon aircraft.

5.4.10. **(Added-ELLSWORTHAFB)** For Inert weapons accomplish all of the same actions above with the following exceptions:

5.4.10.1. **(Added-ELLSWORTHAFB)** Taxi to the nearest hammerhead.

5.4.10.2. **(Added-ELLSWORTHAFB)** Remain on board and follow maintenance instructions.

5.5. Simulated Weapons Employment Training. Simulated weapons employment may be accomplished following actual weapon releases if; there are no release system, indicator, or weapon bay door malfunctions; the POST RELEASE/ABORT checklist is complete; and the release system is in full simulation.

5.6. Chaff, Flare and Towed Decoy Employment. Units will ensure that all personnel concerned are familiar with AFI 11-214; AFMAN 11-202V3; Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3212.02E, *Performing Electronic Attack in the United States and Canada*; and AFGSCI 10-706, *Electronic Attack Training and Emissions Control (EMCON) Procedures*. **(T-2)**.

5.6. (ELLSWORTHAFB) Chaff, Flare and Towed Decoy Employment.

5.6.1. Flare Procedures. In case of an inadvertent flare expenditure, contact the applicable airspace controller and advise them of the incident. Note the approximate location and estimated damage and immediately safe the expendable countermeasures (EXCM) system.

5.6.1.1. **(Added-ELLSWORTHAFB)** If an emergency jettison of flares was necessary due to overtemp, contact the SOF no later than 30 minutes prior to landing and report the following: suspected unsafe condition and previous actions; ETA; fuel remaining at IAF; and intentions. Declare an IFE and make one approach to a full stop. Complete landing rollout and taxi clear into departure-end hammerhead. Aircrew will shut down engines and return the aircraft to maintenance. Maintenance personnel will safe the EXCM system and inspect the flare cavities. Once flares are confirmed safe, the aircraft will be towed to parking. If any portion of the flare cartridge is protruding from the dispenser, cease all operations and notify EOD.

5.6.2. Towed Decoy Procedures. MLs will brief towed decoy deploy, transmit, and sever procedures any time its use is anticipated. Additionally, MLs will have a contingency plan in the event a decoy fails to sever.

5.6.2.1. At a minimum, the contingency plan will cover sever areas and requirements, minimum risk routing to a recovery base avoiding populated areas, T.O. 1B-1B-1, *Flight Manual USAF Series B-1 Aircraft,* section 3 procedures for landing with decoy in tow and airfield-specific instructions. **(T-3)**.

5.6.2.2. Units will develop local procedures for towed decoy fail-to-sever situations. **(T-3)**.

5.6.2.2.1. **(Added-ELLSWORTHAFB)** The definition of a fail to deploy decoy is the same as that for a hung weapon.

5.6.2.2.2. **(Added-ELLSWORTHAFB)** Aircrew will notify SOF of a fail-to-sever or deploy decoy no later than 30 minutes prior to landing and report the following: suspected unsafe condition and previous actions; ETA, fuel remaining, and intentions. An IFE will be declared. Upon landing, aircrew will stop straight ahead until maintenance can confirm the status of the towline and decoy. Aircrew will follow the instructions of the On Scene Commander (OSC) and be cognizant that taxiing may cause damage to the runway lighting, markers or other obstacles in the path of a deployed towline/decoy.

5.6.2.2.3. **(Added-ELLSWORTHAFB)** Aircrew will shut down where directed by the OSC. After engine shutdown, ground personnel will meet the aircraft and retrieve safety pins from the crew compartment.

5.6.2.2.4. **(Added-ELLSWORTHAFB)** The aircrew will inform the crew chief of the number of decoys expended.

5.6.2.2.5. **(Added-ELLSWORTHAFB)** The maintenance personnel will install the ALE-50 safety pins, resolve FOD and obstacle hazard and tow the aircraft back to parking.

5.6.2.2.6. **(Added-ELLSWORTHAFB)** Prior to safing the dispensers and/or confirming the status of any remaining decoys, all personnel must remain outside a clear zone to preclude injury if a decoy ejects. The clear zone consists of 50-foot distance directly to the rear of the aircraft and 10 feet side to side.

5.6.3. **(Added-ELLSWORTHAFB)** Retained expendables. Inform maintenance and annotate their location in the aircraft forms.

Chapter 6

OPERATIONAL LIMITS AND RESTRICTIONS

6.1. New or Modified Aircraft Equipment and Weapons. In flight, aircrew will only operate aircraft equipment which they are qualified or certified to operate unless either under the supervision of a current and qualified instructor of like specialty or otherwise specified by MAJCOM guidance. **(T-3)**.

6.2. Crew Restrictions.

6.2.1. Maximum number of individuals authorized in-flight is four.

6.2.2. Aircrew will only accomplish seat swaps when the aircraft is at a safe altitude (i.e., MSA or pattern altitude). Pilots will not conduct seat swaps with only two pilots on board. **(T-3)**.

6.2.3. **Single Weapon System Officer (WSO) Operations.** Flight surgeons, third pilots, incentive flight participants, etc., flying in the DSO position will be briefed on the following, at a minimum:

6.2.3. **(ELLSWORTHAFB)** An IWSO must occupy the OSO seat for all Single WSO operations. Exception: Experienced WSOs may occupy the OSO seat for three pilot operations.

6.2.3.1. Equipment operations (ladder or hatch operation, power latch reset or electrical multiplex control interrupt panel, central integrated test system (CITS) monitoring, and aft station temperature control). **(T-3)**.

6.2.3.2. Safety of flight indicators (flight parameter indicators and attitude indicators, radar altimeter, navigation (NAV) prime data). **(T-3)**.

6.2.3.3. Emergency procedures to include egress procedures. **(T-3)**.

6.2.4. Only a qualified B-1 aircrew member may occupy the OSO seat with the exception of orientation flights approved in accordance with DAFMAN 11-401, *Aviation Management*. **(T-3)**.

6.2.5. **(Added-ELLSWORTHAFB)** Transition Duty Day. The transition duty day is 12 hours. Beyond 12 hours transition will be limited to one approach to a full stop. The 28 OG/CC may waive this to 16 hours.

6.3. Unusual Attitudes Recovery. Aircrew will not intentionally place the aircraft in attitudes of greater than plus or minus 10 degrees pitch or bank angles greater than 45 degrees for the purposes of practicing recoveries. Aircrew will not practice unusual attitude recoveries at night, in instrument meteorological conditions (IMC), or below 15,000 feet AGL. **(T-3)**.

6.4. Flight Characteristic Demonstrations.

6.4.1. Flight characteristic demonstrations include:

6.4.1.1. Configured Approach to Stall Demonstration. **(T-3)**.

6.4.1.2. Aft Wing Approach to Stall Demonstration. **(T-3)**.

6.4.1.3. Stability Control and Augmentation System (SCAS) Off Demonstration. **(T-3)**.

6.4.2. Formal Training Unit (FTU) or Flight Instructor Course (FIC) qualified instructors may perform flight characteristic demonstrations in-flight provided they:

6.4.2.1. Perform the maneuvers during daylight hours. **(T-3)**.

6.4.2.2. Remain clear of clouds throughout the maneuvers. **(T-3)**.

6.4.2.3. Perform all maneuvers (except SCAS off demos) above 8,000 feet AGL. **(T-3)**.

6.4.2.4. Do not perform any Approach to Stall demonstrations with weapons onboard. **(T-3)**.

6.4.2.5. Ensure all aircrew members are strapped into their seats with their helmets on. **(T-3)**.

6.5. Fuel Requirements. Reserve fuel requirements will be the most restrictive value of the applicable AFMAN 11-202V3, *Flight Operations*, AFI 11-202V3 AFGSCSUP, *General Flight Rules*, or **Table 6.1** guidance.

