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SECRETARY OF THE AIR FORCE**

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VOLUME 3**



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Flying Operations

E-4 OPERATIONS PROCEDURES

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This instruction implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*. It establishes the minimum Air Force standards for operations while performing duties in the E-4B. It applies to all Air Force personnel in E-4B units. It does not apply to Air National Guard or Air Force Reserve Command units. MAJCOMS are to forward proposed MAJCOM-level supplements to this volume to ACC/A3C for approval prior to publication. In accordance with (IAW) Air Force Instruction (AFI) 11-200. Copies of MAJCOM-level supplements, after approved and published, will be provided by the issuing MAJCOM to ACC/A3C, and the user MAJCOM Offices of Primary Responsibility (OPR). Maintain supplement currency by complying with AFI 33-360, *Publications and Forms Management*. This publication requires the collection and or maintenance of information protected by Title 5 United States Code (USC) Section 552a, *The Privacy Act (PA) of 1974*. The authorities to collect and or maintain the records prescribed in this publication are 37 USC § 301a, *Incentive Pay: aviation career*; Public Law (PL) 92-204, *Appropriations Act for 1973*; PL 93-570 § 715, *Appropriations Act for 1974*; PL 93-294, *Aviation Career Incentive Act of 1974*; Department of Defense Instruction (DoDI) 7730.57, *Aviation Incentive Pays and Continuation Bonus Program*; and Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, as amended. The applicable SORN, F011 AF XO A, *Aviation Resource Management System (ARMS)*, is available at <http://dpcl.d.defense.gov/Privacy/SORNS.aspx>. Forms affected by the PA have an appropriate PA statement. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located in AFRIMS. Refer recommended changes and

questions about this publication to the OPR using AF Form 847, *Recommending for Change of Publication*; route AF Forms 847 from the field through the appropriate chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. To the extent these directions are inconsistent with other Air Force publications; the information herein prevails, in accordance with AFI 33-360.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include: Tier waiver authorities (T-0, T-1, T-2, T-3) have been included to all mandated unit compliance items (Wing level and below). Added note in Table 3.1 which allows an egress trained crewmember to perform flight attendant duties when no flight attendant is available. **Table 3.2** changed to more accurately reflect Emergency War Order (EWO) mission crew complement. Flight attendant Public Address (PA) announcement changed to specify operating restrictions of portable electronic devices. Incorporated Electronic Flight Bag considerations in **Table 6.1**. **Para 6.13- 6.16** contain numerous changes to weather considerations. Removed guidance on short-field landings and Low Pass Visual Rendezvous that will be incorporated in squadron standards guide. Added verbiage regarding taxi-back/quick turn sorties. Added verbiage to require all crewmembers to remove rings and scarves prior to flying or working around the aircraft. Added new information (**para 6.27.4**) regarding the payment of airfield services and landing fees at foreign government airports.

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Chapter 1

GENERAL INFORMATION

1.1. General. This AFI establishes procedures for operation of the E-4B aircraft and is a basic directive. For those areas where this AFI is the source document, waiver authority will be in accordance with [paragraph 1.4.2](#). For those areas where this AFI repeats information contained in other source documents, waiver authority is in accordance with these source documents. This AFI will be used by all units and agencies involved in or supporting E-4B operations. Copies will be current and available to planning staffs from headquarters to aircrew level.

1.2. Applicability. This AFI is applicable to all individuals operating the E-4B. Crewmembers must have a thorough working knowledge of all procedures included in this volume that are applicable to their crew position.

1.3. Key Words Explained.

1.3.1. “Will” and “Shall” indicates a mandatory requirement. Failure to comply with paragraphs that include these mandatory words is a violation of Article 92 of the UCMJ.

1.3.2. “Should” is used to indicate a preferred, but not mandatory, method of accomplishment.

1.3.3. “May” indicates an acceptable or suggested means of accomplishment.

1.3.4. “Note” indicates operating procedures, techniques, etc, which are considered essential to emphasize.

1.4. Deviations and Waivers. Do not deviate from the policies and guidance in this AFI, except when a valid waiver exists or when deemed necessary by the aircraft commander to ensure crew safety or safe aircraft operations during a situation not covered by this AFI and immediate action is required.

1.4.1. Deviations. The Aircraft Commander (AC) shall report deviations or exceptions taken without waiver through channels to ACC Stan/Eval who in turn, notifies the 55 WG as appropriate of follow-on actions. (T-1)

1.4.2. Waivers. HQ ACC/A3C is the waiver authority for all other provisions in this AFI unless specifically noted via the tiered waiver notation (e.g. T-0, T-1, T-2, T-3). Consult AFI 33-360 for explanation of tiered waiver notations. Waiver requests are submitted in electronic form and include the rationale for the waiver to HQ ACC/A3C. Forward all requests through the chain of command to ACC/A3CN for approval. Waivers, if approved, are good for one year from the effective date or up to 30 days after the approving commander’s tour length, whichever is shorter.

1.5. Local Supplement Coordination Process. The 55 WG/OG may define additional local operating procedures to this instruction in a unit supplement. The procedures will not duplicate, alter, amend, or be less restrictive than the provisions of this basic AFI or flight manual. OG/CCs will forward one copy for validation to ACC/A3CN through 12 AF prior to releasing their supplement. (T-1)

1.6. Requisitioning and Distribution Procedures. Unit commanders provide copies for all aircrew members and associated support personnel. This publication is available digitally at <http://www.e-publishing.af.mil>.

1.7. Improvement Recommendations. Refer recommended changes and questions about this publication to the OPR, ACC/A3CN, using the AF FORM 847, route AF FORM 847s from the field through the appropriate functional's chain of command.

1.8. Definitions. Find explanations or definitions of terms and abbreviations commonly used in the aviation community in Code of Federal Regulations (CFR) Title 14, Part 1; *DoD Flight Information Publication General Planning*, Chapter 2; and Joint Pub 1-02, *The Department of Defense Dictionary of Military and Associated Terms*. See **Attachment 1** for common terms used herein.

1.9. Aircrew Operational Reports. The reporting requirements in this instruction are exempt from licensing IAW AFI 33-324, *The Air Force Information Collections and Reports Management Program*.

Chapter 2

COMMAND AND CONTROL

2.1. General.

2.1.1. Combatant Command (COCOM). COCOM is exercised by the Secretary of Defense (SECDEF), through the Chairman of the Joint Chiefs of Staff (CJCS) and Commander USSTRATCOM, dependent upon assigned mission.

2.1.2. Operational Control (OPCON). Alert Operations Teams (OTs) are elements of the National Military Command System (NMCS) operated by the CJCS. They operate under the command of, and in support of, the President and Secretary of Defense, or their successors. Operational control of alert OTs, aircraft, aircrews, and ground communications terminals which support the National Airborne Operations Center (NAOC) is exercised by the SECDEF through the CJCS, the Director for Operations, Joint Staff, and the Deputy Director for Global Operations, NMCS Division. During mission operations, the entire alert force is subject to mission requirements (billeting, messing, transportation, uniforms, etc.) as specified by the NAOC Commander through the NAOC Operations Team Commanders (OTCs).

2.2. Execution Authority.

2.2.1. NAOC Missions. The Air Force will execute missions IAW CJCS Operations Order (OPORD) 2-CY, *National Military Command System (NMCS) Survivable Mobile Command Center (SMCC) Operations* and the ACC OPORD 84-CY, *Giant Net*.

2.2.1.1. The Operations Team Chief (OTC) has OPCON of 1 Airborne Command Control Squadron (ACCS) crewmembers while on alert and while performing NAOC tasked missions.

2.2.1.2. Special Support Mission (SSM) are non-alert, NAOC tasked missions. For SSMs if SQ/CC deems necessary, 1 ACCS/DO, in conjunction with AMC Threat Working Groups (TWG) and 55 ISS will assess the threat level of SSM locations prior to executing the SSM. (T-1) The results are then be briefed to the 55 OG/CC and NAOC/CC. The 55 OG/CC will inform the NAOC/CC of his recommendation. (T-0)

2.2.2. Local Training Missions. The 55 OG/CC must obtain NAOC/CC approval for local training missions on primary or secondary aircraft. (T-0) The WG/CC is the approval authority for local training missions on tertiary or quaternary aircraft.

2.3. Aircraft Commander Responsibility and Authority. SQ/CC shall designate an AC for all flights on the flight authorization form, IAW AFI 11-401, *Aviation Management*, and applicable supplements. (T-1)

2.3.1. For NAOC alert missions, the AC is responsible for the safe accomplishment of the mission and will:

2.3.1.1. Serve as the focal point for interaction between 55 WG personnel, OTC and/or Command Center Operations Chief (CCOC), and mission support personnel.

- 2.3.1.2. Inform the OTC and/or CCOC of any factors that may affect mission accomplishment.
- 2.3.1.3. Comply with Operations. Complies with the guidance found in this and other governing/applicable instructions. (T-1)
- 2.3.1.4. Conduct EWO Operations. Conducts operations IAW JCS OPORD 2-CY and the ACC OPORD 84-CY series. (T-0)
- 2.3.2. For local training sorties (Non-NAOC), ACs are:
 - 2.3.2.1. In command of all persons aboard the aircraft.
 - 2.3.2.2. Responsible for the welfare of all persons aboard the aircraft as well as the safe accomplishment of the mission.
 - 2.3.2.3. Vested with the authority to accomplish the assigned mission. The AC shall only fly events authorized in the mission tasking unless, in the AC's judgment, an emergency condition demands otherwise. (T-3) Coordinate with the appropriate C2 agency to obtain approval from the execution authority prior to flying unscheduled training events.
 - 2.3.2.4. The final mission authority and makes decisions not specifically assigned to higher authority.
 - 2.3.2.5. Charged with keeping the applicable C2 or executing agencies informed concerning mission progress.
 - 2.3.2.6. The final authority for all operational matters pertaining to their aircraft, aircrew, and mission.
- 2.3.3. When approved by the NAOC/CC or 55 OG/CC, maintenance and civilian employees under direct contract to the DoD and engaged in official direct mission support activities, are considered mission essential and may be onboard the E-4 as Mission Essential Personnel (MEP) IAW AFI 11-401.

Chapter 3

CREW MANAGEMENT

3.1. Aircrew Qualification. Primary crew members must be current and qualified (valid AF Form 8, *Certificate of Aircrew Qualification*) or in training for qualification in that crew position. (T-2)

3.1.1. 55 Wing senior leaders who have completed the E-4B Senior Officer Qualification Course and possess a current AF Form 8 may occupy either pilot seat under direct IP supervision. These individuals will use “MP” as the Flight Authorization Duty Code on the Air Force Technical Order (AFTO) Form 781, *ARMS Aircrew/Mission Flight Data Document*. (T-3)

3.1.2. NAOC Alert/Presidential Support Mission (PSM) Missions. Pilots, navigators and flight engineers must complete mission certification IAW AFI 11-2E-4V1, *E-4 Aircrew Training*, prior to assuming alert duties and maintain mission-ready status for the duration of the scheduled mission. (T-2)

3.1.3. When aircraft is in Depot Status, HQ AFMC in coordination with ACC/A3 may approve FAA Designated Examiners to operate aircraft controls for the purpose of providing or renewing a Supplemental Type Certificate.

3.1.3.1. A current and qualified, E-4B instructor pilot will be at the controls whenever the FAA Designated Examiner is at the controls. (T-2)

3.1.3.2. USAF Functional Check Flight (FCF) pilot must be designated the Aircraft Commander. (T-2)

3.2. Aircrew Complement. [Table 3.1](#) and [3.2](#) below summarize crew position requirements for different crew positions.

3.2.1. The minimum flight crew complement is the same as for a basic crew.

Table 3.1. Minimum Flight Crew Complement.

Crew Position	Basic	Augmented
Pilot (<i>Note 1</i>)	2	3
Navigator	1	2
Flight Engineer	1	2
Flight Attendant (<i>Note 2,3</i>)	1	2

Note 1: For all NAOC alert-sorties, at least one pilot must be an Alert AC. (T-3)
Note 2: When no Flight Attendants (FA) are available due to mission requirements, the 1 ACCS/DO may waive the FA requirement provided sorties are flown without passengers onboard.
Note 3: 1 FA per 50 passengers is required for all ground and flight operations.
Note: If a FA is not available, the 1ACCS/DO may designate another egress trained crew member to assist with the emergency evacuation of mission support personnel. The designated crewmember is limited to no more than 10 passengers. **Note:** Augmented crews are required when a mission cannot be completed in a basic Flight Duty Period (FDP) (T-2). Two of the three pilots will be Alert AC qualified. (T-3) Flight crew complement shall in no case limit mission crew FDP IAW **para 3.3.4.** (T-2)

Table 3.2. Minimum Mission Crew Complement.

Crew Position	Alert (note 1)	SSM	Depot Testing	EWO (note 4)
Communications Control Officer (CCO)	1	1 (note 2)	0	0 (note 2)
Radio Operator (RO) / Voice Operator	5	2	1 (note 3)	3
Data Operator (DO)	6	1	1 (note 3)	2
Dual Trailing Wire Operator (DTWO)	1	0	0 (note 3)	1
Technical Control I (TC-1)	3	2	1 (note 3)	1
Technical Control II (TC-2)	3	2	1 (note 3)	1
Senior Leader Comms System (SLCS)	3	3	0 (note 3)	1
Radio Maintenance (RM)	1	0	0 (note 3)	1
Super High Frequency Operator (SHF)	3	2	1	1

Note: Crew complement may be adjusted when multi-seat qualified personnel are onboard.
Note 1: The minimum alert mission crew is 20 personnel. Mission crew for overseas travel should be 29 personnel to cover all contingencies.
Note 2: For Special Support Mission (SSM) and EWO Alert, at least one mission crew position is filled by a CCO or NCOIC.
Note 3: For Depot testing the RO and/or Data operator shall be VO qualified. (T-2) The two Technical Control operators cover positions TC-1, TC-2, RM, SLCS and DTWO.
Note 4: Actual needs are at the discretion of the Operations Team Chief. The CCO/NCOIC should recommend needed EWO personnel.

3.3. Flight Duty Period (FDP).

3.3.1. Reserve Crews. FDP begins one hour after the crew is notified to report for duty.

3.3.2. FDP Extensions. When requested by the aircraft commander, the 55 WG/CC may grant a 2 hour FDP extension to a basic crew FDP. Any augmented crew FDP extension requires HQ ACC/A3 approval.

3.3.2.1. FDP extensions apply to both flight crew and mission crew in an equal amount.

3.3.3. Because the mission crew is considered augmented, the mission crew FDP is 24 hours. When mission requirements dictate, consider adding additional mission crewmembers as necessary to maximize in-flight rest opportunities. **EXCEPTION:** The maximum FDP for mission crews with less than the applicable crew complement outlined in **Table 3.2** is 16 hours.

3.3.3.1. Mission crewmembers may have their FDP terminate in flight. These mission crewmembers will cease performing official in-flight duties. (T-2) Per AFI 11-401, paragraph 3.3.5, these crewmembers will log other time during periods of crew rest or sleep. (T-2)

3.3.4. The flight crew must complete transition training (i.e., multiple patterns, approaches, landings, and/or A/R training) during the first 12 hours of the flight crew's FDP. (T-2) In no case can this prevent missions from continuing to the final destination once training events are accomplished. Mission crew FDP does not affect the events associated with this paragraph. **EXCEPTION:** Transition training may be completed during the first 16 hours of the flight crew's FDP for aircrew evaluation or initial qualification sorties with OG/CC approval to extend transition duty day to 16 hours.

3.4. Crew Rest. Consult AFI 11-202V3, *General Flight Rules*, for additional guidance.

3.4.1. En Route Crew Rest and Ground Times.

3.4.1.1. Non-alert missions should be planned with a minimum of 17 hours ground time between engine shutdown and subsequent takeoff. If extended post flight duties are anticipated, ground time is adjusted to allow a full 12 hours crew rest prior to the start of the next FDP. When possible, flight crews should be afforded crew rest times in excess of the minimum to give crews the opportunity to overcome the cumulative effects of fatigue while flying consecutive days or transiting time zones.

3.4.2. Alert/SSM Missions. Once provided the opportunity for at least 8 hours uninterrupted rest, an aircrew member may start a new FDP. The crew rest period for alert is defined as the period when official alert duties are not being performed. Crew rest is free time, which includes time for meals and rest.

3.4.2.1. Mission crews may perform a maximum of 12 hours ground alert duty after flight and/or deadheading, provided they are afforded the following:

3.4.2.1.1. Eight hours continuous rest in the 10 hours immediately preceding the ground duty alert period.

3.4.2.1.2. Each applicable mission crew member will be provided an on-board bunk or passenger seat for their crew rest. (T-2)

3.4.2.1.3. After this ground alert duty, mission crew members will be afforded a full 12 hours crew rest before subsequent FDP can begin. (T-2)

3.4.2.1.4. Mission crew members will be relieved as soon as suitable replacements are crew-rested IAW 3.4.2. (T-2)

3.4.3. Post-Mission Crew Rest (PMCR). Aircrew members returning to home station from extended, multi-day missions should be given sufficient time to recover from the cumulative effects of the mission and tend to personal needs. PMCR begins upon mission termination and/or the completion of official mission/alert duties. Crewmembers should receive 1 hour (maximum of 96 total hours) for every 3 hours off-station and/or on alert.

3.5. Standby Force Duty.

3.5.1. Reserve Standby Force. As required, the 1 ACCS/CC shall posture aircrews as a Reserve Standby Force able to show for duty 1 hour after notification. (T-3) Unless approved otherwise by the 1 ACCS/DO, the Reserve Standby Force will remain in the local Omaha area (able to respond to work within 1 hour from time of notification). (T-3) The 1 ACCS/DO may adjust response times as necessary for mission accomplishment.

3.5.2. Telephone Standby Crews. As required, the 1 ACCS shall posture aircrews as a Telephone Standby Force ready to enter pre-mission crew rest within 2 hours. (T-3) Tasked aircrews will be legal to show for duty 12 hours after entering crew rest. (T-2)

3.6. Mission Alerting Procedures.

3.6.1. Crewmembers normally self-alert for all missions and trainers.

3.6.2. When necessary, the 1 ACCS/DO may set a crew legal-for-alert (LFA) time to provide greater flexibility for mission accomplishment. Crews with a LFA time do not show for duty until notified. Crews will show NLT 1 hour after notification. (T-2)

3.7. Aircrew Release Policy. The aircrew release policy is as follows:

3.7.1. Reserve and Telephone Standby Crews. Release time is 0730 the first duty day after assuming standby duty or as established by the 1 ACCS/DO.

