



DEPARTMENT OF THE AIR FORCE
86TH AIRLIFT WING (USAF)

RAMSTEINABI13-204_GM2017-01

23 August 2017

MEMORANDUM FOR 86 AW

FROM: 86 AW/CC

SUBJECT: RAMSTEIN AB Guidance Memorandum (GM) to RAMSTEINABI 13-204,
Airfield Operations

1. By order of the commander, 86th Airlift Wing, this guidance memorandum immediately supplements RABI 13-204, *Airfield Operations*. Compliance with this memorandum is mandatory. To the extent its directions are inconsistent with other Air Force publications, the information herein is in accordance with AFI 33-360, Publications and Forms Management. Publications and forms are available for downloading or ordering on the e-Publishing website at www.e-publishing.af.mil. There are no releasability restrictions on this publication. Failure to observe the prohibitions and mandatory provisions within this publication by military members is a violation of Article 92 of the UCMJ. 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). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command.

2. The specific supplemental provisions to RABI 13-204, *Airfield Operations* are found in the attachment to this memorandum. The provisions establish guidance changes to the airfield operations procedures on Ramstein Air Base.

3. This memorandum becomes void after one-year has elapsed from the date of this memorandum, or upon publication of an interim change or rewrite of RABI 13-204, *Airfield Operations*, whichever is earlier.

RICHARD G. MOORE,
Brigadier General, USAF
Commander

Attachment:
Guidance Changes

Attachment

Guidance Changes to RABI 13-204, *Airfield Operations*

Chapter 1

GENERAL INFORMATION

1.3.1. The northern boundary of the CMA starting at the northwest corner follows 10 feet inside of the edge of West Perimeter Road going east. At Bldg. 4456, the CMA extends south to run parallel with Taxiway (TWY) Golf North Visual Flight Rules (VFR) hold line to Taxiway Echo North VFR hold line. The CMA then extends northeast at Bldg. 4451 to Taxiway Charlie VFR hold line and extends within 10 feet of the east perimeter road.

1.3.2. The southern boundary is defined by the Morbach drainage ditch, located approximately 700 feet south of the centerline of Runway (RWY) 08/26. **Exception:** The CMA is marked by the VFR hold lines on Taxiways Echo South, Lima and Golf South, excluding buildings 2398 and 2399.

1.5. Multiple Runway Crossings. IAW FAAO JO 7110.65 multiple runway crossings are not authorized.

1.25.3.1. CMA preparation for ILS CAT II/IIIa operations are initiated when weather conditions are at or below 300 ft. ceiling and either reported visibility or Tower observed prevailing visibility is at or below 1,600m.

Chapter 4

INSTRUMENT FLIGHT RULES (IFR) PROCEDURES

4.5. Standard Climb-out Instructions/Procedures. Transient aircraft must be issued detailed standard climb out instructions as required. Prior coordination with Langen Air Control Center must be accomplished for all aircraft departing GCA airspace. The use of the phrase, "execute local climb-out" applies to locally-assigned aircraft per standard climb-out outlined in paragraph 4.5.1.

4.5.1.1. ATC Phraseology: "AFTER COMPLETING (low approach, touch and go, stop and go, option), EXECUTE LOCAL CLIMBOUT."

4.5.1.2. Rwy 08 and 09 local climb-outs:

FLY RUNWAY HEADING, CROSS DEPARTURE END ABOVE 35 FEET AGL, THEN CLIMB AND MAINTAIN 4,000. MINIMUM CLIMB GRADIENT 250 FEET PER NAUTICAL MILE UNTIL 2,000.

4.5.1.3. Rwy 26 and 27 local climb-outs:

FLY RUNWAY HEADING, CROSS DEPARTURE END ABOVE 35 FEET AGL, THEN CLIMB AND MAINTAIN 4,000.

4.5.1.4. The GCA shall have control of departures at or beyond three (3) DME unless otherwise coordinated with Tower.

4.5.1.5. DELETE.

4.5.1.6. DELETE.

4.5.1.7. DELETE.

4.7. Breakout/Go-Around/Missed Approach Procedures.

4.7.1. Breakout procedures. When an aircraft/flight is at 6 miles or more from end of runway: "FLY RUNWAY HEADING, CLIMB AND MAINTAIN 5,000" unless otherwise directed by GCA.

4.7.2. Go-Around procedures. When an aircraft/flight is less than 6 miles from the end of runway, the aircraft will be instructed to execute local climb out, unless otherwise directed by Tower. **Note:** In the event of an aircraft in departure position on the runway, Tower will issue "Go-around left (Rwys 26/27) or right (Rwys 08/09)." Aircraft will offset 200 feet south of the runway, and then fly local climb out procedures.

4.7.2.1. DELETE.

4.7.2.2. DELETE.

4.7.3. Missed approach procedures. Pilots will fly the published missed approach procedure for the published approach they are executing, unless otherwise instructed by ATC. If no published missed approach procedure exists, pilots will execute local climb out procedures and notify ATC.

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

**RAMSTEIN AIR BASE
INSTRUCTION 13-204**

31 JULY 2014



Nuclear, Space, Missile, Command and Control

AIRFIELD OPERATIONS

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This publication implements AFD 13-2, *Air Traffic, Airfield, Airspace and Range Management*. It describes the operational environment for Ramstein AB and the local area, and prescribes policies/procedures for air traffic control (ATC), airfield management (AM), airspace, and flight line activities. The provisions of this instruction are directive in nature and apply to all assigned/attached units. Pilots may deviate from the procedures contained herein in the interest of flying safety or when directed by Langen Air Control Center (ACC), Ramstein Ground Controlled Approach (GCA), Ramstein Control Tower, or other competent authority. **Note:** All altitudes in this instruction are mean sea level (MSL) unless specified otherwise or when referring to weather minimums. Aircrew and ground personnel should refer to Notices to Airmen (NOTAM) and AM for up-to-date information. This publication may be supplemented at any level, but all direct Supplements must be routed to the OPR of this publication for coordination prior to certification and approval.

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).

Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command.

SUMMARY OF CHANGES

This publication has been revised in its entirety and must be reviewed. The following changes were made: revision of all references to obsolete AFIs, RABIs, and base OPLANs, airfield description, runways, and taxiways, controlled movement area, Mitchell Avenue Crossing, Multiple Runway crossings, airfield lighting systems, permanently closed/unusable portions of the airfield, airfield parking plan and restrictions, air traffic control facilities, local frequencies, local ATC frequencies, transient alert services, automated terminal information service procedures, aircraft special operations areas/ramps, aircraft towing procedures, engine test/run-up procedures, authorized engine run spots on Ramp 5 and 8, authorized engine runs for base assigned aircraft, noise abatement procedures, local flying area/designation of airspace, VFR local training areas, VFR traffic patterns, special procedures, intersection departures, local departure procedures, radar vector to initial procedures, standard climb-out instructions/procedures, arrival procedures, station keeping equipment procedures, hot break area and procedures, evacuation of airfield operations facilities, other emergency procedures, alternate facility procedures, slot times and flow control, airfield operations board, airfield operations board membership, night vision device operations, local aircraft priorities, civilian aircraft operations, aero club operations, weather dissemination and coordination procedures, airfield snow removal operations, tactical arrival/departure procedures, UAS operations procedures, exercise procedures, waivers to airfield/airspace criteria, wear of hats and reflective belts, airfield smoking policy, low visibility operations, and all attachments.

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Chapter 1

GENERAL INFORMATION

1.1. Airfield Description. Ramstein Air Base (ICAO: ETAR) is located in the southwest portion of Germany, in the federal state of Rheinland-Pflaz, in the rural district of Kaiserslautern, adjacent to the small town of Ramstein-Miesenbach. The airfield is situated on the low-lying south side of the installation. See **Attachment 2, Airfield Diagram** for airfield layout.

1.1.1. Ramstein AB aerodrome reference points are 49°26.21' N and 7°36.02' E.

1.1.2. The airfield elevation is 781 feet.

1.1.3. Ramstein AB has two runways designated as runway (Rwy) 08/26 and Rwy 09/27.

1.1.3.1. Rwy 08/26 is considered the runway reference point and is located at 49°26.04' N and 7°36.02' E.

1.1.3.1.1. Rwy 08/26 is 10,498 feet long and 148 feet wide; the entire usable length is grooved.

1.1.3.1.2. The first 1,818 ft of Rwy 08 and the first 1,836 feet of Rwy 26 are portland cement concrete (PCC). The remaining 6,844 feet is asphalt concrete (AC) or porous friction coarse asphalt.

1.1.3.1.3. Both Rwy 08/26 have 656-foot AC overruns.

1.1.3.2. Rwy 09/27 information is 9,842 feet long and 148 feet wide; the entire usable length is grooved.

1.1.3.2.1. The first 1,401 feet of Rwy 09 and the first 1,410 feet of Rwy 27 is PCC. The remaining 7,031 feet is AC.

1.1.3.2.2. Both Rwy 09/27 have 656-foot AC overruns.

1.1.3.3. Rwy gradients:

1.1.3.3.1. Rwy 08 gradient is +0.1429%.

1.1.3.3.2. Rwy 09 gradient is +0.1930%.

1.1.3.3.3. Rwy 26 gradient is -0.1429%.

1.1.3.3.4. Rwy 27 gradient is -0.1930%.

1.1.4. Runway/instrument holdline locations. Runway holdlines are located at least 352 feet from the centerline (277 feet from the edge) of all runways IAW ICAO Annex 14 and are located on Taxiways (Twy) Alpha, Bravo, Charlie, Echo, Golf, Kilo, and Lima. Instrument holdlines are placed to protect the glideslope and localizer critical areas and are located on Twys Alpha, Bravo (north), Charlie, Echo (north and south), Golf (north and south), Kilo and Lima. See **Attachment 2, Airfield Diagram** for runway/instrument holdline locations.

1.1.4.1. Aircraft and vehicles will not cross lit red stop bar lights. Tower deactivation of red stop bar lights authorizes aircraft and vehicle movement past the stop bar.

Table 1.1. Width of Ramstein Air Base Taxiways.

Taxiway	Width (in feet)
A	75
B	75
C	75
D	75
E	75
F	75
G	75
G (South)	49
K	75
L	75

1.2. Runway Selection Procedures.

1.2.1. Rwy 26 is designated the primary calm wind runway. Rwy 26 shall be designated as the runway in use whenever the prevailing wind speed is less than 5 knots regardless of wind direction.

1.2.2. The Tower watch supervisor (WS) may designate a runway in use other than that favored by the prevailing wind when an operational advantage will be gained.

1.2.3. Pilot requests for opposite direction operations will be approved on a workload permitting basis.

1.2.4. Runway change notification.

1.2.4.1. 86 OSS/OSAT, Tower will coordinate with 86 OSS/OSAR, GCA prior to a runway change.

1.2.4.2. Tower will notify 86 OSS/OSAA, AM and weather after a runway change.

1.2.4.3. GCA will notify Langen ACC and Neckar Low after a runway change. In the event GCA is closed, Tower will notify Langen ACC and Neckar Low of a runway change.

1.2.4.4. AM will notify the fire department alarm room, barrier maintenance (786 CES/CEOFP), command post, (86 AW/CP), TA, maintenance operations center (86 MXS/MOC), and air mobility control center (313 EOSS/AMCC) after a runway change.

1.2.5. Simultaneous runway operations are not authorized at Ramstein AB.

1.3. Controlled Movement Area (CMA). See Attachment 3, Controlled Movement Area.

1.3.1. The northern boundary of the CMA begins 10 feet south of the edge of the North Crash Access Road (NCAR).

1.3.2. The southern boundary is defined by the Morbach drainage ditch, located approximately 700 ft south of the centerline of Rwy 08/26. **Exception:** The CMA is marked by the instrument hold lines on Twys Echo South and Lima and the VFR hold line on Twy Golf South, excluding buildings 2398 and 2399.

1.3.3. The eastern boundary of the CMA follows 10 feet inside of the edge of the east perimeter road from the NCAR to parallel with the Morbach drainage ditch south of Rwy 08/26.

1.3.4. The western boundary follows 10 feet inside the edge of the west perimeter road from Twy Golf North to Twy Golf South.

1.3.5. Vehicles/Pedestrians Operating in the CMA. A detailed outline of Ramstein AB flight line vehicle/pedestrian operations can be found in RABI 13-213, Airfield Driving. Only mission essential government vehicles and other approved vehicles displaying the appropriate flight line pass are permitted in the CMA.

1.3.5.1. Emergency Vehicles.

1.3.5.1.1. Any emergency vehicle requiring access to the CMA will be on either the CRASH or RAMP net and obtain permission for entry from tower.

1.3.5.1.2. In order to maintain response reaction times; limited Fire Response vehicles (due to their size and maneuverability) may utilize Taxiway Golf to access Fire Station #3 in the southwest area.

1.3.6. Gaining Access to the CMA. Aircraft, vehicles, or personnel will not operate in the CMA without two-way radio communication and approval from Tower. Approval for entry to CMA via phone calls to Tower or AM by third parties is prohibited, including during exercises or emergencies. If circumstances beyond an individual's control preclude radio communication, they must obtain an escort with 2-way radio capability before being granted access to the CMA.

1.4. Mitchell Avenue Crossing.

1.4.1. The activation of traffic lights is an additional service and will not take precedence over the control and movement of aircraft. Tower activates the vehicular traffic light/warning siren at the intersection of Mitchell Avenue and Twy Delta for the following conditions:

1.4.1.1. When aircraft taxiing on Twy Delta will cross Mitchell Avenue, the light should remain on from approximately 3 spots prior to the intersection until the aircraft has cleared the intersection.

1.4.1.2. When aircraft are taxiing into or out of Ramp 3, spot 1 and/or Ramp 2, spot 12, the light should remain on from approximately 3 spots prior until the aircraft has stopped movement in parking for arriving aircraft and prior to issuing a taxi clearance until the aircraft has turned onto Twy Delta and cleared the intersection for departing aircraft.

1.4.2. AM is responsible for inspecting/tracking all maintenance actions associated with vehicle traffic lights/warning sirens on the airfield.

1.5. Multiple Runway Crossings. Multiple runway crossings are authorized at Taxiway Echo. All other runway crossings are IAW FAAO 7110.65.

1.6. Airfield Lighting Systems. The Tower is equipped with the capability to operate airfield lighting systems and visual aids. Tower will operate the airfield lighting system IAW FAAO 7110.65, BesAnMilFS 2-100 (*German Air Force air traffic control publication*) and the following local procedures, unless pilots request otherwise.

1.6.1. Lighting system types.

1.6.1.1. Runway lights.

1.6.1.1.1. Rwy 08: High intensity runway lights (HIRL) with 5-step intensity, runway centerline lights (RCL), runway alignment indicator lights (RAIL) and runway end identifier lights (REIL).

1.6.1.1.2. Rwy 26: HIRLs, RCLs, RAILs, REILs, and touchdown zone lighting.

1.6.1.1.3. Rwy 09/27: HIRLs, REILs.

1.6.1.2. Approach lights: Rwy 08 has approach lighting system with sequenced flashing lights (ALSF)-1, Rwy 26 has ALSF-2 and Rwy 09/27 has NATO standard configuration (5-step intensity), all runways have sequenced flashing lights (SFL).

1.6.1.3. Precision approach path indicator (PAPI): Rwy 08/09/26/27, 5-step intensity.

1.6.1.4. Taxiway lights: All taxiways are lighted with standard blue taxiway lights, 1-step intensity. Twys Alpha, Bravo (south of Rwy 09/27), Echo, Foxtrot, Golf (north of Rwy 08/26); Kilo, Lima, and Rwy 08/26 and 09/27 have taxiway centerline lighting. **Exception:** The taxitracks south of Ramp 7 are unlit.

1.6.1.5. Stop bar lights: Located at hold lines on Twys Alpha (east of Twy Bravo), Bravo (north and south of Rwy 09/27), Charlie, Echo (north of Rwy 09/27, north of Rwy 08/26 and south of Rwy 08/26), Golf (north and south of Rwy 08/26, and north of Rwy 09/27) Kilo, and Lima; and on Rwy 09/27 (east and west of Twy Echo). IAW BesAnMilFS 2-100, aircraft or vehicles shall not cross a stop bar that has been switched on without prior approval from ATC.

1.6.1.6. Threshold lights: Rwy 08/26 and 09/27.

1.6.1.7. Distance remaining markers: Rwy 08/26 and 09/27.

1.6.1.8. Rotating beacon.

1.6.2. Lighting system operations.

1.6.2.1. Tower will report changes in the high intensity runway light setting to the weather observer when reported visibility is at 3,200 meters or less, or the runway visual range (RVR) is 1,500 meters or less.

1.6.2.2. Unless requested, airfield lighting will be turned off during hours of darkness when not needed for air or ground aircraft movement operations for the purpose of energy conservation.

1.6.2.3. Between sunset and sunrise, Tower will activate taxiway lights along the taxi route when taxi instructions are issued to an aircraft. Tower will leave these lights on until aircraft departure or shutdown.

1.6.2.4. Airfield lights may be adjusted to Step 5 to aid in snow removal operations, if it does not negatively affect flight operations.

1.7. Permanently Closed/Unusable Portions of the Airfield. The Ramp 9 and Ramp 6 are permanently closed.

1.8. Aircraft Arresting Systems (AAS).

1.8.1. Ramstein AB is equipped with Barrier Arresting Kit (BAK)-12/14 systems on Rwy 08/26. See [Attachment 2, Airfield Diagram](#) for depiction of locations. **Note:** There are no arresting systems on Rwy 09/27.

1.8.1.1. The west BAK-12/14 is 1,815 feet from Rwy 08 threshold.

1.8.1.2. The east BAK-12/14 is 1,833 feet from Rwy 26 threshold.

1.8.2. Configuration. Barriers will be connected and in the down position. Barriers will be raised for all tailhook-equipped aircraft departing/arriving with known or suspected radio failure and upon request.

1.8.3. Responsibilities:

1.8.3.1. The 786th Civil Engineering Squadron (786 CES) is responsible for the operation and maintenance of the aircraft arresting systems. 786 CES/CEOFP provides indoctrination training briefing of arresting systems to newly assigned ATC and AM personnel.

1.8.3.2. The 86th Maintenance Squadron (86 MXS) is responsible for the training and response of crash recovery personnel.

1.8.3.3. Tower controllers will raise and lower the BAK-12/14 according to this instruction, report all arresting system malfunctions to AM and activate Primary Crash Alarm System (PCAS) for all unscheduled/unplanned barrier engagements.

1.8.3.4. AM will notify 786 CES/CEOFP and Tower of all arresting system malfunctions or abnormalities.

1.8.4. Barrier engagement. See [Attachment 4, Aircraft Arresting Barrier Engagements Procedures](#), for information regarding barrier engagement, responsibilities, suspension, and resumption of runway operations, etc.

1.9. Parking Plan and Restrictions.

1.9.1. 86 OSS/OSAA manages seven ramps on the aerodrome and remains the overall authority for ensuring proper airfield utilization.

1.9.1.1. Ramp 1 is operated by the 86th Aircraft Maintenance Squadron (86 AMXS); 19 aircraft parking spots numbered 1-1 through 1-19 are available to accommodate base assigned C-130s. Aircraft will be parked facing west unless prevailing wind is from the east. See [Attachment 5, Airfield Parking Ramp 1, 2, 3, 4](#).

1.9.1.2. Ramp 2 is operated by 86 AMXS. 12 aircraft parking spots numbered 2-1 through 2-12 are designed to accommodate base assigned C-130s facing to the north. Taxilanes oriented east/west are designed to accommodate aircraft with a wingspan of 130 feet or less; if taxilanes are utilized to accommodate C-130 parking, prior coordination with AM is required to ensure appropriate wingtip restrictions are imposed for Twy D. Spots 2-1 through 2-8 will be used for normal operations. Spots 2-9 through 2-12 will only be utilized when use of other available parking spots will impede operations. To the maximum extent possible, the remaining aircraft parking spots on Ramps 1, 2, and 4 will be fully utilized prior to Spots 2-9 through 2-12 being utilized by transient aircraft; all parking spots on Ramp 3 should be utilized prior to use by distinguished visitors (DV) support aircraft. See [Attachment 5, Airfield Parking Ramp 1, 2, 3, 4](#).

1.9.1.3. Ramp 3 is operated by TA. Four aircraft parking spots are numbered 3-1 through 3-4. Taxilanes associated with Spots 3-1 through 3-2 are marked to accommodate aircraft with a wingspan of 132 feet, 7 inches or less; Spots 3-3 through 3-4 are marked to accommodate aircraft with a wingspan of 117 feet, 5 inches or less. When requested, TA will inform Tower of parking locations for all transient aircraft and base assigned aircraft transporting DVs. **Note:** Spot 3-1 will normally only be utilized to enplane and deplane passengers or the time it takes to service the aircraft. The maximum amount of time should normally not exceed 1 hour and 15 minutes. If mission requirements dictate additional time, users will coordinate with TA for parking at an alternate location and then will double-block back to Ramp 3 as necessary. See [Attachment 5, Airfield Parking Ramp 1, 2, 3, 4](#).

1.9.1.4. Ramp 4 is operated by TA; six aircraft parking spots are numbered 4-1 through 4-6. Spot 4-1 is designated the primary parking for fighter aircraft without forward firing munitions. 4-1 through 4-5 are designed to accommodate C-130s facing south; Spot 4-6 is designed to accommodate aircraft with a wingspan of 117 feet 5 inches or less (C-40). A variety of transient aircraft may park on the ramp, however, marshallers and wingwalkers must be provided as necessary. See [Attachment 5, Airfield Parking Ramp 1, 2, 3, 4](#).

1.9.1.5. Ramp 5 is operated by 521 AMOW (AMC) through 721 AMOG. 721 AMXS Maintenance Operations Center (MOC) is the ramp coordinating authority for its use. Ramp 5 is intended for the primary use of 18 AF (AMC) controlled missions. Transient aircraft operating other than 18 AF (AMC) controlled missions may be accommodated on a space available basis with appropriate prior coordination through 721 AMXS/MOC. Servicing of non-18 AF (AMC) aircraft shall be IAW local maintenance directives. Ramp 5's air terminal jetway parking spots are designated T1 and T2. Power-back taxi is not authorized from T1 or T2. Departing aircraft must be pushed back onto a designated east/west parking spot for engine start and taxi. Ramp 5 engine run spots R1 and R2 require aircraft to be towed into place. Aircraft may taxi under power when departing R1 and R2. See [Attachment 6, Airfield Parking Ramp 5](#).

1.9.1.6. Ramp 7 (Southwest Area) is controlled by 76th Airlift Squadron (76 AS); there are 8 aircraft parking spots, 2 for C-20s and 6 for C-21s. Additional aircraft parking is available utilizing hangars and dispersed aircraft shelters. See [Attachment 7, Airfield Parking Ramp 7, 8](#).

1.9.1.6.1. Ramp 7, Spots 7-1 and 7-2 are designed to accommodate C-20s. See [Attachment 7, Airfield Parking Ramp 7, 8](#).

1.9.1.6.2. Ramp 7, Spots 7-3 through 7-8 are designed to accommodate C-21s. **Note:** Spot 7-7 is closed. See [Attachment 7, Airfield Parking Ramp 7, 8](#).

1.9.1.7. Ramp 8 - Ramp 8 - Hot Cargo Pad (HCP), located on the south side of Runway 08/26 at the mid-field Taxiway E, is operated by 521 AMOW (AMC) through 721 AMOG. 721 APS/TROC (Cape Forecasting) is the ramp coordinating authority. There are four total aircraft parking spots, but only three are usable at any one time. Ramp 8 can accommodate up to three C-17 or smaller aircraft for simultaneous operations OR up to two commercial wide-body/C-5 type aircraft for simultaneous hot cargo operations. Parking is limited to two aircraft (any type), if a commercial wide-body or a C-5 are present. See [Attachment 7, Airfield Parking Ramp 7, 8](#).