6.5.1. **Normal Recovery Fuel.** Normal recovery fuel is the fuel on initial or FAF at the base of intended landing or alternate, if required. This is a general planning factor, and does not include any required fuel reserve or fuel required for final ballast capture. This value is based on an approach, go-around, and an additional radar pattern and landing at or above minimum fuel. Aircrew will always plan to land above minimum fuel. **(T-3)**.

6.5.1. **(ELLSWORTHAFB)** Single Compatible Runway. When filing to an airfield with a single compatible runway for B-1 operations, crews should consider landing with enough usable fuel to hold for a short period of time (i.e. 15-30 mins) before reaching min fuel in case of unscheduled runway closures.

6.5.2. **Minimum and Emergency Fuels.** Aircrew will declare minimum fuel or emergency fuel (as applicable) to the controlling agency when it becomes apparent an aircraft will land at the base of intended landing or alternate (if required), with the less than or equal to the amounts listed in **Table 6.1** **(T-3)**. After declaring minimum or emergency fuel, add the fuel status call and amount of fuel remaining (in minutes) to each new ATC facility.

6.5.3. **Remote or Island Recovery Fuel.** The fuel on initial or FAF at the remote or island destination of intended landing. This is a planning factor to be used for holding in lieu of filing an alternate for remote or island destinations, in accordance with AFMAN 11-202V3 and AFI 11-202V3 AFGSCSUP. This value is based on a climb from pattern altitude to FL200, holding for two hours at max endurance, and a radar pattern and landing at or above minimum fuel. The amount listed in **Table 6.1** may be reduced if an alternate is not required per AFMAN 11-202V3, and landing at or above minimum fuel is assured.

Table 6.1. Fuel Requirements.

Minimum Fuel	Condition
20,000 pounds	Normal Recovery Fuel (initial or FAF)
16,000 pounds	Minimum Fuel (final landing)
12,000 pounds	Emergency Fuel (final landing)
48,000 pounds	Remote or Island Recovery Fuel (initial or FAF) when holding in lieu of an alternate

6.6. Formation Restrictions. Aircrews will not conduct or perform any of the formation positions described in this instruction, AFMAN 11-2B-1V1 or AFTTP 3-3.B-1 until completing the appropriate formal training program unless under the supervision of a qualified instructor. **(T-3)**.

6.6.1. **Visual Formation.**

6.6.1.1. Aircrew may only fly visual formations during daylight hours. **(T-3)**.

6.6.1.2. Aircrew flying visual formation at or above 5,000 feet AGL will remain clear of clouds with at least two statute miles visibility. **(T-3)**.

6.6.1.3. Aircrew flying visual formation below 5,000 feet AGL will remain clear of clouds with a minimum ceiling and visibility of 1,500 feet AGL and 5 statute miles. **(T-3)**.

6.6.1.4. If aircrew are unable to maintain the visual formation requirements listed above, sensor formations will be used. **(T-3)**.

6.6.2. **Battle Damage (BD) Checks.** Flight leads should direct a BD check after actual weapon deliveries and prior to return to base. During day visual conditions BD checks, fly no closer than Route spacing. **(T-3)**. During night visual conditions BD checks, wingmen will maintain a sensor formation and each aircraft will use their targeting pod to execute the BD check. BD checks will not be performed during IMC. **(T-3)**.

6.7. Air Refueling Restrictions. Aircrew will not accomplish air refueling during training missions if either the tanker or receiver has a known emergency condition unless refueling is required for the safe recovery of the aircraft. **(T-3)**.

6.7.1. **Disconnect Malfunctions.**

6.7.1.1. Without tanker disconnect capability (including tanker manual operation without tanker disconnect capability or receiver emergency override operation) aircrew will air refuel only under the following conditions:

6.7.1.1.1. When necessary to ensure safe recovery of the aircraft. Minimize contacts and contact time to that required for safe recovery of the aircraft. **(T-3)**.

6.7.1.1.2. When necessary to complete contingency operations, deployment, redeployment, higher headquarter directed missions, or other operations when specifically directed by MAJCOM. **(T-3)**.

6.7.1.2. Aircrew may only conduct emergency override (manual boom latching) training with receiver IP supervision. Brief procedures during mission planning. **(T-3)**. Coordinate receiver pilot and boom operator procedures in accordance with applicable T.O.s. Receivers must demonstrate disconnect capability prior to accomplishing override operations. **(T-3)**.

6.7.2. **Air Refueling Breakaway Training and Envelope Limits Demonstration.**

6.7.2.1. Aircrew will not accomplish breakaway training or demonstrate envelope limits while in contact unless the receiver system is in normal and the aircrew has checked tanker disconnect capability with the applicable receiver by either a boom operator initiated or a boom limit switch disconnect. **(T-3)**.

6.7.2.2. For breakaway training, the tanker pilot, boom operator, and the receiver pilot must coordinate the maneuver before its actual accomplishment. **(T-3)**. This coordination must include when the maneuver will occur and who will give the command of execution. **(T-3)**.

6.7.3. **Maximum Air Refueling Altitude.** Normal training sorties should conduct air refueling at or below the maximum refueling altitudes at 1.3g available.

6.8. Radar Restrictions. Obtain permission to activate offensive radar set (ORS) electronic protection (EP) modes through AFGSC/A3TW. **(T-2)**. In order to operate the ORS with EP enabled, the airspace must be clear of radio frequency (RF) collection assets. **(T-3)**. Additionally, the airspace controlling agency must monitor for unplanned RF collection assets and have procedures to terminate ORS EP operations if RF collection assets arrive. **(T-3)**.

6.9. NVG Restrictions. Do not use NVGs during air refueling contacts or pattern operations. **(T-3)**. After takeoff, do not use NVGs until reaching 2,000 feet AGL or MSA, whichever is higher. **(T-3)**. On arrival, remove NVGs no later than the FAF or five nautical miles if performing a visual approach. **(T-3)**.

6.10. Takeoff and Landing Restrictions. See **Table 6.2** for landing pattern limitations and restrictions. If mission requirements dictate, the OG/CC may authorize recovery within the maximum flight manual limitations.

6.10.1. Aircrew will not taxi, takeoff, or land when the measured Runway Condition Reading (RCR) is less than nine without OG/CC approval. **(T-3)**.

6.10.2. Aircrew will not takeoff with a tailwind component greater than 10 knots on a dry runway or five knots on a wet runway without OG/CC approval. **(T-3)**.

6.10.3. Aircrew will not takeoff or land with crosswind components greater than 26 knots without OG/CC approval and landings will be to a full stop. **(T-3)**.

6.10.4. Aircrew will not practice No Slat/Flap full stop landings. **(T-3)**.

6.10.5. Aircrew will not perform overhead patterns at night. **(T-3)**.

6.10.6. Aircrew will not practice traffic patterns if any emergency conditions exist. **(T-3)**.

6.10.7. Normal touch and go landings or low approaches are permitted with a PITCH AUG 1, ROLL AUG 1, YAW AUG 1, and/or SPOILER 1 caution light illuminated.

6.10.8. Aircrew will make all landings within the touchdown zone (runway threshold to 3,000 feet). **(T-2)**.The optimum B-1 touchdown zone is 1,000 feet to 2,000 feet beyond the threshold.