3.7.2. Aircrews with a LFA Time. If not “alerted” within 12 hours of the LFA time, the crew will be released or reentered into crew rest.

3.7.3. Local Trainers.

3.7.3.1. If a training sortie cannot depart within 4 hours of the scheduled takeoff time due to maintenance, weather or other events, the crew should be released. The AC, with 1ACCS/DO concurrence, may extend the takeoff window as necessary for mission accomplishment.

3.7.4. Operational Missions (Alert, PSM, SSM, etc). The 1 ACCS/DO, in conjunction with the NAOC OTC, will direct aircrew release. (T-0)

Chapter 4

AIRCRAFT OPERATING RESTRICTIONS

4.1. General. Aircrews will reference the aircraft flight manual T.O. 1E-4B(II)-1, *E-4B Flight Manual*, T.O. 1E-4B-1-1, *E-4B Performance Data Manual*, T.O. 1E-4B(II)-43-1-1, *E-4B Command Control and Communications (C3) Systems Operations Manual* and T.O. 1E-4B(II)-43-2-1, *E-4B Organizational Flightline Maintenance Instructions C3 Systems*, *Boeing Dispatch Deviation Guide* and/or the *Minimum Equipment List (MEL)*, as applicable, to determine aircraft status and any pertinent operating restrictions. (T-2)

Chapter 5

OPERATIONAL PROCEDURES

5.1. Duty Stations. Both pilots and the engineer shall be in their seats during critical phases of flight and as required by AFI 11-202 V3. (T-0) During non-critical phases of flight, only one pilot or the flight engineer will be absent from his/her duty station at any one time. (T-1) When additional crewmembers are on board, the jump seat should be occupied to assist the crew in avoiding other aircraft, birds, etc., during critical phases of flight. Cockpit crewmembers will notify the pilot prior to departing their assigned primary duty station. (T-2)

5.2. Takeoff and Landing Policy. A qualified AC will occupy one of the pilot seats during all takeoffs and landings. (T-2) The designated AC is not required to occupy a primary position, but still retains overall authority for conduct of the mission.

5.3. Seat Belts. All occupants will have a designated seat with a seat belt. (T-2) Crewmembers will have seat belts fastened when occupying a duty position unless crew duties dictate otherwise. (T-2)

5.4. Flight Deck Communications Policy. Recorded aircraft crew communications represent official communications, and aircrew should be aware they have no expectation of privacy.

5.4.1. Sterile Flight Deck. Limit conversation to that essential for crew coordination and mission accomplishment during taxi, critical phases of flight, and flight below 10,000 feet MSL.

5.4.2. Advisory Calls. The pilot flying periodically announces his/her intentions during critical phases of flight and when circumstances require deviating from normal procedures.

5.4.2.1. In addition to the mandatory calls found in the flight manual, the pilot not flying (PNF) will make calls when passing transition level, approaching 1000 feet above or below any assigned altitude, VVIs in excess of 1000 ft/min below 500 feet AGL, and during landing when the pitch exceeds 8 degrees. (T-2)

5.4.2.2. Any crewmember will announce an altitude deviation of 200 feet or more, an airspeed deviation of 10 knots or more, or any potential terrain, obstruction or traffic clearance problem.(T-3)

5.4.3. Aircraft Interphone. All crewmembers will monitor interphone except when crew duties or physiological needs dictate otherwise. (T-3) Hot-mic (if available) should be monitored to the max extent possible, but may be toggled off for short periods when its use impedes the accomplishment of essential duties. Crewmembers will notify the AC prior to checking off interphone and/or hot-mic. (T-2)

5.4.4. Command Radios

5.4.4.1. The flight deck requires at least one UHF command radio plus guard, for all flights. (T-1)

5.4.4.2. The PNF normally makes all air traffic control (ATC) radio calls.

5.4.4.3. A designated crewmember will monitor the primary command radio unless directed otherwise, during all phases of flight. (T-2)

5.4.4.4. A flight deck crewmember will monitor guard regardless of the primary radio. (T-2)

5.4.5. Datalink, SATCOM voice, and Airline Operational Control (AOC).

5.4.5.1. The PNF and/or navigator normally accomplish all datalink correspondence with ATC. Verify the content and accuracy of all downlinks with the other pilot or navigator prior to sending a downlink to ATC.

5.4.5.2. Prior to sending any ATC downlink report containing aircraft position, altitude, altitude climbing/descending to, airspeed, or routing information, the PNF will coordinate with the navigator to ensure the Flight Management System (FMS) is providing accurate information for the report. (T-2)

5.4.5.3. The navigator (or PNF) normally monitors, replies to, and initiates all SATCOM voice, AOC, and Air Traffic System datalink communications.

5.4.6. HF Communications. Perform HF radio ground checks prior to takeoff when HF radio use may be required for ATC or C2 communications.

5.5. Runway, Taxiway, and Airfield Requirements.

5.5.1. Runway. The minimum required runway length and width is 7000 feet by 147 feet.

5.5.1.1. Intersection Takeoffs. Normally, takeoffs should be initiated from the beginning of the approved usable portion of the runway. However, pilots may accomplish intersection takeoffs provided the aircraft gross weight, takeoff obstructions, weather, runway condition, etc, allows for a safe takeoff and departure. The decision to make intersection takeoffs rests solely with the AC.

5.5.1.2. Contaminated Runways. During operations on runways partially covered with snow or ice, base takeoff computations on the reported Runway Surface Condition (RSC) or Runway Condition Reading (RCR) for the cleared portion of the runway. A minimum of 50 feet either side of centerline should be cleared. If the runway cannot be cleared, compute takeoff data based on the un-cleared portion up to 50 feet either side of centerline.

5.5.1.3. Use of Overruns. If approach end overruns are available and stressed or authorized for normal operations, they may be used to increase the runway available for takeoff. Departure end overruns may also be used for landing (as needed) if stressed and authorized.

5.5.1.4. RCR Limitations. Minimum RCR for takeoff and landing is the lowest RCR depicted in the T.O. 1E-4B-1-1 (never less than 4). When no RCR is reported, aircrews should consider the runway wet when there is sufficient water on the surface to cause a reflective glare or when rain is falling.

5.5.2. Taxiways. Minimum required taxiway width is 74 feet.

5.5.2.1. RCR Limitations. Aircrews will not taxi on surfaces where the reported RCR is less than 4 without approval from the 55OG/CC, or the NAOC OTC on off-station HHQ missions. (T-0) Aircrews should use caution during periods of degraded RCR since taxiways and ramps may have an even lower RCR than reported for the runway.

5.6. Wind Limitations. Airfields are considered below minimums for takeoff and landing when winds (including gusts) are greater than:

- 5.6.1. Maximum wind (any direction) – 50 knots.
- 5.6.2. Tailwind – 10 knots.
- 5.6.3. Crosswind – 30 knots, uncorrected for RCR.

5.7. Aircraft Taxi Speeds. Aircraft taxi speeds should be limited to 10 knots during turns of 90 degrees or more and 30 knots when taxiing straight ahead. Aircrews should adjust speeds accordingly for turns between 0 and 90 degrees.

5.8. Taxi Obstruction Clearance Criteria and Foreign Object Damage Avoidance.

5.8.1. Do not taxi an aircraft within 25 feet of obstructions without wing walkers. With wing walkers, avoid obstructions by at least 10 feet. Use extreme caution when scanning from inside the airplane since wing tip and tail growth in turns make determination of actual clearance very difficult. **EXCEPTION:** IAW AFI 11-218, *Aircraft Operations and Movement on the Ground*, aircraft may taxi without marshallers/wing walkers at home station along fixed taxi lines which have been measured to ensure a minimum of 10 feet clearance from any permanent obstacles.

5.9. Seat Belt/No-Smoking Sign Policy.

5.9.1. To enhance “Seat Belt” sign credibility and compliance, the flight crew turns the sign on just prior to taxi and off just after the parking brake has been set for parking. The flight crew will also turn on the seat belt sign during air refueling, anytime the landing gear is extended, and at the discretion of the AC. (T-2)

5.9.2. In order to comply with AFI 11-202V3 guidance, the “No Smoking” sign policy and the use of portable electronic devices on E-4B aircraft is as follows:

5.9.2.1. The flight crew will turn on the “No Smoking” sign prior to engine start and it will remain illuminated anytime the aircraft is operating below 10,000 feet MSL. (T-2) Prior to takeoff, the FA will make a PA announcement directing all personnel to turn off, or set to airplane mode, and stow all non-approved portable electronic devices and cellular phones. (T-2)

5.9.2.2. When the aircraft descends through 10,000 feet MSL and the “No Smoking” light illuminates, the FA will make a PA announcement directing all personnel to turn off, or set to airplane mode, and stow all non-approved portable electronic devices. (T-2)

5.9.2.3. Anytime in flight when the “No Smoking” sign is illuminated, all personnel will turn off and stow all non-approved portable electronic devices. (T-2) **EXCEPTION:** During air refueling, portable electronic devices may be used above 10,000 AGL with the “No Smoking” sign illuminated unless otherwise directed.

5.10. Aircraft Door Operations.

5.10.1. The flight crew will not conduct taxi operations with a cargo door or hatch open. **EXCEPTION:** EWO operations.

5.10.2. Door operators will be selected from qualified personnel and assigned a specific door by their section supervisor. (T-2) **Table 5.1** specifies E-4B door assignments by section. Personnel assigned duties as a door operator will:

5.10.2.1. Complete the E-4B emergency egress training before being designated a door operator. (T-2)

5.10.2.2. Identify doors armed in the automatic mode of operation with the appropriate flag. (T-2)

5.10.2.3. Utilize the “buddy system” when opening any of the main deck doors except during actual emergency egress situations. (T-2)

5.10.2.4. Immediately inform the FA of any problems arming/disarming any door. (T-2)

Table 5.1. Aircraft Door Assignments.

Door	Section
1 Left, 1 Right	Flight Attendant
2 Left, 2 Right	Battlestaff
3 Left, 3 Right	Battlestaff
4 Right	Communications
5 Left, 5 Right	Communications

5.11. Maximum Number of Personnel Aboard Aircraft.

5.11.1. Normal. Unless directed otherwise by the JCS or HQ/ACC and approved by ACC/A3, the AC will not exceed the maximum number of personnel using a standard configuration (111 aircrew and passengers). (T-2)

5.11.2. Emergency. The emergency authorization is for planning purposes and the AC must consult it in the event of emergency evacuation. (T-2) In this situation, the maximum number of personnel (aircrew and passengers) is 330 with a standard configuration. However, the passenger load may be varied depending on the urgency of the evacuation, the distance to be flown, and the overall condition of the aircraft. Weight and space limitations for survival equipment and personal baggage are not considered in these numbers.

5.12. Communication Systems Hazard Area Procedures.

5.12.1. Do not open the flight deck escape hatch when SHF/UHF SATCOM and/or MILSTAR are in use. (T-2)

5.12.2. At no time will maintenance (MX) personnel enter an area level with or higher than the blue line on the fuselage without first verifying with communications personnel that the SHF/UHF SATCOM, INMARSAT and MILSTAR systems are operating in receive only, not operating, or are pointed at an angle not to interfere with planned maintenance. (T-2) This area includes walking on the wings outboard of the inboard engines.

5.12.3. The SHF SATCOM antenna should not normally be operated below an angle of +10 degrees. If operation below +10 degrees is necessary, the SHF operator will coordinate with maintenance to ensure personnel are outside the hazard distance associated with the power output. (T-2)

5.12.4. MILSTAR operators should not normally transmit below an angle of +5 degrees from the horizon. If operation below +5 degrees is necessary, operators will coordinate with maintenance to ensure personnel are outside the hazard distance of 217 feet. (T-2) This restriction includes personnel in and around surrounding aircraft.

5.12.5. The HF radio may be transmitting anytime the aircraft is on alert. Crewmembers will take precautions to avoid contact with the aircraft surfaces when the HF radio is transmitting. (T-2)

5.13. Aircraft Electrical Power Transfers. With mission equipment operating, all power transfers for the mission busses will be via Non Interruption of Power Supply (NIPS). (T-2) If a NIPS transfer cannot be made, coordinate with Technical Control prior to any switching or restoring of electrical power. Power transfer is extremely critical and the must be done properly to avoid mission equipment damage. (T-2) If power transfers cannot be made via NIPS, FEs and/or maintenance personnel will ensure that Technical Control has ample time to power down critical equipment prior to any electrical configuration changes. (T-2) Clearly communicate the power needs of the aircraft to the ground crew.

5.14. Fuel Jettison Procedures.

5.14.1. Aircrews should burn down fuel versus jettison unless safety of flight dictates. Except in emergencies, notify ATC or a flight service facility of intentions, altitude, and location prior to jettison. If available, aircrews should use designated jettison areas except when safety of flight would be compromised. Never jettison fuel in a circular descending pattern.

5.14.2. For NAOC and HHQ missions, the OTC may authorize fuel jettison when an urgent operational requirement dictates immediate recovery/reconstitution of the aircraft and/or aircrew (alert force exercises are not considered urgent). The 55 OG/CC may also approve fuel jettison for training missions when an urgent operational requirement exists to expedite recovery of the aircraft and all alternatives have been exhausted.

5.15. Bird/Wildlife Aircraft Strike Hazard (BASH) Program. BASH programs are centralized unit efforts that provide information cross-feed, hazard identification, and a consolidated course of action. Aircrews will comply with guidance found in 55 WG BASH Plan 91-212. On operational NAOC missions the OTC is the BASH waiver authority. (T-3)

5.16. Participation in Aerial Events. See AFI 11-209, *Aerial Event Policy and Procedures*, and the appropriate ACC supplement. The 55 OG/CC must ensure aerial events are sanctioned and individually approved by the appropriate military authority and the FAA. (T-0)

Chapter 6

AIRCREW PROCEDURES

Section 6A—Pre-Mission

6.1. Aircrew Uniform.

6.1.1. Wear the aircrew uniform as outlined in AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, and AFI 11-301V1, *Aircrew Flight Equipment Program*, and all applicable supplements, on all missions unless otherwise authorized. When the *DOD Foreign Clearance Guide* requires civilian attire, wear conservatively styled civilian clothing.

6.1.2. All crewmembers and mission essential ground personnel (MEGP) (aircrew, maintenance, NAOC battlestaff, security forces, etc.) will remove rings and scarves before performing activities on/around the aircraft.

6.2. Personal Requirements. Crewmembers will carry the following items on all OCONUS missions: (T-2)

6.2.1. Restricted Area Badge and Military ID Card.

6.2.2. Government AF Form 2293, *U.S. Air Force Motor Vehicle Operator Identification Card*, Flight Line AF Form 483, *Certificate of Competency* and State Drivers Licenses, if held, Official Government/Military Passport (if required). **EXCEPTION:** Unit commanders may authorize newly assigned personnel who have applied for, but not yet received, a passport to act as crewmembers on missions scheduled to transit locations where passports are mandatory.

6.2.3. Crewmembers will obtain and carry visas as required by the Foreign Clearance Guide (FCG). (T-0)

6.3. Flight Crew Publications. As designated, the flight crew will carry the publications in Table 6.1 on all missions. (T-2)

Table 6.1. Flight Crew Publication Requirements.

Publication	Pilot	Nav	FE	FA
T.O. 1E-4B(II)-1 (Note 1)	I	I	C	I
T.O. 1E-4B(II)-1CL-1	C		C	
T.O. 1E-4B(II)-1CL-2		C		
T.O. 1E-4B(II)-1CL-4				C
T.O. 1E-4B-1-1	I		C	
AFI 11-2E-4V3 (Note 2)	I	I	I	I
AFI 11-202V3 (Note 2)	I	I	I	I

I = Issued
C = Issued and carried

Note 1: When utilizing the Electronic Flight Bag (EFB), only T.O. 1E-4B(II)-1 Volume II is required to be carried in paper format.

Note 2: Requirement includes all applicable supplements.

6.4. Mission Crew Publications. The Communications Team will maintain and carry the publications in **Table 6.2** on all missions. (T-2) Each team's appointed T.O. monitor will inspect the Publications quarterly. (T-2)

Table 6.2. Mission Crew Publication Requirements.

Publication	Quantity
T.O. 1E-4B-43-1-1	1
T.O. 1E-4B(II)-43-1-1CL-1	1
T.O. 1E-4B(II)-43-1-1CL-2	2
T.O. 1E-4B(II)-43-1-1CL-3	2
T.O. 1E-4B(II)-43-1-1CL-8	2
T.O. 1E-4B(II)-43-1-1CL-10	1
T.O. 1E-4B(II)-43-1-1CL-13	1
T.O. 1E-4B(II)-43-1-1CL-15	2
T.O. 31R2-2TRC194-41	1
T.O. 31R2-2A-121	1
T.O. 31R2-2A-121CL-1	1

6.5. Aircraft Functional Publication File. The Squadron Manuals Control Officer (SMCO) and/or Airborne Mission System Operator will maintain the publications in **Table 6.3** on each aircraft (specific to the applicable aircraft) and ensure they are inspected quarterly. (T-2)

Table 6.3. Aircraft Publication File Requirements.

Publication
T.O. 1E-4B(II)-43-1-1 (2 Sets)
T.O. 1E-4B(II)-43-1-1CL-4
T.O. 1E-4B(II)-43-1-1CL-5
T.O. 1E-4B(II)-43-1-1CL-7
T.O. 1E-4B(II)-43-1-1CL-9
T.O. 31R2-2A-121CL-1
Boeing 747 Dispatch Deviation Procedures Guide
Note: All T.O.s listed above are maintained by appointed Airborne Mission System Operators.

6.5.1. Unit-developed checklists are authorized. Units will ensure these checklists incorporate equipment configuration/operation, crew duties and coordination items as required (T-3). They will be used in conjunction with applicable aircraft specific Emergency Procedures Checklists contained in the Technical Orders provided by aircraft manufacturers.

(T-3) 55 OG/OGV will be the final approval authority for all unit-developed checklists IAW AFI 11-215, *USAF Flight Manuals Program*.

