BY ORDER OF THE COMMANDER
LUKE AIR FORCE BASE

LUKE AIR FORCE BASE
INSTRUCTION 13-212

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Nuclear, Space, Missile, Command and Control

RANGE PLANNING AND OPERATIONS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Mr. Charles Buchanan)

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This instruction provides specific guidance in accordance with (IAW) Air Force Manual (AFMAN) 13-212V1, *Range Planning and Operations*, and AFMAN 13-212 Volume 1, Air Education and Training Command (AETC) Supplement, *Range Planning and Operations*, applicable to all weapons systems and all units conducting operations on the Barry M. Goldwater Range (BMGR) East and in associated airspace managed by the 56th Range Management Office (56 RMO) for the 56th Fighter Wing (56 FW). This instruction is applicable to all military, civilian, and contractor personnel. Waivers to guidance in this publication are not authorized. It also applies to the Air Force Reserve Command (AFRC) and to Air National Guard (ANG) and their units. Refer recommended changes and questions about this publication to the OPR using the DAF Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. The authorities to waive wing, unit, delta or garrison level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. Submit requests for waivers through the chain of command to the appropriate tier waiver approval authority or alternately to the publication OPR for non-tired compliance items. See DAF Manual (DAFMAN) 90-161, *Publishing Processes and Procedures,* for a description of the authorities associated with the tier numbers.

Use this instruction with AFMAN 13-212v1; AFMAN 11-214, *Air Operations Rules and Procedures;* AFMAN 13-217 *Drop Zone and Landing Zone Operations;* and other applicable guidance. **This instruction is not to be used as a stand-alone document.**

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. The following are some of the significant changes. **Chapter 2** limits check-ins for first mission of the day to no more than 15 minutes early and restricts personnel to Explosive Ordnance Disposal (EOD) and Range Maintenance only during tactical range detonation days. **Chapter 3** updates Cabeza Prieta National Wildlife Refuge (CPNWR) altitude restrictions to include new lower altitude section in the northern part of the refuge. **Chapter 4** clarifies requirement for Snakeye coordination when transitioning from one range to another and establishes criteria whereby the transit corridor can be used for tactical maneuvering. **Chapter 5** adds Joint Threat Emitters (JTE) comm sites and associated coordinates. **Chapter 7** adds section on Central Tactical Range (CENTAC) operations. **Chapter 9** updates control area figure to include Hazard Area and adds associated description.

Chapter 1

BACKGROUND AND RESPONSIBILITIES

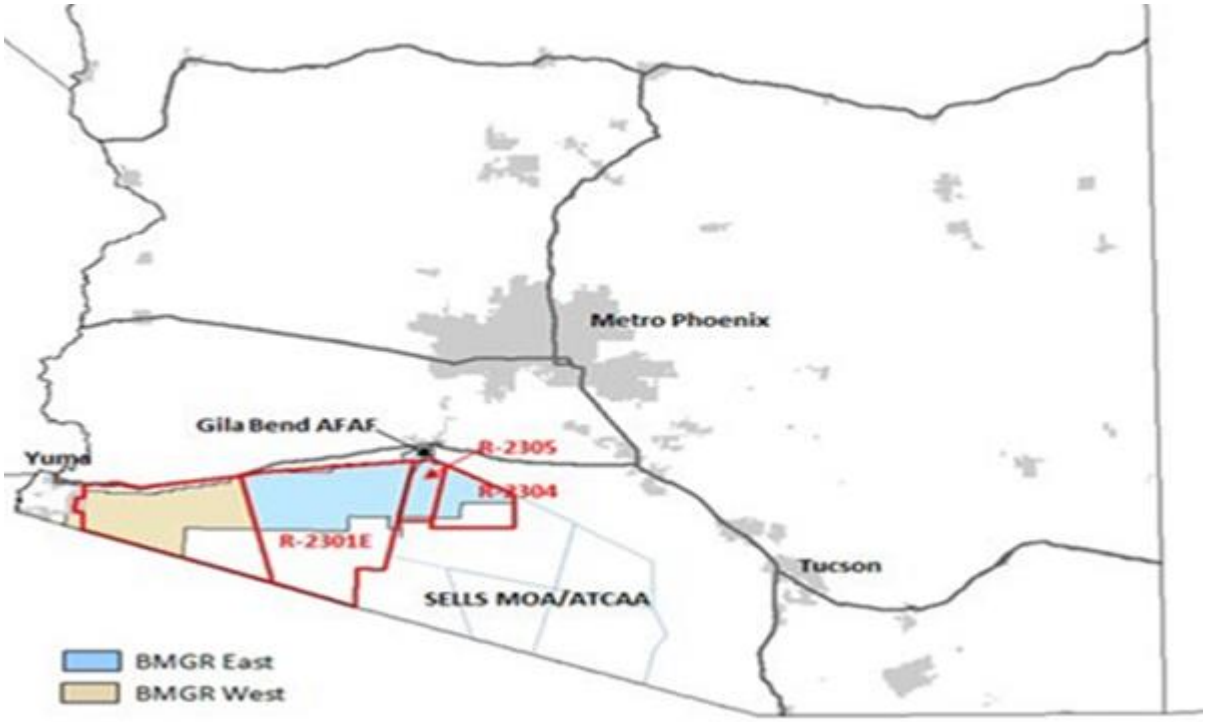
1.1. General Description.

1.1.1. This instruction provides information and procedures for all units operating in the USAF-managed portion of the Barry M. Goldwater Range (BMGR), which is referred to as the BMGR East.

1.2. Barry M Goldwater Range Defined.

1.2.1. In 1999 Congress assigned management authority over the eastern and western segments of the BMGR to the Secretaries of the Air Force and Navy, respectively (Public Law 106-65; referred to hereinafter as the MLWA of 1999). The eastern segment, the BMGR East, is approximately 1,050,000 acres; the western segment, BMGR West, is approximately 691,760 acres. A five-mile-wide air buffer zone along the R-2301E and R-2301W boundary separates the two segments (**Figure 1.1**.).

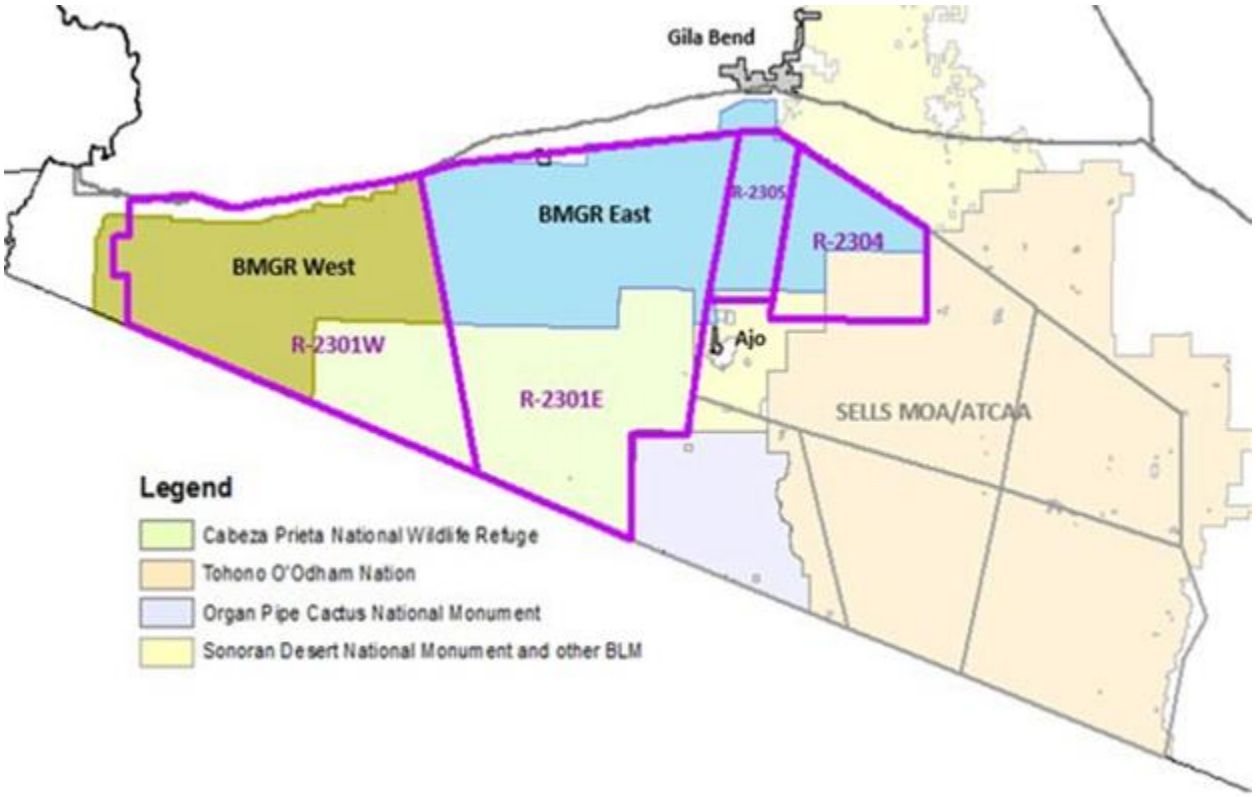
Figure 1.1. Barry M Goldwater Range.