6.10.9. **(Added-ELLSWORTHAFB)** Night touch-and-go training will not be accomplished without glideslope guidance (e.g. ILS, VASI, PAPI).

6.10.10. **(Added-ELLSWORTHAFB)** Combat Departures. Combat departure takeoff gross weight for training sorties will not exceed 350,000 lbs.

Table 6.2. Traffic Pattern and Landing Limitations and Restrictions.

Approach Type	Gross Weight	Crosswind Component	Weather	IP Supervision	Night	RCR
Normal Low Approach	275,000 (**Note 12**)	N/A	Published Minimums	No	Yes	N/A
Normal Touch and Go (**Note 1**)	275,000 (**Note 12**)	20 Knots	500 feet/1 statute mile (**Note 5**)	No	Yes	12
Normal Full Stop Landing	275,000 (**Notes 6, 12**)	26 Knots (**Note 7**)	Published Minimums	No	Yes	9 (**Note 7**)
No Slat/Flap Low Approach	275,000 (**Note 12**)	N/A	(**Note 2**)	No	Yes	N/A
No Slat/Flap Touch and Go (**Note 1**)	250,000	15 Knots	(**Note 2**)	No (**Notes 8, 9**)	Yes (**Note 9**)	Dry
½, ¼, and ¾ Flap Touch and Go (**Note 1**)	250,000	15 Knots	(**Note 2**)	Yes	Yes	Dry
Simulated Engine Out Low Approach (**Note 3**)	275,000 (**Note 12**)	N/A	(**Note 2**)	Yes (**Notes 9, 10**)	Yes (**Notes 9, 10**)	N/A
Simulated Engine Out Touch and Go (**Notes 1, 4**)	275,000 (**Note 12**)	10 Knots	(**Note 2**)	Yes (**Notes 9, 10**)	Yes (**Notes 9, 10**)	Dry
Simulated Engine Out Full Stop Landing (**Notes 1, 4**)	275,000 (**Note 12**)	10 Knots	(**Note 2**)	Yes (**Notes 9, 10**)	Yes (**Notes 9, 10**)	Dry
SCAS Off Low Approach (**Note 3**)	275,000 (**Note 12**)	N/A	(**Note 2**)	Yes (**Note 11**)	Yes	N/A
SCAS Off Full Stop Landing (**Note 1**)	275,000 (**Note 12**)	10 Knots	(**Note 2**)	Yes (**Note 11**)	No	Dry
Slat Only Touch and Go (**Note 1**)	230,000	15 Knots	(**Note 2**)	Yes (**Note 11**)	No	Dry
25º Wing No Slat or No Flap Touch and Go(Note 1)	250,000	15 Knots	(**Note 2**)	Yes (**Note 11**)	No	Dry

Notes:
1. Go around if not in the designated touchdown zone. Runway length and RCR must permit an aborted takeoff using computed landing ground run distance. **(T-3)**.
2. Weather required is 1,000 feet/2 statute mile visibility or circling minimums, whichever is higher.
3. Initiate go around or missed approach no lower than 200 feet height above threshold.
4. Takeoff portion and unplanned go around requires symmetrical thrust.
5. May fly published minimums with an IP.
6. Sq/CCs (delegated no lower than Ops Sup) may grant waivers to make landings to a full stop. Notify the OG/CC if waiver is granted. Full stop landings are authorized to T.O. 1B-1B-1 GW limits in an emergency or safety of flight situation.
7. OG/CC may authorize aircraft recovery within maximum flight manual limitations.
8. Stability Enhancement Function/Stall Inhibitor System (SEF/SIS) must be operational to conduct no-flap touch and go training without IP supervision. **(T-3)**.
9. IP Supervision required for co-pilots and during night or IMC conditions. **(T-3)**.
10. FTU IP or FIC IP supervision is required for simulated two engine out approaches, touch and go or full stop landings. **(T-3)**.
11. FTU IP or FIC IP supervision is required. **(T-3)**.
12. All transition work should be accomplished below 250,000 pounds. For GWs between 250,000 and 275,000 pounds, aircrew are limited to one approach or touch and go/landing per pilot. Sq/CCs (delegated no lower than Ops Sup) may grant waivers. Notify the OG/CC if waiver is granted.

6.11. Navigation Equipment Restrictions.

6.11.1. An inertial navigation system (INS) must be operational as the prime navigation model for takeoff on all missions except for flight in the local area during day visual conditions. **(T-3)**. Missions outside the local area requiring INS in-flight alignment may launch with operations supervision approval provided VMC can be maintained until the INS is aligned. **(T-3)**.

6.11.2. Do not takeoff with the gyro stabilization system (GSS) inoperative (steady illumination of the GSS caution light), unless performing a simulated GPS-out sortie. **(T-3)**. GPS-out flight considerations must be briefed during mission brief including but not limited to INS alignment procedures and radar position update points. **(T-3)**.

6.11.3. Two primary attitude modes (INS and GSS) will be operational for flight at night or in instrument meteorological conditions. **(T-3)**.

6.11.4. Do not take off if the INS and GSS headings differ more than four degrees (unless staying in the local area under day visual meteorological conditions). **(T-3)**.

6.11.5. Both aft station attitude indicators must be fully operational for takeoff. **(T-3)**.

6.11.6. Avionics control unit (ACU) restarts and INS air alignments.

6.11.6.1. Do not practice in-flight ACU restarts or simultaneous air alignment of all operable INSs at night or in IMC unless the GSS is operational and selected and the TACAN is operational.

6.11.6.2. During any in-flight ACU restart or INS air alignment, maintain straight and level flight to the maximum extent possible and crosscheck primary flight reference (PFR) attitudes with the standby attitude indicator and the aft station attitude indicators.

6.11.6.3. When the ACU complex and/or all INSs are not fully operational aircrew must maintain VMC to the maximum extent possible, regardless of GSS status. **(T-3)**.

6.11.6.4. Prior to shutting down or restarting an Integrated Battle Station in-flight, the initiating crewmember will brief the crew. **(T-3)**.

6.12. Emergency Limitations.

6.12.1. Do not practice in-flight emergency (IFE) procedures with actual weapons loaded on the aircraft. **(T-3)**.

6.12.2. Do not practice compound emergencies during flight (unless specifically required for upgrade training). **(T-3)**.

6.12.3. Aircrew will not takeoff with one engine inoperative from start of takeoff roll except during emergency evacuation, with wing commander approval or when directed by MAJCOM. **(T-3)**.

6.12.4. During an IFE, the most experienced or qualified pilot should make the landing. The aircraft commander should balance the experience, skill, and proficiency of the aircrew member flying against the complexity of the event to be flown.

6.12.5. Aircrews will declare an IFE for any of the following situations:

6.12.5.1. An emergency procedure checklist states “land as soon as possible.” **(T-3)**.

6.12.5.2. Any situation where aircrews refer to an emergency procedure landing checklist. **(T-3)**.

6.12.5.3. Any planned landing with other than normal wing, flap or slat position, gear position or normal braking capability. **(T-3)**.

6.12.5.4. In any case where current or foreseeable system failures could require immediate ground assistance (e.g., fire, medical, maintenance, supervision). **(T-3)**.

6.12.5.5. If any doubt exists in the opinion of the aircrew, supervisor of flying (SOF), or the squadron operations supervisor (Ops Sup/Top 3) about the safety of the aircrew or aircraft’s performance. **(T-3)**.