Section 6B—Pre-Departure

6.6. Sequence of Events (SOE). Aircrews should adhere to the established SOE found in the *1 ACCS Standards Guide*. The NAOC/CC, OTC, and/or 1 ACCS/DO may adjust SOEs as required for mission accomplishment.

6.7. Flight Crew Information File (FCIF) Procedures. Aircrew will utilize Patriot Excalibur program to obtain and sign-off all FCIF and squadron read file items. (T-2)

6.8. Route Navigation Kits.

6.8.1. Route navigation kits are issued at home station. Units must ensure kits contain sufficient quantities of material to cover the planned mission. (T-2) The minimum kit contents for local and worldwide operations are listed in **Table 6.4**. **EXCEPTIONS:** Local Route Navigation Kit contents may be modified as required for mission accomplishment. When a fully operable EFB is employed, all quantities in **Table 6.4** may be reduced to 1 copy. **EXCEPTION:** Back-up paper copies of worldwide Flight information Publication (FLIP) (OCONUS) products are not required on local training sorties.

Table 6.4. Route Navigation Kit Contents.

Item	Local	Alert	PSM/SSM
NACO US Terminal Procedures (24 Vols)	1	1	1
Flight Information Handbook	3	3	3
Standard Terminal Arrival Routes (STARs) (U)	3	3	3
VFR Supplement (U)	2	2	2
En Route Instrument Flight Rules (IFR) Supplement (U)	3	3	3
En Route IFR Supplement (W)		1	3
En Route Charts (High, Low, Terminal) (U)	2	2	2
En Route Charts (High, Low, Terminal) (W)		1	2
Instrument Approach Procedures (High & Low) (U)	3	3	3
Instrument Approach Procedures (High & Low) (W)		1	3
Terminal Change Notices (TCNs) (U)	3	1	3
Terminal Change Notices (TCNs) (W)		1	3
FLIP Planning (General Planning (GP), AP Series) (U)	2	2	2
FLIP Planning (GP, AP Series) (W)		1	2
Foreign Clearance Guide (W)		1	1
U – US Only W – Worldwide (OCONUS)			
Note: Numbers indicated required minimum quantity of applicable items			

6.9. Briefing Requirements.

6.9.1. Aircraft Commander Briefing. Cover all applicable items on the 55th Wing-approved Briefing Certificate to ensure safe and effective mission accomplishment. Items expanded on in the standards guide and understood by all participants may be briefed as “standard.” All flight crew members will attend this briefing unless excused by the AC. (T-3) The

communications team Flight Commander and NCOIC (or their representatives) will also attend (as applicable) and back-brief team members on all pertinent items. (T-3) If more than 72 hours have elapsed between the initial brief and scheduled takeoff, the AC shall re-brief any items deemed critical for safe mission accomplishment. (T-3)

6.9.2. Pre-Alert (NAOC 4-Hour) Briefing. All Flight crew members should attend if possible. As a minimum, the AC and the CCO will attend a NAOC pre-alert briefing. (T-2) If, due to mission requirements, the AC and/or CCO are unable to attend, a designated representative will be sent who will brief the on-coming crew prior to assuming alert. (T-2) The AC and CCO will, in-turn, brief all remaining crewmembers. (T-3)

6.9.3. Pre-Deployment Briefing. The NAOC/CC and/or 1 ACCS/CC (or designated representative) will conduct specialized briefings for aircrews deploying on PSMs/SSMs. (T-0) This briefing is used to advise aircrews of the latest mission changes, deployment issues, intelligence situation, and review other applicable information. All primary and alternate crewmembers should attend the briefing. The DO or AC may exempt crewmembers from this briefing on a case-by-case basis. If excused, crewmembers will be back briefed by the AC or section head before deployment. (T-3)

6.9.4. Weather Briefings.

6.9.4.1. Home Station Departures. Weather briefings may be faxed, emailed or posted on the Offutt weather website, as requested by the aircrew. When faxing weather request, aircrews will call to verify receipt, clarify any questions they have, and receive any critical updates that may arise. (T-2) Verbal briefings are authorized for flights.

6.9.4.2. En Route Stops. Aircrews should obtain weather information from the local military weather flight, Offutt AFB weather flight, or the Operational Weather Squadron (OWS) responsible for weather support at their location. If adequate services are not available and the crew cannot contact their home station weather flight, obtain weather through an OWS or MAJCOM-approved source in accordance with AFI 11-202V3.

6.9.4.3. NAOC Controlled Missions. Weather products and services will be provided or arranged for by the supporting AF organization according to AFI 11-202V3, AFH 11203V2, *Weather for Aircrews, Products and Services* and the *DoD Flight Information Handbook* (FIH).

6.10. Flight Plan Verification. Computer Flight Plans (CFP) are the official source of performance, navigation, and climatic data, including enroute wind information. Each mission segment should use the best wind data available.

6.10.1. Verify CFPs for route of flight and fuel computation accuracy before departure. CFP wind data should be considered inaccurate if the average wind for a route segment exceeds either 30 degrees in direction or 25 knots in speed from forecast conditions.

6.10.2. As a minimum, the Navigator will optimize CFPs for winds and include the route of flight, headings and airspeeds, winds, enroute times, air refueling information, and fuel log. (T-2) Best range airspeed should be used for general flight planning unless mission requirements dictate otherwise.

6.11. Jeppesen Flight Planning Procedures. Jeppesen Dispatch services will only be utilized on HHQ missions. (T-2) Jeppesen Milplanner may be used for any sortie.

6.12. Departure Planning. Comply with T.O. 1E-4B-1-1, AFI 11-202V3, AFMAN 11-217V1; *Instrument Flight Procedures*, and this chapter for departure planning. Regardless of the type of departure flown, review the following (as appropriate): IFR Departure Procedures, Standard Instrument Departure (SID), instrument approach plates, NOTAMS, Global Decision Support System (GDSS) Giant Report (if available), and suitable terrain charts including obstacles. Pilots and Flight Engineers will check IFR SIDS at all departure and destination airfields to ensure that all published climb gradients can be met for forecast weather conditions. (T-0) Crews will be trained and certified prior to flying Special Departure Procedures (SDP). (T-0)

6.13. Weather Minimums for Takeoff.

6.13.1. Departures with weather below landing minimums are authorized IAW AFI 11-202V3, chapter 4. When weather is below approach and landing minimums (ceiling and visibility), a departure alternate is required (see **paragraph 6.14**).

6.13.2. RVR Requirements. For NAOC operational missions, the NAOC Team Chief may waive takeoff RVR down to 1000 ft (300 M). For Special Airlift Missions (SAM), takeoff RVR is 1000 ft (300 M). Minimum takeoff RVR for all other sorties is 1600 ft. NOTE: Aircrews will comply with AFI 11-202V3 basic requirements when RVR is below 1600 ft.

6.14. Departure Alternates.

6.14.1. A departure alternate is required if ceiling or visibility is below landing minimums for an available approach (at departure aerodrome). Do not use CAT II/III Instrument Landing System (ILS) minimums to determine if a departure alternate is required.

6.14.2. When a departure alternate is required, the AC will ensure the aircraft is capable of maintaining the Minimum Enroute Altitude (MEA) or minimum obstruction clearance altitude (MOCA), whichever is higher, to the alternate using One Engine Inoperative (OEI) performance criteria. (T-2)

6.14.3. Suitability.

6.14.3.1. To qualify as a departure alternate, the selected airfield must be within 1 hour flying time at cruising speed. The existing weather (takeoff time) at the alternate must be at least 500-1 above the lowest compatible published approach minimums, but not less than 600-2 for a precision approach or 800-2 for a non-precision approach, and forecast to remain so for 1 hour after Estimated Time of Arrival (ETA) at the alternate.

6.15. Destination Requirements (for filing purposes). The forecast destination weather will be IAW AFI 11-202V3 and the following:

6.15.1. Destination Weather Below Minimums. On operational missions, aircrews may file to a destination airport which is forecast to be below the lowest published approach minimums provided they comply with the guidance in **paragraph 6.15.2**.

6.15.2. File two alternates when:

6.15.2.1. The forecast visibility (intermittent or prevailing) is less than published for an available DoD or National Aeronautical Charting Office (NACO) precision approach; or

6.15.2.2. The forecast ceiling or visibility (intermittent or prevailing) is less than published for all other approaches. For approaches with no published ceiling requirement (e.g. Jeppesen approaches), the minimum required ceiling shall be computed by taking

the published HAA or HAT and rounding it up to the nearest one hundred feet (or as determined by MAJCOM Terminal Instrument Procedures (TERPs) review). (T-2)

6.15.2.3. The forecast surface winds to include gusts (intermittent or prevailing) exceed limits corrected for RCR.

6.15.2.4. When filing two alternates, both must be at least 45 nm apart, have an operational and compatible precision approach, and meet the criteria for alternate airport weather outlined in AFI 11-202V3, Chapter 4. Include fuel for an approach, missed approach, and divert to the most distant alternate in the total flight plan fuel. (T-2)

6.15.3. File an alternate, regardless of forecast weather, when the destination aerodrome is outside the 48 conterminous states. **EXCEPTION:** OCONUS, intra-theater flights that do not exceed 3-hours, comply with basic AFI 11-202V3.

6.15.4. Remote or Island Destination. When filing to a remote or island destination, aircrews will use 1+15 holding fuel in lieu of an alternate (plus 45 minutes reserve fuel). (T-2) A remote or island destination is defined as any aerodrome which, due to its unique geographic location, offers no suitable alternate (civil or military) within 2 hours flying time. The forecast weather at the remote or island destination must meet the following criteria:

6.15.4.1. The prevailing surface winds, to included gusts, corrected for RCR, must be within limits at ETA and forecast to remain so for 2 hours thereafter. (T-2)

6.15.4.2. The prevailing ceiling and visibility must be equal to or greater than published minimums for an available non-precision approach [excluding Approach Surveillance Radar (ASR)], for ETA plus 2 hours. (T-2) However, if a precision approach is available, the ceiling or visibility may be intermittently below non-precision approach minimums (excluding ASR), but not below precision approach minimums (for ETA plus 2 hours). **NOTE:** See **paragraph 14.3.3** of this AFI for fuel planning considerations for destination requirements.

6.16. Adverse Weather.

6.16.1. Turbulence.

6.16.1.1. Do not fly into areas of forecast or reported severe turbulence. Additionally, avoid areas of known or forecast moderate or greater mountain wave turbulence.

6.16.1.2. Crews should confirm the type of aircraft the forecast turbulence applies to, or what type of aircraft reported the encounter, to gain a more accurate picture for their route of flight. The E-4B is a category II aircraft for turbulence.

6.16.2. Icing.

6.16.2.1. Do not fly into areas of forecast or reported severe icing. If moderate icing is encountered, every effort will be made to exit the icing conditions.

6.16.2.2. Do not takeoff under conditions of freezing rain. Do not takeoff under conditions of freezing drizzle/fog except when the aircraft has been properly de-iced/anti-iced with approved commercial fluids IAW applicable aircraft T.O. procedures. **NOTE:** Air Force Weather Agency technical note AFWA/TN 98/002, *Meteorological Techniques*, states that freezing drizzle is equivalent to moderate clear icing and freezing rain is equivalent to severe clear icing.

6.16.2.3. Freezing precipitation, snow, freezing fog, or temperatures near 0oC may cause ice or frost to accumulate on aircraft surfaces. When the aircraft requires de-icing/anti-icing prior to takeoff refer to the 1E-4B(II)-1 and the following guidance:

6.16.2.4. In all cases, a visual inspection of the aircraft will be made within 5 minutes of takeoff. (T-2) Aircrews can assume that the condition of the horizontal stabilizer is the same as the wing provided a visual inspection of the entire aircraft is made just prior to taxi.

6.16.2.5. Aircrews may utilize FAA/AFFSA published holdover times when the aircraft is de-iced with other than Type I de-icing fluids.

6.16.3. Thunderstorm Avoidance.

6.16.3.1. To minimize exposure to thunderstorm hazards when approaching or departing airports in areas of convective activity, aircrews will maintain at least 5 NM separation from heavy rain showers. (T-2) Aircrews can further minimize exposure to thunderstorm hazards by attempting to maintain VMC and avoiding areas of high lightning potential (clouds within $\pm 5,000$ feet of the freezing level or $\pm 8oC$ of the freezing level).

6.16.3.2. Aircrews should avoid flying in areas of recently dissipated thunderstorms, advected clouds (horizontal movement of clouds caused by wind) downwind of thunderstorms, or underneath a thunderstorm's anvil cloud.

6.16.3.3. On operational missions, approaches or departures may be accomplished when thunderstorms are within 10NMs. The thunderstorms must not be producing any hazardous conditions (such as hail, lightning, strong winds, gusts fronts, heavy rain, wind shear, or microburst) at the airport, and must not be forecast or observed to be moving in the direction of the route of flight (to include the planned missed approach corridor, if applicable).

6.16.3.4. Alert Missions. To the maximum extent possible, alert aircraft will avoid ground alert at locations where severe thunderstorms are forecast. (T-3) Aircrews should consider launching when severe thunderstorms are observed within 50 NM, but will launch without delay when thunderstorms are observed to be on course to the airfield. (T-2) When in doubt, ACs should err to the conservative side and launch since thunderstorms develop quickly, with little or no warning in an unstable atmosphere, thus providing little to no window for safe escape.

6.16.3.5. Consideration should be given to accomplish TRT takeoffs in areas where wind shear and thunderstorm activity is forecast.

6.17. Risk Management (RM). RM is a logic-based, common sense approach to making calculated decisions on human, material, and environmental factors that impact safe mission accomplishment. ACs will accomplish the 1 ACCS-approved RM worksheet during preflight mission planning activities. (T-2)

Section 6C—Preflight

6.18. AFTO Forms 781 Series. Review AFTO Forms 781 series before performing any preflight duties or checks. An authorized official must sign an Exceptional Release (ER) before flight. (T-2) A maintenance (MX) officer, superintendent, or authorized civilian normally signs

the ER, but the AC may sign if one of these individuals is not available. Ensure that the DD Form 1896, *Jet Fuel Identaplate* and Air Card are aboard the aircraft. Verify a current MX dash-six inspection is completed and annotated on the AFTO form 781H.

6.19. FMS Flight Plan Accuracy. Either a pilot or another navigator will verify all waypoint data inserted into the FMS by the navigator. Check both the coordinate information and the distances between waypoints against the flight plan. This information will also be checked against the IFR flight plan filed with ATC.

6.20. Aircraft Servicing and Ground Operations.

6.20.1. Refueling and De-fueling. Qualified FEs are authorized to refuel or de-fuel the aircraft. Refer to **Chapter 12** of this instruction for further guidance.

6.20.1.1. Alert Missions. Standard fuel load is 180,000 pounds regardless of location. Fuel loads may be adjusted as mission requirements dictate provided the change is approved by the OTC and/or CCOC and aircraft performance factors allow it.

6.20.1.2. Hot Refuel Procedures. Hot Refueling is authorized on alert missions with one or more engines operating. The AC and senior crew chief on duty will determine the need for hot refueling and ensure that all operations are accomplished in a safe manner and IAW applicable T.O. guidance. (T-3)

6.20.1.2.1. Only essential personnel are authorized on-board the aircraft during hot refueling. All NAOC Operations Team (OT) personnel may remain with their classified material on board the aircraft.

6.20.1.2.2. Both the base and the refueling team must be certified and current. The 55 Maintenance Group Quality Assurance section maintains a list of certified and current bases. (T-2)

6.20.1.2.3. Refueling will not begin until sufficient fire coverage is present. (T-2) If sufficient fire coverage cannot be maintained, hot refueling will be terminated. (T-2) Do not resume operations until sufficient fire coverage is restored.

6.20.2. Potable Water.

6.20.2.1. Operational Missions. Service 400 gallons of fresh potable water (4 full tanks). Drain and re-service water every 72 hours.

6.20.2.2. Training Sorties. Service a minimum of 200 gallons of fresh potable water when outside temperatures allow or as directed by the 1 ACCS/DO (for example, Trailing Wire Antenna (TWA) sorties). Drain and re-service water every 72 hours.

6.20.3. Hot liquid oxygen (LOX) Servicing Procedures. Hot LOX servicing is authorized on alert missions with one or more engines operating. The AC and senior crew chief on duty will determine the need for hot LOX servicing and ensure that all operations are accomplished in a safe manner and IAW applicable T.O. guidance. (T-3)

6.20.3.1. Only essential personnel are authorized on-board the aircraft during hot LOX servicing. No personnel are permitted in the forward lower lobe. All NAOC OT personnel may remain with their classified material on board the aircraft.

6.20.3.2. Limit maintenance activities to the physical replacement of avionics components inside the aircraft.

6.20.3.3. Hot LOX servicing will not begin until sufficient fire coverage is present. (T-2) If sufficient fire coverage cannot be maintained, servicing will be terminated. (T-2) Do not resume operations until sufficient fire coverage is restored.

6.20.4. Tire Rotation. Although a 72-hour tire rotation is not mandated, T.O. 4T-1-3, *Inspection, Maintenance Instructions, Storage and Disposition of Aircraft Tires and Tubes*, recommends a three-day tire rotation cycle. If the aircraft has not been moved in several days and tire flat-spotting is suspected, the crew must perform sufficient taxiing to roll out tire flat spots prior to attempting a high-speed taxi and/or takeoff. (T-2)

6.20.5. Non-Contract Fuel. In limited cases, NAOC operational mission requirements may necessitate the use of an airfield where no contract fixed based operator (FBO) exists. In these cases, the use of non-contract fuel is approved.

6.21. Life Support Requirements.

6.21.1. Oxygen. Minimum liquid oxygen (LOX) quantity is 200 liters with 4 operable LOX converters and 150 liters with 3 operable LOX converters. The AC may authorize lower amounts.

6.21.2. Meals Ready to Eat (MREs). Fifty seven cases are pre-positioned aboard the alert aircraft.

Section 6D—Departure

6.22. On Time Takeoffs. Mission departures are considered on time if the aircraft is airborne within 30 minutes of scheduled takeoff time.

6.23. Cabin Security Procedures for Takeoff and Landing. The following procedures should be followed prior to all takeoffs and landings:

6.23.1. The FA should assure all carry-on luggage and supplies are secured as soon as possible after boarding personnel. Ensure all personal carry-on baggage is stowed to prevent a hazard during emergency landings. Notify the AC when excessive amounts of baggage preclude safe stowage.