1.2.2. BMGR East. The BMGR East has three large Restricted Airspace segments above it, R-2301E, R-2304, and R-2305, and is situated on either side of State Route (SR) 85, as shown in **Figure 1.2**. It is divided into eight subranges in order to safely support multiple, simultaneous training or other operations. They include the North, South, and East Tactical Ranges (NTAC, STAC, ETAC), conventional ranges with scoring capability (Ranges 1-4), and the Air-to-Air (AA) range. Subranges are defined in **Chapter 3**, and attributes of individual subranges are provided in Chapters **6** and **7**. The Air Force administers the BMGR East

through the 56th Fighter Wing (FW) Range Management Office (56 RMO) at Luke Air Force Base (AFB).

Figure 1.2. BMGR East, BMGR West, and Surrounding Areas.



1.2.2.1. The BMGR East Complex. In addition to the land area described above, the BMGR East Complex includes the Sells Military Operations Area (MOA)/Air Traffic Control Assigned Airspace (ATCAA), Restricted Areas 2301E, 2304 and 2305, and Gila Bend Air Force Auxiliary Airfield (Gila Bend AFAF).

1.2.3. BMGR West. The western segment of the BMGR (Figure 1.2) has R- 2301W above it. The Marine Corps administers the BMGR West through the Range Management Division, Marine Corps Air Station (MCAS) Yuma. Specific BMGR West points of contact are as follows:

Commanding Officer, Attn: Range Scheduling H & HS ATC Box 99160

MCAS Yuma, AZ 85369-9160

Phone: (DSN) 269-2214/2215 (Comm) 928-269-2214/2215

FAX: (DSN) 269-2964 (Comm) 269-2964

Range Management Department

P.O. Box 99160 MCAS/YUMA Yuma, AZ 5369

Phone: (DSN) 269-7150 (Comm) 928-269-7150

1.2.4. Adjacent federal and tribal lands. Most areas that border BMGR East are managed by other government agencies (see **Figure 1.2**), and the 56 RMO Intergovernmental Liaison maintains close coordination with these entities: 56 FW Intergovernmental/Native American Liaison 7101 Jerstad Luke AFB, AZ 85309 623-856-5857/8520

1.2.4.1. Cabeza Prieta National Wildlife Refuge (NWR). The refuge abuts the southern boundary of the range. It is overlain by R-2301E (and R-2301W).

1.2.4.2. Sonoran Desert National Monument (NM). A large portion of the monument, which is managed by the Bureau of Land Management (BLM) Phoenix District, lies immediately north of ETAC.

1.2.4.3. BLM Ajo Block. This area lies south of the range in the vicinity of Ajo, Arizona, underlying R-2304, R-2305, and the SELLS MOA/AATCA. The Ajo block is managed by BLM Phoenix District.

1.2.4.4. Tohono O'Odham Nation. Tribal lands are adjacent to the range south of ETAC and are overlain by R-2304 and the SELLS MOA/ATCAA. Access to tribal land for DoD military and civilian personnel must be coordinated through the 56 FW Native American Liaison.

1.3. Responsibilities.

1.3.1. Units of the 56 FW, contractors, and range users share responsibility for understanding and abiding with applicable laws, regulations, and instructions.

1.3.2. Range users.

1.3.2.1. Commanders. Commanders of all units and agencies which operate aircraft or perform ground operations within the boundaries of BMGR East will ensure compliance with the provisions of this instruction by all personnel within their jurisdiction.

1.3.2.2. Aircrew. Units requesting flight operations on BMGR East will have thoroughly reviewed this instruction for mission planning and will make contact with the appropriate point of contact (POC) if proposing to perform operations not specifically described in this instruction. All requests for range uses outside the scope of this instruction must be made in writing (e-mail can suffice) to the appropriate POC. Aircrew must have the most current edition of this instruction in their possession for mission planning and must review Range NOTAMs published on the Luke AFB site on the Air Force's Center Scheduling Enterprise (CSE) at **https://cseaf.eglin.af.mil/cse/home.aspx**. Strict adherence to ordnance, target, and laser restrictions is essential. The restricted areas are subdivided for multiple simultaneous uses; following proper area entry/exit procedures and maintaining flight operations within scheduled subranges are crucial to flight and ground safety.

1.3.2.2.1. All casual users and hosted units must receive a local area orientation briefing before operating on BMGR East.

1.3.2.2.2. All users of the BMGR East will check in with Snakeye on entry/exit. Snakeye will log all airspace entry and exit times in CSE.

1.3.2.2.3. All users of the BMGR East will report ordnance expenditures and number of duds/jettisons on tactical ranges to Snakeye when exiting the airspace; Snakeye will

log expenditures in CSE. Numbered range users report this information to RCOs, who will log weapons expenditures into CSE.

1.3.2.2.4. To ensure mission impacts are properly tracked, pilots will advise Snakeye of any unusual airspace or range issues that adversely affected their training (e.g., unauthorized activity/Border Patrol operations, pronghorn sightings/target closures, stranger air traffic, etc.). Snakeye will document IAW **paragraph 10.5.6** and provide amplifying information to 56 RMO (DO/ASM/ARO) as required.

1.3.2.2.5. 56 FW pilots will log all supersonic activity in Graduate Training Integration Management Systems (GTIMS). Other users must report supersonic activity to 56 RMO/ASM (623-856-5855, DSN 896).

1.3.2.3. Mission Planners. Essential information for planners is included throughout this instruction, including range operating hours, potential funding requirements associated with operating outside those hours, capabilities, restrictions, and the scheduling process. Major events and special activities must be coordinated with 56 RMO/ARO early in the planning stages to maximize the likelihood that proposed activities can be supported. Event planners will complete the Range Activity Request form, which is available on the BMGR East Air and Range Operations SharePoint site at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**. This form identifies capabilities and support available on the BMGR East and helps ensure that all user needs are identified through the planning process. The completed form must be submitted to 56 RMO/ARO at least 45 days in advance. Additional information is available on the CSE and SharePoint sites referenced above and throughout this document.

1.3.2.4. Joint Terminal Attack Controllers (JTAC). The BMGR East is regularly used for JTAC, Tactical Air Control Party (TACP), Forward Air Controller (FAC), and fire control officer training. **Note:** throughout the remainder of this document, the term "JTAC" will be used to refer to ground personnel controlling aircraft on range. JTACs are responsible for reviewing and complying with requirements for both aircrew and ground parties operating on the BMGR East. JTAC use is coordinated through 56 RMO/ARO.

1.3.2.5. All range users. Aircrew and ground-access personnel must understand and comply with rules protecting the endangered Sonoran pronghorn (SPH) antelope while operating in the BMGR East Complex. These include targets closed to ordnance employment, speed limit restrictions on range roads, dry overflight of ranges to support SPH morbidity checks, etc. See **paragraph 2.2.5** for additional information.

1.3.2.6. Ground personnel. All ground parties, including JTACs and contractors, must receive a range safety briefing before going on range.

1.3.3. 56th Fighter Wing.

1.3.3.1. 56th Range Management Office. The 56th Range Management Office (56 RMO) has primary responsibility for the BMGR East complex.

1.3.3.1.1. Director, 56 RMO. The Director (56 RMO/DIR) is the delegated Range Operating Authority (ROA) as defined in AFMAN 13-212v1, paragraph 2.9.. The ROA's responsibilities include but are not limited to operating the range, appointing a Range Operations Officer (ROO), Range Safety Officer (RSO), and Laser Safety

Officer (LSO), ensuring compliance with AFMAN 13-212v1 and other directives, and publishing and maintaining a range supplement to that AFMAN. Phone: (DSN) 896-8520 (Comm) 623-856-8520; send correspondence to: Director, 56th Range Management Office 7101 Jerstad Luke AFB, AZ 85309

1.3.3.1.2. 56 RMO Director of Operations. The Director of Operations (56 RMO/DO) is responsible for all operations on the BMGR East and in associated airspace managed by the 56 RMO, and serves as the Range Operations Officer (ROO), IAW AFMAN 13-212v1. The 56 RMO/DO is the OPR for organizing and leading the Annual Range Board, a meeting of BMGR East users. Phone: (DSN) 896-8790 (Comm) 623-856-8790.