1.9.1.7.1. Aircraft with Hazardous Class 1.1, 1.2 or greater than 1,000 pounds net explosive weight (NEW) of 1.3 are required to use Ramp 8 when transiting, loading or unloading at Ramstein, unless specifically waived by an appropriate authority.

1.9.1.7.2. Use of Ramp 8 requires a specific Prior Permission Required (PPR) from 721 APS/TROC. This PPR is in addition to the PPR required/issued by 86 OSS/OSAA for general use of Ramstein Air Base. Ramp 8 PPRs are approved using JCS priority, munitions load and projected availability at the time of the request. Higher priority munitions missions may subsequently bump lower priority missions or non-munitions missions after PPRs are issued. In such cases, requestors will generally be notified for mitigation. In some cases aircraft may be required to be downloaded and/or towed to accommodate higher priority munitions movements. Failure to coordinate a PPR with 721 APS/TROC may result in denied access during mission execution.

1.9.1.7.3. Aircraft block in/block out activities are controlled through 721 AMXS/MOC. Inbound aircraft, regardless of type, with a PPR for the HCP shall contact Ramstein AMCC NLT 30 minutes prior to arrival for final parking coordination. Unexpected aircraft diverts may be accommodated on a space available basis. However, divert aircraft may encounter parking delay until appropriate coordination can be accomplished and/or space becomes available. As much advance notice/coordination as possible will ensure the best possible success.

1.9.1.8. Building 2525, 2526, 2524 (the Three Amigos) are controlled by 86th Munitions Squadron (86 MUNS). There are two aircraft shelters (HS-131 & HS-132) designated to accommodate aircraft with forward firing munitions.

1.9.2. Deviation from marked parking plans should be forwarded to the Airfield Manager (AFM) for coordination and approval at least 48 hours prior to planned deviation. AM will inform Tower of parking deviations.

1.10. Air Traffic Control Facilities. Ramstein AB has a VFR Control Tower and a GCA facility.

1.10.1. Ramstein Tower provides 24-hour a day VFR service within Ramstein Class D airspace.

1.10.1.1. When Tower is manned with one qualified Watch Supervisor/Senior Controller (example- during quiet hours), the following operational restrictions will apply:

1.10.1.1.1. No more than three airborne aircraft at any given time.

1.10.1.1.2. The VFR patterns will be closed.

1.10.1.1.3. If more aircraft are simultaneously scheduled, the Control Tower Chief Controller (CCTLR) will notify and schedule additional qualified controllers.

1.10.2. GCA provides ATC radar services within Ramstein Class E airspace. See **Attachment 8, Class E Airspace/Radar Pattern**) from 0600L to 2200L, Monday through Saturday; and 1230L to 2200L on Sundays, and German holidays. The GCA is closed on US Holidays, USAFE, and 86 AW down days.

1.10.2.1. . Departure control. Langen ACC controls IFR departures except those aircraft remaining within Ramstein GCA's airspace.

1.11. Local Frequencies.

1.11.1. ATC must authorize use of ATC frequencies by other than air traffic controllers. Aircraft will use VHF (primary) when equipped, to communicate with ATC in the local area.

1.11.2. The 435th Air Ground Operations Wing (435 AGOW) and 86th Airlift Wing (86 AW) ground personnel will use the Ramp Net to contact the Tower.

1.11.3. The fire department is authorized to use 282.7 during airfield emergencies.

Table 1.2. Local ATC Frequencies.

FACILITY	UHF	VHF
Ramstein GCA	356.225/399.475	140.9/124.275
Ramstein Tower	386.75	133.2
Ramstein Ground	308.775	121.775
Langen ACC	256.675	129.675

1.12. Navigational Aids (NAVAIDs).

1.12.1. Tactical air navigation (TACAN) RMS. Channel 81; located at N 49°26.08' and E 07°35.14'. See DoD FLIP (Enroute) Supplement for unusable radials and preventive maintenance inspection (PMI) schedule.

1.12.2. Instrument landing system (ILS).

1.12.2.1. ILS Rwy 08. CAT I. See DoD FLIP (Enroute) Supplement for detailed information and PMI schedule.

1.12.2.2. ILS Rwy 26. CAT I. See DoD FLIP (Enroute) Supplement for detailed information and PMI schedule.

1.12.2.3. ILS Rwy 26. CAT II. See DoD FLIP (Enroute) Supplement for detailed information and PMI schedule.

1.12.2.4. ILS Rwy 26. CAT IIIa. See DoD FLIP (Enroute) Supplement for detailed information and PMI schedule.

1.12.2.5. ILS Rwy 09. CAT I. See DoD FLIP (Enroute) Supplement for detailed information and PMI schedule.

1.12.2.6. ILS Rwy 27. CAT I. See DoD FLIP (Enroute) Supplement for detailed information and PMI schedule.

1.12.3. Digital Airport Surveillance Radar (DASR). Antenna operated by Ramstein GCA, is located approximately 1 NM north-northwest of the runways. See DoD FLIP (Enroute) Supplement for more detailed information and PMI schedule.

1.12.4. TACAN checkpoints on airfield are marked and located:

1.12.4.1. At the instrument hold lines for Twy Echo north (R-063/0.5 DME).

1.12.4.2. South of the instrument hold lines for Twy Echo south (R-102/0.7 DME).

1.12.4.3. West of the instrument hold lines for Twy Alpha (R-080/1.4 DME).

1.13. Transient Alert (TA) Services. TA provides full service during airfield operating hours, however, limited services are available for unscheduled arrivals during airfield quiet hours. For additional information on TA services available at Ramstein, see DoD FLIP (Enroute) Supplement.

1.14. Automated Terminal Information Service (ATIS). Tower will broadcast the ATIS IAW FAAO 7110.65 and local operating procedures Monday through Saturday 0500L to 2200L and Sundays 1200L to 2200L on 142.125 and 292.275 MHz.

1.15. Aircraft Special Operations Areas/Ramps.

1.15.1. Arm/De-Arm, Hot Brake, Hung Flare, and Hydrazine Areas. Twys Alpha and Kilo are the primary arm/de-arm, hot brake, hung flare, and hydrazine areas. Twy Golf between Rwy 09/27 and 08/26 is the secondary arm/de-arm, hot brake, hung flare, and hydrazine areas. The primary hydrazine servicing areas will be outside of building 2525 and the hot cargo pad. See [Attachment 2, Airfield Diagram](#) for depiction.

1.15.1.1. Aircraft requiring arm/de-arm or with hung/unsafe ordnance parked on Twy Kilo and Twy Golf center will be instructed to park facing due west (270 heading). Aircraft parking on Twy Alpha will be instructed to park facing southeast (120 heading).

1.15.1.2. Fighter aircraft requiring a hydrazine response will be instructed to park with the nose of the aircraft facing into the wind.

1.15.2. Engine Run-up Areas. See paragraph 1.23 for engine run procedures.

1.15.3. Drag Chute Jettison Areas.

1.15.3.1. Aircraft equipped with drag chutes shall retain chutes until parked unless otherwise approved by Tower.

1.15.3.2. Tower will inform AM where the drag chute is released and AM will retrieve the chute. Tower or AM will suspend runway operations if necessary.

1.15.4. Hot Pit Refueling Areas. Hot pit refueling is allowed on the airfield for specific aircraft and missions. For hot pit refueling procedures and associated waivers, contact the 86 MXG/QA.

1.15.5. UAS Designated Start Areas. Ramstein AB does not support UAS.

1.15.6. Large Aircraft Infrared Countermeasures (LAIRCM) Functional Tests. Pre-coordination with AM, aircraft self defense system functional tests may be intentionally activated on Ramp 1, Spot 18 and Ramp 5, Spot 17 to confirm functionality and laser beam alignment. All other locations shall be pre-coordinated at least 48 hours in advance and approved on a case-by-case basis by the AFM or AOF/CC. When notified:

1.15.6.1. AM shall:

1.15.6.1.1. Obtain start time, projected completion time, location of the test and confirm Ramp Net capable throughout the test.

1.15.6.1.2. Notify Tower, Security Forces (SF) and unit airfield driving program managers of all pertinent info.

1.15.6.1.3. For C-17 testing, suspend aircraft taxi operations on Taxiways Golf (North) and Foxtrot in the direction of Ramp 5, Spot 17.

1.15.6.1.4. Conduct pre/post-LAIRCM testing checks

1.15.6.1.4.1. Pre-LAIRCM Testing. Ensure MX personnel have established a 171-foot cordon around the aircraft and impose appropriate airfield restrictions.

1.15.6.1.5. Notify Tower, SF and unit airfield driving program managers when testing is complete.

1.15.6.1.6. Annotate start, completion and airfield restrictions due to LAIRCM testing and functional checks on AF IMT 3616, Daily Record of Facility Operation.

1.15.6.2. Tower shall:

1.15.6.2.1. Ensure all coordination for LAIRCM testing is coordinated through AM.

1.15.6.2.2. Maintain direct communications with LAIRCM safety observers via the Ramp Net and request to be notified of all laser activations and termination activity.

1.15.6.2.3. Prohibit aircraft from taxiing in the direction of Ramp 5, Spot 17 on Taxiways Golf or Foxtrot while the laser is activated.

1.15.6.2.4. If notified by any other agency other than AM that LAIRCM testing is complete, inform AM.

1.15.6.2.5. Document start and stop times on AF IMT 3616, Daily Record of Facility Operation.

1.15.6.3. Hazards and Safety. The LAIRCM pointer tracker and laser can radiate harmful levels of radiation up to 171 feet. Tower controllers shall not use binoculars to scan the surface area in the direction of LAIRCM testing. AM personnel shall remain outside of the safety zone and avoid using binoculars in the area of the test. To the maximum extent possible, all scheduled tests on Ramp 5 shall be conducted during quiet hours when there is minimal movement in the vicinity.

1.15.7. Recovering Aircraft Experiencing In-Flight Emergencies (IFE). Twys Lima and Echo (south of Rwy 8/26) may be used for recovering aircraft experiencing in-flight emergencies to avoid congesting taxiways leading into Ramps 1-5.

1.16. Aircraft Towing Procedures.

1.16.1. The 86 MXG/MOC and 721 AMXS/MOC will coordinate all aircraft tow requests directly with the Tower.

1.16.2. The MOC will not authorize towing and/or parking of aircraft on any taxiway without prior coordination and approval from AM. AM will notify Tower of taxiway closures and send appropriate NOTAMs.

1.16.3. Tow supervisors will ensure:

1.16.3.1. Ramstein ground control is contacted for approval when ready to begin tow operation.

1.16.3.2. All instructions are read back verbatim.

1.16.3.3. Ground control frequency is monitored at all times after initial contact and until tow operation terminates.

1.16.3.4. Ground control is advised when tow operation is complete.

1.17. Aircraft Taxiing Requirements/Routes.

1.17.1. General Procedures

1.17.1.1. All aircraft will call ground control with current ATIS to request permission to taxi.

1.17.1.2. To reduce FOD, aircraft can expect to make a 180 degree turn on runway in the following preferred direction: Rwy 26 and 09, a left 180 degree turn and Rwy 08, a right 180 degree turn.

1.17.1.3. Aircraft with wingspans greater than 170 feet shall expect back-taxi on Rwy 08/26 or 09/27.

1.17.2. Heavy Aircraft Jet Thrust Avoidance Procedures. All Heavy Aircraft Jet Thrust Avoidance procedures are published in the FLIP.

1.17.3. Hazardous Cargo Taxi Procedures. Unless directed otherwise, all hazardous cargo aircraft will back-taxi on the runway.

1.17.4. Aircraft Taxi during Emergencies. Ground control will inform taxiing aircraft to give way to responding emergency vehicles.

1.17.5. Taxiway/Taxilane Restrictions and Wingtip Clearance.

1.17.5.1. Twy Alpha. Unrestricted.

1.17.5.2. Twy Bravo. Twy Bravo South is unrestricted. Twy Bravo North is closed.

1.17.5.3. Twy Charlie. Restricted to aircraft with a wingspan of 142 feet or less (e.g., C-32, C-40, C-130, KC-135, etc.). Restriction is based upon obstacle clearance of 121 feet.

1.17.5.4. Twy Delta.

1.17.5.4.1. Twy Delta (East): Restricted to aircraft with a wingspan of 142 feet or less (e.g., C-32, C-40, C-130, KC-135, etc.). Restriction is based upon obstacle clearance of 121 feet.

1.17.5.4.2. Twy Delta (West): Restricted to aircraft with a wingspan of 170 feet or less (e.g., C-17, C-32, C-40, C-130, KC-135, etc.). Restriction is based upon obstacle clearance of 135 feet.

1.17.5.5. Twy Echo.

1.17.5.5.1. Twy Echo (South): Unrestricted.

1.17.5.5.2. Twy Echo (Middle): Unrestricted.

1.17.5.5.3. Twy Echo (North): Restricted to aircraft with a wingspan of 226 feet 3 inches (e.g., C-5, E-4, VC-25, B-747/200/300/400, B-757, B-767, B-777, etc.). Restriction based upon obstacle clearance of 163 feet 6 inches.

1.17.5.6. Twy Foxtrot. Restricted to aircraft with a wingspan of 222 feet 9 inches or less (e.g., C-5, E-4, VC-25, B-747/200/300/400, B-757, B-767, B-777, etc.). Restriction is based upon obstacle clearance of 161 feet 5 inches.

1.17.5.7. Twy Golf.

1.17.5.7.1. Twy Golf (South): Restricted to aircraft with a wingspan of 78 feet or less (e.g., A-10, C-12, C-20, C-21, etc.). Restriction is based upon obstacle clearance of 68 feet 10 inches.

1.17.5.7.1.1. Ramp 7, Through Taxilane (East): Restricted to aircraft with a wingspan of 48 feet or less (e.g., C-21, etc.) when Spot 7-3A is occupied; 77 feet 10 inches or less (e.g., C-12, C-20, C-21, etc.) when Spot 7-3 and/or 7-6 is occupied.

1.17.5.7.1.2. Ramp 7, Through Taxilane (West): Restricted to aircraft with a wingspan of 64 feet or less (e.g., C-12, C-21, etc.) when Spot 7-3 is occupied; when Spot 7-4 is occupied.

1.17.5.7.1.3. Southern Taxitracks: Restricted to aircraft with a wingspan of 39 feet 6 inches or less (e.g., C-21); Day/VFR operations only.

1.17.5.7.2. Twy Golf (Middle): Unrestricted.

1.17.5.7.3. Twy Golf (North): Restricted to aircraft with a wingspan of 224 feet 3 inches or less (e.g., C-5, E-4, VC-25, B-747/200/300/400, B-757, B-767, B-777, etc.). Restriction based upon obstacle clearance of 162 feet 6 inches.

1.17.5.8. Twy Kilo. Unrestricted.

1.17.5.9. Twy Lima. Unrestricted.

1.18. Airfield Maintenance.

1.18.1. Sweeper Operations. All sweeper operation procedures are contained in a Letter of Agreement (LOA) between 86 OSS and 86 CES.

1.18.2. Grass Mowing. All mowing operation procedures are contained in a Letter of Agreement (LOA) between 86 OSS and 86 CES.

1.18.3. Host Nation Farming. Ramstein AB does not have any host nation farming agreements.

1.19. Runway Surface Condition (RSC) and/or Runway Condition Reading (RCR) Values.

1.19.1. AM will accomplish RCR/RSC checks IAW AFI 13-204v3, *Airfield Operation Procedures and Programs* and TO 33-1-23, *Equipment and Procedures for Obtaining Runway Condition Readings*. AM will report RCR/RSC values to the following agencies: Tower, 86 AW Command Post, 86 OSS Weather (86 OSS/OSW), 786 CES Snow Control Center, and 313 EOSS/AMCC.

1.19.2. For NATO aircraft, Tower and GCA will convert RCR readings according to Standard NATO Agreement 3634 RS, using **Table 1.3**

Table 1.3. Braking Coefficient and Conversion.

A (GOOD)	B (FAIR)	C (POOR/NIL)
-- 13 and above	-- 12 to 9	-- 8 and below

1.20. Procedures/requirements for conducting runway inspections/checks.

1.20.1. AM will conduct an airfield inspection at least once daily IAW AFI13-204v3.

1.20.2. IAW 13-204v3, AM personnel will conduct and document additional checks to examine the primary takeoff, landing and taxi surfaces when necessary in support of IFE, FOD, BASH, nighttime lighting, wide body/heavy aircraft departures, and any other events that could cause unsafe airfield conditions.

1.20.3. The 786 CES/CEOE (Airfield Lighting), will conduct an airfield lighting check at least once daily during official dusk or pre-dawn hours. Airfield lighting will report the status of airfield lighting systems to AM upon completion.

1.20.4. Civil engineering construction (86 CES/CEPM) will inspect areas closed for repair/construction prior to opening in conjunction with 86 OSS/OSAA and 86 AW/SE (Wing Safety).

1.20.5. 786 CES/CEOE will check and report the status of the arresting barriers to AM daily. Status will be reported to AM as “operational or non operational”.

1.21. Procedures for Opening and Closing the Runway.

1.21.1. IAW AFI 13-204v3, *Airfield Operations, Procedures, and Programs*, AM is the approval authority for opening/closing runways.

1.21.2. Closing a runway. AM will close the runway, advise the Tower and 86 AW/CP, and send NOTAM (if appropriate) anytime the runway will be unusable for an extended period of time (i.e. construction, snow removal, hazardous weather conditions, damage to landing surfaces, etc.)

1.21.3. Opening a runway. AM will re-open the runway after they inspect it to ensure that the runway is free of all hazards (aircraft, vehicle, debris, etc.). AM will notify the Tower and 86 AW/CP when the runway is open and will cancel applicable NOTAM.

1.22. Procedures for Suspending and Resuming Runway Operations.

1.22.1. IAW AFI 13-204v3, Runway operations may be suspended at the discretion of AM or the Tower Watch Supervisor/Senior Controller. Tower Watch Supervisor/Senior Controller will inform AM immediately when suspending runway operations. Only AM may resume runway operations following suspension or closure.

1.22.2. Operations are automatically suspended on the affected runway after an emergency aircraft has landed, except for physiological or medical emergencies, and remain suspended until AM has inspected the runway and informed Tower that runway operations may resume. **Note:** When runway operations are suspended, all vehicles shall continue to obtain clearance from the Tower prior to entering or crossing the runway.

1.23. Engine Test/Run-Up Procedures.

1.23.1. IAW the German Air Traffic Act Permit (ATAP), during engine test runs, only two engines per aircraft are allowed to be operated simultaneously under load conditions, unless necessary for fulfillment of mission-related tasks.

1.23.2. The 86 AW MOC and 721 AMXS/ MOC will coordinate all engine runs with Tower for approval. Engine run supervisors will ensure ground control is contacted for approval prior to engine start.

1.23.3. Once approval is given, maintenance engine run supervisors will continue to monitor ground control. Aircraft radio transmissions to ground control will be kept to a minimum.

1.23.4. The following periods are authorized for aircraft maintenance engine runs for all aircraft without quiet hour waiver approval:

1.23.4.1. Monday through Saturday: 0700L to 1900L (excluding German holidays).

1.23.5. Deviation requests. Any requests for engine runs for transient aircraft outside the above periods must be approved by the 86 OG/CC via 86 AW/CP. MXG/CC via 86 AW/CP will approve all 86 AW engine runs. The approving authority may be delegated to 86 AMXS Production Superintendent (Herk Super).

1.23.5.1. Acceptable reasons for deviation requests:

1.23.5.1.1. Mission degradation. Disapproved engine runs would cause mission degradation.

1.23.5.1.2. Higher headquarters (HHQ) impact. Disapproved engine run would cause HHQ/JCS mission impact.

1.23.5.1.3. Generation of HHQ or JCS directed alert or high priority mission.

1.23.6. Tower and AM will monitor airfield operations during quiet hours and notify 86 AW/CP of any deviations.

1.23.7. Rules for aircraft engine runs on Ramps 5 and 8 are listed in **Table 1.4**. Rules for engine runs by base assigned aircraft are listed in **Table 1.5**.

Table 1.4. Authorized Engine Run Spots on Ramps 5 and 8 (Except C-130s).

Rule	Conditions
1	Idle runs may be accomplished on any parking location.
2	Engine runs requiring two engines above idle will use the designated run spots 5 (facing east), R1 and R2 (facing north) unless spots are unavailable. In this case, refer to Rule 3. (See Note 1)
3	Engine runs requiring two engines above idle may use Spots 5-6 through 5-11 and Spots 5-18 through 5-24 (facing west) provided two spots behind the aircraft are vacant. See Note 2.
4	C-17 reverse engine run-ups may be accomplished on all spots except T1 and T2. See Note 3.
<p>Note 1: All aircraft with a wingspan greater than 169 feet 10 inches (C-17) to be parked on R1 or R2 will be pushed back onto parking spots.</p>	
<p>Note 2: Any maintenance runs must be coordinated through 86 MXG/MOC, 721 AMXS/MOC, and the Air Terminal Operations Center. Spotters will be positioned to ensure nothing passes behind the aircraft. All runs described in Table 1.5 will have 1000 ft clearance and guards facing the direction of the run.</p>	
<p>Note: All engine runs procedures to include power levels and direction, are the responsibility of the 721 AMXS and/or 86 MXG. Aircrew members or engine run supervisors assume full responsibility for the safety of all surrounding personnel and equipment. Tower serves only to approve engine runs for anti-hijack purposes. 86 OSS/OSA takes no responsibility for incorrect engine run procedures.</p>	
<p>Note: Reverse engine runs are prohibited while nacelle is positioned over unsecured fuel hydrant pit covers or manhole covers</p>	

Table 1.5. Authorized Engine Run Spots for Base Assigned Aircraft.

Ramp 1	
Rule	Conditions
1	Any spot for idle engine runs.
2	C-130 Aircraft (All) – Max power engine runs are authorized on parking spots provided there is a blast deflector or another spot directly behind vacant of personnel, equipment and aircraft. The spot two rows behind, if applicable, will be vacant of non-powered AGE; all personnel will be restricted from upper surfaces and aircraft, if present, will be in the high winds configuration. The running aircraft’s nose will face

	west, in alignment with nose wheel block/centerline. (See Notes 1 and 2)
Note 1: Safety spotters will be positioned to ensure nothing passes within 1,000 feet behind the aircraft.	
Note 2: Any maintenance runs on these spots must be coordinated through 86 MXG/MOC, 721AMXS/MOC, and the Air Terminal Operations Center.	
SOUTH WEST AREA (Ramp 7)	
1	C-21 engine runs authorized at HS-91 only.
Note 3: All aircraft are authorized engine runs to include full power on the hammerheads for minor maintenance problems only.	
Note 4: C-130 engine compressor washes can only be accomplished on Ramp 1 using a wash containment system. If a wash containment system is not available, engine compressor washes are prohibited.	
Note 5: All engine run procedures to include power and direction, are the responsibility of the 86 MXG. Aircrew members or engine run supervisors assume full responsibility for the safety of all surround personnel and equipment. Tower serves only to approve engine runs for anti-hijack purposes. 86 OSS/OSA takes no responsibility for incorrect engine run procedures.	