6.23.2. The FA will confirm the anticipated taxi time with the AC prior to commencing any cabin service before takeoff. (T-2)

6.23.3. The FA will notify the cockpit crew that the cabin is secure prior to being seated for takeoff to include number of souls on board. (T-2)

Section 6E—En Route

6.24. Flight Progress. In-flight, use all available navigational aids to monitor Flight Management System (FMS) performance. Immediately report malfunctions or any loss of navigation capability that degrades centerline accuracy to the controlling air route traffic control center (ARTCC). Use the following procedures for flight progress:

6.24.1. The flight crew will enter Oceanic, Trailing Wire Antenna, air refueling, communication exercise, and Category I routes into an approved mission planning system and a display using a moving map. (T-2) If a new route of flight is received, enter the new route of flight when able. When the approved mission planning system and/or moving map are unavailable, crews will use an appropriate navigational chart to plot and record route data. (T-2)

6.24.2. Another pilot or navigator will verify all waypoint data inserted into the Flight Management System. (T-2)

6.24.3. When approaching each waypoint on a Category I or over-water route, recheck coordinates for the next waypoint and crosscheck actual versus planned fuel remaining.

6.24.4. Operations in Territorial and International Airspace. (See FLIP, FCG, and Area Planning (AP) for further guidance).

6.24.4.1. Territorial Airspace. Includes airspace above territorial seas, archipelagic waters, inland waters, and land territory, and is sovereign airspace. Consistent with international law, the US recognizes sea claims up to 12 NMs, however, specific guidance from certain US authorities may establish limits which differ from this standard. Do not enter the territorial airspace of another nation without the proper diplomatic clearance.

6.24.4.2. International Airspace. This includes all airspace seaward of coastal states' territorial seas. Military aircraft may operate in such areas free of interference or control by the coastal state. A Flight Information Region (FIR) does not reflect international borders or sovereign airspace. Aircraft may operate within an established FIR without approval of the adjacent country, provided the AC avoids flight in territorial airspace.

6.24.4.3. Aircrews should not amend diplomatically approved entry point(s) when on a flight plan route which takes them from international airspace into territorial airspace.

6.24.4.4. In the event an ATC agency challenges the validity of a flight routing or attempts to negate existing clearances, ACs must evaluate the circumstances. The normal response is to advise ATC that the aircraft is continuing to the planned destination as cleared in international airspace. The key phrase is "in international airspace." Safety of flight is paramount in determining mission continuation.

6.24.4.5. Aircrews should not normally fly "due regard" routings unless specifically required by the mission directives. Operating under "due regard" obligates ACs to be their own ATC agency and separate their aircraft from all other air traffic. If operational requirements dictate, ACs may exercise the "due regard" option to protect their aircraft. Comply with the guidance found in FLIP *General Planning*. Aircraft should return to normal air traffic services as soon as safety permits.

6.25. Special Qualification Airspace.

6.25.1. E-4B aircraft are approved for operations in Required Navigation Performance (RNP) airspace down to RNP-0.3, Required Vertical Separation Minimum (RVSM) and Future Air Navigation Systems (FANS) airspace. The E-4B is Stage-3 Noise Compliant.

Section 6F—Arrival

6.26. Instrument Approach Procedures (IAPs).

6.26.1. Weather. Prior to starting an instrument approach or beginning an en route descent, pilots will confirm that existing weather is reported to be at or above required minimums for the lowest compatible approach.

6.26.2. Aircraft Category. The E-4B is designated a category D aircraft. Instrument approach RVR/visibility and, if required, ceiling minimums are as published for a category "D" aircraft. If the approach speed will exceed 165 knots, the minimums for category "E" are used.

6.26.3. ILS Precision Runway Monitor (PRM) Approaches. Both pilots must be certified to conduct ILS PRM approaches. (T-0) The PIC must comply with the following operational procedures: (T-0)

6.26.3.1. PIC will brief the approach as an ILS/PRM approach. (T-0)

6.26.3.2. Two operational VHF communication radios are mandatory.

6.26.3.3. All breakouts from the approach will be hand flown. Pilots will disengage autopilots when a breakout is directed. (T-1)

6.26.3.4. Should a Traffic Collision Avoidance System (TCAS) Resolution Advisory (RA) be received, the pilot shall immediately respond to the RA. (T-0) If following an RA requires deviating from an ATC clearance, the pilot shall advise ATC as soon as practical. (T-0) While following an RA, comply with the turn portion of the ATC breakout instruction unless the pilot determines safety may be compromised by following ATC directions.

6.26.4. ILS Cat 1. Category 1 minimums will be as published on the Instrument Approach Procedures (IAP). When authorization is stated on the IAP, Category 1 ILS approaches may be flown to minimums as low as 1800 RVR (feet). When TDZ/CL is not available and RVR is below 2400 feet, aircrews will fly an autopilot coupled approach (single channel) until reaching the altitude at which the decision to land or go-around is made.

6.26.5. ILS Cat II/IIIa Approaches. Multiple airfield/aircraft systems and equipment must be operational for Cat II/IIIa approaches. Consult AFM 11-217VI, *Instrument Flight Procedures*, T.O. E-4B(II)-1, and applicable AFIs for additional guidance. (T-2)

6.26.5.1. Unless circumstances dictate otherwise, aircrews should comply with the following guidance to *maximize* aircraft performance during Cat II/IIIa approaches:

6.26.5.1.1. Intercept localizer at an angle of 45 degrees or less.

6.26.5.1.2. Intercept localizer not less than 8 miles from the runway threshold.

6.26.5.1.3. Capture localizer at a speed of $V_{ref} + 40$ knots or less.

6.26.5.1.4. Capture glide slope at or above 1500 feet AGL.

6.26.5.1.5. Stabilize aircraft on localizer and glide slope not later than the outer marker or as soon as possible after passing the Final Approach Fix (FAF).

6.26.5.1.6. Sterile Approach Path. Advise and get confirmation from ATC that you are flying a coupled and/or auto-land approach.

6.26.5.1.7. Check aileron and rudder trim prior to engaging the autopilot for the approach.

6.26.5.1.8. Maintain symmetrical thrust on all four engines throughout the approach. **Note:** If any of these conditions cannot be met and weather conditions permit, the pilot may elect to hand-fly a Cat II approach with three or four engines operating.

6.26.5.2. "RA-NA" Minimums. CAT II approaches without an RA setting for Decision Height (DH) are authorized. In this case, the terminology "RA-NA" is annotated in the minimums section of the IAP. This denotes irregular terrain changes that affect RA. The PIC must determine DH solely from the barometric altimeter.

6.26.6. ILS Cat IIIa. Minimums will be as published on the IAP, but no lower than 700 RVR (feet). Accomplish a go-around if there is no visual reference with the touchdown zone by 50 feet AGL or upon receiving a report of controlling RVR below minima prior to this height.

6.26.6.1. Weather Below Minimums. If an aircrew has begun the en route descent or published approach and subsequently determines the weather is below approach minimums (reported or observed), the pilots must not deviate from the last ATC clearance until obtaining a new or amended clearance. CAT I approaches may be continued to the missed approach point and land, if the aircraft is in a position to make a safe landing and the runway environment is in sight. (T-1)

6.27. Border Clearance/Customs. Refer to Foreign Clearance Guide, DoD FLIP documentation and host nation procedures for border clearance/customs procedures.

6.27.1. Normal Operations:

6.27.1.1. The 1 ACCS is normally responsible for border clearance of all aircraft. When staff support is not available, border clearance is the responsibility of the AC.

6.27.1.2. The AC may delegate duties to ground personnel or to other designated crewmembers, but he/she retains ultimate responsibility. The AC will ensure the following:

6.27.1.2.1. Crew members and passengers possess current passports and valid visas, when required. (T-0)

6.27.1.2.2. Crew members and passengers possess current certificates of immunization. (T-0)

6.27.1.2.3. Depart or enter the United States through an air base where border clearance can be obtained. (T-0)

6.27.1.2.4. Obtain border clearance for aircraft passengers, crew and baggage, if required, before takeoff to a foreign area or after arrival from a foreign area. (T-0)

6.27.2. Procedures for US Entry:

6.27.2.1. En route, the FA or designated crewmember will distribute personal customs declarations to all passengers and crew members. (T-2) The FA or designated

crewmember will also brief passengers and crew members on customs regulations and prepare and compile necessary border clearance forms for the FA's signature. (T-2)

6.27.2.2. En route, notify the C2 agency or airfield contact at the base of intended landing of any change in ETA to ensure that border clearance is accomplished as soon as possible after landing.

6.27.2.3. Obtain a permit to proceed when military necessities require that an aircraft (which has landed in the United States for customs clearance) proceed to another base in the US to obtain border clearance. The permit to proceed delays customs inspection of passengers and crew until arrival at the off-load station and saves intermediate off-loading and reloading normally required for customs inspection. The permit to proceed is valid only to the airport of next landing where the AC must ensure the border clearance is completed or a new permit to proceed issued by a customs official. (T-0) Do not make intermediate stops between the issue point of the permit to proceed and destination unless required by an emergency situation or directed by the controlling authority.

6.27.2.4. When an aircraft lands for a US border clearance, a US Customs representative normally meets the aircraft to obtain the required documents. Do not deplane passengers or crew members unless absolutely necessary for safe recovery of the airplane or the preservation of life and property. Do not unload until approved by customs and agriculture personnel or their designated representatives. This procedure applies to the initial landing in the US and all landings required when operating on a permit to proceed or until all crew and passengers complete final border clearance.

6.27.3. Inspections of E-4B aircraft by foreign officials:

6.27.3.1. Follow US Air Force policy on status of military aircraft as stated in the Foreign Clearance Guide, General Information, **Chapter 3**. In substance, this policy states that US military aircraft are immune from searches, seizures, and inspections (including customs and safety inspections) by foreign officials. In addition, ACs must be aware of and adhere to any specific Foreign Clearance Guide provisions for individual countries. (T-0)

6.27.3.2. If confronted with a search request by foreign authorities, aircrews will follow the direction of the NAOC OTC. (T-0) ACs should also consider the following guidance:

6.27.3.2.1. In most cases, search attempts may be halted simply by a statement from the AC to the foreign official that the aircraft is a sovereign instrumentality not subject to search without consent of US Air Force headquarters or the US Department of State officials in the country concerned. This should be clearly conveyed in a polite manner so as not to offend foreign authorities who may honestly, but mistakenly, believe they have authority to search US Air Force aircraft.

6.27.3.2.2. If foreign authorities insist on conducting a search, the AC should make every effort to delay the search until he or she can contact US Air Force headquarters or the appropriate embassy officials. The AC should then notify these agencies of the foreign request by the most expeditious means available and follow their instructions.

6.27.3.2.3. If foreign officials refuse to desist in their search request, pending notification to US Air Force headquarters or the appropriate embassy, the AC should

indicate that he or she would prefer to fly the aircraft elsewhere (provided fuel, flying time, and mechanical considerations permit a safe flight) and request permission to do so.

6.27.3.2.4. If permission is refused and the foreign authorities insist on forcing their way on board an aircraft, the AC should state that he protests the course of action being pursued and that he intends to notify both US Air Force headquarters and the appropriate American Embassy of the foreign action. The aircraft commander should not attempt physical resistance, and should thereafter report the incident to US Air Force headquarters and appropriate embassy as soon as possible. The AC should escort foreign authorities if the inspection cannot be avoided.

6.27.3.3. Other procedures may apply when carrying sensitive materials or equipment. Follow these procedures and applicable portions of classified Foreign Clearance Guide supplements.

6.27.4. Payment of Services and Refusal of Fees:

6.27.4.1. Consistent with U.S. Government policy, DoD aircraft shall not be subject to air navigation, overflight, or similar fees for transit through the national airspace of another country or through Flight Information Regions in international airspace. DoD aircraft shall not be subject to landing and parking fees (or other use fees) at foreign government airports. Reasonable charges for services requested and received at foreign airports shall be payable.

6.27.4.2. If a foreign government insists on collecting a landing or parking fee, the AC should make every effort to delay the payment until he or she can contact US Air Force headquarters.

6.27.4.3. If payment of a fee is demanded by the foreign government in order to depart, the AC may pay the fee “under protest” and shall notify the foreign government that he intends to notify both US Air Force headquarters and the appropriate American Embassy of the foreign action.

6.28. Insect and Pest Control. ACs will ensure required spraying is accomplished according to the FCG, or as directed by higher headquarters. (T-2) Certify the spraying on a **CF 7507**, or on forms provided by the country transited. Aircraft should never be sprayed with passengers on-board. The only exception is when the FCG mandates it (for example, Australia).

6.28.1. When spraying is conducted, use insecticide, aerosol d-phenothrin-2 percent, USAF approved or equivalent, to spray the aircraft. Use the following guidelines:

6.28.1.1. Direct the nozzle toward the ceiling of the compartment or space being sprayed.

6.28.1.2. Spray spaces inaccessible from within the aircraft after completely loading fuel, baggage, cargo, and passengers, including baggage compartments, wheel wells, and other similar spaces.

6.28.1.3. Spray the cabin, cockpit, and other spaces accessible from within the aircraft after the crew is aboard and after closing all doors, windows, hatches, and ventilation openings. **CAUTION:** If the insecticide label requires disembarkation after use, spray

prior to boarding crew or passengers. Close all doors and hatches for 10 minutes after dispensing and ventilate for 15 minutes before allowing anyone on board.

6.28.2. **Spraying Times.** Spray the aircraft for 118 seconds unless longer periods are specified for the country being transited.

6.28.3. **Responsibility of Aircraft Commander In-flight.** When seeing any insect or rodent infestation of the aircraft in-flight, notify the destination C2 facility, base operations, or airport manager of the situation before landing so the proper authorities can meet the aircraft.

6.29. Aircraft Recovery Away From Main Operating Base (MOB).

6.29.1. When an aircraft is scheduled to land at a base other than home station, crew chiefs should accompany the aircrew. In the absence of E-4B maintenance personnel (i.e. weather divert), the flight crew is responsible for ensuring the aircraft is turned to meet subsequent mission taskings.

6.29.2. In all cases where qualified maintenance specialist assistance is not available, the flight crews will ensure compliance with the appropriate maintenance T.O. (T-2)

6.30. Maintenance Debrief. Complete the AFTO Form 781 series after each flight. After landing, crewmembers will debrief maintenance personnel on the condition of the aircraft. (T-2)

6.30.1. ACs or Flight Attendants will provide one copy of the AFTO Form 781, ARMS Aircrew/Mission Flight Data Log to maintenance personnel. (T-2)

6.30.2. Turn in Offutt Form 791, *Aerial Receiver In-Flight Receipt Log*, AF Form 664, *Aircraft Fuels Documentation Log*, AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance Document*, AFTO FORM 781A, *Maintenance Discrepancy and Work Document*, and the Offutt Form 73, *Engine Condition Sheet*, to the maintenance debriefer.

Section 6G—Miscellaneous

6.31. Engine Maintenance Runs. Aircrews are authorized to perform engine maintenance runs which cannot be performed on the Echo Row and/or by maintenance personnel. When an aircrew is needed, the following procedures apply:

6.31.1. AMU should notify 1 ACCS/DO no later than 14 hours prior to the scheduled engine run time. This provides 2 hours to organize a crew and 12 hours for pre-mission crew rest. A minimum of two pilots and one engineer are required for all engine runs. (T-2)

6.31.2. Maintenance personnel will accomplish all necessary inspections and preparations for the engine run prior to crew show time and document the AFTO 781 series appropriately. (T-2)

6.31.3. Engine run crews will comply with the following guidance: (T-2)

6.31.3.1. Prior to departing for the aircraft, notify command post, SOF, Maintenance Operations Center (MOC) and base operations about the engine run. CP, in turn, notifies Central Security Control (CSC). Aircrews pre-coordinate with the control tower if runway use is required.

6.31.3.2. Verify all engine run parameters/requirements (type of run, power settings, etc) with the maintenance supervisor prior to starting engines.

6.31.3.3. Follow normal aircrew checklist procedures. Flaps will be set to the UP position. (T-2)

6.31.3.4. Power Settings Above Ground Idle. Operate symmetrical engines with the parking brake set for all power settings above ground idle. For engine runs at or above the takeoff power range, aircrews may open the AURAL WARN circuit breaker to eliminate nuisance warnings. When opened, crews should pay special attention to all visual warning indications for the engine and APU. Delay opening the circuit breaker until just prior to commencing the engine run and close it immediately upon completion.

6.31.3.5. Terminate engine run at the first indication that damage to the aircraft or base equipment may occur.

6.31.4. Military Power Assurance (MPA) Runs. Engine runs are normally accomplished at MPA settings with no bleed air or electrical loads on the associated engine. These runs normally use an N2 power setting instead of N1. MPA runs may be performed on any Echo Row parking spot up to maximum power.

6.31.5. Takeoff Rated Thrust (TRT) Runs. TRT runs are only accomplished on the active runway. When runway use is necessary, engine runs should be de-conflicted with the local flying schedule. Position the airplane into the wind (as best as possible) at approximately the mid-field position.

6.31.6. If the aircraft is not ready 4 hours after show time, the crew is released.

6.32. Life Support Equipment. The Flight Attendant or the AC designated representative will:

6.32.1. Ensure appropriate serviceable protective clothing, life support, and survival equipment for the entire mission is aboard the aircraft before departing home station. (T-2)

6.32.2. Review, sign, and date the AFTO 46, *Prepositioned Life Support Equipment*, to ensure all required protective clothing and life support and survival equipment have been certified as installed by aircrew life support. (T-2) The FA will ensure appropriate number and type of life preservers are aboard for over-water missions if carrying children and/or infants. (T-2)

6.32.3. Equipment Discrepancies. Aircrews discovering defective or missing equipment will document the discrepancy in the AFTO 781A. (T-2) Normally, do not sign the AFTO 46 until the discrepancy has been corrected. If the mission continues without the missing equipment, annotate the discrepancy on the AFTO 46 when signing and dating the form.

6.32.4. Additional Equipment. If more equipment is discovered during the preflight than is annotated on the AFTO 46, notify the maintenance supervisor. Extra equipment is normally stored in the main deck Technical Control/Rest Area overhead compartment. Excess equipment should be removed by life support personnel during the next life support inspection.