6.13. Aircrew and Aircraft Limitations.

6.13.1. **Structural Limitations.** The following restrictions are a result of the ASIP and are imposed to increase the airframe life. Reducing average GW and flying hours, limiting transition and landing GW, and removing LAHS flight can significantly extend the life of the B-1.

6.13.1.1. B-1 LAHS flight operations are prohibited in accordance with **paragraph 3.2.1**.

6.13.1.2. Units will reduce fuel loads to the minimum required for the mission. **(T-3)**.

6.13.1.3. Aircrew are prohibited from landing at GW exceeding 275,000 pounds, unless necessary for safety of flight. **(T-3)**. Sq/CCs (delegated no lower than Ops Sup) may grant waivers to make landings to a full stop. Notify the OG/CC if waiver is granted. Full stop landings are authorized to T.O. 1B-1B-1 GW limits in an emergency or safety of flight situation.

6.13.1.4. All transition work should be accomplished below 250,000 pounds. For GWs between 250,000 and 275,000 pounds, aircrew are limited to one approach or touch and go/landing per pilot. Sq/CCs (delegated no lower than Ops Sup) may grant waivers. Notify the OG/CC if waiver is granted.

6.13.2. **Operational g-Limits.**

6.13.2.1. During peacetime operations, aircrew are limited to 1.5g with the wing sweep between 15 and 55 degrees, and 2.5g between 65 and 67.5 degrees. This is due to the increased structural fatigue of operating near, and risk of exceeding, the structural limits.

6.13.2.2. Momentary deviations outside of the operational limits may not constitute an over-g unless also outside of the parameters in T.O. 1B-1B-1.

6.13.2.3. Aircrew experiencing an over-g that exceeds T.O. 1B-1B-1 structural limitations (whether flagged by CITS or observed by the aircrew) will terminate the mission and accomplish a controllability check. **(T-3)**. Aircrew will annotate aircraft configuration, GW and observed over-g in Air Force technical order form 781A, *Maintenance Discrepancy and Work Document*. **(T-3)**. Observed over-g occurring between peacetime operational limits and the structural limits will be debriefed as a training rule violation. **(T-3)**.

6.13.3. **Aircraft Tire Wear.** The maximum wear limit (MWL) for authorized B-1 tires (Goodyear and Michelin Aviator/Air-X) is three cords. Once the third cord is showing, the tire is unserviceable and requires replacement. The MWL applies to both main and nose gear tires on the B-1. A visible red cord is only an indicator and should not be used to determine the serviceability of a tire because not all tires will possess a red cord.

6.13.4. **Overheated or Hot Brakes.** Aircrew will not execute engine running crew changes, hot pit refuels, or warm pit refuels in an aircraft with a known or suspected brake overheat condition (any brake temperature above 600ºF). **(T-3)**.

6.13.4.1. Aircrew with actual or suspected brake overheat condition, identified via CITS parameter monitor code, BRAKE TEMP light, or visual indications such as excessive smoke or fire will declare a ground emergency and immediately notify maintenance personnel. **(T-3)**.

6.13.4.2. Taxi operations are permitted if the overheat condition no longer exists.

6.14. Weapon Employment Restrictions.

6.14.1. While carrying weapons, do not conduct simulated weapon releases, unusual attitude maneuvers, flight characteristic demonstrations or touch and go landings.

6.14.2. Aircrew may accomplish electronic attack training with retained weapons provided they do not designate any targets.

6.14.3. During training missions, aircrew will not open weapon bay doors during flight with weapons on board other than for intentional release or jettison. **(T-3)**. During contingency operations and higher headquarter directed missions, aircrew may open weapon bay doors with weapons on board in order to ensure proper door operation, provided the aircrew can confirm they are over sparsely populated areas, preferably over water.

6.14.3. **(ELLSWORTHAFB)** Weapon Employment Restrictions:

6.14.4. **(Added-ELLSWORTHAFB)** Live and inert weapons will not be concurrently loaded on the same aircraft unless approved by the OG/CC.

6.14.5. **(Added-ELLSWORTHAFB)** BDU-50 C/Bs. Will not be released from greater than 17,000' HAT and aircrew will ensure a 2,000' radius around the target is within the range impact area.

6.14.6. **(Added-ELLSWORTHAFB)** Joint Direct Attack Munition (JDAM). For training releases, aircrew will monitor the status of the tail kit and abide by the following restrictions when the status is less than All Up Ready Round (AURR).

6.14.6.1. **(Added-ELLSWORTHAFB)** Safe to Release (SR)/GO Navigation Solution Quality (NSQ) state Good, there are no restrictions.

6.14.6.2. **(Added-ELLSWORTHAFB)** SR/GO NSQ state Marginal or Unsatisfactory will not be released unless approved by the Range Control Officer (RCO) and Joint Terminal Attack Controller (JTAC), if applicable, and not prohibited by the range guide. If planning to release in either of these states aircrew will be familiar with the weapon limitations and should correctly communicate these limitations to the controller. Aircrew should ensure the weapon delivery corridor is clear if possible.

6.14.6.2.1. **(Added-ELLSWORTHAFB)** Example coms, "Tiger 37 has a degraded JDAM, the weapon may not meet GPS or INS only Circular Error Probable (CEP) performance resulting in a significant miss distance."

6.15. Supersonic Flight. Supersonic operations will be in accordance with DAFMAN 13-201, *Airspace Management*.

Chapter 7

LOCAL OPERATING PROCEDURES

7.1. General. This chapter provides a consolidated framework for units to supplement local operating procedures. In accordance with DAFI 33-360, the paragraph method is the only authorized way to supplement an AFMAN and units must arrange added material according to the basic publication. **(T-3)**. This chapter is not intended to be a single source document for procedures contained in other directives or regulations. Avoid unnecessary repetition of guidance provided in other directives; however, reference to those directives is acceptable when it serves to facilitate location of information necessary for local operating procedures.

7.1.1. Units may publish guidance in a single, stand-alone local operating instruction instead of supplementing this AFMAN.

7.1.2. Added or stand-alone procedures will not be less restrictive than those contained elsewhere in this manual. **(T-2)**.

7.2. Local Operating Guidance. Note : Units should include the following topics in their local operating guidance:

7.2.1. Introduction.

7.2.2. General Policy.

7.2.3. Ground Operations.

7.2.4. Flying Operations.

7.2.5. Weapons Employment.

7.2.6. Abnormal Procedures.

7.3. Recommended Guidance. If applicable, include procedures for the following in the appropriate section of **paragraph 7.2**:

7.3.1. Command and Control.

7.3.2. Fuel Requirements and Bingo Fuels.

7.3.3. Mission Plan Fly-Fly and Show & Go Procedures.

7.3.4. Diversion Instructions.

7.3.5. Jettison Areas, Procedures and Parameters.

7.3.6. Controlled Bailout Areas.

7.3.7. Local Weather Procedures.

7.3.8. Unit Standards.

7.3.9. NVG Procedures.

7.3.10. Cross-Country Procedures.

7.3.11. Search and Rescue, and On-Scene Commander Procedures.

7.3.12. Bird and wildlife aircraft strike hazard program guidance in accordance with AFI 91-202, *The US Air Force Mishap Prevention Program*, and AFI 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Program*.

7.3.13. Environmental Restrictions to Flight Operations (winds, sea state, temperature, etc.) applicable to unit operating locations.

7.4. Coordination. Prior to publication, units will forward copies of the local supplement to MAJCOM and appropriate subordinate agencies for approval. If a procedure is deemed applicable to all B-1 units, it will be incorporated into the basic AFMAN. **(T-2)**.