1.3.3.1.3. Air Range Operations. The Air Range Operations section (56 RMO/ARO) is the POC for operational employment within BMGR East. The 56 RMO/ARO oversees daily operations on the BMGR East and is responsible for mid- and long-range planning and program management. ARO also is responsible for JTAC scheduling and coordination, managing the Range Residue Removal (R3) program, and coordination with major event planners. The RSO and LSO reside in ARO. 56 RMO/ARO compiles and submits Toxics Release Inventory Reports for range munitions. Phone: (DSN) 896-8813 (Comm) 623-856-8813.

1.3.3.1.4. Airspace Management. The Airspace Management section (56 RMO/ASM) coordinates all airspace issues, including Letters of Agreement (LOAs) with the Federal Aviation Administration (FAA) and other users. The 56 RMO/ASM also coordinates counter measures and Electronic Counter Measures (ECM) clearances and authorizations, as well as all activities on the Military Training Routes (MTRs) assigned to the 56th Fighter Wing. The 56 RMO/ASM is responsible for the certification of Range Control Officers (RCOs) and serves as the FAA's Control Tower Operator examiner for Gila Bend AFAF (KGXF) Tower. 56 RMO/ASM will compile a monthly airspace utilization report for 56 FW (CPTS and HO) and annual utilization report IAW DAFMAN 13-201, *Airspace Management*. Phone: (DSN) 896-5855 (Comm) 623-856-5855.

1.3.3.1.5. Scheduling. The Scheduling section (56 RMO/ASMS) is responsible for managing the scheduling process/procedures and for overall allocation and scheduling of 56 FW ranges, airspace and MTRs. Request airspace or range time at:

Phone: (DSN) 896-8466 (Comm) 623-856-8466

FAX: (DSN) 896-7655 (Comm) 623-856-7655

Email: **UDG_56rmo_bmgrscheduling@us.af.mil**

1.3.3.1.5.1. Center Scheduling Enterprise, Luke AFB Site (CSE): **https://cseaf.eglin.af.mil/cse/home.aspx/.** CSE serves as the initial entry point for users to obtain information on scheduling the range and points of contact for questions. Information posted on the CSE Luke AFB site includes Range NOTAMs, points of contact, updated scheduling procedures, access to this instruction, scheduling information, and links to other reference sources, such as drop zones (DZ) and landing zones (LZ), target and range imagery.

1.3.3.1.6. Daily Operations and Oversight. The ROO has delegated much of the responsibility for daily management to Contractors and Contracting Officer's Representatives (CORs).

1.3.3.1.6.1. Operations and Maintenance. Under the oversight of CORs at Gila Bend AFAF, the BMGR/Gila Bend AFAF Operations and Maintenance contractor sustains the range and operates Gila Bend AFAF to include airfield operations, fire department/emergency response, billeting, civil engineering, logistics, and pronghorn monitoring:

56 RMO/COR

Bldg 3096, First Street

Gila Bend AFAF, AZ 85337

Phone: (DSN) 896-5261 (Comm) 623-856-5261

1.3.3.1.6.2. Air Combat Training Systems. The Air Combat Training Systems (ACTS) Section is responsible for managing BMGR East communications and instrumentation equipment. Under the oversight of CORs at Luke AFB, the ACTS contractor is responsible for operating the ROCC and a variety of advanced training systems including Air Combat Maneuvering Instrumentation (ACMI), Unmanned Threat Emitters (UMTEs), Joint Threat Emitters (JTEs), simulated surface-to-air missiles (Smokey SAMs), laser feedback devices, and the tactical data-link network. The ROCC, call sign *Snakeye*, plays a critical role in the safety of operations on the BMGR East. This function will be referred to as *Snakeye* throughout the remainder of this document. Specific requirements are mentioned in several chapters and the responsibilities of Snakeye are further defined and detailed in **Chapter 10**. Contact information below:

Phone: (DSN) 896-3915/3976 (Comm) 623-856-3915/3976

FAX: (DSN) 896-7143 (Comm) 623-856-7143.

1.3.3.1.7. 56 RMO/ESM. The 56 RMO Environmental Sciences Management Section is responsible for managing BMGR East natural and cultural resources in compliance with federal environmental laws and regulations and for assessing the impact of military and nonmilitary activities on the range environment using the Air Force's *Environmental Impact Assessment Process* (32 CFR 989). A key function of this office is coordination with US Fish and Wildlife Service (USFWS) and Sonoran Pronghorn Recovery Team in the protection and recovery of endangered species.

1.3.3.2. 56th Civil Engineering Squadron (56 CES). The Chief, EOD Flight (56 CES/CED), is responsible for providing range clearance and EOD support for BMGR East. 56 CES/CED is responsible for providing qualified personnel to conduct EOD Safety Briefings, upon unit commander's request, according to this publication. 56 CES/CED develops a detailed plan for each range clearance operation and coordinates with 56 RMO and maintenance contractor personnel. 56 CES/CED prepares the Range Clearance Report required by AFMAN 13-212v1, paragraph 8.3.

1.3.3.3. The Chief of Safety (56 FW/SE) conducts periodic safety reviews of Gila Bend AFAF. As needed, the 56 FW/SE will monitor, investigate, and coordinate with

concerned/involved units, all reports of violations, incidents, or accidents in BMGR East that affect safety of air or ground operations.

1.3.4. Shared responsibilities. The 56 RMO and all range users share responsibility for safety of operations and incident response.

1.3.4.1. Range Incidents. Range incidents (such as internal airspace violations, ground intrusions, unintentional release, ordnance delivered on closed targets, etc.) must be reported to Snakeye, or to the RCO if on a numbered range, by aircrew or ground parties. Snakeye/RCO will report all incidents by phone to the 56 RMO/ARO (or 56 RMO/DO if ARO is not available) within 1 hour of its occurrence. Snakeye/RCO also will complete the BMGR East Incident Report (**Attachment 2**) and forward it to the appropriate offices within 3 hours. The 56 RMO will provide initial response and follow-on support for all range incidents within the BMGR East Complex IAW applicable 56 FW and 56 RMO Operating Instructions (OIs).

1.3.4.2. Airspace Violations. All airspace violations will be logged by Snakeye and reported to 56 RMO/ASM within one hour of the incident. The 56 RMO/ASM will investigate and process appropriate action for the violation.

1.3.4.3. Emergency Response. In case of emergency on range, notify Snakeye immediately by telephone or radio. Snakeye will notify Gila Bend AFAF Emergency Communication Center (ECC). If Snakeye is unavailable, contact the ECC directly: Snakeye 623-856-8818/8819 ECC 623-856-5200/5241.

1.3.4.3.1. Aircraft accident. Aircraft accidents may be reported to Snakeye by anyone. Snakeye will advise respective command posts of an aircraft incident. Other avenues of reporting/communication are GXF tower, ECC, and respective Supervisor of Flying (SOF). Snakeye will assist the on-scene commander as much as possible and direct traffic as the situation warrants. The Gila Bend AFAF emergency management team will convene upon notification of an aircraft accident within BMGR East. Gila Bend AFAF fire, medical, and security personnel will respond to aircraft accidents.

1.3.4.3.2. Ground party medical emergency. BMGR East is a very remote operating area. Medical attention is limited to first response stabilization; Gila Bend Fire and Emergency Services (FES) will respond to all reported medical emergencies when available. Serious injuries/conditions will require transport to the Phoenix metropolitan area for treatment. The ECC will coordinate transportation either by ambulance or medical evacuation helicopter if needed. Typically, civilian contract helicopter medivac will respond to an accident. If deemed necessary by the FES Incident Commander, military search and rescue assets from Davis-Monthan AFB or MCAS Yuma can be requested for response.

1.3.4.3.3. Reporting range fires. All air and ground users must immediately report fires to Snakeye or to the Gila Bend ECC if Snakeye is closed.

1.3.4.3.4. Fire suppression. The 56 RMO is responsible for fire response at Gila Bend AFAF and on BMGR East. Ultimate fire suppression responsibility lies with the Gila Bend AFAF Fire Chief. Gila Bend AFAF firefighting activities will be conducted IAW AFI 32-2001, *Fire Emergency Services Program*. Depending on location and situation, the Gila Bend AFAF FES Assistant Chief on duty will decide whether to respond or

monitor the fire until deemed safe. A memorandum of understanding between the 56 RMO and the BLM outlines wild land fire support procedures. Wild land fires will be monitored, responded to if necessary, and if required the Arizona Interagency Dispatch Center (AIDC) will be notified (623-582-0911 or 1-800-309-7081).