Chapter 7

AIRCRAFT SECURITY

7.1. General. This chapter provides guidance on aircraft security and preventing and resisting hijacking of E-4B aircraft. AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*, AFI 31-101, *Integrated Defense*, and specific ACC security publications contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed aircrew members or missions to the public. (T-2)

7.2. Security. All E-4B alert aircraft are Protection Level (PL) 1 resources. All other E-4Bs are PL 2 resources. Aircraft security at non-United States military installations is the responsibility of the controlling agency.

Chapter 8

OPERATIONAL REPORTS AND FORMS

8.1. General. Applicable reports and forms are contained in this chapter. Specific reports and forms applicable only to the flight engineer are in **Chapter 12**.

8.2. AF FORM 457, USAF Hazard Report. The AF FORM 457 is a tool to notify supervisors and commanders of a hazardous condition that requires prompt corrective action. For hazardous weather, complete the front side of an AF FORM 457 and send it to the parent wing flying safety office.

8.3. AF FORM 651, Hazardous Air Traffic Report (HATR). The AF FORM 657 is a tool to report near midair collisions and alleged hazardous air traffic conditions. See Attachment 3 of AFI 91-202, *The US Air Force Mishap Prevention Program*, for more information concerning the HATR program.

8.3.1. AFI 91-204, *Safety Investigations and Reports*, and AFMAN 91-223, *Aviation Safety Investigations and Reports*, list HATR reportable incidents.

8.4. OAFB 3404, 55th Wing Aircraft Incident Worksheet. Notify the appropriate authorities of any mishap involving aircraft, crew, or passengers.

8.4.1. This form is filled out to collect factual information after an incident or unusual occurrence. Information provided is collected under the provisions of AFI 91-204 solely for the purpose of mishap prevention within the US Air Force. Reportable mishaps include:

8.4.1.1. Physiological mishaps.

8.4.1.2. Engine flameout, failure, or required shutdowns (regardless of damage) after engine start with the intent to fly. Report incidents involving two or more engines immediately. Single-engine incidents may be reported upon landing.

8.4.1.3. Loss of thrust sufficient to preclude maintaining level flight at a safe altitude.

8.4.1.4. Engine case penetration by shrapnel from internal engine component failure.

8.4.1.5. Engine case rupture or burn-through, engine bay fire, or massive fuel leakage.

8.4.1.6. Unselected thrust reversal.

8.4.1.7. Flight control malfunction (including trim systems) resulting in an unexpected, hazardous change of flight attitude, altitude, or heading. When making the AFTO 781A entry, include the flag words "reportable flight control malfunction."

8.4.1.8. Malfunction of landing gear when difficulty is experienced using emergency system or procedures.

8.4.1.9. Cargo door when intent for flight exists which could affect the integrity of the system.

8.4.1.10. In-flight loss of all pitot-static instrument indications or all gyro-stabilized attitude or directional indications.

8.4.1.11. Spillage or leakage of radioactive, toxic, corrosive, or flammable material from aircraft stores that, in the judgment of the reporting individual, is significant hazard to the crew, passengers, or aircraft.

8.4.1.12. Human factors related situations.

8.4.1.13. All cases of departure from intended takeoff or landing surface onto a surface not designed to normally support takeoff or landing loads.

8.4.1.14. All in-flight fires regardless of damage.

8.4.1.15. All bird strikes, regardless of damage.

8.4.1.16. Any dropped object.

8.4.1.17. Any occurrence which does not meet the established criteria for a reportable mishap, but in the judgment of the reporting individual, needs to be emphasized in the interest of mishap prevention.

8.4.2. Report mishaps as soon as possible to the 1 ACCS/DO and as directed on the OAFB 3404. When transiting en route USAF bases, ACs should contact the local Flight Safety office to comply with local reporting requirements and seek any additional assistance required. Retain a copy of all relevant information, and turn it into the home station safety officer upon mission completion.

8.4.3. Required Information. Complete all appropriate areas of the form. Provide as much detail as possible.

8.5. Report Violations, Unusual Events, or Circumstances. ACs shall document events that require them to deviate from AFI 11-202V3 (unless waived by competent authority) or alleged navigation errors (include over-water position errors over 24NMs, border, or ATC violations). (T-2)

8.5.1. Use OPREP-3 reporting procedures contained in AFI 10-206, *Operational Reporting*,

8.5.1.1. When notified of a navigation position error, the AC (or agency that receives initial notification) shall document the circumstances surrounding the incident (using report format below) and ensure C2 agents submit an OPREP-3. (T-2)

8.5.2. ACs shall expeditiously report unusual events/circumstances that impact their mission to appropriate ACC agencies. (T-2) Most events require C2 agents to forward OPREP reports to higher headquarters. In all cases, pass the who, what, when, where, why, and how of the incident to the appropriate C2 agency.

Chapter 9

TRAINING POLICY

9.1. Touch-and-Go Landings. The following limitations apply:

9.1.1. Comply with all flight manual procedures and restrictions.

9.1.2. Runway.

9.1.2.1. Minimum runway length is 8,000 feet.

9.1.2.2. RCR shall be 15 or greater. (T-3)

9.1.2.3. Do not accomplish touch-and-go landings on slush, ice, or snow covered runways. **EXCEPTION:** When conditions are “patchy” (ice or snow), touch-and-go landings may be accomplished provided RCR is 9 or greater and minimum runway length is 9,000 feet.

9.1.3. Maximum crosswind component is 20 knots.

9.1.4. Accomplish all touch-and-goes under the direct supervision of an IP/EP in one of the pilot seats. There is NO limitation on accomplishing touch-and-go landings while MEP or passengers are onboard. No emergency procedures may be accomplished while MEP or passengers are onboard. AFI 11-401 contains other restrictions based on the type of flight profile.

9.1.5. Weather. Must be at/above minimums for the lowest compatible approach, but no lower than 200 foot ceiling / 2400 RVR (1/2 mi when RVR is not reported). (T-3)

9.2. Short-Field Landings & LPVRs. When conducting practice short-field landings and LPVRs, aircrew will comply with local guidance defined in the 1 ACCS Standards Guide. (T-3)

9.3. Full Stop/Taxiback Landing Procedures. Full stop/taxiback landings are authorized under the following conditions:

9.3.1. Compute a brakes-on speed which requires the dissipation of less than 20M ft-lbs of brake energy. If manual braking is used, the runway length and condition should allow withholding brake application until the computed brakes-on speed is reached and still permit a safe stop.

9.3.2. Brake energy is cumulative (landing, taxi, possible abort on subsequent takeoff, etc). Compute the total brake energy accumulation possible. Use a limit of 50M ft-lbs for this calculation.

9.3.3. Brake Cooling. The landing gear remains down on the subsequent takeoff. The crew will not perform further full stop/taxibacks until the required brake cooling time has been observed and actual brake cooling is confirmed at the Flight Engineer (FE) station. (T-3)

9.3.4. The crew should carefully consider the possibility of exceeding the brakes' stopping capability during a high-speed abort on the subsequent takeoff. The brakes are effective to approximately 58M ft-lbs of brake energy.

9.3.5. So long as flight crew maintain control of the aircraft, for the purpose of scheduling, a taxi-back is not considered an additional sortie and does not require Form 2407, nor does it

require a Maintenance Quick Turn Checklist be accomplished. Taxi-backs need not be pre-coordinated and may be performed to change aircrew or to have quick inspections following a suspected bird strike. (T-3)

9.4. Simulated In-Flight Emergency Procedures. Simulated emergency procedures are conducted IAW AFI 11-202V3 and this instruction. If an actual emergency situation develops, the crew will terminate practice emergency procedures. (T-3) The following limitations apply:

9.4.1. Pilots will alert all crewmembers prior to simulating emergency procedures. (T-3)

9.4.2. Compound emergencies are not to be practiced.

9.4.3. Simulated Engine-Out Limitations.

9.4.3.1. Do not simulate engine failures on takeoff below 100 feet AGL. Pilots will only accomplish EFTOC emergencies below 650,000 lbs gross weight. (T-3)

9.4.3.2. Maximum crosswind component is 20 knots.

9.4.4. An IP/EP occupying one of the pilot seats will supervise simulated emergencies. (T-2)

9.5. Category II/IIIa Training. Practice ILS Cat II/IIIa approaches may be flown provided actual weather conditions are at or above Cat I minimums. Aircrews will use the following guidance: (T-2)

9.5.1. Cat I Certified Facilities. Use a DH of 100 feet RA.

9.5.2. Cat II/IIIa Certified Facilities. Use published approach minimums, but no lower than 50 feet RA.

9.5.3. Comply with flight manual procedures/restrictions and the guidance found in **Chapter 6** of this instruction.

9.6. Missed Approach Training.

9.6.1. All planned missed approaches (auto, manual or engine-out) will be initiated no lower than 100 feet AGL. (T-2)

9.6.2. Missed approaches with men and equipment on the runway will be initiated no lower than 500 feet AGL or as directed by ATC. (T-2)

9.6.3. If an unplanned go-around is executed due to any unsafe condition during an engine-out approach, symmetrical thrust will be established on all engines as soon as practical. (T-2)

9.7. Air Refueling. Ensure positive tanker disconnect capability exists prior to accomplishing boom limit demonstrations and/or practice breakaways (from the contact position). Pilots will notify all crewmembers before initiating practice breakaways. (T-3)

9.8. Prohibited In-Flight Training Maneuvers.

9.8.1. Actual engine shutdowns.

9.8.2. Simulated rejected takeoffs.

9.8.3. Simulated multiple engine-out landings and missed approaches.

9.8.4. Stalls and approach to stalls.

9.8.5. Unusual attitudes.

9.8.6. Emergency descents.

9.8.7. Emergency boom latching.

9.8.8. Reverse-flow air refueling.

9.8.9. Steep turns (over 45 degrees of bank). Steep turns (up to 45 degrees of bank) may be practiced at or above 10,000 feet AGL in Day VMC conditions.

Chapter 10

MISSION CREW (COMM) PROCEDURES

10.1. General. This chapter outlines mission crew procedures not found in the aircraft flight manuals, other AF directives, or elsewhere in this volume. Mission crews are comprised of a Communications Control Officer (CCO), Airborne Mission Systems Operator(s) (AMSO), and Satellite & Wideband Communications Equipment Specialist(s) (SHF).

10.2. Responsibilities. The mission crew is responsible to the AC for the inspection, operation, and maintenance of communication and electronic mission equipment aboard the aircraft. Mission crews will:

10.2.1. Closely monitor and safeguard all classified material associated with communication and electronic mission equipment. (T-2) Only mission crewmembers are authorized access to designated safes in the communications compartments.

10.2.2. Assure communication resources are available to meet all NAOC and/or SSM communication requirements. (T-2)

10.2.3. Assure adequate communications and electronic spare parts are available to support the mission. (T-2)

10.2.4. Distribute applicable message traffic aboard the aircraft. (T-2)

10.3. Pre-Mission Procedures. As designated by the CCO, mission crews will:

10.3.1. Review the planned mission itinerary. Coordinate with the OT or SSM communications agency to determine all communication requirements for the mission. (T-2)

10.3.2. Determine spare communications and electronic equipment requirements and arrange procurement. (T-2)

10.3.3. Determine Communications Security (COMSEC) kit requirements and advise 1 ACCS/COMSEC. (T-2)

10.4. Pre-Flight Procedures. Mission crews will:

10.4.1. Pick-up or arrange delivery of COMSEC and communications mission database kits. (T-2)

10.4.2. Accomplish preflight inspections IAW flight manual checklist. (T-2)

10.4.3. Advise supporting and/or supported agencies of aircraft communication status (limitations, available circuits, etc). (T-2)

10.4.4. Verify aircraft forms prior to starting preflight or coordinated with maintenance superintendent that the aircraft is ready to perform all preflight checks. (T-3)

10.5. In-Flight Procedures. Mission crews will:

10.5.1. Maintain continuous phone patch and data circuit capability as required. Continuously monitor all available circuits throughout the entire mission. (T-2)

10.5.2. Transmit departure and arrival reports as well as any other C2 communications as directed by the AC. (T-3)

10.5.2.1. Home station CP is the single point of contact for the reporting of all arrival and departure information for E-4B missions. Home station CP and/or some ground support agencies may require certain departure and arrival information items to track Distinguished Visitor (DV) locations.

10.5.2.2. Departure and Arrival Messages. Crews will refer to local guidance for specific message content. (T-3) As a minimum, messages should contain the call sign, time of departure, ETA to next station, maintenance status, DV code (if applicable), and total number of official passengers. When returning from overseas, request customs, agriculture, and immigration as needed.

10.5.2.3. Two-Hour-Out Report. For all SSMs, send the destination airfield a two-hour-out report to inform them of DV arrival time. All aircraft servicing and other special requests should also be made at this time.

10.5.3. Relay all DV messages and arrange passenger phone patch service. (T-2) When briefing passengers on phone patch procedures, advise them what type of circuit their phone patch is being placed over (Secure vs. Non-Secure) and that circuits are subject to monitoring.

10.5.4. Receive and distribute message traffic to passengers immediately upon receipt. (T-2)

10.5.5. Comply with local directives concerning the disposition of messages, files, and logs. (T-3)

10.5.6. One crewmember from each compartment (tech control, radio, etc) will monitor aircraft interphone at all times, unless approved by the AC. (T-3)

10.6. En Route Security of Classified Material. When authorized security personnel accompany the airplane, all levels of classified material may be left onboard the aircraft provided it is locked in appropriate safes and/or security containers.

10.7. Post-Flight Procedures. Accomplish post-flight inspections to include flight manual and security sweep checklists.

10.8. Post-Mission Procedures.

10.8.1. Prior to disembarking the aircraft, mission crew members will complete a security sweep IAW owning wing developed procedures.

10.8.2. Upon mission completion, crewmembers or a designated representative will attend the aircrew debrief, turn in all COMSEC and communications mission database kits, and debrief the Communication Operations Chief and/or other applicable agencies as designated by the CCO. (T-2)

Chapter 11

NAVIGATION PROCEDURES

11.1. General. This chapter consolidates unique navigation procedures into one location.

11.2. Mission Planning.

11.2.1. The AC or designated representative shall verify proposed routes and flight altitudes/levels provide proper terrain clearance and meet FLIP and FCG requirements. (T-2)

11.2.2. Flight Plan. Cross-check the CFP planned route against the route of flight entered on the DD 175, *Military Flight Plan* or DD 1801, *DOD International Flight Plan*, and the approved diplomatic clearance.

11.2.3. Navigator Station. The navigator who prepares or accepts the flight plan will remain on duty at the navigator's station during departure and briefs the relieving navigator. (T-3) The navigator ensures all required fuel computations are accurate and complete, and, in addition, will ensure ramp fuel load is compatible with mission requirements. (T-0)

11.3. Flight Charts. Prior to flight, navigators will plot oceanic, TWA, air refueling, communication exercise, and Category I routes on an appropriate navigational chart. (T-2) If a new route of flight is received, record and plot the new route of flight on the chart when able. This requirement may be met using paper charts or electronic charts produced with approved mission planning software. If electronic charts are used in flight and become unavailable, navigators will transition to paper charts. (T-2) Required symbology and chart annotations are in accordance with AFPAM 11-216, Air Navigation and the flight manual.

11.3.1. Annotate the following information on the chart:

11.3.1.1. Flight plan course depicting reporting points, names and/or coordinates.

11.3.1.2. On A/R missions, plot the ARIP, ARCP, turn, and exit points.

11.3.1.3. Restricted, warning, and prohibited airspace located within 50 NM of the intended route of flight. Note: Special use airspace need not be annotated on the chart when the appropriate FLIP enroute chart is used.

11.3.1.4. Highest terrain and/or obstacle within 50 NM of the intended route of flight.

11.3.1.5. Air Defense Identification Zone (ADIZ) for all flights conducted off airways which penetrate the ADIZ on the inbound leg.

11.3.2. Multiple legs on the same chart are permissible when practical.

11.4. Navigator Procedures.

11.4.1. General Procedures. General navigation (fixing requirements) begins upon completion of the published departure or when cleared off SID/on course by the departure control agency and ends when the pilot or air traffic controller assumes navigation to the terminal facility.

11.4.2. Navigation Log. The navigator is required to record flight information on an in-flight log during general navigation only when operating with degraded automated navigation systems. (T-2) ACC-approved or locally-produced forms are acceptable for use.

11.4.2.1. Obtain a position at either the planned departure point or the final level off point not to exceed takeoff time plus 30 minutes.

11.4.2.2. As a minimum, record position time, compass or true heading, true airspeed, groundspeed, and drift at intervals not to exceed 30 minutes. Record a position for unplanned turns of 20 degrees or more off compass heading.

11.4.2.3. Terminate fixing requirements and record a position when one of the following occurs: arrival at the initial point of a Standard Terminal Arrival Route (STAR), arrival at a high Initial Approach Fix (IAF), or start of the enroute descent.

11.4.2.4. Navigation log entries are not required for minor heading changes, ATC vectors, etc. In-flight information/fixing requirements are not applicable during departure, holding, air refueling (rendezvous, orbits and anchor patterns), weather avoidance, airway/jet route navigation, trailing wire orbits, mission rendezvous, and upon initiation of penetration and approach. The navigator must monitor the position of the airplane, at all times using all available aids. (T-2)

11.4.2.5. Log entries may be delayed, postponed, or altered due to operational requirements or restrictions, unscheduled rendezvous or anchor air refueling, weather deviations requiring immediate action, or EMCON limitations. Pacing is vital to ensure navigation accuracy. During periods when log entries are not required, the navigator will use all available resources to verify and cross-check navigation systems. (T-2)

11.4.2.6. Dead Reckoning. The primary means of navigation is dead reckoning (DR). DR positions may be manual or automatic. Use automatic DR to the maximum extent possible. Manual DR is not required when at least one Inertial Navigation System (INS) or GPS is operating satisfactorily.

11.4.2.7. Fixing. The primary method of fixing is the FMS. For normal FMS operation (Actual Navigation Performance [ANP] is less than the RNP for the airspace being flown), the FMS position will be cross-checked by radio aid or radar (when available) and the compass magnetic heading. (T-2) INS track or true heading will be cross-checked with the flight plan or manually computed data. (T-2)

11.4.3. Training Sorties. Navigation legs should be planned for a minimum duration of 30 minutes. Do not plan navigation legs (1) during departure, prior to level off and prior to the planned departure point, (2) during A/R or when within the trailing wire area, or (3) during arrival, from 10 minutes prior to the planned enroute descent point, initial position of a STAR, or high altitude IAF until landing.