1.24. Noise Abatement Procedures. To minimize noise pollution for the Ramstein AB workforce and surrounding communities, the following procedures and restrictions apply:

1.24.1. Reverse thrust. Aircrews will use powered reverse thrust to the minimum extent necessary for safe operations.

1.24.2. Approach procedures. Aircrews will utilize German civil airfield approach procedures as specified in FLIP AP/2 to the maximum extent possible. For ILS approaches, crews should establish final configuration by the final approach fix as depicted for the localizer approach.

1.24.3. Visual approaches should avoid overflight of towns and villages. When approaching from the east, execute the Autobahn 6 Visual Approach for Rwy 26 or 27 (See FLIPS) to avoid overflight of the city center.

1.24.4. Quiet hours. Ramstein AB quiet hours are defined as periods when only mission-essential arrivals/departures/engine runs will be authorized. Authorization is granted on a case-by-case basis.

1.24.4.1. Established quiet hours for arrivals and departures at Ramstein AB are in effect Monday through Saturday, 2200L to 0600L. Engine start is not authorized prior to 0600L without a quiet hour waiver. **Note:** Tower personnel have approval authority to taxi aircraft to parking that land at or before 2200L.

1.24.4.2. On Sundays and German holidays, quiet hours remain in effect until 1300L. Engine start is approved 30 minutes prior to the end of quiet hours, but aircraft cannot depart prior to 1300L.

1.24.5. Quiet hour waivers.

1.24.5.1. Requesting agencies will contact 86 AW/CP to coordinate quiet hour waivers (QHW).

1.24.5.2. 86 AW/CP processes requests with 86 OG/CC/CD and notifies the requesting agency of final approval/disapproval; 86 AW/CP will notify tower and AM of any approvals daily.

1.24.5.3. Quiet hour waivers (QHW) are approved for the following missions:

1.24.5.3.1. TACC may expect QHW approval for any aircraft carrying human remains (HR), conducting aeromedical evacuations (AE), or those on WX divers or in-flight emergencies (IFE). Moreover, TACC may plan for an additional six QHWs per day (above those granted for HR, AE, WX, and IFEs) for aircraft flying critical contingency movements. These six QHWs are tracked by 86 AW/CP. **Note:** If TACC identifies a surge requirement, the number of planned QHWs may be increased for the duration of the surge.

1.24.5.3.2. All aircraft maintenance engine runs at idle power 1900L-2200L.

1.24.5.3.3. C-17 maintenance engine runs at idle power 2200L-0700L for 1B1 or higher missions departing ETAR for contingency deployments, but not for de-positioning legs to CONUS.

1.24.5.3.4. Maintenance engine runs up to takeoff power for aircraft supporting the following missions:

1.24.5.3.4.1. 1A1, 1A2, 1A3 priority missions.

1.24.5.3.4.2. Urgent and priority aeromedical evacuations

1.24.5.3.4.3. Repatriation of human remains

Note: Takeoff power engine runs will be IAW 86 AW policy and German ATAP (i.e. - no more than two engines at a time). 1.24.5.3.5. Take-offs/landings during quiet hours for all aircraft types for the following missions:

1.24.5.3.5.1. 1A1, 1A2, 1A3 missions

1.24.5.3.5.2. Urgent and priority aeromedical evacuations

1.24.5.3.5.3. Repatriation of human remains

1.24.5.3.5.4. Weather divers

1.24.5.3.5.5. IFEs (follow QRC guidance for notification)

1.24.6. Aircraft operations during quiet hours. The following general guidance will be applied to reduce noise pollution during quiet hours without negatively impacting the mission:

1.24.6.1. Aircrews and maintainers will operate their aircraft/engines so as to produce the least amount of noise consistent with safety of flight/mission accomplishment.

1.24.6.2. During quiet hours, pilots with quiet hour approval are only authorized one instrument approach to a full stop landing and/or one departure.

1.24.6.3. Aircraft are not authorized VFR patterns on weekends and German holidays except in emergency situations or upon approval by the 86 OG/CC.

1.24.6.4. When quiet hour operations are authorized, Tower will advise pilots to avoid overflight of populated areas.

1.24.7. Avoidance of populated areas. Aircraft will avoid overflying villages to the maximum extent possible, except as required in an emergency, or when executing a departure procedure (DP). **Note:** If VMC on a DP/ATC instructions, course corrections are approved until leaving the class D airspace.

1.24.8. Avoidance of USAFE HQ and CC Air Ramstein area. To the maximum extent possible, aircraft will avoid over flight of the areas on Ramstein Air Base encompassing USAFE headquarters and CC Air Ramstein buildings below 3,600 ft. Arriving VFR aircraft will be instructed to land via runway or taxiways in such a manner that avoids this area. Transient VFR aircraft when crossing the airport north/south bound will be instructed to cross the east or west ends of the runway and avoid mid field over flight. Transient VFR aircraft crossing the class delta surface area east/west bound will remain south of the runway or four miles north until past the end of the runway for their direction of flight. Pipeline inspection helicopters, federal agency and emergency response operations aircraft are exempt from this restriction.

1.25. Procedures for Protecting Precision Approach Critical Areas- ILS CAT I/II/IIIa.

1.25.1. No aircraft, vehicle, or personnel shall be allowed in, or be allowed to enter into the ILS critical area when an ILS approach is in progress. See [Attachment 10, ILS CAT II/IIIa Critical Areas](#).

1.25.1.1. All aircraft, vehicles and personnel will stop at the appropriate ILS Category instrument hold lines and contact Tower for permission to enter the CMA/runways. **Exception:** Separation between one approaching aircraft and another approaching or departing aircraft shall be provided in such a way as to ensure that approaching and departing aircraft, taxiing aircraft or vehicles do not cause any ILS signal interference when the approaching aircraft is within 2 NM of the runway threshold.

1.25.1.2. Locally assigned aircraft are authorized to taxi to/from Runway 08/26 to Ramps 3, 4, and 7 when the RVR is at or above 200m. "Follow Me" service is available upon pilot request. In the event RVR falls below 200m, "Follow-Me" service is required. Exception to this policy requires 86 OG/CC approval.

1.25.1.3. When operating in CAT II/IIIa, certain outages to airfield lighting systems may result in a downgrade to the ILS Category IAW BesAnMilFS 2-100. In such instances, AM will publish a NOTAM informing aircrews and will ring out the secondary crash net informing base agencies of the downgrade to available service.

1.25.2. ILS CAT I Operations.

1.25.2.1. ILS CAT I operations are in effect as long as the reported ceiling is not lower than 200 ft and the visibility is not less than 800m and the RVR is not less than 800m.

1.25.2.2. All aircraft, vehicles and personnel shall be out of the CAT I ILS critical area prior to an approaching aircraft, executing an ILS approach, reaching 2 NM from the landing threshold (4 NM when the DASR is out of service).

1.25.3. Preparations for ILS CAT II/IIIa Operations.

1.25.3.1. CMA preparation for ILS CAT II/IIIa operations are initiated when weather conditions are at or below 30 ft ceiling and either reported visibility or Tower observed prevailing visibility is at or below 1,600m.

1.25.3.2. AM will make an initial CMA check (CAT II/IIIa critical and sensitive area) to ensure all vehicles/personnel and/or aircraft in the CMA are accounted for and in contact with the Tower prior to commencing ILS CAT II/IIIa operations. AM will assist Tower in clearing/vacating all CAT II/IIIa critical and sensitive areas of all non mission essential personnel, equipment and vehicles. AM shall report the status of CMA check to Tower upon completion.

1.25.3.3. Ramstein Tower shall broadcast a message at least once every 30 minutes on all available frequencies including the Ramp Net stating, "CAT II/IIIa instrument hold procedures in effect".

1.25.3.4. All aircraft, vehicles and personnel are required to hold short at the CAT II/IIIa instrument hold lines upon receipt of notification from the Tower IAW paragraph [1.21.1](#)

1.25.3.5. IAW BesAnMilFS 2-100, the secondary power supply for optical (i.e. airfield lighting system) and non-optical landing aids (i.e. ILS) shall be verified operational.

1.25.4. ILS CAT II Operations.

1.25.4.1. ILS CAT II operations are in effect when the ceiling is less than 200 ft, but not lower than 100 ft, and/or the visibility is less than 800 m and/or the RVR is less than 800m but not lower than 370 m.

1.25.4.2. During ILS CAT II operations IAW BesAnMilFS 2-100:

1.25.4.2.1. The Rwy 26 sequenced flashing lights (SFLs) and Precision Approach Path Indicator lights (PAPIs) shall be **switched off**.

1.25.4.2.2. The runway centerline lights, the red side row barrettes and the taxiway centerline lights and the stop bars shall be **switched on**.

1.25.4.3. Tower shall include on the ATIS IAW BesAnMilFS 2-100 fig. 475.3 the following statement, "LOW VISIBILITY PROCEDURES CAT II IN OPERATION."

1.25.4.4. Non-mission essential vehicles and/or personnel are not authorized into the CMA during ILS CAT II/IIIa operations.

1.25.4.5. Arrival vs. Arrival: The Ramstein GCA will separate successive arriving aircraft by 10 NM in order to allow the lead aircraft to land, turn off the runway and clear the ILS critical area/CMA before the following aircraft is 2 NM from the runway threshold.

1.25.4.6. Arrival vs. Departure: Departing aircraft will be separated from a arriving aircraft on a ILS approach by ensuring the departing aircraft has commenced take-off roll prior to the ILS aircraft reaching 15 flying miles from the landing threshold. No aircraft shall be allowed to depart, be put into position and hold, or back taxi via the active runway with an approaching ILS aircraft 15 flying miles or less from the landing threshold.

1.25.5. ILS CAT IIIa Operations.

1.25.5.1. ILS CAT IIIa operations are in effect when the ceiling is less than 100 ft and/or the reported RVR is less than 370 m but not lower than 200 m.

1.25.5.2. The procedures stated in paragraph 1.21.4 for ILS CAT II operations remain in effect. In addition Tower shall include on the ATIS IAW BesAnMilFS 2-100 fig. 475.5 the following statement, "LOW VISIBILITY PROCEDURES CAT IIIa IN OPERATION."

1.25.5.3. Arrival vs. Arrival: The Ramstein GCA will separate successive arriving aircraft by 10 NM in order to allow the lead aircraft to land, turn off the runway and clear the ILS critical area/CMA before the following aircraft is 2 NM from the runway threshold.

1.25.5.4. Arrival vs. Departure: Departing aircraft will be separated from an arriving aircraft on a ILS approach by ensuring the departing aircraft has commenced take-off roll prior to the ILS aircraft reaching 15 flying miles from the landing threshold. No aircraft shall be allowed to depart, be put into position and hold, or back taxi via the active runway with an approaching ILS aircraft 15 flying miles or less from the landing threshold.

1.26. Restricted/Classified Areas on the Airfield.

1.26.1. Restricted areas are established "pursuant to DoD Directive DoD 5200.8, Security of DoD Installation and Resources, and Section 21, Internal Security Act of 1950 Title 50 U.S.C. 797."

1.26.2. All personnel must obtain specific written permission to enter restricted and controlled areas.

1.26.2.1. Written permission consists of an Automated Entry Control Card, commonly referred to as a line badge.

1.26.2.2. Line badges may be obtained through security forces pass and ID office. Transient personnel may use line badges issued at their home station IAW 86 AW local directives. Contact 86 SFS for specific information on required documentation.

1.26.3. Restricted areas on and around the airfield are defined in 86 AW local directives.

1.26.3.1. Restricted areas are denoted by painted red lines painted.

1.26.3.2. Entry into a restricted area is permitted only through entry control points (ECP) marked by painted white lines.

1.26.4. Questions regarding restricted/classified areas should be forwarded to 86 SFS/S5P and S5A.

1.27. Auxiliary power for ATCALs facilities.

1.27.1. Battery power. All NAVAIDS have backup batteries which provide up to one hour of power in case commercial power fails. For those facilities equipped with backup generators, the battery systems are designed to provide power in the interim between commercial power and generator power.

1.27.2. Generator power. Tower, GCA, TACAN, all ILS's, and DASR have diesel generators that can provide backup power in the event of a commercial power failure.

1.27.3. Uninterruptible power supply (UPS). GCA, Tower, TACAN and DASR are each equipped with an UPS system to provide power in the interim between commercial power interruption and the start of generator power.

Chapter 2

FLYING AREAS

2.1. Local Flying Area/Designation of Airspace

2.1.1. Ramstein Class D airspace. Airspace measuring 14 nautical miles (NM) by 7 NM from the surface up to and including 3600 ft MSL: 4 NM north and 3 NM south of Rwy 09/27 centerline, 7 NM east and 7 NM west centered on Rwy 09/27. See [Attachment 9, Class D Airspace/VFR Overhead/Inside Closed Pattern](#) for depiction.

2.1.2. Ramstein GCA airspace. Class E airspace from the surface up to and including 5000 feet MSL, approximately 20 NM by 40 NM total, only about 20 NM by 25 NM controlled by Ramstein at any time, depending on active runway. See [Attachment 8, Class E Airspace/Radar Pattern](#) for depiction. **Note:** See DoD FLIP VFR ARRIVAL/DEPARTURE ROUTES EUROPE for additional information.

2.2. VFR Local Training Areas.

2.2.1.1. Aircrews are restricted from conducting full procedure approaches from MAPIG and/or holding at MAPIG during VMC, unless flying in VMC conditions above a ceiling that is prohibitive to glider activity.

2.2.1.2. Aircrews receiving vectors to RWY 08/09 should expect and request short vectors to maintain maximum separation from MAPIG.

Chapter 3

VFR PROCEDURES

3.1. VFR Weather Minimums.

3.1.1. IAW FAAO 7110.65, visual flight rules are in effect when observed weather is equal to or greater than 1,000 ft ceiling and/or equal to or greater than 5,000 meters prevailing visibility. For noise abatement purposes, fighter aircraft will not depart VFR with ceiling less than 3,700 ft and prevailing visibility less than 5,000 meters.

3.2. VFR Traffic Patterns. See [Attachment 9, Class D Airspace/VFR Overhead/Inside Closed Pattern](#)

3.2.1. Class D airspace entry procedures, standard Tower frequency/VFR reporting points.

3.2.1.1. Pilots must establish two-way radio communication with the Tower and obtain approval for the requested pattern to be flown prior to entering class D airspace.

3.2.1.2. The primary Tower radio frequency for all aircraft conducting operations in class D airspace is VHF 133.2.

3.2.1.3. The VFR reporting points are ECHO (062-R/5.2 DME), WISKY (291-R/6.6 DME) and PIVOT (352-R/6.6 DME). All radials and DME are from Ramstein's TACAN. **Note 1:** Pilots must be familiar with the VFR entry/reporting points listed in [Attachment 9, Class D Airspace/VFR Overhead/Inside Closed Pattern](#) prior to working in class D airspace. Unless otherwise coordinated, enter class D airspace and proceed to the approved reporting point at or below 3,000 MSL. **Note 2:** Expect extensive glider activities in the vicinity of Ramstein AB during VFR conditions. Local gliders are not in communication with Ramstein GCA and are not transponder equipped to provide traffic alert and collision avoidance system guidance. Aircrews should be extremely vigilant when operating in the vicinity of Ramstein. **Note 3:** All local assigned aircraft will exercise caution when traversing points WISKY, PIVOT, and ECHO in the local pattern. The Potzberg Hotel (Castle) performs aviary shows at their location. The risk of striking a very large predatory bird is increased over the area and aircrews must avoid direct over-flight. Crews should plan to avoid the area (49°31.20' N and 7°28.80' E) by at least ½ NM.

3.2.2. Pattern use/deviations.

3.2.2.1. VFR patterns are authorized for use by all locally assigned 86 AW aircraft only, unless otherwise specified. Transient aircraft may fly the VFR pattern when an abnormal or emergency situation exists or when authorized by the OG/CC.

3.2.2.2. USAFE fighter aircraft are authorized to recover using the overhead pattern. However, aircraft desiring multiple approaches must execute their option back to the GCA radar pattern.

3.2.2.3. VFR patterns are closed during quiet hours, weekends and German holidays.

3.2.3. Pattern Profiles.

3.2.3.1. Closed Traffic Patterns.

3.2.3.1.1. Pattern altitude is 2,000 MSL.

3.2.3.1.2. Weather criteria. Ceiling at or above 1,700 AGL and visibility at or above 5,000 m.

3.2.3.1.3. Pattern Profile. Aircraft must request and tower must specifically approve “inside” or “outside” closed traffic prior to the aircraft commencing the procedure. See **Attachment 9, Class D Airspace/VFR Overhead/Inside Closed Pattern**

3.2.3.1.3.1. Outside closed traffic pattern profile. Remain outside Ramstein Village, Miesenbach, and Ramstein AB housing area, but inside Mackenbach.

3.2.3.1.3.2. Inside closed traffic pattern profile (Runway 26/27 only). Remain inside Ramstein AB, avoiding Ramstein Village, Ramstein High School, and USAFE/NATO Headquarters buildings to the maximum extent possible. **Note:** Simulated engine-out pattern deviation requires Tower approval.

3.2.4. Overhead pattern. See **Attachment 9, Class D Airspace/VFR Overhead/Inside Closed Pattern** for depiction.

3.2.4.1. Pattern altitude is 3,000 MSL until either points WISKY or ECHO and 2,500 MSL after passing points WISKY or ECHO.

3.2.4.2. Weather criteria. Ceiling at or above 2,700 AGL and visibility at or above 5,000m.

3.2.4.3. Pattern profile. Proceed to points WISKY at 3,000 MSL for initial to Rwy 08/09 or ECHO at 3,000 MSL for initial to Rwy 26/27, as directed by Tower. Only right breaks will be made to both runways and pilots will remain clear of all no-fly areas. **Exception:** If ATC requires C-21 aircraft to break past the approach end when Rwy 08/09 are in use, a left break will be used to avoid overflying Kindsbach village. Additionally, when a left break is used, C-21 aircraft will avoid overflying Ramstein village to the north and turn base around the water tower. Subsequent patterns will reenter initial avoiding villages for noise abatement (**Attachment 9, Class D Airspace/VFR Overhead/Inside Closed Pattern**).

3.2.5. Vectors to initial.

3.2.5.1. Pattern altitude is assigned and will be no lower than 3,600 ft MSL.

3.2.5.2. Weather criteria. Ceiling at or above 2,200 AGL and visibility at or above 5,000 m.

3.2.5.3. Pattern profile. Pilots requesting vectors to initial will be vectored by Ramstein GCA to a point no closer than 7 NM on final approach at an assigned altitude no lower than 3,600 MSL, unless otherwise coordinated with Tower. **Note:** Aircraft enter the overhead pattern from points WISKY and ECHO at 3,000 MSL. After reporting the field in sight, pilots will be instructed to contact Tower. Pilots who do not report the field insight by 6 NM final will be instructed to climb to at least 4,000 MSL, then radar vectored into the radar pattern for an instrument approach.

3.2.6. Protection of the overhead pattern. When the overhead pattern is in use, all departure aircraft will be instructed by the Tower/GCA to maintain at or below 2,000 MSL until

departure end of runway. Tower may omit/cancel the 2,000 foot restriction provided no conflict exists with aircraft in the overhead pattern.

3.2.7. Holding procedures. When traffic dictates, aircraft will be instructed to hold at either points WISKY or ECHO by Tower personnel until resumption of the normal traffic pattern can continue. Aircraft are expected to circle to the north at 3,000 MSL or ATC assigned altitude as standard unless specifically instructed otherwise by Tower personnel.

3.2.8. Aircraft will squawk 0033 in the VFR pattern or as directed by ATC.

3.2.9. VFR Tactical Procedures. See [Attachment 11](#), **VFR Tactical Procedures**.

3.2.9.1. High speed downwind.

3.2.9.1.1. Pattern altitude is 3,000 MSL from points PIVOT, ECHO, and WISKY, then descend to 2,000 MSL according to profile.

3.2.9.1.2. Weather criteria. Ceiling at or above 2,200 AGL and visibility at or above 5,000 m.

3.2.9.1.3. Pattern profiles.

3.2.9.1.3.1. North high speed downwind. Only available for Rwy 26/27. From point PIVOT, proceed between the towns of Miesenbach and Mackenbach at 3000 MSL. On the 45-degree entry leg, descend to pattern altitude of 2,000 MSL (1,200 AGL). From point WISKY, proceed between the towns of Miesenbach and Ramstein at 3,000 MSL then descend to pattern altitude of 2,000 MSL.

3.2.9.1.3.2. South high speed downwind. Proceed from point WISKY at 3,000 MSL on a suggested heading of 110 for a 45-degree entry to Rwy 26/27; or from point ECHO at 3,000 MSL on a suggested heading of 240 for a 45-degree entry to Rwy 08/09, as directed by Tower. After crossing the runway centerline, descend to 2,000 MSL (1,200 AGL) and enter downwind on the south side of the runway. Remain north of Landstuhl and Kindsbach.

3.2.9.2. Random shallow approaches.

3.2.9.2.1. Pattern altitude is no lower than 500 AGL.

3.2.9.2.2. Weather criteria. Ceiling at or above 1,500 AGL and visibility at or above 5,000 m.

3.2.9.2.3. Pattern profile. Request the random shallow "straight-in" approach via points ECHO for Rwy 26/27 or WISKY for Rwy 08/09. Request the random shallow "abeam north" or random shallow "abeam south" with a 90 degree entry midfield for a right/left 270 degree pitch to final, depending upon the runway in use. Enter class D airspace no lower than 500 AGL, up to 250 KIAS, and avoid all no-fly areas. Subsequent patterns will reenter via points WISKY or ECHO, avoiding the no-fly areas. Approach not authorized at night. **Note:** Pilots will use the phraseology; "random shallow straight in" or "random shallow pitch north" for Rwy 26/27 or "random shallow pitch south" for Rwy 08/09.

3.2.9.2.4. During the abeam maneuver, Tower may direct a north downwind entry when another aircraft is 2 miles or less from touchdown, to ensure de-confliction in the event of a missed approach.

3.2.9.3. Random steep approaches.

3.2.9.3.1. Pattern altitude is normally 5,500 MSL or 6,000 MSL (depending on aircraft type); unless coordinated otherwise with ATC.

3.2.9.3.2. Weather criteria. Ceiling at least 500 ft above requested pattern altitude and visibility at or above 5,000 m.

3.2.9.3.3. Pattern profile. Contact Tower approaching the airfield and request a climb to 5,500 MSL (C-130), 6,000 MSL (C-21), or coordinated altitude for the random steep approach. Pilots will give Tower their direction and distance when approaching the field and coordinate the break with Tower. Avoid the no-fly areas in the vicinity of Ramstein throughout the maneuver.

3.2.9.4. VFR High altitude tactical straight-in approaches.

3.2.9.4.1. Pattern altitude as coordinated.

3.2.9.4.2. Weather criteria. Ceiling at least 500 feet above requested altitude and visibility at or above 5000 meters.

3.2.9.4.3. Pattern profile. Contact Langen ACC, Ramstein GCA, or Tower (depending upon tactical situation) approaching the airfield and coordinate for a climb/descent to requested altitude for the high altitude tactical straight-in approach. Pilots will specify their direction and distance when approaching the field. Avoid the no-fly areas in the vicinity of Ramstein throughout the maneuver.

3.2.9.5. VFR Low altitude tactical straight-in approaches.

3.2.9.5.1. Pattern altitude as coordinated.

3.2.9.5.2. Weather criteria. Ceiling at or above 1,500 feet AGL and visibility at or above 5,000 meters.

3.2.9.5.3. Pattern profile. Contact Langen ACC, Ramstein GCA, or Tower (depending upon tactical situation) approaching the airfield and coordinate for a climb/descent to requested altitude for the low altitude tactical straight-in approach. Pilots will specify their direction and distance when approaching the field.