JOSEPH T. GUASTELLA, Jr., Lt Gen, USAF
Deputy Chief of Staff, Operations

(ELLSWORTHAFB)

DAVID A. DOSS, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Abbreviations and Acronyms

(Added-ELLSWORTHAFB) 28BW—28th Bomb Wing

(Added-ELLSWORTHAFB) 28OG—28th Operations Group

(Added-ELLSWORTHAFB) 28OG/OGV—28th Operations Group Standardization and Evaluation

(Added-ELLSWORTHAFB) AC—Aircraft Commander or Alternating Current

ACU—Avionics Control Unit

(Added-ELLSWORTHAFB) ADG—Accessory Drive Gearbox

(Added-ELLSWORTHAFB) AF—Air Force

(Added-ELLSWORTHAFB) AFB—Air Force Base

AFGSC—Air Force Global Strike Command

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

(Added-ELLSWORTHAFB) AFRIMS—Air Force Records Information Management System

(Added-ELLSWORTHAFB) AFS—Avionics Flight Software

AFTO—Air Force Technical Order

AFTTP—Air Force Tactics, Techniques, and Procedures

AGL—Above Ground Level

AILA—Airborne Instrument Landing Approach

(Added-ELLSWORTHAFB) ALR—Acceptable Level of Risk

(Added-ELLSWORTHAFB) AMC—Air Mobility Command

(Added-ELLSWORTHAFB) AMU—Aircraft Maintenance Unit

(Added-ELLSWORTHAFB) AMXS—Aircraft Maintenance Squadron

(Added-ELLSWORTHAFB) APU—Auxiliary Power Unit

(Added-ELLSWORTHAFB) AR—Air Refueling

ASIP—Aircraft Structural Integrity Program

ASL—Above Sea Level

ATC—Air Traffic Control

ATM—Air Traffic Management

ATP—Allied Tactical Publication

(Added-ELLSWORTHAFB) AURR—All Up Ready Round

BASH—Bird Aircraft Strike Hazard

(Added-ELLSWORTHAFB) BASH—Bird Aviation Strike Hazard

BD—Battle Damage

(Added-ELLSWORTHAFB) BDU-50—Practice variant of the MK-82

(Added-ELLSWORTHAFB) BINGO—Pre-briefed fuel state needed for recovery

(Added-ELLSWORTHAFB) BLOS—Beyond Line of Sight

(Added-ELLSWORTHAFB) BS—Bomb Squadron

(Added-ELLSWORTHAFB) BTF—Bomber Task Force

(Added-ELLSWORTHAFB) BWC—Bird Watch Condition

(Added-ELLSWORTHAFB) CC—Commander

(Added-ELLSWORTHAFB) CEP—Circular Error Probable

(Added-ELLSWORTHAFB) CHARLIE—OG/CC or designated authority responsible for the daily flying operation