11.5. High Latitude Operations. Operations when flying north of 70 degrees and south of 60 degrees latitude require thorough study and understanding of all instrument approach and INS/FMS procedures as well as heading displays. The AC will decide whether headings are magnetic or true oriented and ensure all crewmembers understand what type heading is being displayed on the HSI. Consider provisions for conversion of heading systems from magnetic to true and contingency plans for INS failures. Refer to operations manuals for specific procedures. (T-3)

11.5.1. Currently, the use of Polar Routes is not authorized.

11.5.2. INS(s) Inoperative. Comply with FLIP and other applicable procedures.

11.5.3. AR Rendezvous. Coordinate with the tanker to ensure a common heading reference is used.

Chapter 12

FLIGHT ENGINEER (FE) PROCEDURES

12.1. General. This chapter outlines FE procedures not found in the aircraft flight manuals or elsewhere in this volume.

12.2. Responsibilities. The flight engineer is responsible to the AC for all inspections and procedures required by applicable technical orders and regulations.

12.3. Pre-Mission Duties. FEs will:

12.3.1. Prior to flight, prepare the DD Form 365-4, *Weight and Balance Clearance Form F – Transport*, and file a copy in the location designated by the 1 ACCS/DO. (T-2)

12.3.2. Review and compute performance data. (T-2) Notify the AC immediately when current conditions (crosswinds, obstacle clearance, temperature, PA, aircraft GW, etc.) will not allow a departure. (T-2)

12.3.3. Confirm fuel load requirements with the AC. (T-2)

12.4. Pre-Flight Duties.

12.4.1. FEs will ensure a copy of the refueling/de-fueling checklist T.O. 1E-4B-2-12-3CL-1, *Checklist Organizational (Flight Line) Maintenance Refuel/Defuel USAF Series E-4B Aircraft*, a ground cord, headset, and the DD Form 1896, *Jet Fuel Identaplate* are on board the aircraft for all flights. (T-2)

12.4.2. IDG Warm Up. In order to reduce the number of IDG failures, do not put an IDG on-line until the associated oil temperature is a minimum of 50 degrees Celsius. (T-2)
EXCEPTION: Alert response or emergencies.

12.5. Authority to Clear a Red X. Flight engineers are not normally authorized to clear a Red X. If a situation is encountered where the aircraft is on a Red X and qualified maintenance personnel are not available to clear it, a qualified flight engineer on scene may obtain authorization to clear the Red X from the home station MXG/CC or designated representative, in accordance with T.O. 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*. Other crew members are not authorized to clear a Red X.
EXCEPTION: Without restriction, the flight engineer may clear Red Xs for engine covers, pitot covers, and gear pins when qualified maintenance personnel are not available.

12.6. Aircraft Servicing and Ground Operations. This policy is designed for support of the aircraft and its mission while away from home station.

12.6.1. All qualified FEs will have a working knowledge of airplane-specific refueling procedures. (T-2) Although FEs are normally not required to refuel the aircraft, they are authorized to accomplish these duties when maintenance personnel are not available.
EXCEPTION: FEs will not perform Concurrent/Hot Refueling, De-fueling, Multiple Fuel Servicing, or Battery Power Only Refueling unless assisting a maintenance refueling team.

12.6.2. Aircrews will only refuel in cases where maintenance support is not readily available and the mission would be delayed. (T-2) However, crewmembers may augment maintenance refueling teams as required.

12.6.3. If ground support personnel are not available, the AC may designate other qualified crewmembers to assist the FE with refueling duties (safety/fire observer, etc). In these cases, the FE will act as the refueling team supervisor. (T-2) Other crewmembers will be thoroughly briefed on their respective duties. (T-2)

12.6.4. Comply with all applicable dash-2 aircraft T.O.s and T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*. Use applicable T.O. 1E-4B-2-12, *Technical Manual Organizational Flight Line Maintenance Instructions Servicing USAF Series E-4B Aircraft*, section 11-01 and T.O. 1E-4B-2-12-3CL-1 checklists during all refueling operations.

12.6.5. Procedures. The FE should remain at the FE station to control the refuel and monitor aircraft power. To facilitate a smooth refuel operation, the FE should ground the aircraft, position and bond the stand, hook-up and bond the initial hose to the SPR, hook up headsets, and accomplish any other preparation details prior to refuel operations as appropriate.

12.6.6. Unless environmental conditions dictate otherwise, the primary emergency exit is the air stairs.

12.6.7. Transient Alert (TA) Assistance. TA personnel are authorized to refuel the E-4B provided they have the proper refueling checklists. The FE will coordinate the refueling process and assist the refuel supervisor during the refuel. (T-2)

12.7. Aircraft Structural Integrity Program. The flight engineer will complete the AFTO Form 141, *Individual Aircraft Tracking Program (IATP) Flight Log*, on every flight. (T-2) This form documents usage data for the E-4B.

12.7.1. Use the instructions on the form.

12.7.2. Turn in completed forms during the MX debrief. The E-4B Flight Log manager will check these forms. (T-2) The log manager will forward completed forms on a quarterly basis to OC-ALC/ENFOC, 7803 Arnold Street, Bldg 3, Suite 128, Tinker AFB, OK, 73145- 9145. (T-2)

12.8. Engine Condition Sheet. Engine Condition Sheet program data becomes a permanent part of an aircraft engine's history. In order to track potential engine failure, make every effort to record engine performance data on the Offutt Form 73 (engine coupon) or approved electronic versions for each sortie. Discontinue procedure any time safety would be compromised. Turn in completed coupons or electronic versions during the MX debrief. Ensure all coupons are hand-carried to home station when returning from depot modifications or maintenance inputs. The FE must ensure the following conditions are achieved in order to capture valid data: (T-2)

12.8.1. Power is stabilized for 5 minutes at cruise speed with the autothrottle off prior to recording data.

12.8.2. Do not change conditions (power setting, altitude, airspeed, etc) once the FEs begin recording data. Conditions must remain constant for a minimum of 12 seconds to capture valid data. (T-2)

12.8.3. Turbulence. Light turbulence is permissible.

12.8.4. Altitude. Optimum altitude includes FL 250 up to FL 450. FL 240 is acceptable for local mission sorties.

12.8.5. Mach Number. Mach number is between 0.650 and 0.900.

12.8.6. Temperature. TAT is between -60°C and +40°C to the closest 1°C. Ensure positive or negative sign is recorded.

12.8.7. Power Setting. Engine N1 RPMs aligned to within 0.5% of each other and in a range from 65.0% to 119.5%.

12.8.8. Engine Vibrations. AVM is less than 2.5 ips. Annotate AVM discrepancies in the remarks section.

12.8.9. A/C Packs. Maximum of three packs operating. Not valid with four packs on.

12.8.10. Anti-Ice. Nacelle and wing anti-ice are off.

12.8.11. Enter the Zulu take-off time for sortie tracking purposes. Coupons are considered invalid without a Zulu date entered.

12.8.12. If an Engine Condition Sheet is not completed due to mission profile, annotate in the remarks section.

12.9. Performance Data Computations. T.O. 1E-4B-1-1 is the source for all performance computations. Compute takeoff and landing data (TOLD) using T.O. 1E-4B-1-1 via manual means or approved electronic TOLD programs. Use an E-4B or electronic TOLD worksheet. Data is computed by the FE and checked IAW the T.O. 1E-4B(II)-1. Check data using T.O. 1E-4B-1-1 or T.O. 1E-4B(II)-1CL-1, *Pilots/Flight Engineer Flight Crew Checklist* tab data.

Chapter 13

FLIGHT ATTENDANT (FA) PROCEDURES

13.1. General. This chapter outlines FA procedures not found in the aircraft flight manuals or elsewhere in this volume.

13.2. Responsibilities. The FA is the direct contact between the US Air Force and the passenger. The FA primary duties include meal preparation, door and air stair operation, border clearance requirements, passenger instruction on the use of emergency equipment and the conduct of emergency egress when necessary. Additionally, FAs act as the AC's cabin representative, provide cabin service and maintain cabin cleanliness throughout the mission. On multi-FA crews, the first FA acts as FA supervisor and delegates specific duties and responsibilities to each FA. Instructor Flight Attendants are authorized to teach E-4B AFE Familiarization Training (LL01), E-4B Egress Training (LL03), and AFE Recurrent Training (LL06).

13.3. FA Standards.

13.3.1. When making contact with the party, FAs will wear the appropriate uniform as prescribed by the 1 ACCS/DO. (T-3) Comply with all FCG requirements.

13.3.2. Any problems encountered with passengers during the mission (i.e. mistreating the aircraft, disorderly behavior, etc.) should be forwarded to the contact through the AC for appropriate action.

13.3.3. FA Augmentees. Occasionally, multiple mission taskings create shortages in the FA crew force. In these cases, the 1 ACCS/DO may elect to augment missions with other qualified E-4B crewmembers, FAs from SAM aircraft, and/or upgrading E-4B initial qualification FAs. In all cases, augmentees must be under the supervision of an instructor FA and cannot perform FA-specific flight manual procedures (aircraft preflight, etc). (T-2)

13.4. Pre-Mission Duties.

13.4.1. Contact the AC or navigator for itinerary times. Determine all wet/dry ice and bottled water requirements at this time.

13.4.2. Meal Service. The first FA or designated representative will make contact with the mission POC to determine cabin service requirements and obtain necessary funds. (T-2) When funds are not available prior to mission execution, obtain funds from the in-flight funds custodian. Complete all portions of AF 4084, **Air Passenger Specialist Mission Planning Worksheet**. Procure needed supplies (food, beverages, special requirements, etc.) and retain all receipts.

13.4.3. The first FA will conduct an FA brief and assign all FA positions and duties. (T-2) During the pre-mission briefing, the AC and first FA should clearly define aircrew duties during emergency situations. This includes, but is not limited to, egress, cabin smoke and/or fire, hot brakes, and emergency passenger handling duties. During emergency situations, the highest qualified FA should assume command of the emergency and direct all FA actions.

13.4.4. Prior to flight, FAs will place one copy of the completed flight orders and Entry Authorization List (EAL) in the location designated by the 1 ACCS/DO. (T-2)

13.5. Pre-Flight Duties.

13.5.1. Perform applicable preflight or enroute checklists. When more than one FA is assigned to a mission, this preflight may be accomplished by one FA or divided into zones, as necessary. Check that applicable passenger information cards are properly distributed.

13.5.2. Upload food and fleet items and stow as necessary. If aircraft availability and maintenance scheduling allows, consideration should be given to loading non-perishable items the day prior to departure.

13.5.3. Prepare meals as required. Focus of preflight duties is directed toward passenger service to ensure completion prior to station time and not inhibited by crew meal service.

13.5.4. Coordinate receipt of passenger manifests.

13.5.5. Coordinate passenger baggage loading and security.

13.6. Passenger Handling.

13.6.1. Do not unduly alarm passengers by relaying details of abnormal conditions not readily discernible by passengers.

13.6.2. Inform the AC immediately of passenger problems such as those involving unusual requests or bizarre or disruptive behavior.

13.7. Border Clearance. Certain forms for border clearance are mandatory by customs, immigration, public health and agriculture. The FA is the custodian for these and other required forms and will ensure adequate quantities are aboard the aircraft prior to takeoff. (T-2) The first FA should be familiar with the Foreign Clearance Guide and AMC Border Clearance Guide requirements for applicable destinations and will distribute forms to the crew and passengers, as necessary, for completion prior to landing. (T-2)

13.8. En Route and Post-Flight Duties.

13.8.1. FAs will provide cabin and meal service while maintaining the highest standards of safety and cabin discipline. (T-2) During critical phases of flight or turbulence, ensure all loose items are stowed. Suspend cabin service if necessary.

13.8.2. Operational Missions. Meal service is provided on all operational missions as directed by the 1 ACCS/DO, OTC, AC, and/or mission directives.

13.8.3. Training Missions. Meal service may be offered for all sorties when at least 45 minutes of cruise time is available (TWA sorties, navigation legs, etc). In all other cases, meal preparation is at the discretion of the FA. Instructor FAs may also use local trainers to instruct meal preparation. When meal service is not practical, the FA will order and pick up meals from the flight kitchen for crewmembers who desire a meal. (T-2)

13.8.4. Attend to flight crew needs when passenger service duties permit.

13.8.5. Assist with passenger deplaning and baggage offload or transfer. Ensure passengers do not leave baggage unattended around aircraft or personal items on the aircraft.

13.8.6. FAs are responsible for aircraft cleanliness. They are also responsible for ensuring that all food items are properly stored and aircraft is mission ready before departing home station. All perishable items not used are disposed of in appropriate trash containers prior to

leaving the aircraft. Follow host nation rules IAW FCG and border clearance guide. Ensure all passenger cabins, galleys and lavatories are cleaned. Blankets and pillowcases should be changed (if needed) at enroute stops and upon return to home station.

13.8.7. Arrange or procure food and beverages required for subsequent mission legs. When purchasing wet/dry ice from vendors who do not accept an AF 15 or credit card, obtain funds from the in-flight funds custodian and provide him/her with a receipt. The in-flight funds custodian, in turn, will submit a SF 1164, Claim for Reimbursement of Expenditures. (T-2)

13.8.8. Under no circumstances can either perishable or non-perishable items purchased for the official party be consumed by crewmembers or ground support personnel or taken from the airplane for personal use.

Chapter 14

FUEL PLANNING

14.1. General. This chapter provides fuel planning policy and procedures for E-4B operations. It is designed to assist aircrews in planning any and all operational mission or trainers. Fuel conservation and optimization are a priority for all missions. Aircrews and planners should make every effort to reduce fuel consumption on every sortie without compromising flight safety or training objectives.

14.2. Cruise Speed. Normal cruise speed for the E-4B is 350 KIAS/0.84 M, whichever is less. Use high speed cruise only when needed to satisfy the requirements of the DV or mission. Do not exceed flight manual limitations or FAR and/or host nation aircraft speed restrictions.

14.3. Fuel Planning. Fuel planning requirements are in [Table 14.1](#)

14.3.1. Safety. ACs retain the final authority for and will ensure that all factors are considered when determining the minimum required ramp fuel load (RRFL). (T-2) Factors to consider include mission requirements, routing (oceanic, mountainous region, etc), one engine inoperative (OEI) performance capability, ETPs, destination/alternate weather, and en route hazards and alternate suitability.

14.3.2. At a minimum, RRFL consists of all fuel required for engine start, taxi, warm-up, APU operation, takeoff, climb, cruise, en route reserves (if required), alternate/missed approach (if required), descent, approach, landing, holding (minimum required fuel reserve) and any other mission-essential fuel requirements (alert, PSM, etc).

14.3.2.1. Do not carry extra fuel for convenience, but when solid ORM and safety of flight considerations call for it, do not hesitate to mitigate risk/safety factors by adding fuel.

14.3.2.2. Refueling at Enroute Stops. When fuel availability is limited or not available, mission requirements preclude refueling, or refueling would be detrimental to mission accomplishment, extra fuel may be added to RRFLs.

14.3.3. Alternate Fuel. As a minimum, alternate fuel includes fuel for a flight from the intended destination to the furthest alternate aerodrome at optimum altitude and long range cruise speed. When holding is necessary, in lieu of an alternate at a remote or island destination, compute holding for 2+00 (1+15 holding in lieu of an alternate and 0+45 fuel reserve).

14.3.4. If decompression would cause descent to an altitude resulting in fuel consumption exceeding planned fuel, add fuel to recover at a suitable airfield from the Equal Time Point (ETP) at the appropriate altitude. This is not required if the aircraft can recover to a suitable airfield at FL 250 at long range cruise (LRC) speed from ETP.

Table 14.1. Fuel Planning Requirements.

Fuel Component	Quantity	Notes
APU, Start, Taxi, Takeoff	2,000 lb	Acceleration fuel for takeoff is included in the en route fuel. When more than 15 minutes taxi time is anticipated, add 100 pounds per minute, not to exceed 3000 pounds total.
En Route		Fuel for planned climb and cruise to the begin descent point or to overhead destination at cruise or initial approach fix altitude.
En Route Reserve		Fuel for 10 percent of flight time over Category I route/route segments not to exceed 1 hour at normal cruise.
Off Course Maneuvering	500 lb/min	For terrain clearance, thunderstorm avoidance, ATC requirements, etc.
Alternate (if required)		Use fuel planning/alternate charts in the flight manual. Missed approach fuel is always included. (<i>Note 1</i>)
Holding	30,000 lb minimum	Compute 45 minutes of fuel using endurance or holding charts. When the alternate is located in Alaska or latitudes greater than 59 degrees north/south, compute 1+15 of fuel. Holding fuel should be computed at the alternate. When holding in lieu of an alternate is required, use 2+00 fuel.
En Route Descent	5,000 lb	
Approach and Landing	2,500 lb	
Missed Approach	5,000 lb	Required when destination weather is below either ceiling or vis.
Known Holding Delays		Fuel for planned holding when delays are anticipated en route or at high traffic density airports.
Insufficient or Unreliable NAVAIDS at Destination	5,000 lb	
Note 1: If two alternates are necessary, compute fuel from destination to most distant alternate.		

14.4. Fuel Limitations. Commercial Jet A1+ Note: Commercial airports and military airfields may refuse to defuel airplanes (USAF Airfields accept all authorized fuels). Ensure airplane defueling is preplanned accordingly.

14.5. Standard Ramp Fuel (SRF). SRFs for the E-4B are authorized as follows:

14.5.1. Home Station. SRF is 180,000 pounds.

14.5.2. Alert Mission. SRF is 180,000 pounds at all locations.

14.5.3. Local Training Sorties. Plan to arrive at the IAF with 30,000 pounds plus any required alternate fuel.

14.5.4. SRFs may be adjusted by the 1 ACCS/DO, AC or OTC as necessary for mission accomplishment.

Chapter 15

AIR REFUELING (A/R) PROCEDURES

15.1. General. This chapter establishes procedures for air refueling the E-4B. Crews will also comply with all procedures and restrictions in the flight and air refueling manuals.