3.2.9.6. VFR Curvilinear Approaches.

3.2.9.6.1. Pattern altitude as coordinated (usually 8,000 feet – 10,000 feet AGL).

3.2.9.6.2. Weather criteria. Ceiling at least 500 feet above requested altitude and visibility at or above 5,000 meters.

3.2.9.6.3. Pattern profile. Contact Langen ACC, Ramstein GCA, or Tower (depending upon tactical situation) approaching the airfield and coordinate for a climb/descent to requested altitude for the curvilinear approach. Pilots will specify their direction and distance when approaching the field. Proceed to a base slowdown

(9 – 10 NM) or downwind slowdown (8 – 9 NM). Notify Tower prior to reaching base point (1.5 NM).

3.2.10. VFR Departure Procedures. Unless otherwise directed/approved by the Tower, all fixed wing VFR aircraft shall depart class D airspace as depicted in **Attachment 12, VFR Departure Pattern**.

3.2.10.1. Spiral-up departures.

3.2.10.2. Weather criteria. Ceiling must be at least 500 feet above requested altitude and visibility at or above 5,000 meters. Aircraft must maintain VMC throughout the maneuver.

3.2.10.3. Pattern profile. Request "spiral-up departure" with ground control during engine start/taxi or with Tower when in the pattern. Read back controller's authorization. Initiate turns after departure, airspeed permitting, (similar to inside closed). Turn direction is normally to the north. Aircraft will remain with Tower, fly a 180/360-degree climbing turn, cross over the field (enter downwind) at the requested altitude (usually 5,500 MSL), and remain within 4 NM of the field.

3.2.10.4. Fighters departing VFR must climb to 4,000 feet MSL or higher for noise abatement purposes. Weather minimums required for fighter VFR departures will be ceiling at or above 3,700 feet AGL and visibility at or above 5,000 meters. **Note:** Avoid overflying local villages for noise abatement.

3.2.11. Night VFR Procedures.

3.2.11.1. Any pilot who plans to fly VFR outside of class D airspace after sunset, must file a night VFR flight plan with Eurocontrol.

3.2.11.2. Upon engine start, the pilot will state night VFR clearance on request and advise the controller of the altitude and direction of flight.

3.2.11.3. Tower will call GCA and Langen ACC to verify filed flight plan and to obtain a night VFR clearance.

3.3. Special Procedures.

3.3.1. Helicopter operations. In addition to the runway, Tower may authorize helicopters to arrive/depart from any portion of the controlled movement area or from any active taxiway. Helicopters will not be authorized to land directly on or takeoff directly from parking ramps. Additionally, controllers will not allow helicopters to over-fly Mitchell Ave on takeoff or landing. Inbound helicopters from the east, landing on Twy Delta and destined for Ramp 3 or Ramp 4 shall be instructed to land prior to (east of) Mitchell Ave and taxi through the Mitchell Ave intersection. Helicopters departing toward the east shall be taxied onto Twy Delta and through the Mitchell Ave intersection before being issued takeoff clearance. Controllers shall activate the Mitchell Ave traffic lights prior to any aircraft (helicopter or fixed wing) being taxied through the Mitchell Ave intersection.

3.3.1.1. Helicopter procedures are published in the Department of Defense VFR, Arrival/Departure Routes Europe.

3.3.1.2. Helicopters from Charlie Company 1-214th Aviation Regiment are authorized VFR practice approaches at Ramstein. Pattern altitudes are at or below 700' AGL/1,500' MSL.

3.3.1.3. Helicopters operating at Landstuhl Regional Medical Center Helopads/Airport (ETIP) are authorized to operate at or below 100 feet AGL for activities contained on the helopad/airport proper such as hover taxi, maintenance checks, etc., without contacting Tower for approval. All departing helicopters must contact Tower prior to take-off in order to receive clearance.

3.3.2. Restricted low approaches with vehicles or personnel on runway.

3.3.2.1. Tower is authorized to restrict low approaches at or above 500 ft AGL or 1,000 ft AGL for heavy aircraft, when personnel and equipment are on the runway.

3.3.2.2. Tower will advise aircraft of personnel on the runway and will advise personnel on the runway of restricted low approach traffic.

3.3.2.3. Functional Check Flights (FCF). All FCF and maintenance check flight requests must be coordinated through the 86 OSS/DO for 86 OG/CC approval.

3.3.3. Paradrop Operations. Ramstein AB does not allow paradrop operations.

3.3.4. Drop Zone (DZ) Procedures.

3.3.4.1. The ATAP governs the establishment of the DZ. Ramstein Air Base sits on a biotope (nature preserve) which is a habitat for different protected insect breeds. As such, German law outlines specific restrictions to the dimensions and use (including approval) of the DZ:

3.3.4.2. The number of flights for dropping purposes within the drop zone is limited to 8 over flights per week, whereupon, as a rule, three over flights between departure and landing will take place. As a rule, each aircraft drops off a sandbag which is attached to a parachute and weighs approx. 7 kg. In addition to dropping off sandbags, groups of up to ten paratroopers will jump into the drop zone. The minimum altitude for over flights will be 500 ft (150 meters) and the maximum altitude will be 1500 ft (460 meters). The approach to the drop zone is conducted north of ILS 26 in an angle of 6.5° to the basic approach line 26 (track angle 256.9 °), directly towards the impact point, which is located in the center of runways 26 and 27 at a distance of 375 meters from the easterly edge of the drop zone. *The user is enjoined to refrain from using the drop zone when the ground is predominantly damp or wet.* (ATAP, 2006).

3.3.4.3. Actual airdrops require the approval of 86 OG/CC and must be coordinated with the ATAP authority via the 86 AW Host Nation Office.

3.3.4.4. The current DZ survey is maintained by 86 OSS Tactics (86 OSS/OSK). New surveys are confined to the dimensions in the ATAP.

3.3.4.5. 86 OSS/OSO (DSN 480-5311) is the scheduling agency.

3.3.4.6. Ramstein DZ is restricted to locally assigned C-130s. OG/CC is the waiver authority.

3.3.4.7. The Drop Zone Safety Officer (DZSO) shall:

- 3.3.4.7.1. Have a Ramstein AB airfield driver's license and will use the callsign "Tailpipe Delta".
- 3.3.4.7.2. Prior to commencement of DZ operations, conduct a radio check with Ground Control on VHF 121.775, UHF 308.775 and Ramp Net and with 37 AS interplane on UHF 247.7. After completion of radio checks, DZSO will reestablish radio contact with Ground Control.
- 3.3.4.7.3. Inform Tower when the DZ is set up IAW AFI 13-217 and ready for airdrop operations.
- 3.3.4.7.4. Coordinate with Airfield Management and Tower to ensure no aircraft, vehicles or personnel penetrate the confines of the DZ from the time the drop aircraft reaches 5 NM final (two minute out call) until completion of DZ operations.
- 3.3.4.7.5. Broadcast "NO DROP" three times on DZSO frequency to terminate previously approved airdrops. (i.e.: NO DROP, NO DROP, NO DROP).
- 3.3.4.7.6. At the completion of DZ operations, notify Tower when the DZ is secure (i.e. all simulated air drop training bundles or all personnel are accounted for).
- 3.3.4.8. Aircrews shall:
 - 3.3.4.8.1. Obtain/receive drop approval from the DZSO prior to commencing any airdrop through Tailpipe Delta on UHF 247.7.
 - 3.3.4.8.2. Notify ATC and DZSO of any drop cancellations, malfunctions, or time over target changes.
 - 3.3.4.8.3. Contact GCA and request clearance for DZ Ops stating number of aircraft, drop time, type of drop, number of jumpers and type of climb-out when:
 - 3.3.4.8.3.1. VFR: prior to reaching a point 25 NM inbound.
 - 3.3.4.8.3.2. IFR: upon initial call after handoff from Langen ACC.
 - 3.3.4.8.3.3. Upon initial contact with Tower, state call sign, position and request clearance for the run-in.
 - 3.3.4.8.3.4. Establish radio communication with Ramstein Tower prior to 10 DME. If radio contact is not established by 10 DME, or is lost within 10 DME, the airdrop aircraft shall execute local lost communication procedures.
 - 3.3.4.8.3.5. Monitor Tower frequency (VHF 133.2/UHF 386.75) throughout the entire drop operation.
- 3.3.4.9. GCA shall:
 - 3.3.4.9.1. Coordinate with Tower for DZ Ops approval prior to clearing an IFR DZ aircraft for an approach or prior to a VFR DZ aircraft reaching 25 NM inbound.
 - 3.3.4.9.2. Inform Tower when IFR/VFR airdrop aircraft are 25 NM inbound and, at that time, state number of aircraft, drop time, type of drop, number of jumpers and type of climb-out.
 - 3.3.4.9.3. Pass DZ Ops approval to DZ aircraft by stating, "DZ Ops approved".

3.3.4.9.4. When a situation prevents DZ operations, inform the formation to execute a breakout, direct them to climb to or above 4,000 ft MSL and await further instructions.

3.3.4.10. Tower shall:

3.3.4.10.1. Approve GCA requests to clear DZ aircraft inbound after coordinating with DZSO and ensuring the DZ is clear of all known vehicles and personnel by stating, "DZ Ops approved".

3.3.4.10.2. Activate the stop lights on the NCAR when the airdrop aircraft reaches 10 NM final.

3.3.4.10.3. Not permit aircraft to run engines on Ramp 2 and the Hot Cargo pad or taxi into the DZ area from the time the drop aircraft reaches 5 NM final until completion of DZ operations.

3.3.4.10.4. After establishing communications with the DZ aircraft, approve aircraft to commence run-in by transmitting: *"WIND, DZ RUN IN APPROVED."*

3.3.4.10.5. When a situation at the airfield prevents DZ operations, instruct the formation to:

3.3.4.10.5.1. Orbit VFR until the DZ operations can be approved.

3.3.4.10.5.2. Climb or maintain 3,600 feet MSL and fly DZ run-in heading. Tower will instruct aircrew when to contact GCA for further instructions.

3.3.4.10.5.3. Broadcast *"NO DROP"* three times to terminate previously approved airdrops. (i.e.: NO DROP, NO DROP, NO DROP).

3.3.4.10.5.4. Not resume normal runway operations after any drop until notified by the DZSO that the DZ is secure and Airfield Management has declared the runways/taxiways clear of FOD.

3.3.4.11. Airfield Management shall:

3.3.4.11.1. Coordinate with DZSO and Tower to ensure no aircraft, vehicles or personnel penetrate the confines of the DZ from the time the drop aircraft reaches 5 NM final (two minute out call) until completion of DZ operations.

3.3.4.11.2. Perform a FOD check of the runway and taxiways surrounding the DZ area upon the completion of DZ operations. When all runways and taxiways are clear of FOD, issue guidance to Tower to resume normal runway operations.

3.3.4.12. DZ Emergency Breakout Procedures:

3.3.4.12.1. Once cleared to Ramstein DZ, airdrop aircraft are in a critical phase of flight and breakouts should be for emergencies only.

3.3.4.12.2. Inside 10 NM, Tower will assign an altitude to the aircraft and will give further instructions upon coordination with Ramstein GCA, DZSO, or Langen ACC as the situation dictates.

3.3.4.12.3. Outside 10 NM:

3.3.4.12.3.1. IFR: GCA will assign an altitude and vector for the aircraft.

3.3.4.12.3.2. VFR: aircraft will not proceed inbound and will request a VFR orbit from GCA. GCA will ensure aircraft remain outside the Class Delta airspace and await further instructions from Tower.

3.3.4.13. DZ Escape Procedures:

3.3.4.13.1. VFR Escapes. Aircraft shall remain with Tower and proceed as follows: Continue runway heading, climb to 2,500 feet and request permission with the Tower to turn left or right direct to point ECHO/WISKY. Advise Control Tower the type of recovery desired.

3.3.4.13.2. IFR Escapes. Maintain drop altitude until one minute after lead's red light and then climb straight ahead (with a maneuvering turn of up to 5 degrees, if necessary) to ATC assigned altitude and fly the Missed Approach or Climb-out Procedures. Groundspeed across the drop zone will never exceed 150 KIAS. Contact either GCA or Langen ACC when instructed to do so by Tower.

3.3.5. Runway 09/27 Landing Zone (LZ).

3.3.5.1. Only 86 AW C-130 aircraft may execute landing zone procedures unless authorized by the 86 OG/CC.

3.3.5.2. LZs are superimposed on both Rwy 09 and Rwy 27. Each LZ is unidirectional.

3.3.5.3. LZ 09 is 3,500 feet long and 90 feet wide. The first 890 is PCC. The remaining 2,610 feet is AC or porous friction course asphalt; grooved.

3.3.5.4. LZ 27 is 3,500 feet long and 90 feet wide. The entire length is AC or porous friction course asphalt; grooved.

3.3.5.5. Airfield Marking Pattern (AMP). Both LZs are equipped with AMP-3 Overt and AMP-3 Covert light system configuration.

3.3.6. Combat Off-Load Training. Only 86 AW C-130 aircraft may execute combat offload unless authorized by the 86 OG/CC. All combat offload training must be coordinated with and approved by 86 OSS/OSAA at least 24 hours in advance.

3.4. Reduced Same Runway Separation Procedures

3.4.1. RSRS standards shall be applied IAW AFI 13-204v3.

3.4.1.1. RSRS applies to USAF aircraft only unless authorized by letter of agreement IAW USAFE guidance.

3.4.2. RSRS standards may be applied in separation of:

3.4.2.1. C-130 aircraft and other C-130 aircraft.

3.4.2.2. Fighter or attack type aircraft and other fighter or attack type aircraft.

3.4.3. RSRS may be applied to:

3.4.3.1. Full stop behind a full stop, low approach, or touch-and-go.

3.4.3.2. Touch-and-go behind a touch-and-go or low approach (C-130s excluded from RSRS between a touch-and-go and another touch-and-go).

3.4.3.3. Low approach behind a low approach.

3.4.3.4. Low approach behind a full stop - the succeeding aircraft will offset laterally to not over fly the aircraft on the runway.

3.4.3.4.1. For C-130s that are members of the same formation, the succeeding C-130 must maintain at least 500 feet lateral or vertical separation when over-flying the C-130 on the runway.

3.4.4. RSRS is not authorized when:

3.4.4.1. Either aircraft is an emergency.

3.4.4.2. Either aircraft is a heavy.

3.4.4.3. Either the succeeding or preceding aircraft is cleared for the option or a stop-and-go. **Exception:** RSRS is authorized when the succeeding aircraft is cleared for an option or stop-and-go behind a low approach.

3.4.4.4. The runway condition reading (RCR) is less than 12 or breaking action reports of less than “fair” are reported.

3.4.5. The minimum RSRS authorized is:

3.4.5.1. 3,000 feet between same type fighter and attack aircraft, (e.g., F-16 behind an F-16 during daylight hours). **Exception:** 6,000 feet when reported braking action is less than good.

3.4.5.2. 6,000 feet between:

3.4.5.2.1. Dissimilar fighter and attack aircraft (e.g. F-15 behind an F-16).

3.4.5.2.2. Same type fighter and attack aircraft during night time hours.

3.4.5.2.3. A landing (single aircraft or formation) behind a formation landing.

3.4.5.2.4. A formation landing behind a full stop.

3.4.5.2.5. A C-130 and another C-130. **Exception:** The minimum RSRS authorized between C-130 aircraft that are members of the same formation will be no less than 5,000 feet (IFR) and 15 seconds (VFR).

3.4.5.2.6. Weather must be at or above a 500 feet ceiling and 2,400 meters visibility for nighttime RSRS operations.

3.4.5.2.7. C-130 formations may perform nighttime RSRS operations using the weather minima prescribed by AFI 11-2C-130, Volume 3, *C-130 Operations Procedures*.

3.5. Intersection Departures.

3.5.1. Rwy 08 intersection departures are available from:

3.5.1.1. Twy Echo: south – 4,695 feet remaining, north – 4,830 feet remaining.

3.5.1.2. Twy Golf, 8,852 feet remaining.

3.5.1.3. Twy Lima, 3,846 feet remaining.

3.5.2. Rwy 26 intersection departures are available from:

- 3.5.2.1. Twy Bravo, 8,783 feet remaining.
- 3.5.2.2. Twy Echo: south – 4,920 feet remaining, north – 4,758 feet remaining.
- 3.5.2.3. Twy Lima, 5,928 feet remaining.
- 3.5.3. Rwy 09 intersection departures are available from:
 - 3.5.3.1. Twy Golf, 7,532 feet remaining.
 - 3.5.3.2. Twy Echo: south – 3,788 feet remaining, north – 3,950 feet remaining.
- 3.5.4. Runway 27 intersection departures are available from:
 - 3.5.4.1. Twy Charlie, 9,213 feet remaining.
 - 3.5.4.2. Twy Echo: south – 5,295 feet, north – 5,120 feet remaining.

Chapter 4

INSTRUMENT FLIGHT RULES (IFR) PROCEDURES

4.1. Radar Traffic Patterns. The radar traffic pattern will normally be flown at 4,000/5,000 feet, north downwind, and expect vectors from Ramstein GCA to the final approach course. See [Attachment 8, Class E Airspace/Radar Pattern](#).

4.2. Availability Restrictions for DASR Approaches and PAR Approaches/Monitoring. Ramstein AB does not have DASR or PAR approaches available.

4.3. Local Departure Procedures. Tower is required by host nation agreement to request all IFR departure clearances no earlier than 20 minutes prior to departure. Therefore, pilots can expect their clearance with ground control after requesting taxi instructions. Standard instrument departure procedures are listed in the DoD Flight Information Publication (Terminal) Vol-3, High and Low Altitude Europe, North Africa and Middle East.

4.3.1. Expect Toley 2 departure for Rwy 26/27.

4.3.2. Expect Bolki 2 departure for Rwy 08/09.

4.4. Radar Vector to Initial Procedures. Radar vectors to initial and visual approaches are available upon request, traffic permitting. For noise abatement, aircraft under control of Ramstein GCA will be issued radar vectors to a point no closer than 7 NM straight-in final.

4.5. Standard Climb-out Instructions/Procedures. Only local aircraft are authorized to use abbreviated IFR climb-out instructions. All transient aircraft must receive ATC instructions for departures into the local IFR pattern or utilize the published departure procedure instructed by ATC. **Note:** Transient aircraft shall not be issued local ATC instructions for departures into the IFR pattern as a “work-around” for specified climb gradients published in the departure procedures.

4.5.1. Standard local climb-out procedures are listed below.

4.5.1.1. ATC Phraseology: “AFTER COMPLETING (low approach, touch and go, option), EXECUTE LOCAL CLIMBOUT RUNWAY (designator), TRACK 050/269/275 (if applicable).” **Note:** The use of “LOCAL CLIMBOUT” phraseology constitutes an abbreviated IFR clearance for locally assigned aircraft that are transitioning from Tower to the Ramstein radar pattern.

4.5.1.2. Rwy 08 local climb-out:

CLIMB ON TRACK 080 TO 4,000 UPON PASSING 1,300 FT AND 3 DME/2 NM FROM DER TURN LEFT TO TRACK 360.

4.5.1.3. Rwy 09 local climb-out:

CLIMB ON TRACK 080 TO 4,000, UPON PASSING 1,600 FT AND 3 DME/2 NM FROM DER TURN LEFT TO TRACK 360. MINIMUM CLIMB GRADIENT 240 FT/NM TO 1400 FT.

4.5.1.4. Rwy 26 local climb-out 050 track:

CLIMB ON TRACK 275 TO 4,000 FT, UPON PASSING 1,200 FT AND 2 DME/ 2NM FROM DER TURN RIGHT TO 050. MINIMUM CLIMB GRADIENT 220 FT/NM TO 4,000 FT.

4.5.1.5. Rwy 26 local climb-out 275 track:

CLIMB ON TRACK 275 TO 4,000.

4.5.1.6. Rwy 27 local climb-out 050 track:

CLIMB ON TRACK 270 TO 4,000 FT, UPON PASSING 1,400 FT AND 2 DME/2 NM FROM DER TURN RIGHT TO 050. MINIMUM CLIMB GRADIENT 220 FT/NM TO 4,000 FT.

4.5.1.7. Rwy 27 local climb-out 270 track:

CLIMB ON TRACK 270 TO 4,000. Note: During TACAN out procedures, aircraft will be given NM versus DME.

4.6. IFR Arrival Procedures.

4.6.1. Unless otherwise requested, pilots should expect ILS approach.

4.6.2. Reference speeds. C-130: 170 KIAS; C-21: 200 KIAS; C-20: 200 KIAS; and C-40: 200 KIAS.

4.6.3. Circling approaches. Available upon request, traffic permitting. Circling is not authorized south of Rwy 08/26 IAW DoD Terminal FLIP. Tower will instruct transient aircrews to avoid overflying local villages to the maximum extent possible. If executing an approach to Rwy 08 and circling to land 26, use CAT C mins and if executing an approach to Rwy 26 to circle to land 08, use CAT E mins (noise abatement).

4.6.4. Full stop/stop and go operations. Aircraft that desire a full stop/stop and go landing shall advise both GCA and Tower on initial call-up to aid in sequencing other aircraft in the pattern.

4.6.5. C-130 formation procedures. GCA should allow for 1 NM per aircraft in formation between turns/vectors (i.e., flight of four requires 4 NM between turns/vectors).

4.7. Breakout/Go-Around/Missed Approach Procedures.

4.7.1. Breakout procedures. When an aircraft/flight is at 6 miles or farther: "FLY RUNWAY HEADING, CLIMB AND MAINTAIN 5,000".

4.7.2. Go-around procedures.

4.7.2.1. When an aircraft/flight is less than 6 miles and the overhead is in use: "FLY RUNWAY HEADING, MAINTAIN 2,000 FEET UNTIL DEPARTURE END, THEN CLIMB AND MAINTAIN 5,000".

4.7.2.2. In the event of an aircraft in departure position on the runway, Tower will issue "Go-around left (Rwys 26/27) or right (Rwys 08/09)". Aircraft will offset 200 feet south of the runway, and then fly standard go-around procedures. **Note:** The 2,000 foot restriction is not required when no conflict exists with aircraft in the Tower overhead pattern.

4.7.3. Missed approach procedures. Pilots will fly the missed approach procedure for the published approach they are executing, unless otherwise instructed by ATC. If no published missed approach procedure exists, pilots will execute go-around procedures and notify ATC.

4.8. Station Keeping Equipment (SKE) Procedures. C-130J aircraft are equipped with SKE technology which allows pilots to maintain pre-set formation parameters using either manual or automated flight. Standard SKE formation approaches into ETAR will include up to four aircraft.

4.8.1. Spacing and Airspeed. Pilots shall inform ATC when SKE procedures are in effect. Between 10 and 20 miles from the FAF, formations will establish standard spacing of 6,000 feet in trail from the previous aircraft in preparation for the instrument approach. Formation aircraft will slow from their en-route airspeed to 150 knots within 10 miles of the FAF, and will slow to 135 knots within 1 mile of the FAF. Formation aircraft will maintain 135 knots until short final at which point they will transition to the appropriate approach speed based on individual aircraft weight and wind conditions. Speed restrictions for formation aircraft executing SKE procedures are not authorized.

4.8.2. Vectors. Due to SKE technology limitations, GCA vectors of 90 degrees or less are preferred. If a turn of greater than 90 degrees is required, controllers will break the turn into two or more subsequent vectors, if able. In the interest of flight safety, pilots must comply with ATC instruction at all times and cannot resume their own headings without ATC approval. All vectors and headings will be situational based upon traffic.

4.8.3. Holding. SKE formations are restricted in their maneuverability when entering a holding pattern. If holding is required as a result of a delay or cancellation of approach clearance, "large box" vectors are preferred. If unable to accommodate this request, expect that the lead aircraft to coordinate for formation split prior to holding pattern entry. Aircraft will continue the approach as separate elements.