CITS—Central Integrated Test System

CJCSM—Chairman of the Joint Chiefs of Staff Message

CNS—Communication, Navigation, Surveillance

CONV—Conventional

(Added-ELLSWORTHAFB) CP—Command Post

DAF—Department of the Air Force

DAFI—Department of the Air Force Instruction

(Added-ELLSWORTHAFB) DC—Direct Current

(Added-ELLSWORTHAFB) DETCO—Detachment Commander

(Added-ELLSWORTHAFB) DO—Director of Operations

DSO—Defensive Systems Officer

(Added-ELLSWORTHAFB) DSO—Defensive Systems Operator

(Added-ELLSWORTHAFB) EAFB—Ellsworth Air Force Base

EMCON—Emissions Control

(Added-ELLSWORTHAFB) EOD—Explosive Ordnance Disposal

(Added-ELLSWORTHAFB) EOR—End of Runway

EP—Electronic Protection

(Added-ELLSWORTHAFB) ERCC—Engine Running Crew Change

(Added-ELLSWORTHAFB) ETA—Estimated Time of Arrival

ETE—Estimated Time En Route

EXCM—Expendable Countermeasures

FAA—Federal Aviation Administration

FAF—Final Approach Fix

(Added-ELLSWORTHAFB) FCIF—Flight Crew Information File

FIC—Flight Instructor Course

FL—Flight Level

(Added-ELLSWORTHAFB) FL—Flight Lead or Flight Level

FLIP—Flight Information Publications

(Added-ELLSWORTHAFB) FLIP—Flight Information Publication

(Added-ELLSWORTHAFB) FLUG—Flight Lead Upgrade

FMP—Flight Manual Program

(Added-ELLSWORTHAFB) FOD—Foreign Object Damage

FTU—Formal Training Unit

GPS—Global Positioning System

GSS—Gyro Stabilization System

GW—Gross Weight

(Added-ELLSWORTHAFB) HAT—Height Above Target

(Added-ELLSWORTHAFB) HF—High Frequency

(Added-ELLSWORTHAFB) HHD—Higher Headquarter Directed

IAF—Initial Approach Fix

(Added-ELLSWORTHAFB) IAW—In Accordance With

IFE—In-flight Emergency

(Added-ELLSWORTHAFB) ILS—Instrument Landing System

IMC—Instrument Meteorological Conditions

INS—Inertial Navigation System

INU—Inertial Navigation Unit

IP—Instructor Pilot

(Added-ELLSWORTHAFB) IWSO—Instructor Weapon Systems Officer

(Added-ELLSWORTHAFB) JDAM—Joint Direct Attack Munition

(Added-ELLSWORTHAFB) JREAP—Joint Range Extension Protocol

(Added-ELLSWORTHAFB) JTAC—Joint Terminal Attack Controller

KIAS—Knots Indicated Airspeed

KTAS—Knots True Airspeed

LAHS—low altitude high speed

LAR—Launch Acceptability Region

LNAV—Lateral Navigation

(Added-ELLSWORTHAFB) LOLA—Live Ordnance Loading Area

LOWAT—Low Altitude

LPV—Localizer Performance with Vertical guidance

MAJCOM—Major Command

MARSA—Military Assumes Responsibility for Separation of Aircraft

(Added-ELLSWORTHAFB) MBW—Modifiable Ballistic Weapon

(Added-ELLSWORTHAFB) MML—Multi-ship Mission Lead

MNPS—Minimum Navigation Performance Specification

(Added-ELLSWORTHAFB) MOA—Military Operations Area

(Added-ELLSWORTHAFB) MOC—Maintenance Operations Center

(Added-ELLSWORTHAFB) MPC—Mission Planning Cell

(Added-ELLSWORTHAFB) MQT—Mission Qualification Training

MWL—maximum wear limit

MBW—Modifiable Ballistics Weapon

ML—Mission Lead

MSA—Minimum Safe Altitude

MSL—Mean Sea Level

NAT-HLA—North Atlantic-High Level Airspace

(Added-ELLSWORTHAFB) NIPR—Unclassified DOD network

(Added-ELLSWORTHAFB) NLT—No Later Than

(Added-ELLSWORTHAFB) NM—Nautical Mile

NORDO—No Radio

(Added-ELLSWORTHAFB) NOTAM—Notices to Airmen

(Added-ELLSWORTHAFB) NSQ—Navigation Solution Quality

NUC—Nuclear

NVG—Night Vision Goggles

(Added-ELLSWORTHAFB) NWS—Nose Wheel Steering

(Added-ELLSWORTHAFB) OAS—Offensive Avionics System

(Added-ELLSWORTHAFB) OCF—Operational Check Flight

OG—Operations Group

(Added-ELLSWORTHAFB) OPCON—Operational Control

(Added-ELLSWORTHAFB) ORM—Operational Risk Management

ORS—Offensive Radar Set

(Added-ELLSWORTHAFB) OSC—On Scene Commander

(Added-ELLSWORTHAFB) OSKC—OSS Mission Planning

OSO—Offensive Systems Officer

(Added-ELLSWORTHAFB) OSO—Offensive Systems Operator

OPR—Office of Primary Responsibility

OPS SUP—Operations Supervisor

(Added-ELLSWORTHAFB) OSS—Operations Support Squadron

(Added-ELLSWORTHAFB) OSXA—OSS Airspace Scheduling

(Added-ELLSWORTHAFB) PA—Public Affairs

(Added-ELLSWORTHAFB) PAPI—Precision Approach Path Indicator

(Added-ELLSWORTHAFB) PEX—Patriot Excalibur

PFR—Primary Flight Reference

(Added-ELLSWORTHAFB) POC—Point of Contact

(Added-ELLSWORTHAFB) PRTC—Powder River Training Complex

(Added-ELLSWORTHAFB) QA—Quality Assurance

(Added-ELLSWORTHAFB) RAP—Ready Aircrew Program

(Added-ELLSWORTHAFB) RCO—Range Control Officer

RCR—Runway Condition Reading

(Added-ELLSWORTHAFB) RDS—Records Disposition Schedule

RF—Radio Frequency

(Added-ELLSWORTHAFB) RMC—Rescue Mission Commander

RNAV—Area Navigation

RNP—Required Navigation Performance

(Added-ELLSWORTHAFB) ROE—Rules of Engagement

(Added-ELLSWORTHAFB) RTM—RAP Tasking Memorandum

RVSM—Reduced Vertical Separation Minima

(Added-ELLSWORTHAFB) SAR—Search and Rescue

(Added-ELLSWORTHAFB) SATCOM—Satellite Communication

SCAS—Stability Control and Augmentation System

(Added-ELLSWORTHAFB) SD—South Dakota

SEF/SIS—Stability Enhancement Function/Stall Inhibitor System

(Added-ELLSWORTHAFB) SFS—Security Forces

(Added-ELLSWORTHAFB) SHAG—Show-and-Go

(Added-ELLSWORTHAFB) SIPR—Secret Classified DOD network

(Added-ELLSWORTHAFB) SM—Statute Mile

(Added-ELLSWORTHAFB) SML—Single-ship Mission Lead

SOF—Supervisor of Flying

SPINS—Special Instructions

TACAN—Tactical Air Navigation

TES—Test and Evaluation Squadron

TOLD—Takeoff and Landing Data

T.O.—Technical Order

(Added-ELLSWORTHAFB) TOP 3—Squadron Operations Supervisor

(Added-ELLSWORTHAFB) TOT—Time On Target

TTP—Tactic, Technique, and Procedure

(Added-ELLSWORTHAFB) UHF—Ultra High Frequency

USC—United States Code

(Added-ELLSWORTHAFB) VASI—Visual Approach Slope Indicator

VMC—Visual Meteorological Conditions

VNAV—Vertical Navigation

WSO—Weapon Systems Officer

Terms

Mission Lead—Individual responsible for safe and effective formation flight.

Hung Weapon—A live or inert weapon that does not separate from the aircraft following an attempted release (electronic release pulses issued in OAS automatic or manual mode with all switches correctly positioned). **Note**: Weapons not released due to being blocked, a swing arm malfunction or a "slow switch status following squib fire" are considered retained if the "hung state" is removed and the fault clears following corrective action by the OSO.

Lead Change—Used during formation when the ML/flight lead transfers all navigation, lead position, command and control communications, and tactical flight call sign to the wingman. The ML/flight lead typically will not maneuver the formation or direct a lead change back once a lead change has occurred. Lead changes are typically used when an emergency or other extenuating circumstance exist such that the ML/flight lead can no longer fully control the formation.

Live Weapon—Actual munitions containing a primary explosive charge (MK-82, GBU-31, etc.).

Low Altitude Activity—Same as AFI 11-2B-1 V1, *B-1 Aircrew Training*. Below 5,000 feet AGL.

Medium Altitude Activity—Same as AFI 11-2B-1 V1, *B-1 Aircrew Training*. From 5,000 feet AGL to 25,000 feet MSL (For weapons delivery events from 5,000 feet MSL to 17,000 feet MSL).

Mission Lead—The Mission Lead is the aircrew member responsible for mission accomplishment. This includes planning, leading, and debriefing the mission. When circumstances dictate, the Mission Lead does not have to be in the lead aircraft or position during the flight.

Retained Weapon—A weapon still on board the aircraft with no release attempted or after successfully releasing the intended number of weapons in a partial load. Weapons not released due to procedural errors are retained. **Note**: Weapons not released due to being blocked, a swing arm malfunction or a "slow switch status following squib fire" are considered retained if the "hung state" is removed and the fault clears following corrective action by the OSO.

RNAV (Area Navigation)—A method of navigation that permits aircraft operation on any desired course within the coverage of station-referenced navigation signals or within the limits of a self-contained system capability, or a combination of these.

Visual Contour Flight—Operation at a predetermined altitude above the ground, following contours visually with radar altimeter crosscheck.

Weapon—Any live, inert, or training munitions.

Attachment 2

PASSENGER BRIEFING GUIDE

A2.1. Ground Operations. (**Note**: *Item will be briefed at the aircraft.)

A2.1.1. Ramp safety (danger areas / hearing and eye protection)

A2.1.2. Foreign object damage (FOD) considerations

A2.1.3. Normal ingress and egress

A2.1.4. Strap-in procedures / proper use of restraints *

A2.1.5. Life support equipment *

A2.1.6. Oxygen system – Preflight and normal settings *

A2.1.7. Ejection seat procedures *

A2.1.8. Critical switches and controls *

A2.1.9. Safety precautions (e.g., stick/leg interference) *

A2.1.10. Prohibitions and restrictions

A2.1.11. Communications connections and use *

A2.2. Flight Overview and Profile.

A2.2.1. Takeoff and departure

A2.2.2. Route, air work, maneuvers

A2.2.3. Transfer of aircraft control

A2.2.4. Recovery, pattern, and landing

A2.2.5. In-flight checks (challenge and response)

A2.3. Abnormal Procedures. (**Note**: *Item will be briefed at the aircraft).

A2.3.1. Emergency ground egress *

A2.3.2. Abort

A2.3.3. In-flight emergency procedures

A2.3.4. Bird strike

A2.3.5. Smoke and fume elimination *

A2.3.6. Physiological *

A2.3.7. Ejection / bail out *

A2.3.8. Intercom failure *

A2.3.9. Oxygen Emergency Procedures (must demonstrate mask/regulator operation) *

A2.4. Questions?

Attachment 2 (ELLSWORTHAFB)

ON SCENE COMMANDER (OSC) REFERENCE GUIDE

A2.1. (ELLSWORTHAFB) Pre-ejection support.

A2.1.1. **(ELLSWORTHAFB)** Mission and threat permitting, establish visual/pod contact with distressed aircraft

A2.1.2. **(ELLSWORTHAFB)** Provide support and direction if required

A2.1.3. **(ELLSWORTHAFB)** Offset flight paths and do not visually highlight the wounded aircraft

A2.1.4. **(ELLSWORTHAFB)** Always maintain eyes on, never under-fly chutes, never over-fly BINGO, and DO NOT assume no one survived

A2.1.5. **(ELLSWORTHAFB)** Winds aloft _____ Aircraft altitude _____ Aircraft Direction_____

A2.2. (ELLSWORTHAFB) Establish Initial On-Scene Commander.