Chapter 2

SCHEDULING

2.1. General.

2.1.1. 56 RMO/ASMS (Range Scheduling) manages the RMO's scheduling process and is responsible for overall allocation and scheduling of BMGR East subranges, 56 FW-managed airspace, and MTRs. The range schedule is maintained on the CSE Luke Site. Users may request airspace or range time by phone, fax, or email, or through CSE at:

Phone: (DSN) 896-7654/8466 (Comm) 623-856-7654/8466; FAX: (DSN) 896-7655 (Comm) 623-856-7655 Email: **UDG_56rmo_bmgrscheduling@us.af.mil**
Center Scheduling Enterprise, Luke Site (CSE): **https://cseaf.eglin.af.mil/cse/home.aspx**

2.2. Range Availability.

2.2.1. Normal hours are Monday through Friday (except federal holidays) 0730-2330L Mountain Standard Time (MST). Because Arizona maintains MST year-round (no Daylight Saving Time), local time is always ZULU minus 7 hours. Request for early weekday start times before 0730 or extended hours past 2330 will be handled on a case-by-case basis (see **paragraph 2.2.3**.).

2.2.1.1. Weekend operations. Normal hours also include 0800-1700L MST on one weekend per month to support ANG/AFRES flying schedules. Those days are identified as Unit Training Assembly (UTA) on the range scheduling calendar posted on the CSE website. Requests to operate on non-UTA weekends may be supported, resources permitting, as described in paragraphs **2.2.2** and **2.2.3**.

2.2.1.2. Night operations. All subranges can support training missions at night; however, with the exception of helicopter gunnery, Range 3 is not normally scheduled for Class A night missions. Ranges 1, 2, and 4 are the preferred ranges for Class A night operations.

2.2.2. Range support services. Snakeye and GXF will be open to support missions scheduled during normal hours. Due to Snakeye's staffing process, early check-ins for first mission of the day are limited to no more than 15 minutes prior to scheduled start time. For missions scheduled to end at 2330, pilots may use their full range scheduled time, then exit the assigned sub-range enroute to home base. Same-day requests to add missions within normal hours but outside the published schedule for that day may or may not be supported, depending on availability of contract support personnel. Other training support services (threats, LVC, and scoring capability) are available during normal hours when scheduled NLT 1600 the day prior; short-notice requests can be accommodated only if personnel are available. Class A operations on numbered ranges will be supported Monday through Friday during normal operating hours to the extent possible

2.2.2.1. Snakeye support. Snakeye must be open when weapons employment is scheduled. The requirement for Snakeye support for other operations will be determined on a case-by-case basis. Costs associated with Snakeye support outside normal hours, if required, will be charged to the requesting unit (see **paragraph 2.2.3**.).

2.2.2.2. Gila Bend AFAF (GXF) support. GXF must be open when airfield flight operations are scheduled. GXF support is normally required whenever weapons

employment missions are scheduled on the BMGR East; however, this may be waived on a case-by-case basis. Costs associated with GXF support outside normal hours, if required, will be charged to the requesting unit (see **paragraph 2.2.3**.).

2.2.2.3. Other training support. If requested, costs associated with providing threats, moving target, and RCO/scoring support outside normal hours Monday through Friday or on weekends may be charged to the requesting unit.

2.2.3. Scheduling operations outside normal hours. Requests to schedule operations on BMGR East (including GXF) outside normal hours will be accommodated to the extent possible. Requests must be submitted to 56 RMO/ARO and 56 RMO/ASMS at least 45 days in advance and will include date, hours, range assets/support requested, number/type of aircraft and laser/ordnance to be used. The 56 RMO will evaluate each request to determine whether or not resources are available to support it and will advise the requesting unit.

2.2.3.1. If the 56 RMO determines that a request can be supported, it will provide the requesting unit with a cost proposal. A Military Interdepartmental Purchase Request (MIPR), or Form D for DEAMS users, will be used to transfer the estimated amount to 56 RMO for Gila Bend support or to ACTS Program Manager for Snakeye and other ACTS support. Funds must be received at AETC at least 30 days before the requested support date, and at 56 RMO at least one week before the date. POC for funding issues is the 56 RMO Resource Advisor at 623-856-8516 (DSN: 896).

2.2.4. Scheduled Range Closures. Scheduled dates for range maintenance and EOD clearances are coordinated with the range operations contractor and take into account significant training events and regular user requirements. The fiscal year (FY) EOD and range maintenance schedule is posted on CSE NLT 1 August of the previous FY. Any changes to range maintenance schedules will be coordinated with 56 CES/CED to permit proper EOD planning/scheduling.

2.2.4.1. 150-Use-Day Closures. Numbered ranges are normally scheduled for 150 use- day ordnance disposal, typically about every six months, on a Wednesday through Friday as required.

2.2.4.2. Annual Closures. Numbered and tactical ranges are scheduled for some level of ordnance disposal every year to support safe access for road and target maintenance. Numbered ranges will be closed for two weeks each year. Based on clearance requirements identified in AFMAN 13-212v1, tactical ranges are typically closed for ordnance disposal and maintenance six weeks a year. Based on endangered species considerations as well as recurring major exercises, NTAC and STAC are usually closed sometime between November and mid-March, with ETAC closed in March-April. Numbered range closures are scheduled as needed at other times.

2.2.4.3. Detonation Procedures. 56 CES/CED (EOD) will notify 56 RMO/ASMS no later than one duty day prior to non-emergency detonations on the tactical ranges so that an appropriate Range NOTAM can be published. Detonations normally take place on Thursdays and are usually complete by early afternoon. Personnel on range during detonations will be limited to EOD and Range Maintenance personnel only--all others must remain clear of the affected Tac Range. Normal access can resume once EOD has

announced that all detonations are complete for the day. For planning purposes, Range Scheduling can provide range entry times to JTACs starting at 1300L.

2.2.5. Sonoran Pronghorn Monitoring. To minimize adverse effects from military operations, targets on both NTAC and STAC are surveyed by biological monitors. ASMS assigns the first 2 hours of daylight on the STAC schedule, and the first 2 hours 10 minutes on the NTAC schedule, to monitoring activities every day as shown in CSE (exception, monitoring does not occur when no weapons employment is planned on any of the Tactical Ranges). SPH sightings may result in target closures for compliance IAW the BMGR's endangered SPH ROE. When users schedule ordnance deliveries on NTAC or STAC outside normal operating hours, monitoring is usually required, and the cost of monitoring will be included in the proposal provided to the requesting unit.

2.3. User Classification.

2.3.1. Priority is given to flying squadrons identified as regular users.

2.3.2. Regular Users. Regular users include: units of the 56 FW at Luke AFB; units of the 355 WG and 305 RQS (AFRES) at Davis-Monthan AFB; units of the 162 WG at Tucson International Airport, to include the ANG/AFRC Test Center (AATC); Peace Vanguard at Silverbell Army Heliport (Marana, AZ); and the 2-285th Assault Helicopter Battalion (AHB) at Papago Army Airfield (Phoenix). All other units are classified as *Hosted Units* or *Casual Users*.

2.3.3. Hosted Units. Units invited to deploy to a regular user's base of operations to support their mission are considered *hosted units*. A common example of a hosted unit is a one performing dissimilar air combat training (DACT) support. Hosted units are not allocated ranges and airspace separately from the host unit in the regular user process. If a hosted unit requests airspace or ranges above and beyond their host's requirements, they will be allocated range time after the regular user process is completed but before casual users are added.

2.3.4. Casual Users. All units that are not either regular users or hosted units, as defined above, are considered casual users and are allocated available range time after regular users and hosted units have finalized their requirements. Casual user requests will be made using the worksheet at **Attachment 3** or input in CSE.

2.4. Scheduling guidelines.

2.4.1. All BMGR East air and ground operations must be scheduled through 56 RMO/ASMS. Same-day schedule changes/additions must be coordinated through Snakeye.

2.4.2. Special Events. Special events, such as unit ORE, pre-deployment training, CSARTF, Wing LFE, etc., will be accommodated to the extent possible without adversely affecting other users. These events must be coordinated through 56 RMO/ARO at least 45 days in advance of proposed activities. Ground-based operations, which often require extended range times, must be described in detail. Planners/proponents of special events will be required to complete the Range Activity Request form (available on the Range Operations SharePoint site (**https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**) to fully describe their support needs.

2.4.2.1. Complex, non-standard events, such as placement of support equipment or special targets on range, operation of semi-autonomous vehicles, or use of small UAS (sUAS),

typically require scheduling extended range times; to avoid adversely impacting primary users, it may be necessary for planners of these events to leverage weekends or other times when demand is projected to be lower. Requests to schedule special non-standard events will be accommodated to the extent possible without adversely affecting regular user operations.

2.4.2.2. Scheduling Test on BMGR East. As indicated AFMAN 13-212v1 paragraph 4.4, primary training ranges (PTR) are not "designed or structured to accommodate test and evaluation activities as defined in DAFI 99-103, *Capabilities-Based Test and Evaluation*." As a PTR, the BMGR East can, with MAJCOM approval, support test on a limited basis but must ensure that there are no scheduling impacts to the training mission. Tests will not be scheduled on range until the requirements of AFMAN 13-212v1, paragraph 4.4.1.2 have been satisfied. Approved requests will be put on the Barry M. Goldwater Optimized Schedule (BOS) shell 2-weeks out.