4.8.4. Altitudes. When traffic and airspace permit, the earliest possible descent from an en-route altitude to a FAF altitude is preferred, and will best set up the formation for an instrument approach. For example, clearing the formation to 5,000 feet no later than 10 NM prior to point FRANK allows the formation to capture the glideslope prior to the FAF while complying with approach restrictions. Altitude descent will be situational based upon traffic.

Chapter 5

EMERGENCY PROCEDURES

5.1. Operation of Primary Crash Alarm System (PCAS) and the Secondary Crash Net (SCN).

5.1.1. The PCAS is comprised of voice equipment designed to provide direct line communications from Ramstein Tower to selected locations on base. [Table 5.1](#) lists agencies on the PCAS.

Table 5.1. Agencies on the Primary Crash Net.

PCAS AGENCY
TOWER
FIRE ALARM COMMUNICATIONS CENTER
AIRFIELD MANAGEMENT

5.1.2. Activation. Tower personnel will activate the PCAS for all situations that place an aircraft in danger and actual/simulated disaster situations. Tower will test the PCAS daily at approximately 0600L. Activation is required for, but not limited to the following situations:

- 5.1.2.1. In-flight/ground emergencies.
- 5.1.2.2. Hijack/unauthorized aircraft movements.
- 5.1.2.3. Bomb threats.
- 5.1.2.4. Primary/alternate Control Tower evacuation.
- 5.1.2.5. Fuel spills.
- 5.1.2.6. Unscheduled barrier engagements.
- 5.1.2.7. Hung ordnance/hung flare.
- 5.1.2.8. Hot brakes.
- 5.1.2.9. EPU activation (actual or suspected).
- 5.1.2.10. No radio aircraft.
- 5.1.2.11. Pilot's request.
- 5.1.2.12. Local exercise information (as required).
- 5.1.2.13. Any other situation deemed necessary by the Tower/GCA Watch Supervisors.

5.1.3. During wing/base exercises, information passed via the PCAS will be preceded and followed by the words "EXERCISE, EXERCISE, EXERCISE."

5.1.4. For aircraft emergencies, Tower personnel will obtain and pass the following information via the PCAS:

- 5.1.4.1. Aircraft identification and type.
- 5.1.4.2. Nature of emergency.
- 5.1.4.3. Pilot's intentions.
- 5.1.4.4. Location of aircraft for ground emergencies.
- 5.1.5. As necessary, other information to be obtained and relayed include:
 - 5.1.5.1. Fuel remaining in time and pounds. Time information can be used for ATC purposes, pounds should be forwarded for use by fire response personnel.
 - 5.1.5.2. Number of personnel on board.
 - 5.1.5.3. Estimated time of arrival.
 - 5.1.5.4. Type armament.
 - 5.1.5.5. Landing runway.
 - 5.1.5.6. Anticipated approach or departure end barrier engagement.
 - 5.1.5.7. Other information per FAAO 7110.65, as necessary.
 - 5.1.5.8. If available, aircraft tail number for ground emergencies. **Note:** PCAS activation will not be delayed to obtain items listed above.
- 5.1.6. SCN. The SCN is comprised of voice equipment designed to transmit information critical to aircraft and airfield operations. These notices may be received from Tower or from off-base personnel reporting an inbound emergency or aircraft crash. AM will test the SCN daily. **Note:** If information requiring an SCN activation is received from an off-base source, AM will contact the Tower, GCA and/or command post to verify the information prior to activating the SCN.
- 5.1.7. SCN activation. The SCN will be activated by AM when:
 - 5.1.7.1. The PCAS has been activated by the Tower. All information from the PCAS will be relayed verbatim on the SCN.
 - 5.1.7.2. IAW AFI 13-204v3, any of the following conditions exist: weather warnings, IFEs, GEs, change in Force Protection Condition (FPCON) level, Disaster Response Force (DRF) activations/recalls, bomb threats or terrorist activities, or at the request of the EOC Director.
 - 5.1.7.3. Agencies requesting activation of the SCN will pass their message on the circuit after all agencies have answered.
 - 5.1.7.4. When AM is manned with only one person, and that person is on the airfield, the individual will return to AM to activate the SCN as soon as possible upon notification by the Tower of a PCAS activation.
- 5.1.8. The requirements listed in paragraph 5.1.2. for activating the PCAS also apply to the SCN.
- 5.1.9. Contact 86 OSS/OSAA for a list of current SCN agencies.

5.2. Emergency Response Procedures: In-Flight/Ground Emergency Procedures (On/Off Base).

5.2.1. The senior fire department official on duty will be the Emergency incident commander (IC) for all emergencies on the airfield.

5.2.2. The crash/emergency response force will assemble at pre-determined taxiways adjacent to the runway, as required by the type or location of the emergency.

5.2.3. Ramstein ground control will broadcast on UHF/VHF frequencies for all aircraft to give way to emergency response vehicles.

5.2.4. During an emergency, communications on the Ramp Net shall be kept to a minimum. Only communications relating to the emergency will be transmitted on the Ramp Net.

5.3. External Stores Jettison Area Procedures. Follow the aircraft abandonment procedures in paragraph 5.7 and those depicted in **Attachment 13, Jettison of External Stores and Cargo/Aircraft Abandonment Area.**

5.4. Fuel Dumping. Aircraft requesting to dump fuel will coordinate with ATC for a climb to not less than 6100 MSL and vectors to a clear area if situation allows. **Note:** All fuel dumping will be coordinated through Langen ACC.

5.5. Emergency Aircraft Arresting System Procedures. All information regarding barrier engagement procedures, responsibilities, suspension and resumption of runway operations, etc can be found in paragraph 1.8.4. and **Attachment 4, Aircraft Arresting Barrier Engagement Procedures.**

5.6. Hot Brake Area and Procedures.

5.6.1. Pilots will notify the Tower any time an overheated brake condition is suspected. Tower will activate the PCAS and advise all agencies of the ground emergency.

5.6.2. If conditions permit utilize hot brake areas IAW paragraph 1.15.1.

5.6.3. If hot brakes are detected, the senior fire official/crash recovery crew will advise the aircrew to shut down by giving the pilot the cut engine(s) signal only if circumstances require engine shut down.

5.6.4. Aircraft must be isolated a minimum of 30 minutes after hot brakes are declared and then verified by crash recovery crews.

5.7. Abandonment of Aircraft (Controlled Bail-Out, Ejection, Plotting Aircraft coordinates).

5.7.1. The designated aircraft abandonment/egress/jettison area is Baumholder Army Artillery Range depicted in **Attachment 13, Jettison of External Stores and Cargo/Aircraft Abandonment Area.** Impact is desired at RMS TACAN R-331/11.3 DME.

5.7.2. ATC will coordinate vectors to Baumholder. ATC will coordinate range entry with Langen ACC via hotline or Baumholder Range Command at 06783-188-2213. Once on range, aircraft are to remain north of the town of Baumholder and egress/jettison on a 097 heading at 3,600 feet MSL (2,000 feet AGL) to impact at N 49-38.5 E 007-24.5 (RMS 331/11.5). If aircraft are unable to obtain a local ATC handoff, clearance may be obtained by free call to Langen ACC on 256.675 or 134.95. Langen minimum vectoring altitude is 5,000 feet MSL.

5.7.3. Aircraft need to adjust actual ejection/jettison timing accordingly so that impact occurs within 2 kilometers of the desired impact point.

5.8. Personnel/Crash Locator Beacon Signal/Emergency Locator Transmitter (ELT) Response Procedures.

5.8.1. Notifications. Tower will notify AM and GCA (Langen ACC, when GCA is closed) when an unplanned ELT is heard. AM will notify 86 AW/CP, who will then coordinate with 86 MXG/MOC, 721 AMXS/MOC, TA, 86 OSS Aircrew Flight Equipment (86 OSS/OSL), and 1-214 Aviation Regiment to initiate ramp checks.

5.8.2. AM will continue to monitor the status of the ELT until notification is received of the termination time and location.

5.8.2.1. If ELT does not terminate within an hour or is not located during ramp checks, AM will re-accomplish notification.

5.8.3. ELT testing. Scheduled operational testing for ELTs will be conducted within the first 5 minutes of the hour. Duration of the test will be no more than three audio sweeps. Beacon tests are to be conducted in a shielded or screened room.

5.9. Hung Ordnance Procedures.

5.9.1. All aircraft experiencing hung ordnance/hung flare or other ordnance malfunctions will declare an emergency with live/heavyweight "hung ordnance" as soon as radio contact is established with GCA or Tower.

5.9.2. Tower will activate the PCAS. 86 AW/CP will dispatch 886 CES/CED (Explosive Ordnance Disposal). EOD, TA and fire department will respond.

5.9.3. Tower will request the aircraft to fly a straightin pattern, avoiding all populated areas to the runway, factors permitting (i.e., weather, winds, flight safety considerations, etc.). After landing, the aircraft will be taxied to the respective de-arming area IAW paragraph 1.15.1. **Note:** Hung BDU-33/MK-106 training ordnance requires an emergency response.

5.10. Wind Limitations on Control Tower.

5.10.1. The Tower structural wind limitation is 82 knots.

5.10.2. The Tower maximum safe wind velocity is 60 knots.

5.10.3. Tower controllers shall follow evacuation procedures IAW Tower Evacuation Checklist and request a NOTAM be dispatched.

5.11. Evacuation of AO Facilities.

5.11.1. Control Tower evacuation. In the event of fire or other emergency situations, Tower personnel will evacuate to the alternate Control Tower (ACT), Bldg 2307, located north of Rwy 09/27, midfield. All aircraft will be transferred to GCA control (Langen ACC, when GCA is closed) until the ACT is operational, normally within 15 minutes of initial evacuation time.

5.11.2. GCA evacuation. In the event of evacuation, GCA will transfer aircraft control to Langen ACC and follow applicable checklists for personnel evacuation. The Tower will monitor 140.9/124.275/356.225 and instruct all aircraft to contact Langen ACC.

5.11.3. AM evacuation. In the event of fire or other emergency situations, AM personnel will evacuate to Bldg. 2370. AM dispatchers shall follow evacuation procedures IAW the Airfield Management Evacuation Checklist.

5.12. Other Emergency Procedures.

5.12.1. Aircraft Mishap Response Procedures.

5.12.1.1. In the event of an aircraft mishap, the Tower will activate the PCAS and ATC/AM will initiate Mishap/HATR checklists.

5.12.1.2. The senior fire department official will be the IC unless otherwise delegated.

5.12.1.3. ATC and AM will relay all information to the IC and provide assistance to the maximum extent possible. If necessary, AM will suspend runway operations.

5.12.1.4. For further information, contact 86 AW/XP.

5.13. Alternate Facility Procedures. In the event of an evacuation of the Tower to the alternate Control Tower, the following procedures apply:

5.13.1. All aircraft will be transferred to GCA control (Langen ACC during GCA closures) until the ACT is operational, normally within 15 minutes. Mitchell Ave. and taxiway caution lights will not be activated during this time, personnel transiting these routes must use caution.

5.13.2. ACT limitations. Visibility on the ground and in the pattern is limited, due to the position and height of the alternate facility. All northern taxiways, except Twy Echo, are not visible from the ACT. **Note:** VFR patterns will be closed, only full stops are authorized.

5.13.3. . Tower will make the following transmission on all assigned frequencies including 121.5 and 243.0, time permitting: "ATTENTION ALL AIRCRAFT, RAMSTEIN TOWER IS EVACUATING, CONTACT RAMSTEIN GCA ON 124.275/356.225 (OR LANGEN ACC 129.675/272.8/256.675) FOR INFORMATION AND ADVISORIES."

5.13.4. . GCA will monitor 133.2/386.75 during relocation or evacuation to the ACT.

5.13.5. . Ground traffic on all taxiways north of Rwy 09/27. Ground control will advise all taxiing aircraft when they are "NOT IN SIGHT FROM THE ALTERNATE CONTROL TOWER -USE CAUTION" before issuing a taxi clearance.

5.13.6. Helicopter operations. All arriving helicopters will be cleared to land/depart via the active runway. **Exception:** Watch supervisors may authorize deviations. With the exception of Taxiways Delta and Foxtrot, local control may authorize helicopters to depart from any active taxiway when an operational advantage can be gained. In addition to the requirements in FAAO 7110.65, Tower controllers will advise taxiing and departing helicopters to "USE CAUTION: UNCONTROLLED VEHICLES OPERATING ON TAXIWAY _____" IAW 3.3.1. of this instruction.

5.14. Alternate Airfield Management Facility Procedures.

5.14.1. AM will notify Tower, activate the SCN and state "AIRFIELD MANAGEMENT IS EVACUATING. ALTERNATE AIRFIELD MANAGEMENT PROCEDURES EFFECTIVE IMMEDIATELY."

5.14.2. Upon resumption of normal operations, AM will again activate the SCN and state "AIRFIELD MANAGEMENT HAS RESUMED NORMAL OPERATIONS. DISCONTINUE ALTERNATE AIRFIELD MANAGEMENT PROCEDURES. TERMINATION TIME XXXX ZULU."

Chapter 6

FLIGHT PLANNING PROCEDURES

6.1. Responsibilities.

6.1.1. Aircraft commanders:

6.1.1.1. Ensure IFR flight plans are filed at least 4 hours prior to estimated time of departure (ETD), and VFR flight plans are filed 1 hour prior to ETD. Special operations and procedures may require earlier filing. Consult Area Planning 2 (AP2) for additional lead times.

6.1.1.2. With the exception of AMC (Air Mobility Command) aircrews with a flight plan on file with MAJCOM flight planning cell, contracted air carriers, general aviation, and Army helicopters who have flight plans on file with Army Flight Operations Detachment (AFOD), all aircrews departing ETAR must have a flight plan on file with AMOPS.

6.1.1.2.1. Use DD Form 1801, *DoD International Flight Plan IAW AFI 11-202v3, General Flight Rules* and FLIP General Planning.

6.1.1.2.2. Use DD Form 1801 or contact dispatch agency for all changes to flight plans prior to departing.

6.1.2. AMC procedures.

6.1.2.1. AMC aircrews will have flight plans pre-filed through the integrated flight manager.

6.1.2.2. AMC aircrews or Air Mobility Control Center will coordinate any flight plan changes with the integrated flight manager or 603rd Air Operations Center/Air Mobility Division (603 AOC/AMD).

6.1.2.3. Flight plans filed electronically shall be archived in GDSS2 IAW Air Force RDS, Table 13-07, Rule 3.00.

6.1.3. Locally assigned aircrews:

6.1.3.1. File flight plans IAW AFI 11-255v3 and local directives.

6.1.3.2. Contact 603 AOC/AMD initiation cell to determine an alternate method when electronic filing is not possible.

6.1.3.3. Contact flying squadron or 603 AOC/AMD for any flight plan changes needed while en route. **Note:** Transient aircrews must file all flight plans at AM Ops counter. If flight plan was filed at a previous location, AM personnel will determine existence of flight plan in GDSS2. If it cannot be located, transient aircrews must re-file.

6.1.4. AM will:

6.1.4.1. Review flight plans filed at AM for compliance with FLIP General Planning.

6.1.4.2. Submit all flight plans for US and foreign aircrews not supported by AMD or AMC IAW FLIP General Planning,

6.1.4.3. Maintain original flight plans IAW Air Force RDS, Table 13-07, Rule 3.00.

6.1.5. The pilot in command is responsible to identify flight plan changes due to weather, ground aborts or other mission requirements as soon as possible. The pilot may submit requests for changes to ATC for coordination with AMD. Expect a delay, for identification, while AMD coordinates a new slot time for departure.

6.1.6. Once an aircraft is airborne, any corrections or deviations to a flight plan must be coordinated through the air traffic control agency currently in contact with the aircraft.

6.1.7. Problems with flight plans (i.e., route of flight, missing data) and air traffic flow management messaging will be handled by calling the affected flying squadron and coordinating with the on-duty operations officer to correct the problem. The on-duty operations officer shall be responsible for correcting or re-filing the flight plan for the aircrew to prevent mission delay.

6.1.8. Electronic flight plan filing:

6.1.8.1. Configure computers by downloading and following instructions posted on the DD Form 1801.

6.1.8.2. Electronic flight plan and air traffic flow management messaging: Check FLIP Area Planning AP/2 and download instructions from the Form.

6.2. Slot Times and Flow Control.

6.2.1. The two terms, slot time and flow control, are not controlled by AMD or the US government, but are flight restrictions imposed and controlled by several European air traffic control organizations.

6.2.1.1. Flow control means that at a certain point or region (i.e., flight information region boundary) ATC authorities can and/or will only handle a certain number of aircraft per hour.

6.2.1.2. Slot time, or calculated takeoff time (CTOT) is a 15-minute window, during which an aircraft can depart. Slot time is issued to Ramstein from Eurocontrol through GDSS2, and then passed to aircraft.

6.2.1.3. To comply with European flow control restrictions, Tower controllers will not issue clearances allowing aircraft to depart more than 5 minutes before or 10 minutes after an assigned CTOT. **Note:** CTOTs are displayed in the GDSS2. Ground control will ensure aircrews have the correct slot time on initial contact. AMD cannot request slot times--they can delay, send "ready messages" or cancel the flight plan. Sending a ready message does not always mean the aircraft will get a better slot time. Departure will be slot time -5/+10 minutes.

6.2.2. Flow control exempt flights. Flow control exemption shall be in accordance with FLIP Area Planning AP/2, Theater Supplementary Notices and Procedures.

Chapter 7

MISCELLANEOUS PROCEDURES

7.1. Airfield Operations Board.

7.1.1. The Ramstein Airfield Operations Board (AOB) will convene quarterly IAW AFI 13-204v3. Due to size and complexity of Ramstein Flying operations, the 86 AW/CV has delegated 86 OG/CC as chairman of the AOB. AOB membership is listed in **Table 7.1**, although other interested agencies may attend.

Table 7.1. Airfield Operations Board Membership.

86 OG/CC (Chair)
86 MSG/CC
37 AS Representative
76 AS Representative
86 OG/OGV
86 AW/SE
86 OSS/CC/OSA/OSAA/OSAR/OSAT/OSAV/OSW/TERPS Liasion
86 AW/CP
86 CS Representative & 86 CS/SCO
86/786/886 CES Representative
Langen ACC Representative
86 AW/HN
313 EOSS/CC
721 AMOG/CC or DO
721 APS/CC or DO

7.1.2. The following items require annual review IAW AFI 13-204v3, and will be addressed in the months annotated.

7.1.2.1. Letters of Procedure: Airfield Operation Instruction, Letters/Memorandums of Agreement, Operations Letters, Operations Plans (OPLANs), Host Nation Agreements-February

- 7.1.2.2. Terminal Instrument Procedures (TERPS)- October
- 7.1.2.3. Air Installation Compatible Use Zone Program (AICUZ)- August
- 7.1.2.4. Annual Self Inspection Results- April
- 7.1.2.5. Special Interest Items (SIIs)- December
- 7.1.2.6. Annual Airfield Certification/Safety Inspection and Quarterly Joint Inspection results- October
- 7.1.2.7. Aircraft Parking Plan- July
- 7.1.2.8. Status of existing airfield waivers (with emphasis on temporary waivers and associated correction plans)- September

7.2. NOTAM Procedures.

7.2.1. 86 OSS/OSAA is the NOTAM issuing office at Ramstein AB. Agencies requesting NOTAM issuance should contact AM at DSN 480-2073.

7.2.1.1. AM issues Local NOTAMs (L-Series) and Graphical NOTAMs via Defense Internet NOTAM System.

7.2.1.2. AM issues Safety NOTAMs (M-Series) via GDSS2 through the International NOTAM Office (INO).

7.2.2. Tower is the NOTAM monitoring facility for Ramstein AB.

7.2.3. Current NOTAMs are listed on the DoD website at <https://www.notams.jcs.mil/>.

7.3. Flight Information Publication (FLIP) Accounts and Procedures for Requesting Changes.

7.3.1. Procedural changes. HQ USAFE Air Procedures Flight (APF) is responsible for procedural changes and FLIP cycle reviews. Forward procedural change requests to HQ USAFE APF.

7.3.2. Non-procedural changes. Forward non-procedural change requests to the airfield manager.

7.3.3. AM is responsible for ordering and maintaining FLIPs for the flight planning room and for ATC/AM use. FLIPs located in AM and the flight planning room are for transient aircrews only, and are not to be removed from the facility. IAW AFI 11-201, local flying units are responsible for the establishment and management of their own FLIP accounts.

7.4. Prior Permission Requested (PPR) Procedures. Aircraft not assigned to Ramstein AB or on a 618th Tanker Airlift Control Center (TACC) controlled mission must submit a PPR request to AM via email. Send PPR request no earlier than 15 days prior and no later than 24 hours prior to arrival. IAW AFI 13-204v3 USAFE Supplement; AFI 10-1001, *Civil Aircraft Landing Permits*; AFI 10-1801, *Foreign Governmental Aircraft Landings at United States Air Force Installations* and this instruction, the Airfield Manager is the delegated approval authority for all landing approvals and PPR authorizations.

7.5. Air Evac Notification and Response Procedures. The fire department is designated as the agency responsible for rescue protection (aeromedical evacuation flights) upon pilot notification. Tower will:

7.5.1. Notify fire department of the inbound aeromedical aircraft landing at Ramstein when the aircraft is 15 miles final or enters class D airspace VFR.

7.5.2. Relay any additional information requested by the pilot to AM.

7.6. Unscheduled/Unauthorized Aircraft Arrivals. Other than cases of in-flight emergency or weather divert, aircraft that are not scheduled to arrive at Ramstein AB will not receive landing clearance from the ATC Tower. Any uncertainty regarding authorization to land on Ramstein AB must be resolved with AM prior to requesting landing clearance.

7.7. Distinguished Visitor Notification Procedures.

7.7.1. ATC will notify the 86 AW/CP when DV-6 or higher is 25 miles from touchdown or as soon as possible after initial contact if closer than 25 miles.

7.7.2. For all other applicable DV notification procedures, consult AP/2.

7.8. Dangerous/Hazardous Cargo.

7.8.1. The HCP on Ramp 8 is identified as the dangerous/hazardous cargo area . Ramp 5 can also be used to park aircraft carrying certain amounts of hot cargo (see **Table 7.2**). Servicing (up or downloading) of munitions loads may occur on Ramp 5 but, must be limited to the amounts listed in **Table 7.2**. If the amount of munitions exceeds authorized limits, aircraft must be moved to the HCP to service munitions.

7.8.2. Dangerous or hazardous cargo inbound notification. TA will notify the Tower of all AMC aircraft with dangerous or hazardous cargo requiring the HCP.

7.8.3. If the pilot of an explosives-loaded aircraft or a hazardous cargo aircraft declares an in-flight emergency and requires landing at Ramstein AB, the following actions shall be accomplished.

7.8.3.1. Ramstein Tower shall activate PCAS and relay all information received from the pilot.

7.8.3.2. Upon landing, aircraft will be directed to the HCP and marshalled into position.

7.8.3.3. If command post receives notification (by means other than the PCAS) of an in-flight emergency involving an explosives-loaded aircraft or a cargo aircraft with hazardous cargo aboard, they shall relay all information to Tower. Tower will then activate the PCAS.

7.8.3.4. The 86 AW/CP is the designated focal point for information and facilitates coordination of support efforts concerning hazardous munitions/cargo IAW 86 AW local directives.

7.8.4. Explosive loaded cargo aircraft. The following limitations apply to routine, peacetime explosive loaded cargo aircraft operations. **Table 7.2** illustrates approved explosive loaded aircraft cargo operations locations/limitations at Ramstein AB.