A2.2.1. **(ELLSWORTHAFB)** Report the ejection/bailout to C2 via secure means if able

A2.2.2. **(ELLSWORTHAFB)** Establish a ROZ at the survivors suspected location

A2.2.3. **(ELLSWORTHAFB)** Choose an orbit location/altitude that will allow sufficient communications and IP support

A2.3. (ELLSWORTHAFB) Attempt contact with downed crew.

A2.3.1. **(ELLSWORTHAFB)** Attempt contacting the survivor on SAR-A (UHF Guard as a last resort

A2.3.2. **(ELLSWORTHAFB)** Use CALLSIGN, Objective, or JACK when referring to the isolated personnel over unencrypted communications

A2.4. (ELLSWORTHAFB) Initial authentication, introduction, and situation assessment.

A2.4.1. **(ELLSWORTHAFB)** “What is the first letter of the Word of the Day?”

A2.4.2. **(ELLSWORTHAFB)** “Unless I say otherwise, use Yes/No answers only, keep transmissions to 5 sec or less”

A2.4.3. **(ELLSWORTHAFB)** “Are you in any immediate danger?”

A2.4.4. **(ELLSWORTHAFB)** “Do you see any threats?”

A2.4.5. **(ELLSWORTHAFB)** “Do did you see any threats while you were in the chute? Where?”

A2.4.6. **(ELLSWORTHAFB)** “Has the enemy seen you?”

A2.4.7. **(ELLSWORTHAFB)** “Do not transmit your position in the clear.”

A2.4.8. **(ELLSWORTHAFB)** “Talk only when I ask a question or you see a threat.”

A2.4.9. **(ELLSWORTHAFB)** “Talk only to me/players I have introduced you to. Authenticate all others.”

A2.4.10. **(ELLSWORTHAFB)** "If in danger or unable to talk: 2 mic clicks = Yes, Multiple mic clicks = No"

A2.4.11. **(ELLSWORTHAFB)** "If you see me, tell me, but do not key the mic while I am overhead."

A2.4.12. **(ELLSWORTHAFB)** "Do not signal unless I tell you to."

A2.5. (ELLSWORTHAFB) Search Phase.

A2.5.1. **(ELLSWORTHAFB)** Request GPS coordinates from survivor's radio or GPS receiver (encode with SARNEG)

A2.5.2. **(ELLSWORTHAFB)** Request AMC or other capable asset pull location with QuickDraw I

A2.5.3. **(ELLSWORTHAFB)** Use all available navigation aids and visual reference

A2.5.4. **(ELLSWORTHAFB)** Use aircrafts last known position and winds aloft to begin a visual or sensor search

A2.6. (ELLSWORTHAFB) Support Phase.

A2.6.1. **(ELLSWORTHAFB)** Develop a game plan for support required based on the tactical situation

A2.6.2. **(ELLSWORTHAFB)** Request tanker support or develop a BINGO for the nearest suitable diver

A2.6.3. **(ELLSWORTHAFB)** Determine assets required to suppress threats to both the CSARTF and the survivor

A2.6.4. **(ELLSWORTHAFB)** Establish a CAP that remains random and does not continuously overly the objective

A2.6.5. **(ELLSWORTHAFB)** Allocate available sensors to overwatch the survivor and protect recovery vehicles

A2.6.6. **(ELLSWORTHAFB)** NEVER employ ordnance if the exact location of the object is not known

A2.7. (ELLSWORTHAFB) Document.

A2.7.1. **(ELLSWORTHAFB)** Capture video and photos of the area

A2.7.2. **(ELLSWORTHAFB)** Record threat types, strength, and location

A2.7.3. **(ELLSWORTHAFB)** Mark potential recovery locations and ingress/egress routes for the recovery force

A2.8. (ELLSWORTHAFB) Do not needlessly sacrifice yourself and/or the flight.

A2.8.1. **(ELLSWORTHAFB)** Determine when ALR has been exceeded and retrograde until the threat can be suppressed

A2.8.2. **(ELLSWORTHAFB)** Prepare hand-off for replacement OSC or RMC2

A2.8.3. **(ELLSWORTHAFB)** Threats SALT (size, activity, location, time)

A2.8.4. **(ELLSWORTHAFB)** Targets struck, targets in area remaining (type, location)

A2.8.5. **(ELLSWORTHAFB)** Friendly location _____

A2.8.6. **(ELLSWORTHAFB)** Assets on station (stack, call sign, aircraft type, ordnance, playtime)

A2.8.7. **(ELLSWORTHAFB)** Commander (who is OSC) _____

A2.8.8. **(ELLSWORTHAFB)** Ordnance (provide ordnance and playtime of your aircraft)

A2.8.9. **(ELLSWORTHAFB)** Recovery force briefing (all of the current information known)

Attachment 3 (Added-ELLSWORTHAFB)

EAFB AIRCREW FLIGHT STANDARDS

A3.1. (Added-ELLSWORTHAFB) General Crew Coordination. Crewmembers will verbally coordinate actions prior to the following:

A3.1.1. **(Added-ELLSWORTHAFB)** During ground operations, movement of any controls which could cause damage to personnel or equipment.

A3.1.2. **(Added-ELLSWORTHAFB)** Transfer of aircraft control.

A3.1.3. **(Added-ELLSWORTHAFB)** Changes to the FCGMS/fuel management panel.

A3.1.4. **(Added-ELLSWORTHAFB)** Changes to Load Management (LM)

A3.1.5. **(Added-ELLSWORTHAFB)** Leaving or returning to an ejection seat, changes to the ejection mode or arm/safe handle.

A3.1.6. **(Added-ELLSWORTHAFB)** Changes to the Automatic Flight Control System (AFCS) mode, flight director mode or Offensive Avionics System (OAS) which could affect aircraft control or command steering.

A3.2. (Added-ELLSWORTHAFB) Altitude Calls. All crewmembers will monitor assigned altitudes in-flight. The following interphone calls are mandatory:

A3.2.1. **(Added-ELLSWORTHAFB)** The OSO/DSO will announce when 1,000 feet below or above assigned altitude when climbing or descending. Acknowledgment by the Pilot Flying (PF) is required.

A3.2.2. **(Added-ELLSWORTHAFB)** The OSO/DSO will announce approaching the Decision Height (DH)/Minimum Decision Altitude (MDA) at 100 feet above the DH/MDA (e.g. “approaching xx feet”. Acknowledgment by the PF the aircraft is required.

A3.2.3. **(Added-ELLSWORTHAFB)** The Pilot Not Flying (PNF) announces DH, MDA, Visual Descent Point (VDP) and Missed Approach Point (MAP), if required, at which time the PF announces his intentions.

A3.3. (Added-ELLSWORTHAFB) Traffic Pattern Operations.

A3.3.1. **(Added-ELLSWORTHAFB)** LOW visibility (VIS) approach.

A3.3.1.1. **(Added-ELLSWORTHAFB)** At DH/VDP, the PNF will call “Continue” if sufficient visual references with the runway environment are established and the aircraft is in a position to execute a safe landing.

A3.3.1.2. **(Added-ELLSWORTHAFB)** The PNF provides correction to centerline and a verbal description of landing cues.