2.4.3. Regular User BOS Alignment. The BOS process relies on the Wing Scheduling Offices (OSS Scheduling Shop) for the 56 FW, 355 WG, and 162 WG representing all flying units stationed on their respective bases. The following list specifies how the BOS works for non-Fighter Squadrons.

2.4.3.1. AATC (F-16). The 162 WG incorporates range requests for the AATC F-16 Directorate into their fighter squadron requests. Non-standard tests requiring ground access and extended range time may be requested on a non-interference basis. AATC will provide these requirements to 56 RMO/ARO and MAJCOM OPR for Airspace and Ranges for consideration at least 60 days in advance, and such requests will be accommodated if possible.

2.4.3.2. AATC (A-10). The 355 WG incorporates range requests for the AATC A-10 Directorate into their fighter squadron requests. Non-standard tests requiring ground access and extended range time may be requested on a non-interference basis. AATC will provide these requirements to 56 RMO/ARO and MAJCOM OPR for Airspace and Ranges for consideration at least 60 days in advance, and such requests will be accommodated if possible.

2.4.3.3. 563 RQG. The 563 RQG conducts Combat Search and Rescue (CSAR) flying operations and is located at Davis-Monthan AFB. The group supports the 55 RQS (HH-60), 79 RQS (HC-130), and 48 RQS (Guardian Angels) that utilize the BMGR East complex. The 355 WG advocates for the 55 RQS and 79 RQS range requirements at the weekly BOS teleconference.

2.4.3.4. 305 RQS. The 305 RQS is an AFRES CSAR HH-60 unit located at Davis-Monthan AFB. The 355 WG advocates for the 305 RQS range requirements at the weekly BOS teleconference.

2.4.3.5. 2-285th ARB. The 2-285th, an Arizona ARNG UH-60 unit, occasionally requests numbered or tactical ranges for gunnery training. The 56 RMO/DO will evaluate the request and determine the level of support the BMGR East can provide. Often, these gunnery requirements will have to be scheduled on a weekend (contractor call-out as required); however, these decisions will be made on a case-by-case basis.

2.4.3.6. Peace Vanguard. Peace Vanguard, a Republic of Singapore AH-64 unit, occasionally requests numbered and tactical ranges for operational training. Because these requests typically are for extended periods, the 56 RMO/DO will evaluate the request and determine the level of support the BMGR East can provide. Typically, these gunnery requirements must be scheduled on a weekend (contractor call-out as required); however, these decisions will be made on a case-by-case basis.

2.4.4. BOS Process. The daily range schedule is created and maintained using CSE; however, users who are not CSE-capable may schedule range times directly through 56 RMO/ASMS as described above.

2.4.4.1. The 56 FW, 162 WG, and 355 WG scheduling offices consolidate their respective requests onto a wing request sheet. These request sheets are sent to ASMS NLT D-13, 0900L. As a minimum, all wing request sheets should identify missions executing ordnance deliveries. Additionally, F-16 and A-10 missions should identify maximum altitude required to accomplish each mission.

2.4.4.2. Schedule development process.

2.4.4.2.1. By COB on D-13, ASMS emails out "BOS Version 1", a forecast schedule with airspace/ranges allocated to the 56 FW, 162 WG, and 355 WG.

2.4.4.2.2. On D-11, the RMO/DO or designated representative hosts a teleconference with the 56 FW, 162 WG and 355 WG wing scheduling POCs. This conference provides a venue for the three wings to swap airspace and ranges, pick up open airspace and ranges, and turn back allocations they no longer need. The 56 FW, 162 WG and 355 WG are highly encouraged to send representatives who may execute airspace swaps. At the conclusion of the teleconference, ASMS will email out "BOS Version 2" which reflects the agreed to changes.

2.4.4.2.3. On D-7, the 56 FW, 162 WG and 355 WG wing scheduling POCs will email ASMS their airspace and range allocations with squadron designations. ASMS will consolidate these inputs into "BOS Version 3".

2.4.4.2.4. ASMS will input the consolidated BOS Version 3 in CSE NLT D-5. ASMS will email a notification to all BOS units when the schedule in completed in CSE.

2.4.4.3. Range Confirmations and Final Schedule. All users will call 56 RMO/ASMS (DSN 896-8466) to confirm the next day's schedule by 1000L, or the afternoon 2 days prior if night flying. Airspace/subranges not confirmed will be made available (shown as unscheduled) to other users. Units will not be permitted to hold unconfirmed airspace as "backup." To help ensure the safety of ground personnel, when confirming airspace/subrange schedules, the information listed in **Table 2.1** must be provided and will be shown in CSE. The final daily schedule will be published in CSE by 1400L the previous day.

Table 2.1. Information Required for Confirmation.

1	Range/airspace time
2	Number of aircraft (casual users also include type of aircraft)
3	If MARSA with another unit, number and type aircraft they are providing*
4	Combat (non—eye-safe) laser use**
5	Type(s) of weapons to be employed, both inert/training and high explosive (HE)

Note:
*Must be reflected in CSE.
**Not authorized unless shown in CSE.

2.4.4.4. Range Restrictions. Range NOTAMs are published on CSE. Aircrew and ground parties are responsible for checking NOTAMs, which may be updated throughout the day as needed. Range NOTAMs are assigned a phonetic alphabet identifier so that the current version can be identified easily.

2.4.5. Additional scheduling considerations.

2.4.5.1. JTAC, drop zone and assault landing zone operations, ground employment, special operations at Gila Bend AFAF, and unique test requirements downrange are among the events requiring coordination and approval before scheduling. This list is not all inclusive. Contact the 56 RMO/ARO and 56 RMO/ASMS for coordination.

2.4.5.2. Specific Ordnance/Laser requirements. Users must coordinate HE deliveries and combat (non-eye-safe) laser use—including weekend HE deliveries on NTAC and STAC—a minimum of 24 hours in advance. Employment of HE munitions and use of combat laser is not authorized unless annotated as such in CSE. Some ordnance requires scheduling multiple subranges to comply with Weapons Danger Zone (WDZ) footprint restrictions; these requirements are presented in specific attack restrictions published on the range operations SharePoint site.

2.4.5.3. Users who wish to employ LASERs or munitions not listed as approved in **Attachment 5** must consult 56 RMO/ARO LSO in advance. A written waiver is required before employment of any laser systems not listed.

2.4.5.4. Live AGM-65/AGM-114 AGR-19/AGR-20 Scheduling. Email Maverick/Hellfire/ APKWS requirements to 56 RMO/ARO and ASMS (**UDG_56rmo_bmgrscheduling@us.af.mil**) well in advance of need (45 days minimum). Required information includes total number, weapon(s), desired employment dates and the unit's POC for transferring funds (if required) for target construction.

2.4.5.4.1. Target Construction and Required Lead Time. The 56 RMO provides a limited number of individual AGM target DPIs (wooden tank facsimiles) for regular users. Once these targets have been destroyed, a unit may request construction of additional targets at unit expense. The 56 RMO/ARO requires at least 45 days' notice to plan and execute target builds, and there may be times when target construction cannot be scheduled as requested.

2.4.5.4.2. The 56 RMO will review incoming requests for additional targets and provide the requesting unit a cost estimate. If accepted, the requesting unit will MIPR funds (DEAMS users will submit a Form 9) to the 56 RMO Resource Advisor. Funds must be received at least five working days before the scheduled target build date.

2.4.5.4.3. Unless other arrangements have been negotiated with 56 RMO, after the requesting unit's scheduled missions, target vehicles become the property of the USAF and any that have not been destroyed are made available to support other users. If a unit is not able to complete scheduled AGM missions due to weather or maintenance problems, the requesting unit should notify 56 RMO/ARO and then reschedule AGM employment as soon as possible, and no later than 90 days after the original date(s). After 90 days, all targets become the property of the USAF and are made available to other users.

2.4.5.4.4. Target 310 on ETAC will be scheduled for live AGM/AGR employment unless ETAC is closed or otherwise unavailable or the unit specifically requests NTAC. Due to the size of the WDZ hazard area for these weapons, AGM employment on Target 310 requires scheduling both ETAC and Range 3. CSE must clearly indicate that Range 3 is required due to footprint considerations, not for dry overflight only. Unit schedulers must ensure they clearly communicate AGM/AGR requirements to ASMS during the BOS telecon and again at confirmation. Live ordnance employment will not be authorized unless it is shown as such in CSE.

2.4.5.4.5. NTAC Targets 103 and 123 are also authorized for live AGM/AGR employment. AGM employment on these targets requires scheduling NTAC, STAC, and Range 4, which may not be possible during periods of peak range demand. Only NTAC is required for AGR-20 employment on Target 103; both NTAC and STAC are required for employment on Target 123. CSE must clearly indicate that STAC and Range 4 are required due to footprint considerations, not for dry overflight only. **Note:** One or both of these targets may be closed to ordnance deliveries due to the presence of Sonoran pronghorn on any given day.