Table 7.2. Authorized Explosive Loaded Cargo Aircraft Operations Locations/Limitations.

Location	Operation
Ramp 8 (HCP)	Up to 65,136 lbs of HC/D 1.1 explosives
Ramp 5	Up to 1000 lbs 1.3 Unlimited or MEQ 1.4
Ramp 2 (Spots 1-5)	Up to 1,000 lbs 1.3 or 3,000 lbs 1.4
Ramp 1 (Spots 4, 5, and 8-10)	Up to 1,000 lbs 1.3 or 3,000 lbs 1.4

7.8.4.1. The maximum amount of explosives allowed on the HCP at one time is 65,136 pounds net explosives weight (NEW) of HC/D 1.1, utilizing only Spots 01 and 04 at their maximum of 15,000 and 50,136 pounds NEW of HC/D 1.1 respectively.

7.8.4.2. No more than 3 aircraft can be on the HCP at one time, which equates to a maximum of 45,000 pounds of explosives (15,000 pounds NEW of HC/D 1.1 per aircraft parked at Spots 01, 03 and 04).

7.9. Night Vision Device (NVD) Operations. Only units with an approved letter of agreement (LOA) with the 86 OSS may conduct NVG Operations in Ramstein Air Base Class D Airspace. ATC and AM do not utilize NVDs during operations.

7.10. Local Aircraft Priorities. ATC services are provided on a first-come, first-serve basis as circumstances permit, with the exception of the operational priorities listed in FAAO 7110.65. Local aircraft priorities are listed below in the following order:

7.10.1. Emergency aircraft.

7.10.2. "LIFEGUARD"; or "AIR EVAC or MED EVAC" (only when specifically requested).

7.10.3. Search and rescue aircraft performing a search and rescue mission.

7.10.4. Alert aircraft

7.10.5. Presidential aircraft and support aircraft.

7.10.6. Flight Check aircraft.

7.10.7. Primary Nuclear Airlift Force/National Airborne Operations Center (NAOC).

7.10.8. Aircraft with a validated controlled departure time (slot time).

7.10.9. DV aircraft.

7.10.10. 86 AW exercise aircraft.

7.10.11. 86 AW formation aircraft.

7.10.12. Full stops.

7.10.13. AMC Departures.

7.10.14. 86 AW practice approaches.

7.10.15. All other aircraft on a first-come, first-served basis.

7.11. Lost Communication Instructions.

7.11.1. If cleared for an approach, squawk 7600 and execute approach as published and look for light gun signals from Tower.

7.11.1.1. If not cleared for an approach, do one of the following:

7.11.1.1.1. VMC: FLY DOWN THE RUNWAY AT 2000 MSL ROCKING WINGS AND SQUAWKING 7600, TURN NORTH TO ENTER THE VFR PATTERN AND LOOK FOR LIGHT GUN SIGNALS. **Note:** When ACT operations are in effect, aircraft will not be able to observe light signals until turning final approach.

7.11.1.1.2. IMC: IF NOT ESTABLISHED ON A PUBLISHED APPROACH, MAINTAIN AT LEAST 5000 AND PROCEED DIRECT FRANK/MAPIG (DEPENDENT UPON RWY IN USE). IF ALIGNED FOR AN APPROACH, FLY APPROACH AS PUBLISHED. OTHERWISE, EXECUTE ONE TURN IN HOLDING FOR ALIGNMENT, AND FLY APPROACH AS PUBLISHED. SQUAWK 7600. MONITOR TOWER FOR LIGHT GUN SIGNALS. **Note:** When the alternate Tower is in use, aircraft will not be able to observe light signals until approximately 4 NM final.

7.12. Opposite Direction Take-Offs and Landings. See Tower and GCA Coordination Operations Letter for coordination procedures.

7.13. Civilian Aircraft Operations. Civil aircraft (except AMC charter), other than emergencies, will not be allowed to land unless an approved civil aircraft landing permit number/aircraft landing authorization number is on file and verified at AM. Upon verification from AM, a PPR number will be issued to allow for landing/parking at Ramstein AB.

7.14. Civil Use of Military ATCALS. Civil aircraft without PPR approval may use USAF navigational aids and radar services, as long as operations will not conflict with local traffic.

7.15. Aero Club Operations. Ramstein AB does not have an Aero Club.

7.16. Weather Dissemination and Coordination Procedures: Hazardous/Severe Weather Notification Procedures; Lightning Response.

7.16.1. Lightning watch. This watch is in effect 30 minutes prior to thunderstorms being within 5 NM radius of the base. Operations or activities may continue; however, all personnel must be prepared to implement lightning warning procedures.

7.16.2. Lightning warning. This warning is in effect whenever lightning occurs within a 5 NM radius of the base.

7.16.2.1. Personnel in affected locations cease all outside activities and seek shelter. Approved shelters include:

7.16.2.1.1. Dwellings or other buildings protected against lightning.

7.16.2.1.2. Protected underground shelters.

7.16.2.1.3. Large metal-framed buildings.

7.16.2.1.4. Enclosed automobiles, buses, aircraft, and other vehicles with metal tops and bodies.

7.16.2.2. Aircraft with engines running may continue if their specific mission design series regulations allow taxi and takeoff, avoiding all thunderstorms, down drafts or rain shafts. This is with ATC concurrence and slot time approval. Aircraft may also wait in parking with crew and passengers aboard (this applies to arriving aircraft as well). Aerospace Ground Equipment (AGE) equipment will be shutdown during lightning warnings.

7.17. Airfield Snow Removal Operations. Tower will broadcast an advisory on the ATIS which states "DE-ICING MATERIAL on runway". The advisory will remain on the ATIS for 3 hours after application, or until AM advises de-icing material has dissipated. Tower will advise departing turbojet aircraft of the possibility of smoke on takeoff when chemicals have been applied to the runway. See **Ramstein Air Base Instruction 32-1002, Snow and Ice Control**, for more information on snow removal operations.

7.18. Bird/Wildlife Control: Bird/Aircraft Strike Hazard (BASH) Program Guidelines. The BASH Program is managed by 86 AW/SE. Reference 86th Airlift Wing Operations Plan 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Reduction Plan*, for 86 OSS/OSA roles and responsibilities.

7.19. Bird Watch Conditions (BWC).

7.19.1. LOW: Bird activity is just a few scattered, small species around the airfield perimeter.

7.19.1.1. LOW Restrictions: No restrictions during this condition.

7.19.2. MODERATE: Any number of soaring birds of prey near the airfield, flocks of medium sized (less than 10) or small (less than 20) birds consistently passing over the airfield.

7.19.2.1. MODERATE Restrictions: Local training flights must be approved by the 86 OG/CC or designated representative. This condition requires increased vigilance by all agencies and supervisors and caution by aircrews.

7.19.3. SEVERE: Any number of large soaring birds over the runway or in the runway arrival/departure flight path. Congregation of medium (more than 10) or small (more than 20) birds loitering on or over the airfield.

7.19.3.1. SEVERE Restrictions: All arrivals and departures will be delayed until the bird condition is reduced. Minimum fuel or emergency aircraft will be permitted to conduct straight-in, full stop landings only, and will be at the discretion of the pilot-in-command. Departure of any aircraft must be approved by the 86 OG/CC or designated representative. Supervisors and aircrews must thoroughly evaluate mission need before conducting operations in areas under condition SEVERE.

7.20. Supervisor of Flying (SOF) Operating in the Tower. Ramstein AB does not have a SOF program.

7.21. Airfield Photography. Consult 86 AW/PA (Public Affairs) and 86 AW Integrated Defense Plan (IDP) 31-101 for questions regarding photography on the airfield.

7.22. Tactical Arrival/Departure Procedures. See para [3.2.12](#) and [Attachment 11](#), VFR Tactical Procedures.

7.23. UAS Operations Procedures. Ramstein AB does not have UAS operations.

7.24. Exercise Procedures.

7.24.1. Exercise coordination. Base officials must coordinate with the Airfield Operations Flight Commander (AOF/CC) and Airfield Manager at least 48 hours in advance of exercises that involve any ATC facility or the airport movement area. The AOF/CC and Airfield Manager are considered trusted agents.

7.24.2. . During exercises, 86 AW aircraft will be advised by Ramstein GCA or Tower of the NATO alarm condition upon initial contact. When advised of condition alarm red, aircraft will state their intentions in accordance with applicable war plans and simulations.

7.24.3. Exercise aircraft will depart and recover IFR, unless otherwise approved by the 86 OG/CC or designated representative.

7.25. Explosive Ordnance Disposal (EOD) Proficiency Range.

7.25.1. EOD operations occur in the SW area of the airfield at building 2271.

7.25.2. Tower will be notified of the number of detonations, use of smoke grenades, detonations time(s), and when EOD has terminated range operations for the day.

7.25.3. Initial Tower notification of planned/emergency operations will be made via landline. Prior to any detonation, EOD will contact Tower via LMR on Ramp Net and request vertical clearance, inform of number of detonations, and time occurring. Upon termination, EOD will notify Tower of completion of operations.

7.26. Waivers to Airfield/Airspace Criteria.

7.26.1. The airfield manager maintains a copy of the all permanent, temporary and construction airfield waiver packages. The original airfield waivers are located and maintained at 86 CES/CEAOP.

7.26.2. IAW USAFEI 32-1007, the installation commander is the approval authority for all airfield construction and contingency waivers, unless delegated to other authority, which impact airfield and/or airspace operations. MAJCOM/CV is the approval authority for all temporary and permanent waivers to airfield/airspace criteria, except those which affect instrument procedures, and specific airfield markings, see USAFEI 32-1007, Attachment 2 for further details.

7.26.3. Airfield criteria waiver procedures. Airfield Manager, 86 CES/CE/AO, 86 AW/SE, and 86 OSS TERPS Liaison will:

7.26.4. Jointly prepare/initiate waiver requests and coordinate them with HQ USAFE/ APF.

7.26.5. Submit requests through the installation to HQ USAFE/A7CP.

7.26.6. Maintain a complete record of all waivers requested and their disposition (approved or disapproved).

7.26.7. Refer to USAFEI 32-1007, Attachment 2 for additional procedures on processing airfield/airspace waivers.

7.27. Wear of Hats and Reflective Belts. All flight line areas are designated no-hat areas. These areas are inside the fence line of the northeast, southeast, and southwest areas, all ramps, taxiways, and end-of-runway areas.

7.27.1. During cold weather, the winter stocking cap, and flyer's helmet (bunny cap) are authorized to be worn in no-hat areas. Remain alert to operating engines.

7.27.2. SF personnel, while performing official duties, may wear the beret with insignia attached; however, when they are within 50 feet of an operating aircraft their berets must be removed and secured.

7.27.3. During inclement weather, darkness or periods of reduced visibility, all personnel working/operating on the flight line are required to wear a reflective belt. Security forces personnel armed to provide security on the flight line are exempt from this requirement.

7.28. Airfield Smoking Policy. IAW AFI 91-203, *Air Force Consolidated Occupational Safety Instruction* and *National Fire Protection Association, National Fire Code 410*, smoking is prohibited in aircraft maintenance facilities, flight line areas, and weapons storage and maintenance areas.

7.29. Forms Adopted. AF Form 332, *Base Civil Engineer Work Request*, AF Form 1199 series, *USAFE Entry Control Credentials*, AF Form 1768, *Staff Summary Sheet*, DD Form 1801, *DoD International Flight Plan*.

Chapter 8

LOW VISIBILITY PROCEDURES

8.1. Low Visibility Operations.

8.1.1. Tower will notify AM when changes in weather create changes in low visibility conditions. AM will report changes in low visibility conditions via the secondary crash net.

8.1.2. Ramp managers shall establish one central point of contact (POC) for their respective ramps.

8.1.3. When RVR is less than 800 meters and the ceiling is less than 200 feet, the CMA is restricted to mission critical vehicles.

8.2. Low Visibility Conditions (VISCONs). When the RVR is at or below 400 meters, four VISCONs exist as defined below.

8.2.1. VISCON 1. VISCON 1 will be in effect when the RVR is between 200 meters and 400 meters, inclusive. While in VISCON 1, all operators on the airfield will wear reflective gear and all drivers will turn on vehicle headlights and flashing lights.

8.2.1.1. Vehicle operations. Only mission critical vehicles are authorized to operate in the CMA and must activate flashing/hazard lights at all times.

8.2.2. VISCON 2. VISCON 2 will be in effect when the RVR is greater than or equal to 100 m and less than 200 m. In addition to the provisions listed in [paragraph 8.2](#):

8.2.2.1. Ramp POCs will establish two-way communications with the ATC Tower via the digital ramp net.

8.2.2.2. Ramp POCs will take inventory of all personnel and equipment on the ramp.

8.2.2.3. Taxi operations. Only aircraft arrivals will be allowed to taxi.

8.2.2.4. Vehicles will not exceed 10 mph while operating on the airfield.

8.2.3. VISCON 3. VISCON 3 will be in effect when the RVR is greater than or equal to 50 m and less than 100 m. In addition to the provisions listed in [paragraph 8.2 – 8.4.4](#):

8.2.3.1. Vehicle operations. Only mission critical vehicles are authorized to operate on the airfield and must activate flashing/hazard lights at all times even if temporarily parked. IAW AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, refueling and explosive laden vehicles will not be operated on the airfield.

8.2.3.2. Ramp POCs will report 100% accountability of personnel, vehicles and equipment operating on the ramp to ATC Tower via the digital ramp net. Tower will not issue taxi clearances until each ramp has reported 100% accountability.

8.2.3.3. Taxi operations. Only aircraft arrivals will be allowed to taxi. Prior to an aircraft taxiing, the Tower will inform ramp POCs in the path of the aircraft for personnel and equipment dispersal. **Note:** Aircraft will not be given taxi clearance from ATC until each ramp point of contact in the projected path of the aircraft has ensured and reported the taxi route is free of personnel and equipment.

8.2.4. VISCON 4. VISCON 4 will be in effect when the RVR is less than 50 meters.

8.2.4.1. Vehicle operations. IAWAFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, only emergency response and alert vehicles will operate on the airfield. These vehicles will not exceed 10 mph while operating on the airfield. A walking guide equipped with a flashing or luminescent wand is recommended for emergency response or alert vehicles operating on the airfield under these visibility conditions.

8.2.4.2. Personnel should maintain their current location on the airfield until visibility improves to VISCON 3 or better. Only movement to clear the path for taxiing aircraft or in support of emergencies is authorized.

8.2.4.3. All aircraft engine runs will cease.

8.2.4.4. Taxi operations. Only aircraft arrivals will be allowed to taxi. Prior to an aircraft taxiing to parking, the Tower will inform each ramp POC in the path of the aircraft for personnel and equipment dispersal. **Note:** Aircraft will not be given taxi clearance from ATC until each ramp POC in the projected path of the aircraft has ensured and reported the taxi route is free of personnel and equipment.

8.2.4.5. Due to the limitations associated with RVR reporting, 86 OG/CC approval must be obtained to deviate from established procedures. **Note:** 86 MXG/CC may approve deviations from procedures listed in this chapter for 86 MXG personnel operating on Ramps 1, 2 and 7; 721 AMXS/CC may approve deviations for 721 AMXS personnel operating on Ramps 5 and 8.

PATRICK X. MORDENTE, Brigadier General, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 10-1001, *Civil Aircraft Landing Permits*, 1 September 1995

AFI 10-1801, *Foreign Governmental Aircraft Landings at United States Air Force Installations*
1 September 1997

AFI 11-202V3, *General Flight Rules*, 22 October 2010

AFI 11-218, *Aircraft Operations and Movement on the Ground*, 28 October 2011

AFI 11-230, *Instrument Procedures*, 30 March 2010

AFPD13-2, *Air Traffic Control, Air Space, Airfield and Range Management*, 07 August 2007

AFI 13-204v3_USAFESUP, *Airfield Operations Procedures and Programs*, 11 May 2012

AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking) FOUO*, 21 June 2010

AFI 13-213_USAFESUP, *Airfield Driving*, 19 March 2012

AFI 13-217, *Drop Zone and Landing Zone Procedures*, 10 May 2007

AFJMAN 11-213, *Military Flight Data Telecommunications System*, 26 Aug 1994

AFMAN 33-363, *Management of Records*, 1 March 2008

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction* 15 June 2012

Air Traffic Act Permit, 11 June 2003

Besondere Anweisung für die Militarische Flugicherung (BesAnMilFS) 2-100, 16 October 2007

FAAO 7110.65, *Air Traffic Control*, 9 February 2012

USAFEI 32-1007, *Airfield and Heliport Planning and Designing*, 2 October 2012

UFC 3-260-01, *Airfield and Heliport Planning and Design*, 17 November 2008

Prescribed Forms:

No forms prescribed

Adopted forms:

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AAS—Aircraft Arresting System

AB—Air Base

AC—Aircraft Commander

ACC—Air Control Center

ACT—Alternate Control Tower

AFI—Air Force Instruction
AFMAN—Air Force Manual
AGE—Aerospace Ground Equipment
AGL—Above Ground Level
ALS—Approach Lighting System
AM—Airfield Management
AMC—Air Mobility Command
AMCC—Air Mobility Control Center
AMD—Air Mobility Division
AOB—Airfield Operations Board
AOF—Airfield Operations Flight
APU—Auxiliary Power Unit
ARA—Airborne Radar Approach
AS—Airlift Squadron
ASR—Airport Surveillance Radar
ATC—Air Traffic Control
ATIS—Automatic Terminal Information Service
AW—Airlift Wing
BAK—Barrier Arresting Kit
BASH—Bird/Aircraft Strike Hazard
BesAnMilFS—Besondere Anweisung für die Militärische Flugicherung
BWC—Bird Watch Condition
C2T—Command and Control Technology
CAT—Category
CCTLR—Chief Controller
CES—Civil Engineering Squadron
CMA—Controlled Movement Area
CRO—Combat Running Offload
CTOT—Controlled Takeoff Time
DASR—Digital Airport Surveillance Radar
DP—Departure Procedure
DME—Distance Measuring Equipment

DoD—Department of Defense
DSN—Defense Switching Network
DV—Distinguished Visitor
DZ—Drop Zone
DZSO—Drop Zone Safety Officer
ELT—Emergency Locator Transmitter
EOD—Explosive Ordnance Disposal
EPU—Emergency Power Unit
ETD—Estimated Time of Departure
FAAO—Federal Aviation Administration Order
FACC—Fire Alarm Communication Center
FLIP—Flight Information Publication
FOD—Foreign Object Damage
Ft—Feet
GCA—Ground Controlled Approach
HATR—Hazardous Air Traffic Report
HCP—Hot Cargo Pad
HHQ—Higher Headquarters
HIRL—High Intensity Runway Lights
IAW—In Accordance With
IFE—In Flight Emergency
IFR—Instrument Flight Rules
ILS—Instrument Landing System
IMC—Instrument Meteorological Conditions
IC—Incident Commander
ISP—Installation Security Plan
JCS—Joint Chiefs of Staff
KIAS—Knots Indicated Airspeed
LO—Launch Officer
MAJCOM—Major Command
MDS—Mission Design Series
MHz—Megahertz

MOA—Memorandum of Agreement
MOC—Maintenance Operations Center
MSL—Mean Sea Level
NGA—National Geospatial-Intelligence Agency
NATO—North Atlantic Treaty Organization
NAVAID—Navigational Aid
NCAR—North Crash Access Road
NM—Nautical Mile
NOTAM—Notice to Airman
NVG—Night Vision Goggles
OPLAN—Operations Plan
OPS—Operations
OG—Operations Group
OSS—Operations Support Squadron
PAPI—Precision Approach Path Indicator
PCAS—Primary Crash Alarm System
PMI—Preventative Maintenance Inspection
PPR—Prior Permission Required
POV—Privately Owned Vehicle
PTD—Pilot to Dispatch
RABI—Ramstein Air Base Instruction
RCR—Rwy Condition Reading
REIL—Rwy End Identifier Lights
RMS TACAN—Ramstein TACAN Identifier
RSC—Rwy Surface Condition
RSRS—Reduced Same Runway Separation
RVR—Rwy Visual Range
Rwy—Runway
SFCC—Security Forces Control Center
SFL—Sequenced Flashing Lights
SCN—Secondary Crash Net
SID—Standard Instrument Departure

SOF—Supervisor of Flying
SOP—Standard Operating Procedure
SWA—Southwest Area
TA—Transient Alert
TACAN—Tactical Air Navigation
TERPS—Terminal Instrument Procedures
Twy—Taxiway
UFC—Unified Facilities Criteria
UHF—Ultra High Frequency
UMA—Uncontrolled Movement Area
UPS—Uninterruptible Power Supply
USAFE—United States Air Forces in Europe
VHF—Very High Frequency
VFR—Visual Flight Rules
VISCON—Visual Condition
VMC—Visual Meteorological Conditions

Terms

Category I (CAT I) operation— A precision instrument approach and landing with a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m.

Category II (CAT II) operation— A precision instrument approach and landing with a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft), and a runway visual range not less than 350 m.

Category IIIa (CAT IIIa) operation.—A precision instrument approach and landing with:

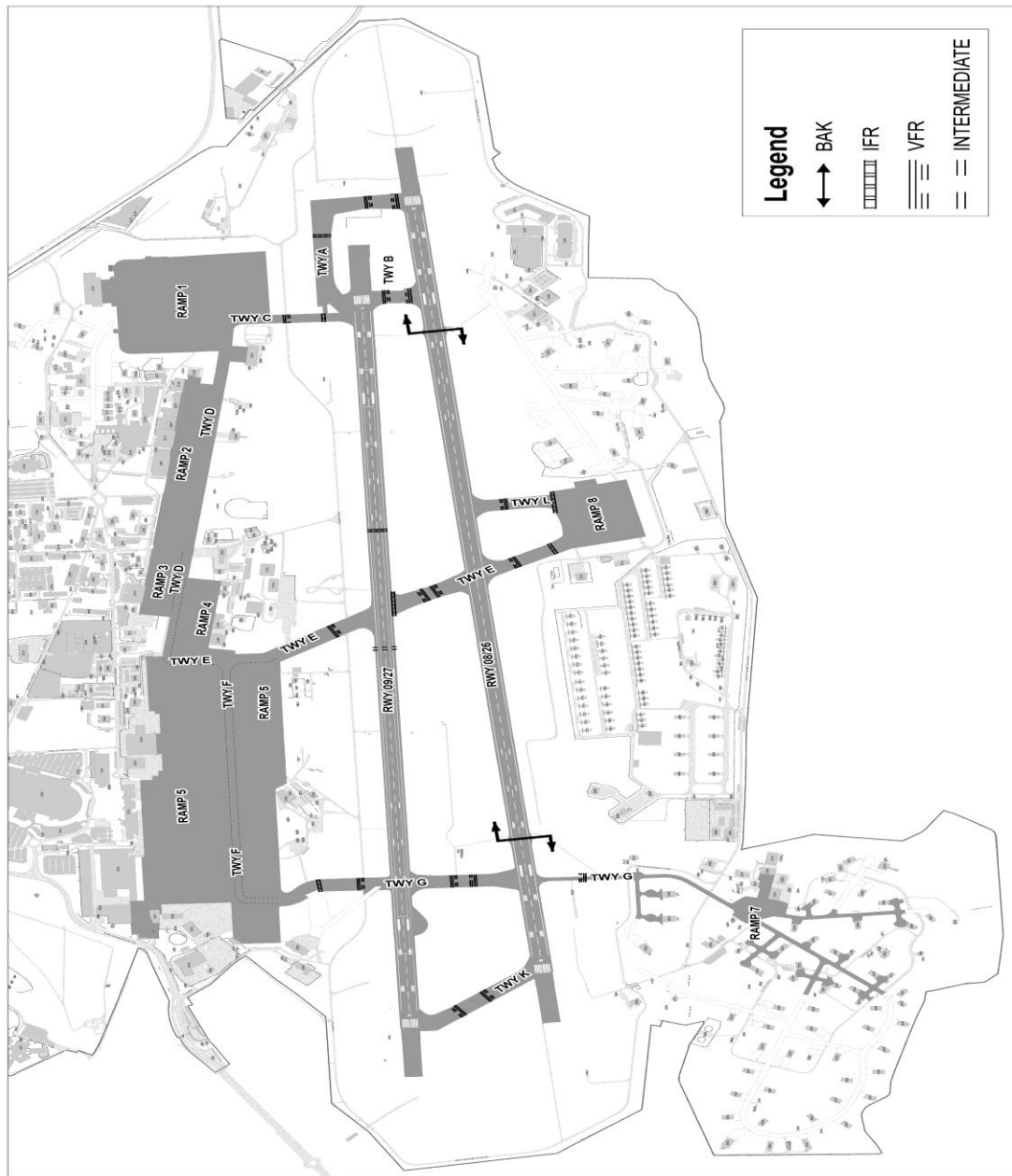
- a) a decision height lower than 30 m (100 ft) or no decision height; and
- b) a runway visual range not less than 200 m.