15.2. Limitations. The following limitations apply:

15.2.1. AC's will not conduct air refueling will not be conducted under the following conditions: (T-2)

15.2.1.1. A/R Without Tanker Disconnect Capability. Without tanker disconnect capability means the boom operator cannot initiate an immediate disconnect. If A/R must be accomplished, receivers will use emergency boom latching (EBL) procedures published in the flight manual and must initiate all disconnects. (T-2)

15.2.1.2. Emergency Boom Latching. Failure of the receiver's signal amplifier has occurred. If A/R must be accomplished, the receiver must initiate all disconnect since tanker disconnect capability is inoperative. (T-2)

15.2.1.3. Engine-Out. Either the tanker or receiver has less than the full number of engines operating

15.2.1.4. The tanker is unable to retract the landing gear.

15.2.1.5. Conditions are encountered that, in the opinion of either AC or the boom operator, result in marginal control of either aircraft or the boom.

15.2.1.6. Tanker or receiver experiences any flight control problem. **Note:** If A/R must be accomplished, aircrews will not approach closer than 1 NM until it is positively ascertained that A/R operations are safe to conduct. (T-2) **Note:** Boom operator and receiver pilot must coordinate all actions as required by applicable directives and checklists when making A/R contacts during the situations listed above. (T-2) **EXCEPTION:** Fuel emergency situations, Single Integrated Operations Plan (SIOP), and when executing HHQ-directed taskings. Limit contacts to the minimum number required to complete mission.

15.2.2. Reverse-flow A/R. Accomplish only during a tanker fuel emergency situation.

15.2.3. Emergency Separations/Breakaways. Follow procedures in IAW T.O. 1E-4B(II)-1. Once the situation has stabilized and the receiver is well clear, notify the tanker and coordinate clearance back to pre-contact.

15.2.4. Receiver A/R Training for Unqualified Pilots. In-flight training will be accomplished under direct IP supervision. (T-2) IPs will occupy one of the pilot seats no later than pre-contact until post A/R. (T-2)

15.2.5. Seat Swaps. If a receiver seat change takes place, move back to at least 100 feet in trail of the tanker and to a point where the receiver pilot can maintain visual contact with the entire tanker until the seat change is complete.

15.2.6. Weather Limitations.

15.2.6.1. Turbulence. Terminate refueling if the actual turbulence encountered creates a situation where safe refueling operations are not assured.

15.2.6.2. Visibility. Do not approach closer than 1 NM unless you have visual contact with the tanker(s). Discontinue refueling if in-flight visibility is insufficient to continue safe refueling operations.

15.3. Communications Failure. ACs will ensure aircraft experiencing two-way communications failure while conducting A/R continue flight in accordance with the following procedures. (T-2)

15.3.1. Discontinue refueling. **EXCEPTION:** EWO operations and/or bona fide fuel emergencies.

15.3.2. Rendezvous. Maintain a minimum of 1,000 feet vertical separation until reliable radio communications are established.

15.4. Altitude Reservations (ALTRV). An ALTRV is an authorization by one of the central altitude reservation functions (Central Altitude Reservation Function (CARF), European Control Altitude Reservation Function (EUCARF), Pacific Military Altitude Reservation Function (PACMARF)) or, under certain circumstances, the appropriate ARTCC/Combined Enroute Radar Approach (CERAP) for airspace utilization under a given set of conditions. Air refueling on operational missions often utilizes an ALTRV. ALTRVs may include all or only portions of the intended route of flight.

15.4.1. PICs will ensure an ALTRV approval is received prior to mission execution. (T-2)

15.4.2. PICs will ensure aircraft departs within the assigned AVANA (ALTRV Void if Aircraft Not Airborne) time for the purpose of providing separation between altitude reservations. (T-2) Normal AVANA time is 30 minutes. If a mission is to be delayed beyond the AVANA time, coordinate with the C2 authority as soon as possible.

15.4.3. PICs will operate aircraft on an ALTRV within the altitude, time, and areas specified in the approval. (T-2) An ALTRV APVL authorizes the aircraft to climb or descend as specified. Controllers are not required to issue a climb or descent clearance for the various flight segments. They may, however, request that the pilot advise them prior to initiating an altitude change.

15.4.4. In a non-radar environment, the PIC shall advise ATC if actual fix timing is more than plus or minus 5 minutes from the planned ALTRV en route fix estimate. (T-2)

15.4.5. File flight plans (1801 or DD175) containing ALTRVs IAW FLIP GP. Include the name of the ALTRV in the remarks section of the flight plan. ALTRV requests or approvals do not eliminate the responsibility to obtain proper diplomatic clearance or file flight plans.

15.5. Alternate Planning. Aircrews will designate an alternate airport for each A/R event. Suitable A/R alternates must meet the destination alternate weather and fuel reserve requirements outlined in AFI 11-202V3 and this AFI. To the maximum extent possible, aircrews should plan divert fuel from the A/R exit point. In every case, aircrews will not proceed beyond the designated “bingo” point unless the desired offload is complete.

Chapter 16

ALERT PROCEDURES

16.1. Concept. The 55 WG is directed to provide operationally ready E-4B aircraft and aircrews to support the NAOC/CC and perform the NAOC mission on a continuous basis. (T-0) To accomplish this, the 55 WG will schedule primary crew and aircraft to ensure a continuous 24-hour alert response capability. (T-2)

16.1.1. Additional Aircraft Generation. The 55 WG may also be tasked to generate secondary, tertiary, and, if available, quaternary aircraft during times of increased DEFCON or heightened world tensions.

16.1.2. The reserve crews will perform additional aircraft generations and are conducted IAW CJCS OPORD 2-CY and/or ACC OPORD 84-CY timing criteria. (T-2) Reference **paragraph 16.18** of this chapter for additional guidance.

16.2. Aircrew Requirements. Aircrew members will be knowledgeable of this AFI, applicable OPORDs, and relevant portions of AFI 31-118, *Security Police Standards and Procedures*, AFJI 31-102, *Physical Security*, and NAOC Manual 9-3. (T-2)

16.3. Scheduling. Tour lengths for all aircrew members should coincide with that of the OT (normally 7 days). For operational missions, the 1 ACCS/DO may modify tour lengths to meet mission requirements.

16.4. Clothing and Equipment Requirements.

16.4.1. Duty Uniform. The green nomex flight suit is the standard alert uniform. Following any alert response, aircrews should depart the airplane in the duty uniform unless directed otherwise by the OTC.

16.4.2. Clothing. Crewmembers will bring clothing appropriate to cover the entire length of the alert tour since laundry facilities may not be available. (T-2)

16.4.3. As a minimum, the following items are required for all alert operations for each crew member:

16.4.3.1. Fly-Away Bag. The fly-away bag will be stored on the aircraft and will include the following items: (T-2)

16.4.3.1.1. Flight Duty Uniform – one set to include headgear, boots, and patches.

16.4.3.1.2. Clothing, undergarments – 5-day supply

16.4.3.1.3. Toiletries – 5-day supply.

16.4.3.1.4. Cold Weather Items. During the winter months (1 Nov - 31 Mar), fly-away bags will also contain the following: (T-2)

16.4.3.1.4.1. Thermal Knit Underwear – 1 set.

16.4.3.1.4.2. Winter Flight Gloves – 1 set.

16.4.3.2. Additional Items. The following additional items will be stored on the aircraft:

16.4.3.2.1. Headset.

16.4.3.2.2. Flashlight.

16.4.3.2.3. Eyeglasses (if required) – 1 pair.

16.4.3.3. Remaining Items. The following remaining items may be worn, carried, or stored on the aircraft, but aircrew must ensure they are on the aircraft under all takeoff conditions: (T-2)

16.4.3.3.1. Nomex Flying Jacket (summer or winter) – with or without hood. **Note:** During the winter months, winter nomex jacket with hood or watch cap is required.

16.4.3.3.2. Nomex Flight Gloves – 1 set.

16.4.3.3.3. Flight Boots (summer or winter) – 1 pair.

16.4.3.3.4. Flight Cap.

16.4.3.3.5. Ear Plugs.

16.4.3.3.6. Eyeglasses (if required) – 1 pair in addition to pair stored on aircraft.

16.4.3.3.7. Reflective Visibility Belt.

16.4.3.3.8. All items listed in [paragraph 6.2](#), as applicable.

16.4.3.4. Current Emergency Data Card on file with the MPF via the Virtual MPF website. **Note:** Although the leather jacket is authorized for in-flight use, it does not satisfy the requirements of this paragraph.

16.5. Briefing Items. As a minimum, the AC or his designated representative will brief the following items during the pre-alert (4-hour) briefing. (T-2)

16.5.1. Training requirements while on alert (touch-and-go, air refueling, etc).

16.5.2. Aircraft Parking Procedures. Only personnel essential to recovery operations should depart the aircraft once in parking until released by the CCOC and their section head.

16.5.3. FOD. All personnel should keep their loose items secure and pockets zipped to prevent any potential for FOD, especially during self-sustained operations.

16.5.4. Any known adverse weather, airfield status, or other item that may have a negative impact on the mission.

16.5.5. Alert aircraft Call Signs change-over at 0001Z each day.

16.5.5.1. Challenge/Response codes change-over at 0700L each day.

16.5.6. Maintenance Procedures: scheduled versus unscheduled maintenance, safety, ground equipment usage near aircraft, etc.

16.6. Changeover Procedures.

16.6.1. Changeover may be conducted via ground-to-ground, air-to-ground, or air-to-air communication link as determined by NAOC. The 1 ACCS/DO and NAOC Ops will thoroughly plan and coordinate all changeovers with both the off-going and ongoing NAOC team chiefs prior to implementation. (T-2)

16.6.2. Changeover Time. The OTC will brief the AC on changeover time and any factors affecting alert status. (T-2)

16.6.3. At a minimum, the AC will verify and brief the OTC and/or CCOC on the status of the following items as soon as possible: (T-2)

16.6.3.1. Aircraft Status. Verify aircraft status with the CCO and MX Superintendent. Aircrews will complete all applicable aircrew pre-flight activities prior to the OT show time. (T-2)

16.6.3.2. Airfield Status. Note any downgrades or other pertinent information that may impact operations.

16.6.3.3. Adverse Weather. ACs will obtain an initial weather briefing and inform the OTC of potential problem areas. (T-2)

16.6.3.4. Other. Any other special mission requirements, operational limitations or items deemed critical to mission accomplishment.

16.6.4. Review expectations with the MX superintendent and CCO/NCOIC. Emphasize communication, coordination, and the proper reporting chain. **Note:** this item may be covered during the aircrew briefing and/or pre-alert (4-hour) briefing.

16.7. Normal Procedures.

16.7.1. Daily Alert Requirements.

16.7.1.1. Power-On Checks. Each crewmember will verify proper system configurations and switch positions at their duty station. (T-2) Items of special interest include radios, inertial navigation systems, APU and electrical, fuel, and air-conditioning systems.

16.7.1.2. The flight crew will stay informed of weather, aircraft status, and NOTAM information for airfields of interest to NAOC. (T-2)

16.7.1.3. Mode 4. The communications mission crew will load the appropriate Mode 4 code each day 0001 Zulu. (T-2) **Note:** A Mode 4 ground check should be accomplished prior to placing the aircraft on alert. In-flight Mode 4 checks may be obtained from AWACS, GTACS, and ADF aircraft.

16.7.2. Aircraft Movements. When possible, all aircraft movements should correspond with mission crew shift changeover.

16.7.3. Aircraft Parking Procedures. Once the aircraft comes to a final stop at the parking location, the seat belt sign is turned off and a PA announcement made stating; “only essential personnel are cleared off to recover the aircraft”. Once the engines are shut down or the aircraft is configured for self-sustained operation, an additional PA announcement is made stating the aircraft configuration (engines shut down or self-sustained), other safety related items (#1 engine is running), and personnel are released to the CCOC.

16.7.4. Main Deck Doors. The FA will configure all doors to the AUTO position upon completion of the FA aircraft preflight. (T-2) As an additional warning, the aircrew will ensure all main deck door handles have a red streamer installed to indicate they are in the AUTO position. (T-2) All assigned personnel will be thoroughly familiar with evacuation procedures. (T-2)

16.7.5. Radio Configuration During Ground Alert. VHF 2 (primary radio) will be tuned to ground control and VHF 1 (secondary radio) to 121.5 at all times. (T-2) Personnel will

monitor these radios while on the flight deck. (T-2) Personnel will ensure a UHF command radio is available to the flight deck at all times, unless mission requirements dictate otherwise. (T-2) Radio section will coordinate with the AC prior to taking control of both UHF command radios. (T-2)

16.7.6. NAOC Update Briefs. The AC should attend any update briefings on the aircraft as directed by the OTC. This briefing normally includes pertinent mission, show-time, and/or planned event changes as well as any operational limitations or special mission tasking from the NAOC staff.

16.7.7. Rendezvous Procedures. Only essential personnel will be out of their seats. (T-2) Normally, essential personnel include the FA, OTC, CCOC, OT NCOIC, security forces, and two crew chiefs. The FA or designated representative will operate the cargo door. (T-2)

16.7.8. De-Icing. The AC and MX Superintendent will ensure de-icing service is readily available at all times during months when frost or other contamination build-up is possible. (T-2)

16.7.9. Personnel will immediately inform their supervisor of any condition that could adversely affect the mission or compromise crew and/or aircraft safety. (T-3) Problems should be elevated to a level appropriate to the perceived impact on the mission. Any problem serious enough to be elevated to the OT, condition that may affect aircraft status or non-routine MX will be coordinated through the AC first. The AC will, in turn, notify the OTC and/or CCOC. (T-2)

16.7.10. ATC Procedures.

16.7.10.1. NAOC operational priority and “Bust Out” procedures are defined in Federal Aviation Administration Order (FAAO) Joint Order (JO) 7610.4S, *Special Operations*, and FAAO JO 7110.65V, *Air Traffic Control*.

16.7.10.2. ACs will keep a copy of the IFR flight plan on file with the local base operations flight (enroute locations) or in the 1 ACCS Mission Planning Room (home-station operations). (T-2) The DD Form 175 should contain the remark “NAOC Routes and Altitudes May Apply” in the REMARKS section.

16.8. Mission Changes.

16.8.1. Aircraft Status Changes. The AC will inform the 1 ACCS/DO via secure means anytime the aircraft status changes. (T-2)

16.8.2. Unscheduled Movements. ACs will notify the 1 ACCS/DO via secure means when any unscheduled alert move is taking place. (T-2)

16.9. Weather Information. It is the responsibility of the host base weather flight (or command post if there is no local base weather shop) to pass all weather advisories, watches and warnings without delay to the NAOC watch officer. The requirements below are those Watches, Warnings, and Advisories that have been coordinated.

16.9.1. Advisories. Issued for visibility of less than one mile.

16.9.2. Watches and Warnings. Issued for hail (of any size), winds 35 knots or greater, freezing precipitation, heavy snow, moderate/severe thunderstorms, lightning, and tornadoes.

16.10. Alert Force Exercises.

16.10.1. Limitations. The AC shall immediately notify the CCOC and 1 ACCS/DO when any condition exists which would preclude executing alert force movement exercises (weather, maintenance, airfield limitations, crew rest, etc). (T-2) Aircrew may reference NAOC Manual 9-3 for a list of weather factors or other conditions which affect an alert force movement exercise.

16.10.2. Safety. Minimum launch timing is mandatory and thus, necessitates close coordination between all personnel and agencies. Safety remains paramount in all exercises. The AC is the final authority in determining when conditions warrant a greater safety margin. Immediately terminate exercises when any unsafe condition develops which presents a hazard to the aircrew and/or aircraft.

16.10.3. Boarding the Aircraft. Proceed in an expeditious and safe manner to the aircraft. Board via the forward lower lobe air-stairs and accomplish all appropriate procedures and checklists. To enhance safety, respond to the aircraft with items properly secured and stowed.

16.10.4. A NAOC battle staff member will deliver the AC's notification card to the navigator or other flight crewmember as soon as possible. (T-2)

16.10.5. FA will get a verbal or visual signal from the CCOC or Operations Superintendent that all required personnel are on-board the aircraft. (T-2) The FA will then pass this information to the flight-deck. (T-2)

16.10.6. Taxi. Comply with the restrictions of [paragraph 5.10.1](#). Limit taxi speeds to those listed in [paragraph 5.7](#).

16.10.7. Simulated Takeoff. To simulate takeoff, momentarily advance the throttles to TRT then smoothly retard the throttles to idle. Reverse thrust should not be activated.

16.10.8. Exercise Timing Sheet. The navigator will record alert exercise timing by denoting key times on the timing sheet. (T-2) At the completion of the exercise, the AC will validate exercise timing with the NAOC watch officer and sign the NAOC exercise timing sheet. (T-2)

16.10.9. Termination Procedures. Terminate all exercises by broadcasting, "This is (call sign), Terminate, Terminate, Terminate" on the appropriate radio frequency. Command post, tower, ground, UHF guard frequencies may be used. Notify the watch officer when the termination is broadcast. If an exercise is terminated prior to arriving at the aircraft, proceed to the aircraft with caution and await further instructions from the OTC. Aircrews may review NAOC Manual 9-3 for expanded termination procedures.

16.11. Minimum Response Posture (MRP). MRP allows for faster response times during periods of heightened world tensions. The flight crew and OT remain aboard the aircraft when operating under MRP. Aircrews will comply with the following guidance:

16.11.1. Maintain an immediate engine start and launch capability. (T-2)

16.11.2. Assume MRP either in the normal parking location or at the end of the runway. If parked at the end of the runway, use self-sustained alert procedures to maintain on board electrical, pneumatic, and engine start capability. (T-2)

16.11.3. The AC and CCOC will coordinate all aircraft servicing and security forces protection as required. (T-2)

16.11.4. The FA will coordinate meal requirements with the AC and OT NCOIC. (T-2)

16.12. Deployed Alert.

16.12.1. ADVON Team. Prior to deployment, an ADVON team will review the deployed location's support plan and procedures as well their ability to sustain alert operations. (T-2) The team will coordinate any changes to the base's support plan and procedures prior to the alert team arriving. (T-2) Headquarters (HQ) ACC/A3CN retains overall responsibility for ADVON as outlined in ACC OPOD 84-CY.