2.4.6. Air Refueling Anchors. Units will schedule AR-603, AR-658, AR-647 and AR-647A tracks through 56 RMO/ASMS.

2.4.6.1. SELLS missions are a higher priority than the use of AR-647; therefore, AR-647 can be used only if the requesting unit also owns SELLS. Units are highly recommended to schedule a backup anchor in the event they do not have SELLS when the range schedule is published two weeks prior. When activated, AR-647 restricts the use of SELLS, AAHI and STAC, and 56 RMO/ASMS will post a Range NOTAM (see 3.4.1.1. for details).

2.4.6.2. AR-647A lies entirely within SELLS and will be used only for 355 WG A-10 night refueling training unless specifically approved by the 56 RMO/ASM. SELLS MOA missions are a higher priority than the use of AR-647A. If there are no SELLS MOA conflicts, the 355 WG will be accommodated to the maximum extent possible. When AR-647A is activated, 56 RMO/ASMS will post a Range NOTAM.

Chapter 3

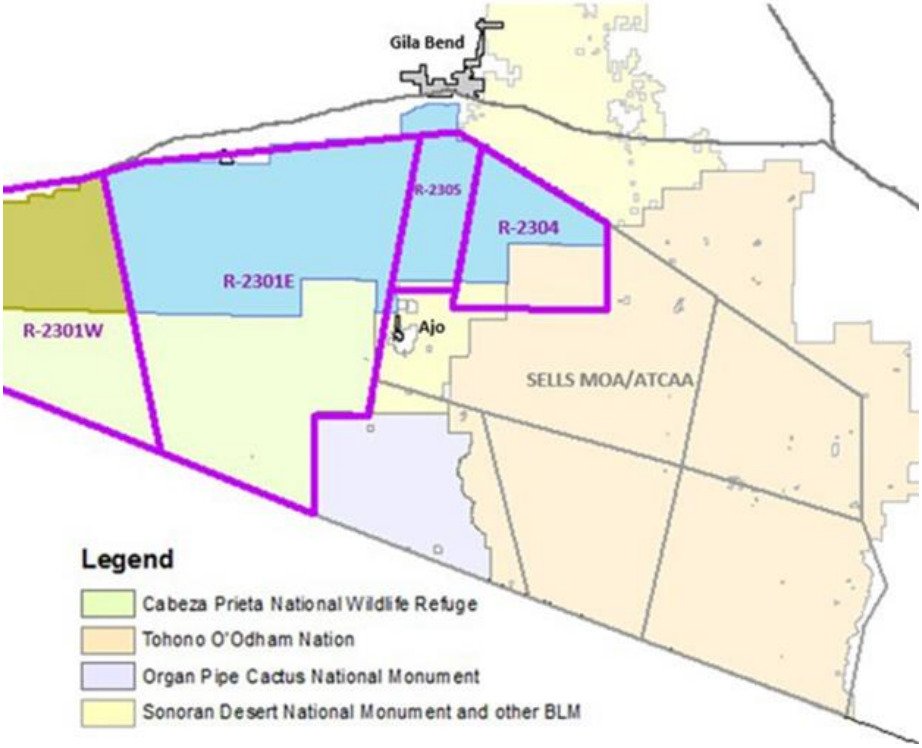
BMGR EAST COMPLEX AIRSPACE

3.1. BMGR East Complex.

3.1.1. The BMGR East Complex is divided into numerous subranges to support a variety of training operations. Compliance with entry/exit procedures and remaining within scheduled subrange boundaries are crucial to flight safety. All casual/hosted units must receive a range orientation briefing prior to range utilization. Aircrew must have the most current edition of this instruction in their possession for mission planning and must review published Range NOTAMs. Strict adherence to ordnance, target, and laser restrictions is essential.

3.1.2. Definition. As described in **paragraph 1.2.2.1**, the BMGR East Complex includes the SELLS MOA/ATCAA and Restricted Areas R-2301E, R-2304 and R-2305 as illustrated in **Figure 3.1**. It also includes Gila Bend AFAF and associated Class D airspace, which is described in detail in **Chapter 11**. Specific information regarding 56 RMO-managed Special Use Airspace (SUA) is outlined in the Letter of Agreement (LOA) between the 56 FW and the FAA Albuquerque Center (available on the Range Operations SharePoint site).Figure 3.1.

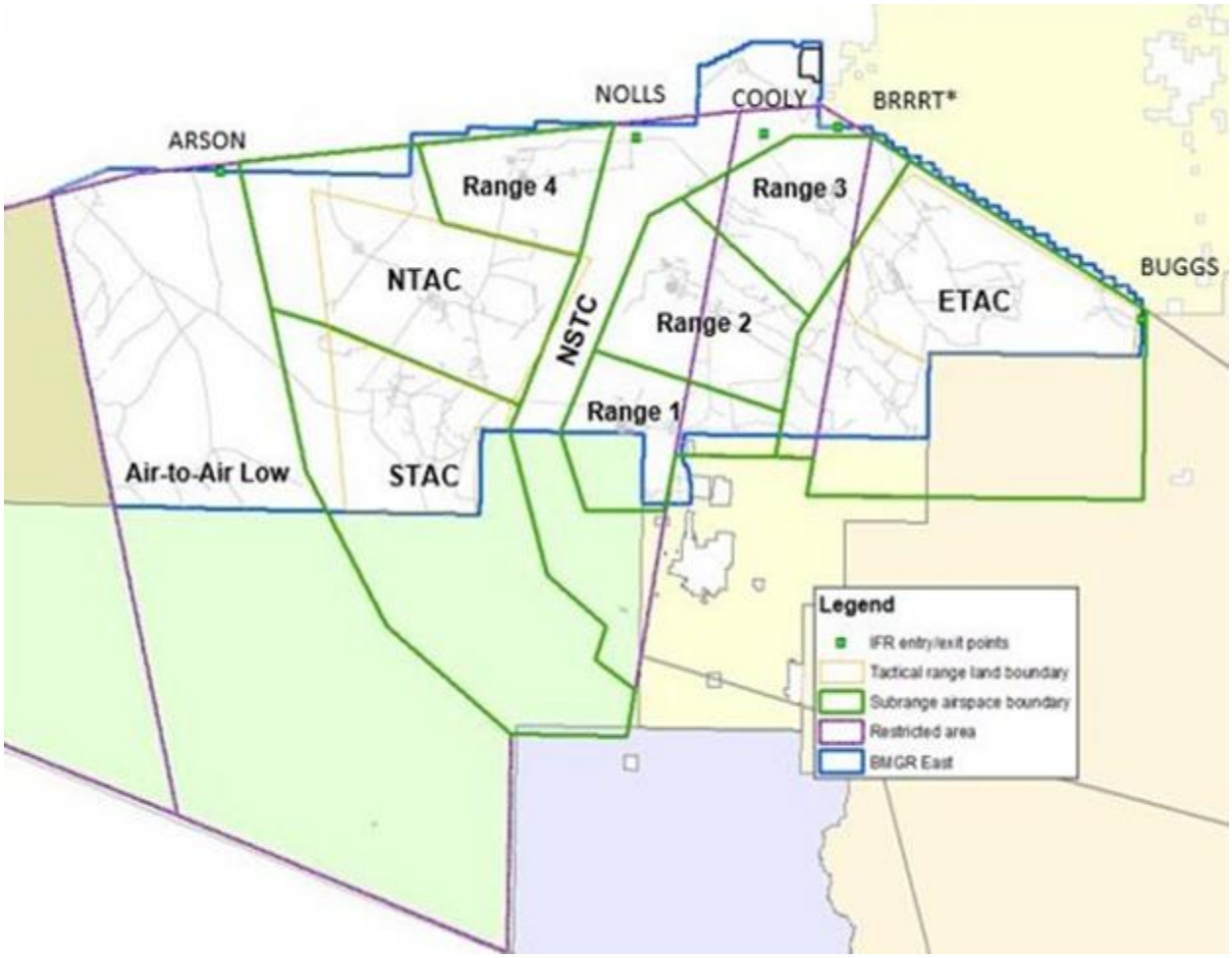
The BMGR East Complex and surrounding federal and tribal land.



3.1.3. Subranges and training resources. Internal subdivisions of the BMGR East Complex include the Air-to-Air (AA) tactical range, three air-to-ground tactical ranges (NTAC, STAC, ETAC), four numbered, scoring-capable air-to-ground ranges (Ranges 1, 2, 3, 4) and the SELLS MOA/ATCAA (Figure 3.2). SELLS is addressed in this chapter; refer to Chapters **6** and **7** for specific information on the restricted area subranges. BMGR East also includes drop

zones (DZ), assault landing zones (LZ), helicopter landing zones (HLZs), and Gila Bend AFAF, some of which are outside restricted airspace. Refer to **5.10** for DZ/LZ information. An EOD training and disposal range is located on the BMGR East west of SR 85, north of Range 2, and east of Range 4. Additional information may be found in **paragraph 5.15**.