All Weather Operations.—Any taxi, take-off or landing operations in conditions where visual reference is limited by weather conditions.

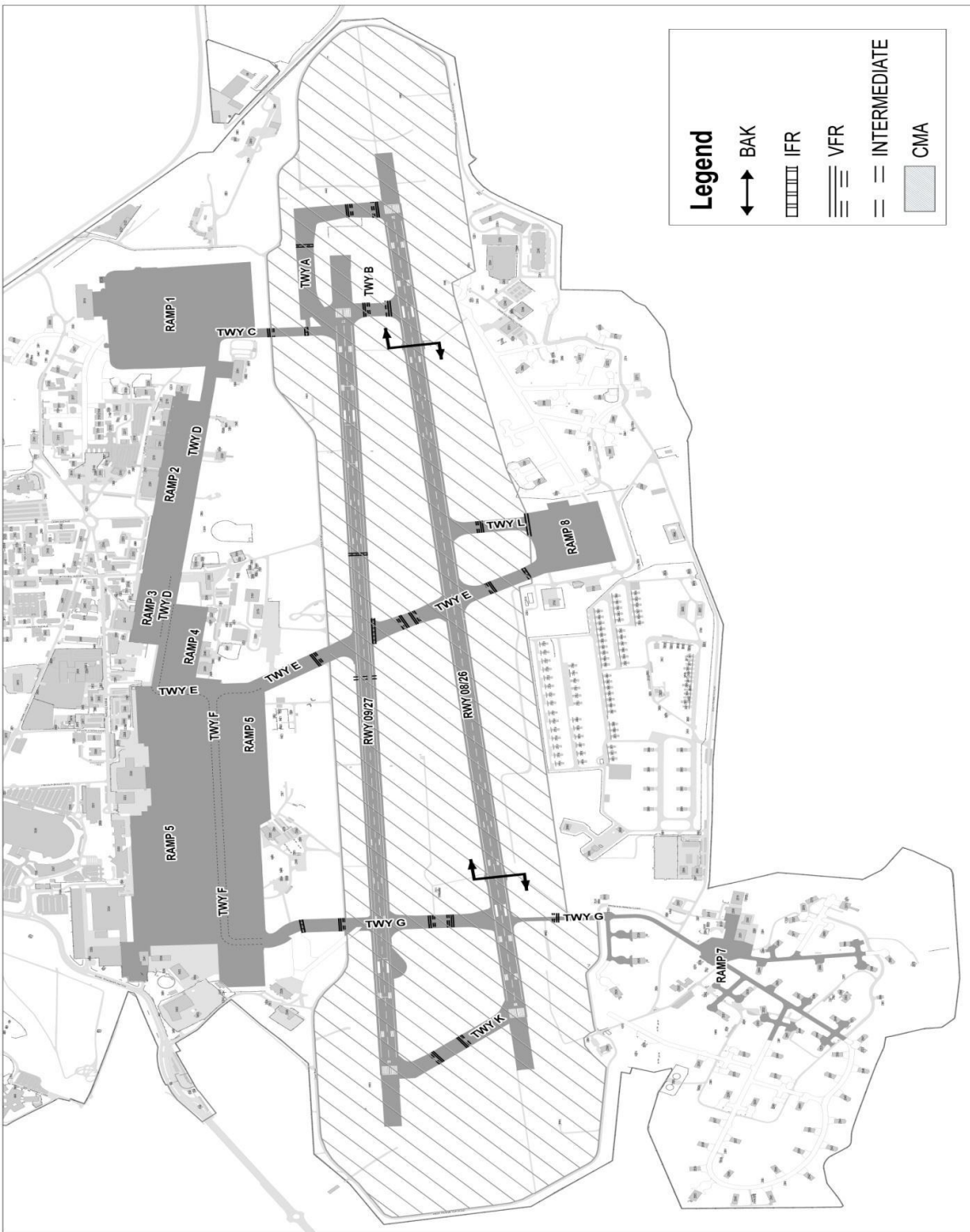
ILS critical area.—An area of defined dimensions about the localizer and glide path antennas where vehicles, including aircraft, are excluded during all ILS operations. The critical area is protected because the presence of vehicles and/or aircraft inside its boundaries will cause unacceptable disturbance to the ILS signal in-space.

ILS sensitive area.—An area extending beyond the critical area where the parking and/or movement of vehicles, including aircraft, is controlled to prevent the possibility of unacceptable interference to the ILS signal during ILS operations. The sensitive area is protected to provide normally within the airfield boundary.

Attachment 2 AIRFIELD DIAGRAM



Attachment 3
CONTROLLED MOVEMENT AREA



Attachment 4

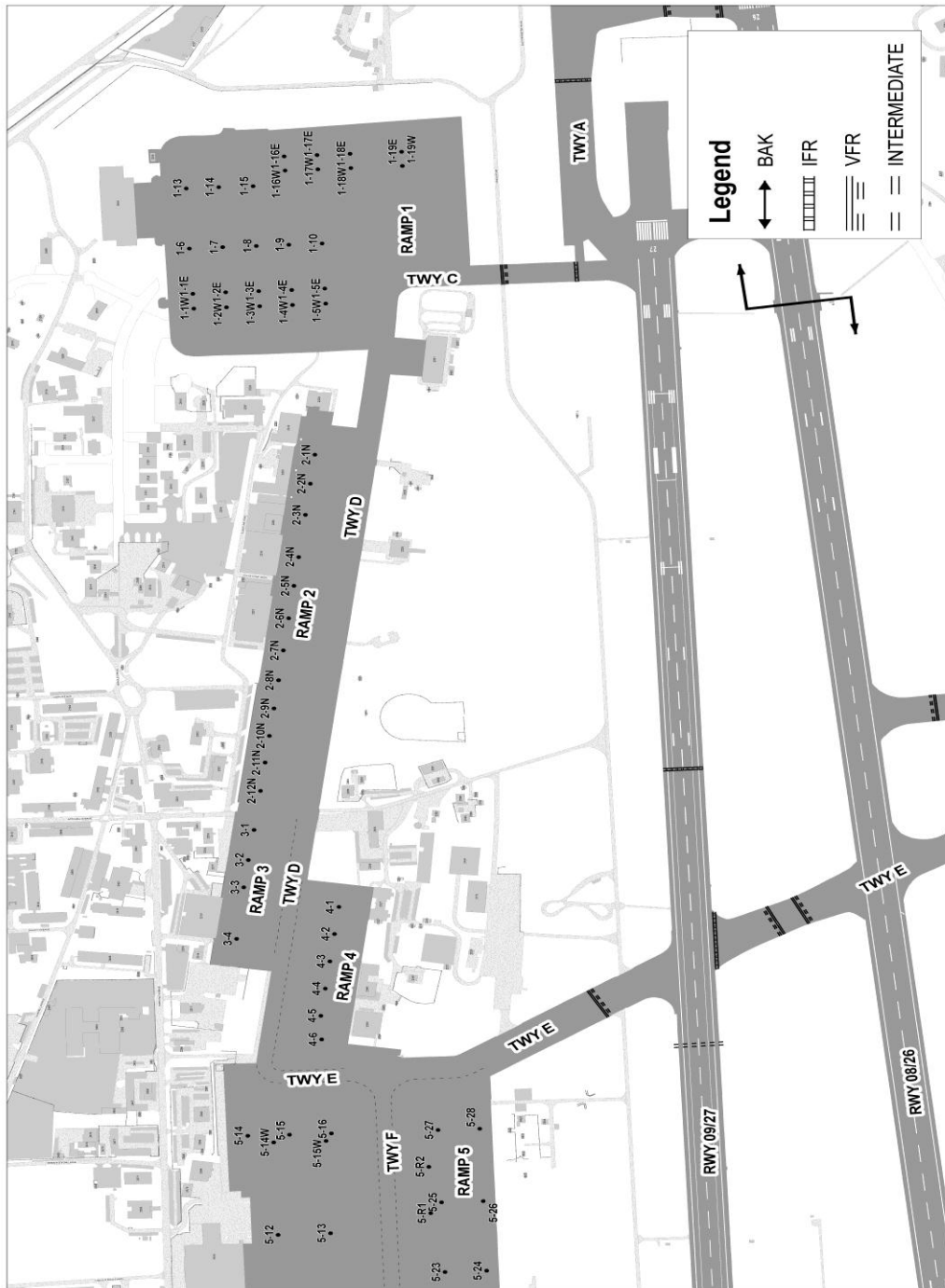
AIRCRAFT ARRESTING BARRIER ENGAGEMENTS PROCEDURES

Table A4.1. Barrier Engagement Procedures.

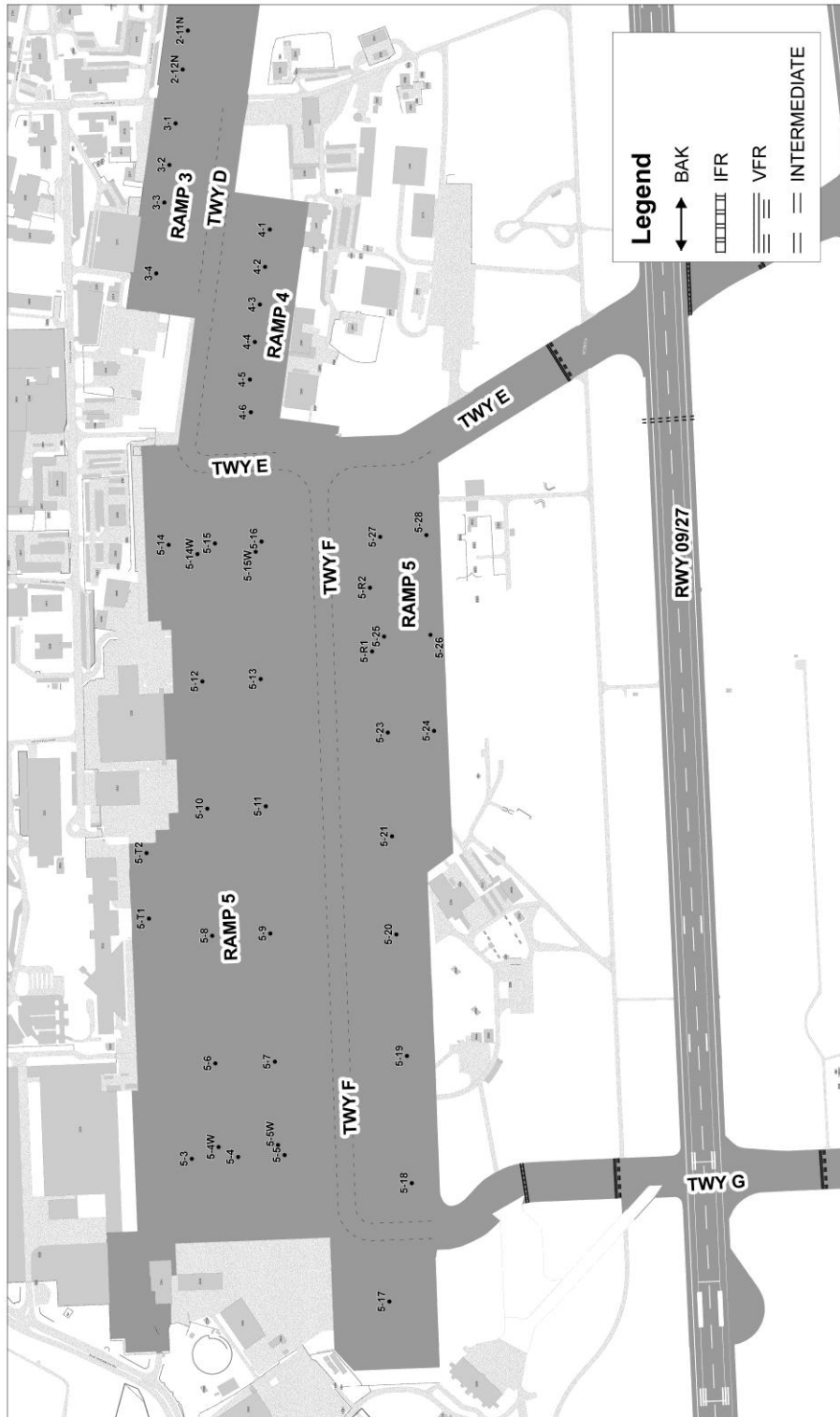
INITIAL RESPONSE AND ASSEMBLY
This will be dictated by the type of barrier engagement.
Fire Department vehicles will be positioned at designated locations along the runway according to the established response plan.
Barrier maintenance will report to the applicable aircraft arresting system. After normal duty hours, barrier-qualified fire department personnel, if available, will report to the aircraft arresting system.
The following agencies will assemble at the intersection of the road leading past Airfield Management and the north crash access road. Crash recovery Ambulance Airfield Management will position for immediate runway access. TA will respond for fighter aircraft.
RUNWAY OPERATIONS SUSPENDED
When the aircraft has engaged the barrier, Airfield Management will notify Tower over the ramp net that runway ops are suspended.
Airfield Management will notify 86 AW/CP and take appropriate NOTAM action.
Traffic and workload permitting, Tower will broadcast on guard frequency that ops are suspended and the estimated time they will resume.
RUNWAY RESPONSE
Fire department and crash recovery vehicles will respond to the aircraft upon clearance from the Tower.
Barrier maintenance will report to the pits. After normal duty hours and on weekends, qualified fire department personnel will report to the barrier pit area.
Airfield Management will obtain clearance from the Tower and inspect the runway for debris.
All other agencies will respond to the aircraft only at the direction of the incident response commander.

<p>The fire department official in command will ensure the aircraft is fire-safe and advise the Tower of assistance requirements. The Tower will relay the requirement to the Airfield Management representative. Vehicles not requested will remain at the assembly point.</p>
<p>The aircraft commander and the 86 OG/CC will determine if the aircraft is capable of self extraction based on aircraft type and mechanical state.</p>
<p>AIRCRAFT EXTRACTION</p>
<p>Hand signals will be used by fire protection and crash recovery personnel.</p>
<p>Fire Department and/or Crash Recovery personnel will remove the aircraft from the barrier cable and contact 786 CES service call for standby response to put the arresting system back in service.</p>
<p>If the aircraft is damaged or disabled, routine priority will normally be used to remove it.</p>
<p>If emergency (30 minutes) or urgent (1+30) priority criteria are to be used, the final decision will be made by the 86 OG/CC.</p>
<p>Note: If prior to the engagement the aircraft commander notifies the Tower with intentions to shut down or determines the situation will warrant shutdown, fire department and crash recovery may proceed onto the runway after receiving clearance from the Tower.</p>
<p>RESUMING RUNWAY OPERATIONS</p>
<p>As the barrier engagement extraction progresses, the incident response commander will pass estimates to the Tower of how long it will take to resume runway ops.</p>
<p>Tower will advise GCA of the anticipated opening time. Tower will advise the incident response commander of any impending emergencies while the engagement clearance is in progress.</p>
<p>As the aircraft is being removed (either by taxi or tow), the Airfield Management representative will check the runway for debris and call the sweeper if necessary.</p>
<p>Power Production standby personnel will perform the post-engagement inspection and notify Airfield Management/Control Tower when the system is operational. When all vehicles are off the runway, the barrier tape rewound, and the runway clear, the Airfield Management representative will notify AM Operations and Tower when runway ops can be resumed. Only Power Production/Barrier Maintenance can return the system to operational status, if they are not available the system will not, under any circumstance, be returned to service. Emergency aircraft will be directed to remaining serviceable arresting system. AM Ops will then notify the 86 AW/CP and take the appropriate NOTAM action.</p>

Attachment 5 AIRFIELD PARKING RAMP 1, 2, 3, 4

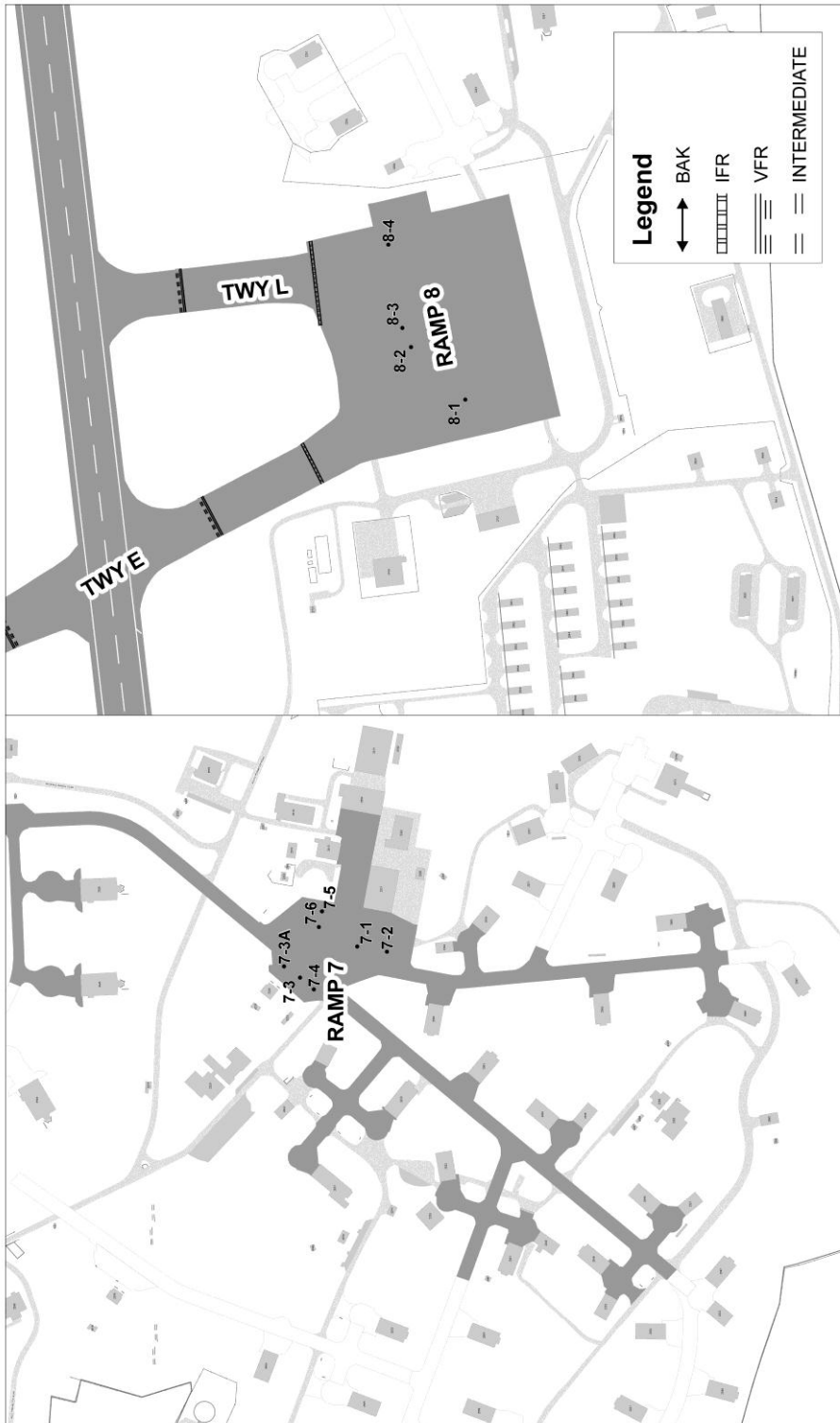


Attachment 6
AIRFIELD PARKING RAMP



Attachment 7

AIRFIELD PARKING RAMP 7, 8



Attachment 8

CLASS E AIRSPACE/RADAR PATTERN

Figure A8.1. Western Airspace with extension (dashed line).