16.12.2. Aircraft Arrival. The ADVON team will brief the alert team on the current support plan and procedures. (T-2) The NAOC Plans and Operations will also review any NIGHTWATCH conflict reports with the AC while the alert aircraft is on station. (T-2)

16.12.3. Security. Procedures and instructions for alert at deployed locations are contained in AFI 31-118.

16.13. Maintenance Requirements.

16.13.1. Manning of Alert Aircraft. Alert aircraft are "cocked", ready to fly at a moment's notice and require continuous monitoring of aircraft systems. MX personnel, including the aircraft quick-start team, satisfy this need by maintaining a continuous watch on the alert aircraft 24/7. During alert launches, the quick-start team will initiate the alert engine start checklist. (T-2) Once in place, the flight crew will continue the checklist at the point and clean up any remaining items. (T-2) **Note:** During self-sustained operations with one or more engines operating, a member of the quick-start team or flight crew will be in one of the pilot seats. (T-2)

16.13.2. Maintenance personnel **will not:** (T-2)

16.13.2.1. Adjust the pilot's vertical or reclined seat positions.

16.13.2.2. Change radio, interphone, volume or other switch settings.

16.13.2.3. Reconfigure the FE's panel without prior coordination with the FE.

16.13.2.4. Rearrange aircrew flight/pro gear.

16.13.3. Maintenance superintendents will obtain AC and CCOC approval prior to performing any non-routine aircraft MX and/or servicing. (T-2)

16.13.4. Aircraft Parts and Mission Equipment Components. The authority to order and obtain repair parts rests solely with the MX superintendent (aircraft equipment) and/or technical controller (mission equipment). Either makes AFTO 781 write-ups, obtain job numbers, and make entries into CAMS.

16.13.4.1. "Routine" status is the default classification assigned for all part order requests. Routine orders require delivery within 24 hours.

16.13.4.2. At times, an "Immediate" (12 hour delivery) or "Urgent" (4 hour delivery) status may be necessary. Coordinate either type of request through the CCO (mission

equipment) or AC (airframe equipment). In cases where special airlift is needed, NAOC staff operations is the validation authority.

16.13.4.3. The MX superintendent and/or CCO will brief the AC and CCOC/OTC on mission impact, as applicable. (T-2)

16.13.5. Ground-Flight Deck Coordination. It is imperative that all communications between ground personnel and the flight deck be clear and concise. Ground personnel will acknowledge and read back all instructions from the flight deck. (T-2) To avoid confusion, use standard terminology. Exercise close coordination and great care when disconnecting ground equipment from the aircraft. Unexpected aircraft power interruptions can adversely affect mission equipment and thus, mission operations.

16.14. Base Restrictions. Aircrews are normally restricted to those base facilities with operable klaxons. Crewmembers will use established alert routes and paging devices for notification when in transit between facilities with klaxons. (T-2) The OTC may modify alert crew movement areas as required. Reference AFI 31-118 for local procedures and instructions at deployed locations. *Note:* Alert crews are restricted to the area south of the runway at Offutt AFB.

16.15. Transportation.

16.15.1. Use of NAOC alert vehicles is at the discretion of the 1 ACCS/DO and OTC. Individuals must possess a valid Government Driver's License and AF Form 483, *Certificate of Competency*, stamped for the Offutt AFB flight line before operating any NAOC alert vehicle on the flight line. (T-2) All vehicles supplied for alert team support are considered government owned vehicles (GOVs). Drivers will comply with instructions governing the use of GOVs. (T-2)

16.15.2. Individuals will coordinate an alert response plan with the personnel whom they share a vehicle with prior to its use. Notify personnel of departure and return. (T-2)

16.15.3. Klaxon Response. Use the alert vehicle response lights. **Observe posted speed limits in all areas.** Only park in designated parking areas. Drive defensively and do not assume the right-of-way. Always expect that the base populace is unfamiliar with what you are doing when responding to a klaxon. *Note: Responding alert forces are subject to traffic violations.*

16.15.4. Parking. Do not park vehicles in front of the alert aircraft. For klaxon responses at Offutt AFB, park vehicles behind the blast fence along the side of the aircraft to avoid jet blast damage. When parking behind the guard shack, park in single file behind the white lines to allow wing tip clearance on taxi out.

16.15.5. Vehicle Inspection. The first driver of each day will inspect the vehicle and sign off the AF Form 1800, *Operator's Inspection Guide and Trouble Report*. (T-2) Annotate vehicle discrepancies and report them immediately to the 1 ACCS Vehicle Control NCO (Offutt AFB) or OT vehicle NCO (enroute stations) so that repairs can be made in a timely fashion.

16.15.6. Unless restricted by the OTC, personnel may travel anywhere on base provided it is on the alert route. Do not leave the alert route without permission from the OTC.

16.16. Security. Security force protection guidelines are outlined in AFI 31-101 and DoD Manual S-5210.41-M, *Nuclear Weapon Security Manual*.

16.16.1. Do not escort personnel onto alert aircraft without prior approval from the AC and OTC. All personnel escorted into the PL 1 area shall be signed in on the AF Form 1109, *Visitor Registration Log*. (T-2) Preannounce all visitors with the OT and security forces.

16.16.2. Maintain positive control of all briefcases and baggage to help prevent attacks against the aircraft and/or billeting quarters.

16.16.3. Cameras. Use is prohibited on E-4B aircraft without prior permission from the NAOC/CC (primary and secondary aircraft) or the 1 ACCS/DO (tertiary and quaternary aircraft).

16.16.4. Security Forces Support. Armed security forces personnel assigned to the mission and aboard alert aircraft will retain control of their weapons. (T-2) The security forces section chief will identify those individuals which are armed to the AC and FA. (T-2)

16.17. Communications During Ground Alert. NAOC utilizes a system of crew notification klaxons and land mobile radios (LMRs) to maintain continuous communication with and recall capability of alert crews.

16.17.1. Klaxon System. Permanently installed klaxon systems are positioned at various support bases around the CONUS and other worldwide locations. A current list of klaxon locations for each support base can be found in NAOC Manual 9-3.

16.17.1.1. Activation. Except during the daily test, personnel will consider any activation of the klaxon system or alerting device as valid unless specifically notified otherwise by valid authority. (T-2) If, during the daily test, the klaxon continues to sound for longer than 10 seconds, it should be treated as a real-world klaxon.

16.17.1.2. Testing. The OT watch officer will initiate a daily test of the klaxon system at 1400 hours (plus or minus 2 minutes) for the primary alert location. (T-2) Tests should last approximately 10 seconds. When arriving at a new alert location after 1400 hours, conduct the initial test as soon as possible. Personnel will immediately notify the watch officer of locations for which the klaxon fails to test properly. (T-2)

16.17.1.3. Outages. The OT watch officer will notify the OTC, OT COMMO, and 1 ACCS COMM personnel when a klaxon test reveals an inoperable klaxon(s). (T-2) Alert personnel will not visit locations with an inoperable klaxon without OTC approval and a second alerting device. (T-2) In the event of complete klaxon failure or when a significant number of klaxons are inoperable, the OTC will provide specific guidance to the alert force. (T-2)

16.17.1.4. Repairs. 1 ACCS COMM will initiate repairs with the base CE office. Notify the OT COMMO and watch officer when klaxons are operational. (T-2)

16.17.1.5. Voice-Klaxon Procedures. Utilized during periods of klaxon outages and/or malfunctions, awaiting a successful system test, or as directed by the OTC. When implemented, personnel will be notified that "voice klaxon procedures are in effect." (T-2) Do not respond to klaxon activation(s) until notified that "normal klaxon procedures are in effect." Personnel will ensure that they have a minimum two LMRs in their possession if they travel away from the primary alert aircraft or crew-rest location. (T-2)

16.17.2. LMRs. These devices are issued to alert personnel for use when transiting locations other than the aircraft.

16.17.2.1. Activation. When the OT watch officer activates the klaxon alert system, LMRs emit a tone to alert all personnel. Tones should be followed by applicable voice commands. In the absence of a voice command, consider the tone a real-world alert response and take action appropriately.

16.17.2.2. Testing. LMR function is tested in conjunction with the daily klaxon test. Personnel will immediately notify the watch officer of locations for which the LMR fails to test properly. (T-2)

16.17.2.3. COMSEC. Turn off LMRs when entering the alert aircraft or secure areas where classified information might be discussed. LMR batteries are to be removed from the radio when applicable. Notify the OT watch officer of location and phone number prior to turning off the radio.

16.17.2.4. Security. Safeguard all LMRs to eliminate the possibility of unauthorized access and/or having them returned with surveillance and/or explosive devices installed.

16.17.2.5. Hazard Areas. Do not operate LMRs within 50 feet of open fuel sources or refueling operations. LMRs are capable of generating sufficient electrical and/or thermal energy to ignite combustible materials. Do not make electronic voice transmissions from the aircraft while hot-refueling procedures are in progress.

16.18. Generating Additional Aircraft.

16.18.1. Aircrews may be tasked to generate additional E-4B aircraft for a variety of reasons. The type of notification used depends upon the type of aircrew response required. Crewmembers will pay special attention to the exact words used in recall messages and accurately relay the message along the notification chain. (T-2)

16.18.2. Full EWO Generation and Mobilization. Commanders will initiate all alert recalls utilizing the pyramid recall roster. (T-2) All personnel will report immediately with full alert or mobility gear and in the duty uniform unless instructed otherwise. (T-2)

16.18.3. Limited Generation and Mobilization. The NAOC/CC and/or 1 ACCS/CC will direct the recall of applicable personnel. (T-2) All personnel will report immediately with full alert or mobility gear and in the duty uniform unless instructed otherwise. (T-2)

16.18.3.1. Single aircraft generation for alert aircraft tail-swaps normally only require the recall of the reserve standby force. Section show times may be staggered based on individual preflight requirements.

16.18.3.2. Generation of an additional aircraft for sustained operations may be performed by non-Reserve or Reserve crew members as circumstances dictate.

16.18.3.3. Aircrews assuming alert following generation activities can expect a seven-day alert (minimum) and will comply with the requirements of **paragraph 16.4** (T-2)

16.18.4. When recalling personnel not in conjunction with a 55 WG-initiated base-wide recall, the 1 ACCS/CC will contact the following agencies to ensure full coordination: (T-2)

16.18.4.1. Command Post.

16.18.4.2. The 55 OG/CC.

16.18.4.3. The 1 ACCS Operations Scheduling. Recall flight crew(s) as directed.

16.18.4.4. The 1 ACCS Communications Branch. Recall mission crew(s) as directed.

16.18.4.5. The 1 ACCS Operational Support Team. Activate the alert facility, prepare flight orders, and generate mission packages.

16.18.4.6. The 1 AMU Maintenance Branch. Notify appropriate MX personnel. Ensure Aerospace Ground Equipment (AGE) personnel are also notified and initiate their recall. Confirm fuel loads, tail number, and aircraft status.

16.18.5. COMSEC/Operations Security (OPSEC). Use great care in what and how information is passed. Use secure means to relay any and all classified information.

16.18.6. Timing. Safely generate aircraft as expeditiously as possible. For expeditious generation, comply with the following guidance:

16.18.6.1. Maintenance. The 1 AMU will provide a fully mission capable (FMC) aircraft fueled to meet the next scheduled sortie's requirements as soon as possible and/or prior to each weekend. (T-2)

16.18.6.2. Operations. When airborne aircraft flying training sorties must be generated immediately, 1 ACCS/DO will recall the aircraft. (T-2) Once recalled, the crew will call 1 ACCS/DO by any means available with ETA, maintenance status, and estimated landing fuel as soon as possible and continue to monitor Ops frequency. (T-2)

JOHN W. RAYMOND, Lt Gen, USAF
Deputy Chief of Staff, Operations

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

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AF Form 483, *Certificate of Competency*

AF Form 673, *Air Force Publication/Form Action Request*

AF Form 847, *Recommendation for Change of Publication*

AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*

AF Form 2293, *U.S. Air Force Motor Vehicle Operator Identification Card*

DD Form 1896, *Jet Fuel Identaplate*

Offutt Form 791, *Aerial Receiver In-Flight Receipt Log*

AF Form 664, *Aircraft Fuels Documentation Log*

AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance Document*

AFTO FORM 781A, *Maintenance Discrepancy and Work Document*

Offutt Form 73, *Engine Condition Sheet*

Abbreviations and Acronyms

AC—Aircraft Commander

ACCS—Airborne Command Control Squadron

AFTO—Air Force Technical Order

AGE—Aerospace Ground Equipment

ALTRV—Altitude Reservation

AMSO—Airborne Mission System Operator

ANP—Actual Navigation Performance

AOC—Airline Operational Control

AP—Area Planning

ATC—Air Traffic Control

BWC—Bird Watch Condition

CARF—Central Altitude Reservation Function

CCO—Communications Control Officer

CCOC—Command Center Operations Chief

CERAP—Combined Enroute Radar Approach

CFP—Computer Flight Plan

CJCS—Chairman of the Joint Chiefs of Staff

COCOM—Combatant Commander

COMM—Communications

COMSEC—Communications Security

DH—Decision Height

DTWO—Dual Trailing Wire Operator

DV—Distinguished Visitor
EAL—Entry Authorization List
EBL—Emergency Boom Latching
EFB—Electronic Flight Bag
ER—Exceptional Release
ETA—Estimated Time of Arrival
ETP—Equal Time Point
EUCARF—European Control Altitude Reservation Function
EWO—Emergency War Order
FA—Flight Attendant
FAF—Final Approach Fix
FANS—Future Air Navigation Systems
FCF—Functional Check Flight
FCG—Foreign Clearance Guide
FDP—Flight Duty Period
FE—Flight Engineer
FIR—Flight Information Region
FLIP—Flight Information Publication
FMS—Flight Management System
FMC—Fully Mission Capable
GP—General Planning
GDSS—Global Decision Support System
HQ—Headquarters
IAF—Initial Approach Fix
IAP—Instrument Approach Procedures
IAW—In Accordance With
ICAO—International Civil Aviation Organization
IFR—Instrument Flight Rules
ILS—Instrument Landing System
INS—Inertial Navigation System
LFA—Legal for Alert
LOX—Liquid Oxygen

LRC—Long Range Cruise
MAJCOM—Major Command
MEA—Minimum Enroute Altitude
MEP—Mission Essential Personnel
MOCA—Minimum Obstruction Clearance Altitude
MX—Maintenance
NACO—National Aeronautical Charting Office
NAOC—National Airborne Operations Center
NDB—Non Directional Beacon
NMCC—National Military Command Center
NMCS—National Military Command System
OEI—One Engine Inoperative
OPCON—Operational Control
OPORD—Operation Order
OPSEC—Operations Security
OT—Operations Team
OTC—Operations Team Chief
OWS—Operational Weather Squadron
PACMARF—Pacific Military Altitude Reservation Function
PNF—Pilot Not Flying
PSM—Presidential Support Mission
RCR—Runway Condition Reading
RSC—Runway Surface Condition
RM—Radio Maintenance
RNP—Required Navigation Performance
RO—Radio Operator
RRFL—Required Ramp Fuel Load
RVSM—Required Vertical Separation Minimum
SHF—Super High Frequency
SID—Standard Instrument Departure
SIOP—Single Integrated Operations Plan
SLCS—Senior Leader Communications System

SOE—Sequence of Events

SRF—Standard Ramp Fuel

SSM—Special Support Mission

STAR—Standard Terminal Arrival Route

TA—Transient Alert

TCAS—Traffic Collision Avoidance System

TERPS—Terminal Instrument Procedures

TWA—Trailing Wire Antenna

TC—Tech Controller

VO—Voice Operator

Terms

ADVON—Advanced Echelon; personnel who arrange support for an upcoming E-4 deployment.

Bird Watch Condition (BWC) Low—Bird activity on and around the airfield representing low potential for bird strikes.

Bird Watch Condition Moderate—Concentrations of small birds or isolated large bird activity observable near the runway or in locations that represent a potential hazard to safe flying operations.

Bird Watch Condition Severe—Heavy concentrations of small birds or significant large bird activity on or immediately above the active runway, taxiways, in-field areas or the arrival/departure corridor which represents a significant hazard to safe flying operations.

Category I Route—Any route that does not meet the requirements of a category II route, including tactical navigation and over water routes.

Category II Route—Any route on which the position of the aircraft can be accurately determined by the overhead crossing of a radio aid (NDB, VOR, TACAN) at least once each hour with positive course guidance between such radio aids.

Critical Phase of Flight—Engine start, takeoff, landing, and emergencies.

Deadhead Time—Duty time for crewmembers positioning or de-positioning for a mission or mission support function and not performing crew duties.

Due Regard—Operational situations that do not lend themselves to International Civil Aviation Organization (ICAO) flight procedures, such as military contingencies, classified missions, politically sensitive missions, or training activities. Flight under "Due Regard" obligates the military aircraft commander to be his or her own air traffic control (ATC) agency and to separate his or her aircraft from all other air traffic. (See FLIP General Planning, section 7.)

Equal Time Point (ETP)—Point along a route at which an aircraft may either proceed to destination or first suitable airport or return to departure base or last suitable airport in the same amount of time based on all engines operating.

Flight Crew—For the purposes of this AFI, the flight crew is defined as all pilots, navigators, flight engineers, and flight attendants.

Instructor Supervision—Supervision by an instructor of like specialty. For critical phases of flight, the instructor must occupy one of the seats or stations, with immediate access to the controls.

Maintenance Status—x

A-1;—No maintenance required.

A-2;—Minor maintenance required, but not serious enough to cause delay. Add system phonic code that identifies the affected units or systems, Alpha, Bravo, etc.

A-3;—Major maintenance required. Delay is anticipated. Affected units or systems are to be identified as in A-2 status above.

Mission Crew—For the purposes of this AFI, the mission crew is defined as all communication specialist crewmembers.

Nightwatch—The unclassified callsign/nickname for the Joint Staff Battlestaff and USAF support of the NAOC mission.

Operational Control (OPCON)—Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions. Operational control does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training.

Operational Risk Management (ORM)—A logic-based, common sense approach to making calculated decisions on human, materiel, and environmental factors before, during, and after Air Force operations. It enables commanders, functional managers and supervisors to maximize operational capabilities while minimizing risks by applying a simple, systematic process appropriate for all personnel and Air Force functions.

Power-on Checks—Aircraft checks accomplished by aircrews which do not involve engine start and/or aircraft acceptance. Primarily used to verify proper system configurations and switch positions at aircrew duty stations during ground alert duty.

Primary Aircraft—The first generated E-4B aircraft able to fully perform the NAOC mission.

Quaternary Aircraft—A fourth E-4B aircraft capable of being generated to perform the NAOC mission.

Secondary Aircraft—A second E-4B aircraft capable of being generated to perform the NAOC mission

Tertiary Aircraft—A third E-4B aircraft capable of being generated to perform the NAOC mission.