Figure 3.2. BMGR East Subranges and IFR Entry/Exit Points.



3.1.4. Subrange Altitude Blocks. Unless stated otherwise, all altitudes given in this instruction are in feet above mean sea level (MSL). Use the GXF altimeter setting when operating on BMGR East.

3.1.4.1. Altitude blocks are established in CSE and are scheduled IAW the RMO's BOS process. The "Medium" altitude block will not be scheduled as a segment of airspace by itself; it will always be married up with either the "Low" or "High" altitude blocks. When two or more altitude blocks are scheduled together, the 1,000' gap between blocks is also owned by the scheduled mission for their full range period.

3.1.4.2. The Low altitude block is SFC to 9,000' MSL for the impact ranges and AA Low; the Low altitude block is 3,000' AGL or 6,000' MSL, whichever is higher, to 9,000' MSL for the SELLS Low MOAs.

3.1.4.3. The Medium altitude block is 10,000’ to 19,000’ MSL for all subranges, AA and the SELLS MOA.

3.1.4.4. The High-altitude block is 20,000’ to 24,000’ MSL for the impact ranges, 20,000’ to FL 800 for AA High, and 20,000’ to FL 510 for SELLS. AA High extends over the high blocks of NTAC, STAC, and Ranges 1, 2 and 4, 25,000’ MSL and above. SELLS High A extends over ETAC High and Range 3 High, 25,000’ MSL and above.

3.1.5. Coordinate Conversions. Airspace boundaries and target locations are defined by WGS 84 / NAD 83 coordinates in degrees, decimal minutes (DDM).

3.1.6. Boundary Separation. Avoid maneuvering within 500’ of any vertical boundary. This provides 1,000’ vertical separation between aircraft.

3.1.7. Weather Requirements. The minimum weather requirements for range operations will be IAW AFMAN 11-214, and specific Mission Design Series (MDS) guidance. In addition to the requirements outlined below, also see special procedures for inertially aided munitions (IAMs) in **paragraph 4.5.2**.

3.1.7.1. Administrative Maneuvering. Aircrew are allowed to transit instrument meteorological conditions (IMC) in scheduled restricted airspace and the SELLS ATCAA. IMC transit is not authorized in MOAs.

3.1.7.2. Tactical Maneuvering. Once established in restricted airspace and/or the SELLS ATCAA, aircraft may execute IMC tactical maneuvering IAW AFMAN 11-214 and specific Mission Design Series (MDS) guidance. Flights will not conduct IMC tactical maneuvering below 18,000’ MSL in the SELLS MOA.

3.1.7.3. IMC Entry Procedures for Ranges. IMC entry is authorized for ARSON (R-2301E), NOLLS (R-2305), or BRRRT (R-2304).

3.1.7.4. Pilots requiring IMC entry into SELLS ATCAA have three options:

3.1.7.4.1. File an IFR Flight Plan at 18,000’ MSL or higher to a point within the Sells ATCAA. Expect termination of IFR service from ATC upon reaching the ATCAA boundary.

3.1.7.4.2. Enter restricted airspace via ARSON, NOLLS or BRRRT. For ARSON, missions need to schedule AA High; after entering ARSON, pilots will proceed east to the SELLS ATCAA, while avoiding scheduled impact ranges in R-2301E. For NOLLS or BRRRT, climb in restricted airspace using the North-South Transit Corridors (NSTC; paragraph 3.2.6.1), then transit to SELLS ATCAA. See **paragraph 4.3** for specific procedures.

3.1.7.4.3. Enter via RAGYN 18,000’ MSL or higher.

3.1.7.5. Pilots will contact Snakeye for traffic point-outs prior to entering SELLS ATCAA or restricted airspace IMC. If other aircraft are established in the flight’s scheduled airspace, flight leads will establish deconfliction via lateral (subrange adherence) and/or altitude separation prior to SUA entry. If unable to establish deconfliction, flights will coordinate with RAPCON or Albuquerque Center to hold outside SUA or enter via a different point if range airspace is available elsewhere.

3.1.7.6. Exit Procedures during inclement weather. No later than 5 minutes prior to departing airspace, pilots will request an IFR clearance from Albuquerque Center or RAPCON, depending on altitude and exit point. All clearances will begin at the boundary of the SUA.

3.1.7.7. Pilots will contact Snakeye for traffic point-outs prior to entering SELLS ATCAA or restricted airspace IMC. If other aircraft are established in the flight's scheduled airspace, flight leads will establish deconfliction via lateral (subrange adherence) and/or altitude separation prior to SUA entry. If unable to establish deconfliction, flights will coordinate with RAPCON or Albuquerque Center to hold outside SUA or enter via a different point if non-contested airspace is available elsewhere.

3.2. Restricted Areas.

3.2.1. The BMGR East Complex includes three restricted areas (R-2301E, R-2304, and R-2305). To support multiple, simultaneous operations, restricted areas are divided into subranges associated with the numbered and tactical ranges described in Chapters **6** and **7**. Restricted areas are not scheduled as blocks; for example, a user wishing to use all of R-2301E must submit a scheduling request for all of the subranges within it.

3.2.2. R-2301E. R-2301E is the largest of the restricted areas managed by 56 RMO. It encompasses most subranges of the BMGR East, including AA, NTAC, STAC, and three of the four numbered ranges (1, 2, and 4). It is roughly defined by SR 85 (between Ajo and Gila Bend) on the east and the Mohawk Mountains to the west between Interstate 8 and the US-Mexican border. The western boundary of R-2301E is adjacent to R-2301W. R-2301E is authorized for unrestricted supersonic operations above 5,000' MSL, except over the numbered ranges, where supersonic is restricted to above 10,000' MSL. The entire R-2301E area is activated for any use of AA, NTAC, STAC, or Ranges 1, 2, or 4. The R-2301E boundaries are:

Table 3.1. R-2301E Boundaries.

Latitude	Longitude
N 32 50.42	W 112 49.05 to
N 32 11.50	W 112 56.80 to
N 32 11.50	W 113 05.55 to
N 31 58.00	W 113 05.55 along the US/Mexico border to
N 32 06.00	W 113 30.55 to
N 32 44.25	W 113 41.13 to
N 32 45.83	W 113 34.55 to the beginning.

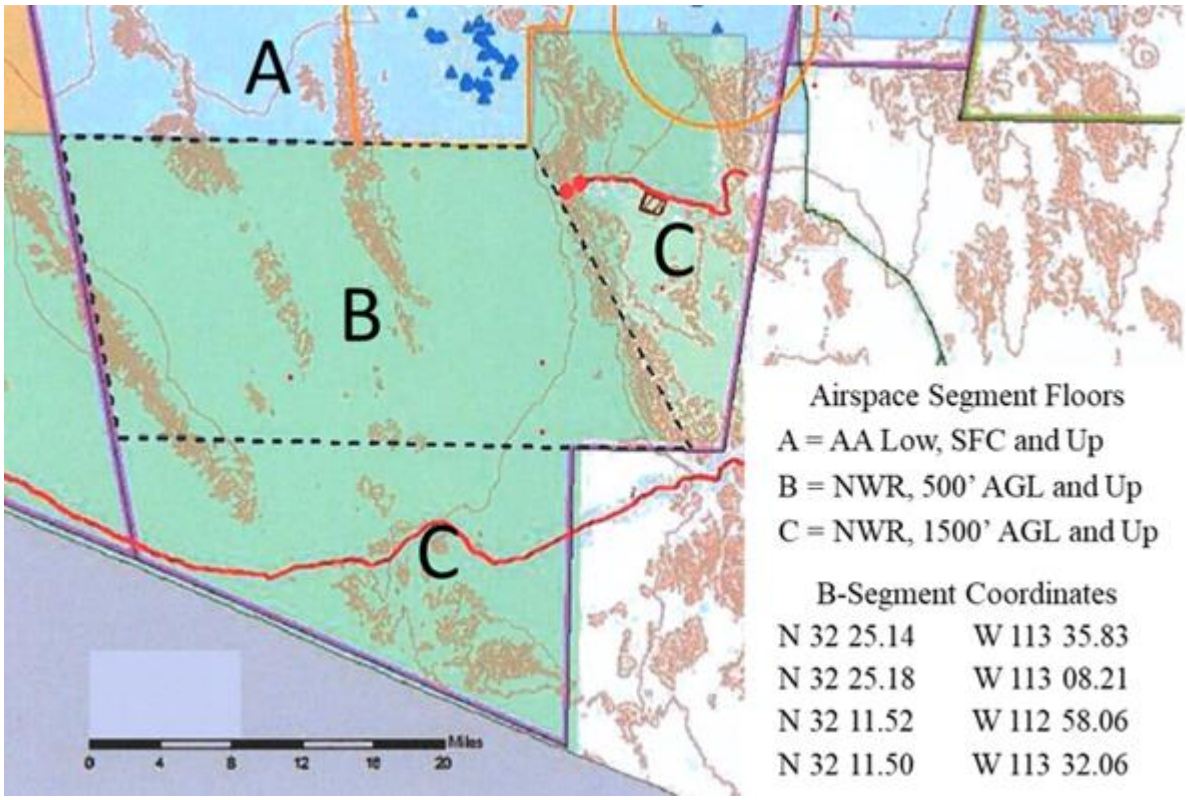
Note: Unless otherwise indicated, all lat/long coordinates in this document are given in degrees decimal minutes.