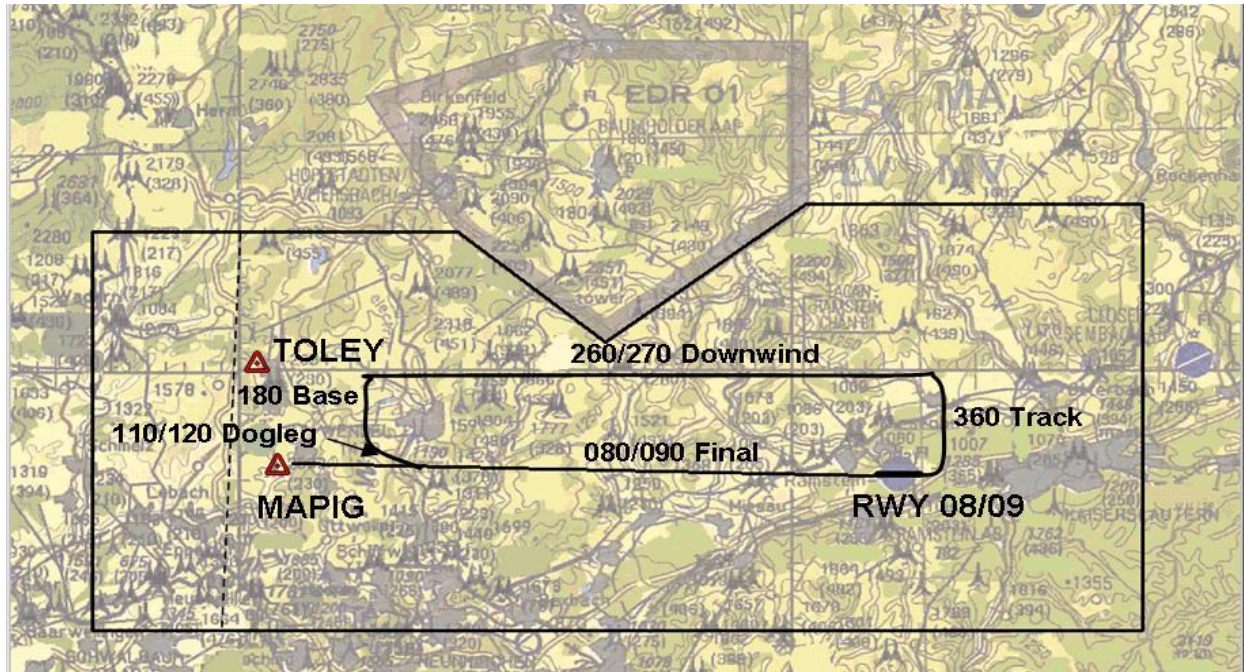
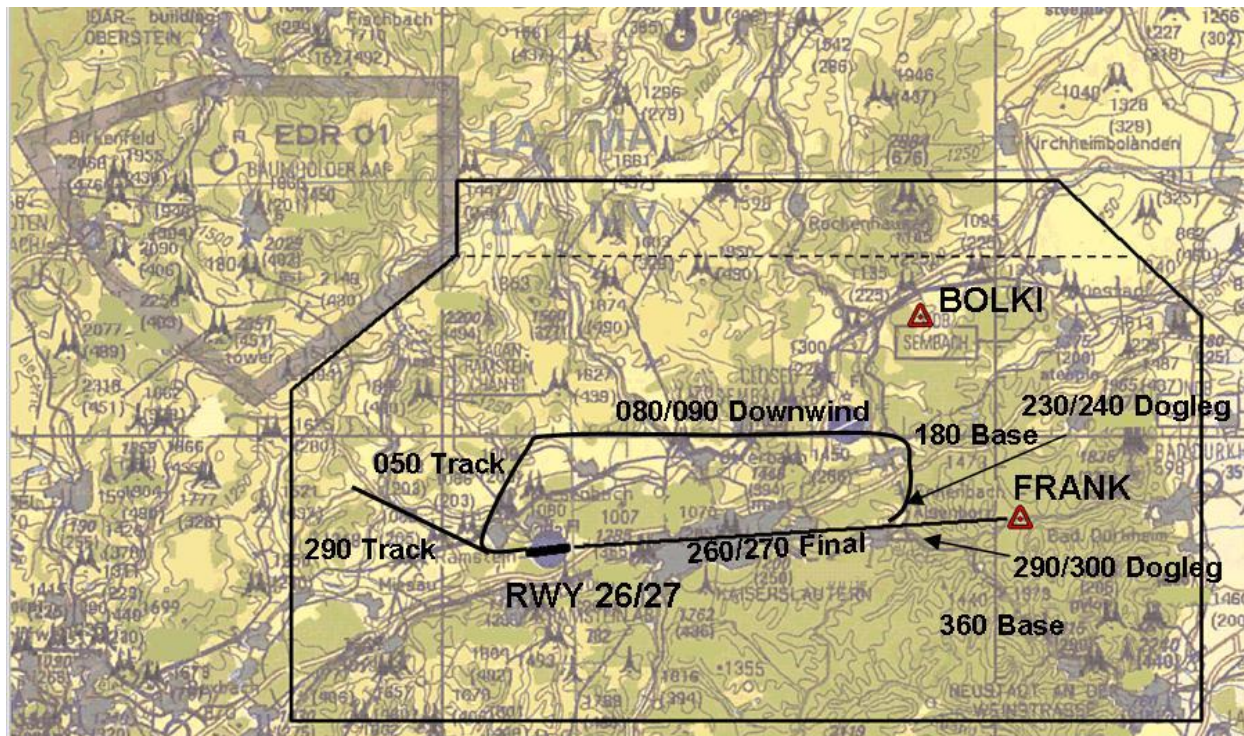


Figure A8.2. Eastern Airspace with extension (dashed line).



Attachment 9

CLASS D AIRSPACE/VFR OVERHEAD/INSIDE CLOSED PATTERN

Figure A9.1. Class D Airspace

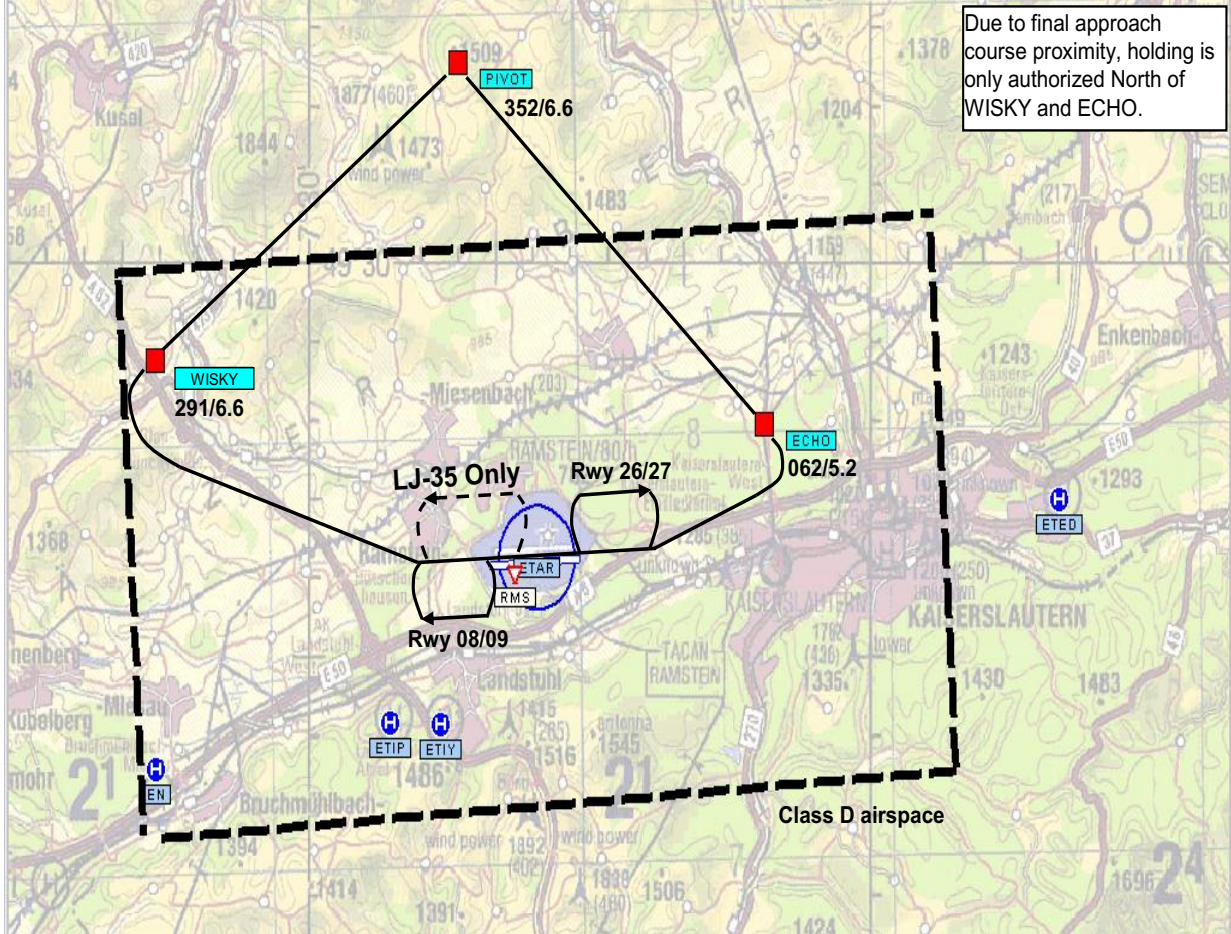


Table A9.1. Reporting Points.

REPORT THE FOLLOWING POINTS AT 3000' MSL UNLESS OTHERWISE COORDINATED			
WISKY	AUTOBAHN BRIDGE	RMS 291/6.6	N49-28.47 E07-25.74
PIVOT	GRAVEL PIT	RMS 352/6.6	N49-32.61 E07-33.75
ECHO	ROAD 'X'	RMS 062/5.2	N49-28.50 E07-42.20

Attachment 10

ILS CAT II/IIIA CRITICAL AREAS



Attachment 11

VFR TACTICAL PROCEDURES (86 AW AIRCRAFT ONLY)

A11.1. VFR Random Step and Spiral Up Departure

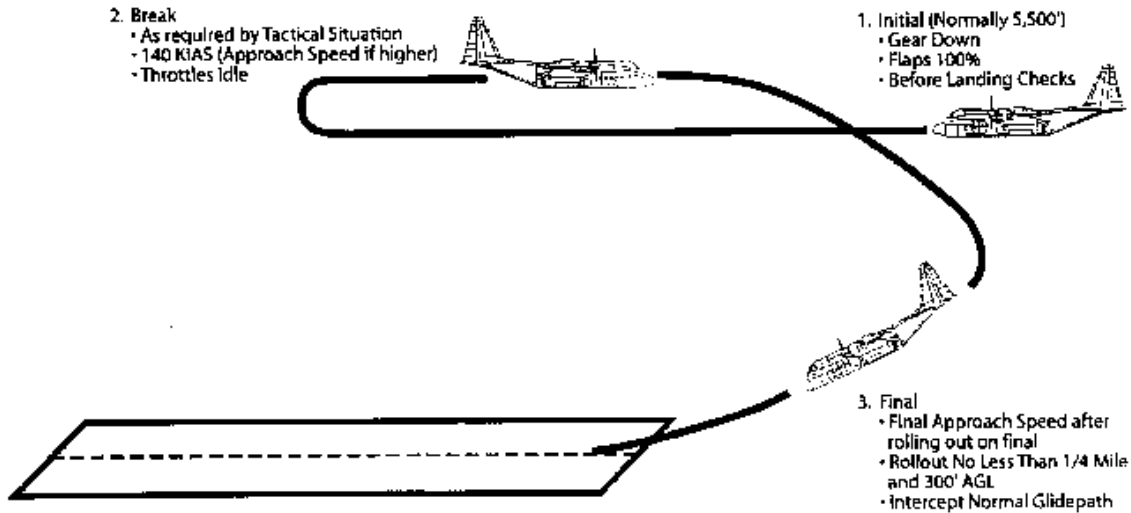
A11.1.1. Initial – 5500 MSL or coordinated altitude.

A11.1.2. Break – coordinate with Tower, 140 KIAS.

A11.1.3. Final – no less than ¼ mile and 300 AGL.

Figure A11.1. VFR Random Step and Spiral Up Departure Procedure

NOTE: Airspeeds, altitudes, and distances are approximate and may be adjusted to fit the tactical situation



A11.2. VFR Random Shallow Approach

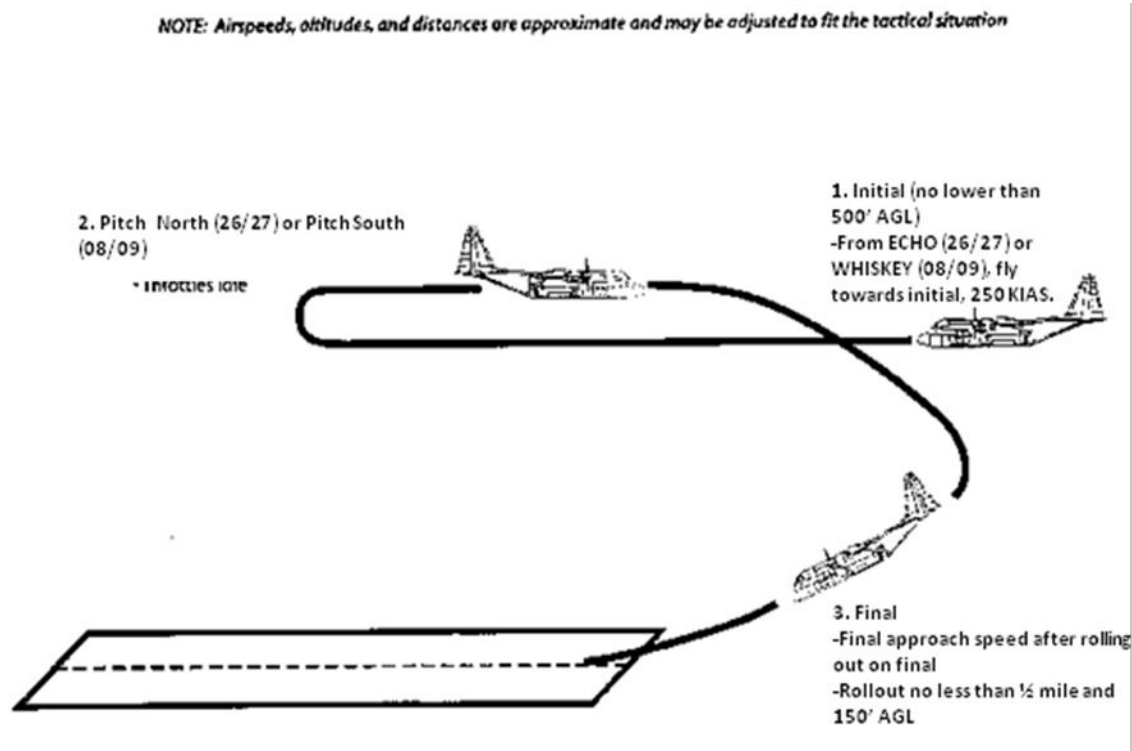
A11.2.1. May be flown as a straight-in, pitch to the north, or a 90-degree abeam with a 270-degree pitch to final.

A11.2.2. Initial- no less than 500 AGL, 250 KIAS.

A11.2.3. Break- to the north at random, 250 KIAS.

A11.2.4. Final- 140 KIAS.

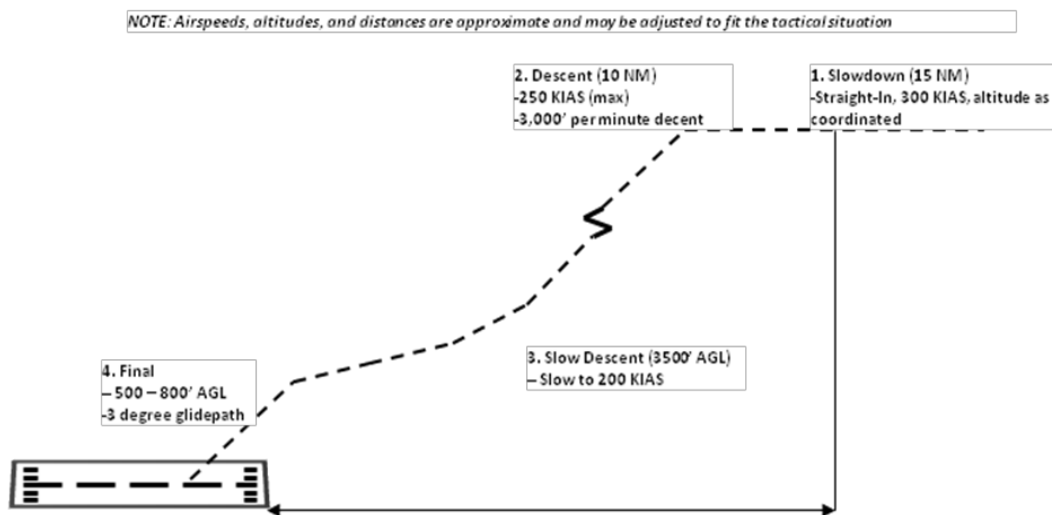
Figure A11.2. VFR Random Shallow Approach Procedure



A11.3. VFR High Altitude Tactical Straight-In Approach

- A11.3.1. Straight-in, altitude as coordinated, 300 KIAS.
- A11.3.2. Descend at 10 NM, 3000 ft per minute descent, 250 KIAS.
- A11.3.3. Slow descent when reaching 3500 AGL.
- A11.3.4. Final – 500-800 AGL, 3 degree glide path.

Figure A11.3. VFR High Altitude Tactical Straight-In Approach Procedure



A11.4. VFR Low Altitude Tactical Straight-In Approach

A11.4.1. Straight-in, altitude as coordinate (usually 1000 AGL), 290 KIAS.

A11.4.2. Descend at 3 NM, no more than 170 KIAS.

A11.4.3. Final – 3 degree glide path.

Figure A11.4. VFR Low Altitude Tactical Straight-In Approach Procedure



A11.5. VFR Curvilinear Approach

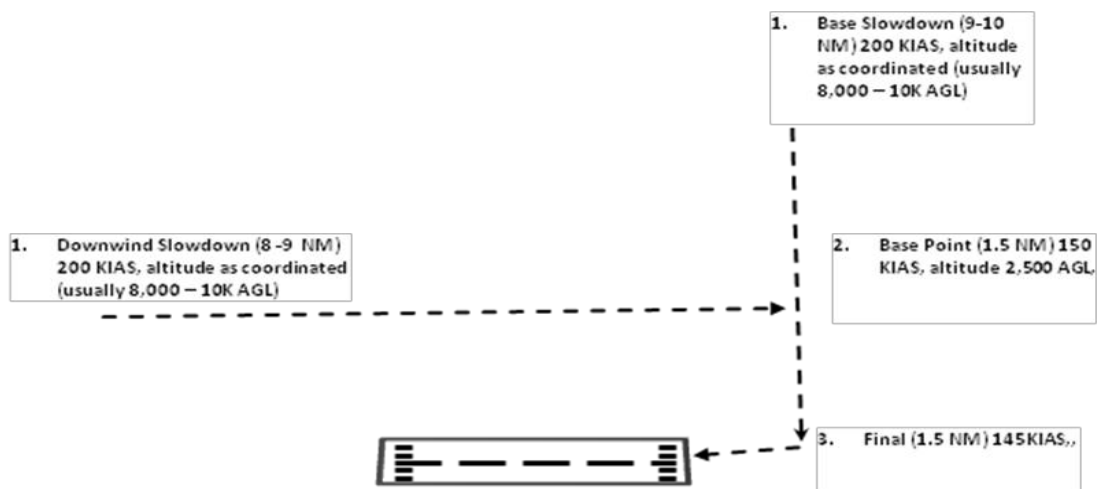
A11.5.1. Base slowdown – 9-10 NM, altitude as coordinated (usually 8000 – 10K AGL), 200 KIAS.

A11.5.2. Downwind slowdown – 8-9 NM, altitude as coordinated (usually 8000 – 10K AGL), 200 KIAS.

A11.5.3. Base point – 1.5 NM, altitude 2500 AGL, 150 KIAS.

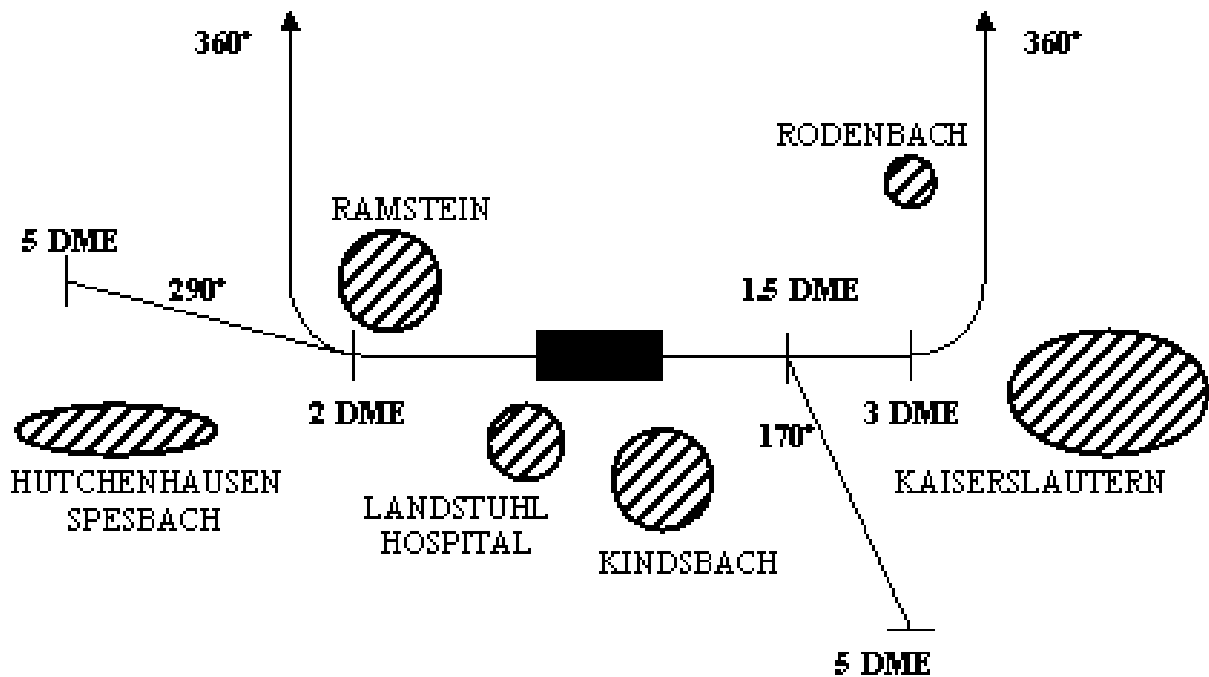
A11.5.4. Final – 1.5 NM, 145 KIAS.

Figure A11.5. VFR Curvilinear Approach Procedure



Attachment 12

VFR DEPARTURE PATTERN

**VFR Departure Procedures**

1. Takeoff Runway 08/09 South.
 - a. Climb straight ahead to 1.5 DME.
 - b. Turn right to heading 170 degrees and report leaving Class D airspace.
2. Takeoff Runway 08/09 North.
 - a. Climb straight ahead to 3 DME.
 - b. Turn left to heading 360 degrees and report leaving Class D airspace.
3. Takeoff Runway 26/27 North.
 - a. Climb straight ahead to 2 DME.
 - b. Turn right to heading 360 degrees and report leaving Class D airspace.
4. Takeoff Runway 26/27 West.
 - a. Climb straight ahead to 2 DME.

- b. Turn right to heading 290 degrees.

Note: Fighters must climb to 4000 MSL or higher for noise abatement purposes.

Attachment 13

JETTISON OF EXTERNAL STORES AND CARGO/AIRCRAFT ABANDONMENT AREA

Figure A13.1. Jettison of External Stores and Cargo

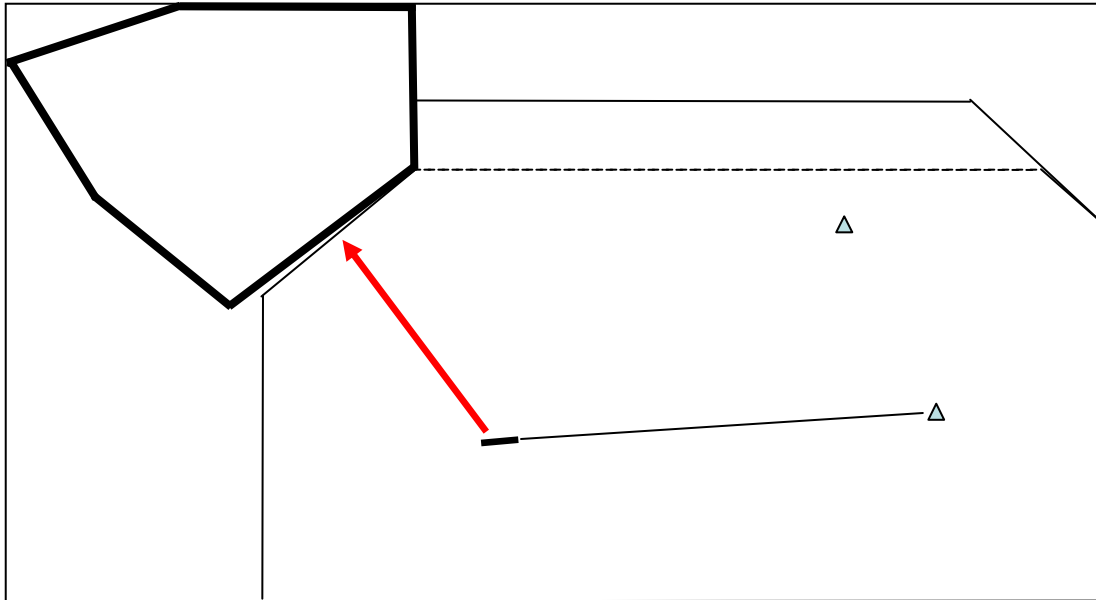


Figure A13.2. Aircraft Abandonment Area