A3.3.1.3. **(Added-ELLSWORTHAFB)** The PNF Calls “Runway in sight” when enough visual cues are available for the PF to complete the approach and landing visually.

A3.3.1.4. **(Added-ELLSWORTHAFB)** The PF calls “Visual” when transitioned to visual references for landing.

A3.3.1.5. **(Added-ELLSWORTHAFB)** The PF will call "Go Around" at DH/VDP if the conditions of "Continue" are not met. Any crewmember who sees the aircraft at or below decision height will call "Go Around" if "Continue" or "Visual" has not been announced. **NOTE:** Low Vis approach procedures are written for a Pilot Fly/Pilot Land Technique. The AC will brief the crew if they plan to use the transfer of aircraft control technique.

A3.3.2. **(Added-ELLSWORTHAFB)** Landing

A3.3.2.1. **(Added-ELLSWORTHAFB)** At the DH/MAP/VDP (500 ft AGL for visual pattern), the PF will state their intentions.

A3.3.2.2. **(Added-ELLSWORTHAFB)** If the Central Integrated Test System (CITS) is available, the OSO or DSO will confirm gear down on every approach. On a full-stop, they will also monitor brake temperatures via CITS. No verbal calls are required for normal indications.

Attachment 4 (Added-ELLSWORTHAFB)

OPERATION RISK MANAGEMENT

A4.1. (Added-ELLSWORTHAFB) Operation Risk Management.

Figure A4.1. (Added-ELLSWORTHAFB) Operation Risk Management.

28 OG ORM CHECKLIST

On MP day, total each line in the "planned" column

On Fly day, reevaluate any changes and total

If **ORM > 15** or specific risks are identified in mission planning or at the step brief, address and mitigate those risks

If benefits do not outweigh the risks, plan a different mission or cut portions of the planned mission.

TOP 3 (After Step) -- Update as changes occur (stepped to spare, working MX/WX issues, mission changes, etc)

ORM Worksheet	LOW = 0	MED = 1	HIGH = 2	MP	FLY	TOP 3
MISSION PROFILE			>3 items = TOP 3	Plan	Step	After Step
Currency/Qualification	Current//Qualified	1 Non-Cur / Non-CMR	2 Non-Cur/Non-CMR			
Experience (Pilots)	Both Experienced	1 Exp / 1 Non-Exp	Both Inexperienced (Note 1)			
Experience (WSOs)	Both Experienced	1 Exp / 1 Non-Exp	Both Inexperienced			
Last Formation Flown	<= 30 days	> 30 days	> 60 days (Note 1)			
Circadian (Local Time)	0800-2000	0400-0800 / 2000-0000	0000-0400			
Ops Tempo	1st Sortie/Week	2nd Sortie/Week	3rd Sortie/Week			
Crew Duty Day (CDD)	CDD < 12 hrs	CDD > 12 hrs	CDD > 16 hrs			
Last Sortie Flown	< 7 Days	7-14 Days	> 14 Days			
Formation	Single Ship	2-Ship	Flag//DACT/Lg Force Ex			
Refueling	None	Day/VMC	Night/IMC			
Weapons	None	Inert	Live			
Defensive Maneuvering	None	SS Maneuvering	2-ship DT			
Special Events	None	3 pilot pro/Inc Ride/11-203	Airshow/Flyby			
Transition	Local <= 45 mins	Local > 45 mins	Off-Station Tx			
Irregular Training Events	<= 30 days/Simple	30-60 days/moderate	> 60 days/complex (Note 2)			
Other:						
Environment			> 2 items = TOP 3	Plan	Step	After Step
Bird Condition	Low	Moderate	Severe			
Temperature	32-80 F	0-32 F or 80-95 F	< 0 F or > 95 F			
Dept Wx	Better than 3000'/3	Non-Precision Mins	Precision Mins			
T/O RCR	26	12-25	< 12			
Enroute Wx	Day VMC	At least 1500'/5	Night/IMC			
Icing	None	Trace/Light/Induction	Moderate			
T-Storms	None	Isolated	> Isolated			
MOA/Range Wx	VMC	Intermittent IMC	IMC at working altitude			
Recovery Wx	Better than 3000'/3	Non-Precision Mins	Precision Mins (Note 3)			
Landing RCR	26	12-25	< 12			
Crosswinds	0-15	15-25 (Note 3)	> 25			
Navaids	0 Inoperative	1 Inoperative	2 or more inoperative			
Other:						
Step Brief			> 2 items = TOP 3	Plan	Step	After Step
Mission Capability	FMC	PMC/ETIC < 2 hrs	ETIC > 2 hrs			
Configuration	As Fragged	# Wpmn / Exp Chg	Type Wpn / Exp Chg			
Tail Number	As Fragged	Tail Swap/Spare	Bag Drag / 2nd Spare			
Mission Changes	None	Some (1-3) (e.g. crew swap)	Multiple (>3) (e.g. replan)			
Plan Variations	None	Minor	Major			
Personal Issues	None	Minor	Major			
Other:						
			Totals:	Plan	Step	After Step

NOTE 1:

- If the flight lead has not led a formation in > 60 days, brief formation procedures (tactical maneuvers, air refueling, weapons release, etc) in-depth

NOTE 2:

- Mission leads can assign up to 3 points based on their crew experience, mission profile, recent accomplishment, and complexity of the planned events

NOTE 3:

- If weather is below non-precision mins or crosswinds > 15 kts and multiple approaches are flown, consider having experienced pilot fly the first approach

Date:	
Callsign	
< 15 FL/ML	
15-25 TOP 3	
> 25 CC	

Attachment 5 (Added-ELLSWORTHAFB)

BTF AND LONG DURATION SORTIE CONSIDERATIONS

A5.1. (Added-ELLSWORTHAFB) At a minimum address the following planning considerations for BTF or other long duration sorties:

A5.1.1. **(Added-ELLSWORTHAFB) Weather**

A5.1.1.1. **(Added-ELLSWORTHAFB)** Account for severe weather impacts: tropical depressions, hurricanes, typhoons; thunderstorms and accompanying severe weather; icing and turbulence; sea states, wave heights, surface winds, water temperatures; and volcanic activity.

A5.1.1.2. **(Added-ELLSWORTHAFB)** A comprehensive pre-flight weather briefing and en route weather updates should be planned and executed.

A5.1.2. **(Added-ELLSWORTHAFB) Flight Operations**

A5.1.2.1. **(Added-ELLSWORTHAFB)** Review filing, communications, airspace control measures and flight procedures for international airspace and in the airspace of transitioned foreign nations.

A5.1.2.2. **(Added-ELLSWORTHAFB)** Review intercept procedures and expected reactions, if applicable.

A5.1.2.3. **(Added-ELLSWORTHAFB)** Fuel plan

A5.1.3. **(Added-ELLSWORTHAFB) Crew Optimization**

A5.1.3.1. **(Added-ELLSWORTHAFB)** Use all available resources to plan for and optimize crew performance with particular focus on: nutrition, fatigue and circadian rhythm disruptions.

A5.1.3.2. **(Added-ELLSWORTHAFB)** Special emphasis should be considered for critical phases of flight (air refueling, takeoff and landing, integration with other aircraft, potential intercept areas, etc.)

A5.1.3.3. **(Added-ELLSWORTHAFB)** Proper nutrition and sleep hygiene should be planned among the crew.

A5.1.4. **(Added-ELLSWORTHAFB) Contingency planning.** Ensure adequate planning for divert and emergency options to include verifying the suitability of contingency fields.