3.2.2.1. The R-2301E altitude block is surface to FL 800, except over the Cabeza Prieta National Wildlife Refuge (NWR). Figure 3.3 depicts the areas of the NWR where 500' AGL and 1,500' AGL restrictions exist. Pilots must comply with these restrictions except when flying on a scheduled MTR. Any excursions below the NWR minimum altitudes must be reported to 56 RMO Airspace Management section at 623-856-5855.

3.2.2.2. BMGR West Boundary. Avoid maneuvering within 2.5 NM of the R-2301E/W boundary.

3.2.2.3. An SPH breeding enclosure, roughly 1 square mile, is located in the Childs Valley within the Cabeza Prieta NWR at N 32 22.648 W 113 01.187 (MGRS 12S UA 0999 8407). Overflight IVO the enclosure below 1,500' AGL is not allowed unless on an MTR (minimum altitude for all MTRs near the enclosure is 500' AGL). To avoid disruptions to SPH, pilots will not conduct simulated attacks on the enclosure.

Figure 3.3. Cabeza Prieta NWR Altitude Restrictions.



3.2.3. R-2304. R-2304 is east of R-2305 and overlies both military-managed land and lands of the Tohono O'Odham Nation; the SELLS ATCAA overlays R-2304. R-2304 altitude block is surface to FL 240 and is authorized for subsonic operations only. R-2304 is activated for any use of ETAC and/or Range 3. R-2304 boundaries are:

Table 3.2. R-2304 Boundaries.

Latitude	Longitude
N 32 38.50	W 112 18.05 to
N 32 26.67	W 112 18.05 to
N 32 26.67	W 112 43.55 to
N 32 49.00	W 112 39.05 to the beginning.

3.2.4. R-2305. R-2305 overlies Range 3 and its facilities and includes the airspace over and out to 7 NM east of SR 85 between the town of Ajo and Gila Bend AFAF; the SELLS ATCAA overlays R-2305. R-2305 altitude block is surface to FL 240 and is authorized for subsonic

operations only. R-2305 is activated for any use of ETAC and/or Ranges 1, 2, or 3. R-2305 boundaries are:

Table 3.3. R-2305 Boundaries.

Latitude	Longitude
N 32 50.42	W 112 49.05 to
N 32 50.87	W 112 42.93 to
N 32 49.00	W 112 39.05 to
N 32 29.00	W 112 43.05 to
N 32 29.00	W 112 53.55 to the beginning.

3.2.5. GA Corridor. A General Aviation/Air Evacuation corridor transects R-2301E and R-2305, extending from Gila Bend AFAF to the Eric Marcos (Ajo) Airport along SR 85, to provide restricted airspace transit for civilian air traffic. Crossing altitudes are 500’ AGL (day) and 1,000’ AGL (night). VFR rules govern civilian flights through the BMGR East. Civilian air evacuation flights "Lifeguard" will be given priority over all other air traffic except in-flight emergencies. The "Air Evac” call sign (USAF) will be used only when the aircraft is on an actual air evacuation mission. Arizona Department of Public Safety (DPS) "Ranger" call signs must indicate they are on an air evacuation mission to receive priority. Military aircraft on numbered ranges will be instructed to remain clear of SR 85 or to transit the highway at 1,000’ above the air evacuation/general aviation aircraft.

3.2.5.1. Corridor Activation. Snakeye will restrict civilian access until deconfliction with scheduled military operations is assured. Snakeye will advise RCOs on numbered ranges and Gila Bend AFAF tower before activating the General Aviation/Air Evacuation Corridor. RCOs will in turn advise/restrict operations until the traffic has passed.

3.2.6. Restricted area entry/exit. IFR entry is via ARSON, NOLLS or BRRRT. IFR exit is via ARSON, COOLY, BRRRT or BUGGS; see **Figure 3.2** (also see **Attachment 7** for waypoint coordinates). VFR entry/exit is via military training route (entry only) or VFR altitudes. Specific range entry/exit procedures are located in **Chapter 6** and **Chapter 7**.

3.2.6.1. North/South Transit Corridors. The NSTC is a key feature internal to R-2301E; these corridors are used regularly to enter and exit the western part of SELLS and subranges within the BMGR East complex. Specific details and procedures are located in **paragraph 4.3**.

3.3. SELLS MOA/ATCAA.

3.3.1. SELLS MOA and ATCAA coordinates see **Attachment 7**. The ATCAA overlies R-2304, R-2305, and the MOA (Figure 3.3) from 18,000’ MSL to FL 510.

3.3.2. Special Considerations. The SELLS MOA overlies two noise sensitive areas—the Tohono O’Odham Nation and the Organ Pipe Cactus National Monument—which include multiple specific sensitive subareas (**Figure 3.4**.).

3.3.2.1. Low altitude flight. Tohono O’odham Nation: every effort should be made to avoid direct overflight towns and villages below 1000’ AGL; avoid overflight of Kitt Peak and avoid Baboquivari Peak by 3 NM. Town of Ajo: do not overfly below 3000’ AGL. Organ Pipe Cactus National Monument: low altitude tactical navigation training flights are

permitted anywhere over the monument, but aircraft must no fly lower than 3000’ AGL over the headquarters area, campground, and Ajo Mountain loop area shown on **Figure 3.5**.

Figure 3.4. SELLS MOA/ATCAA and AR-647/AR-647A.

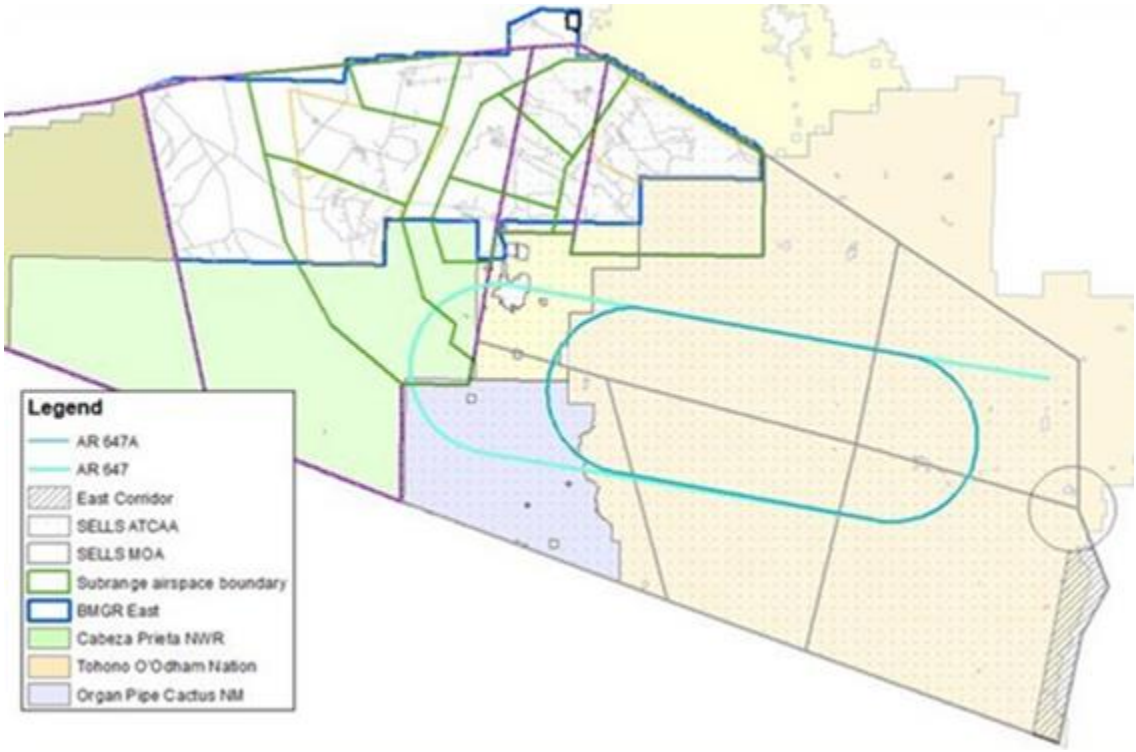
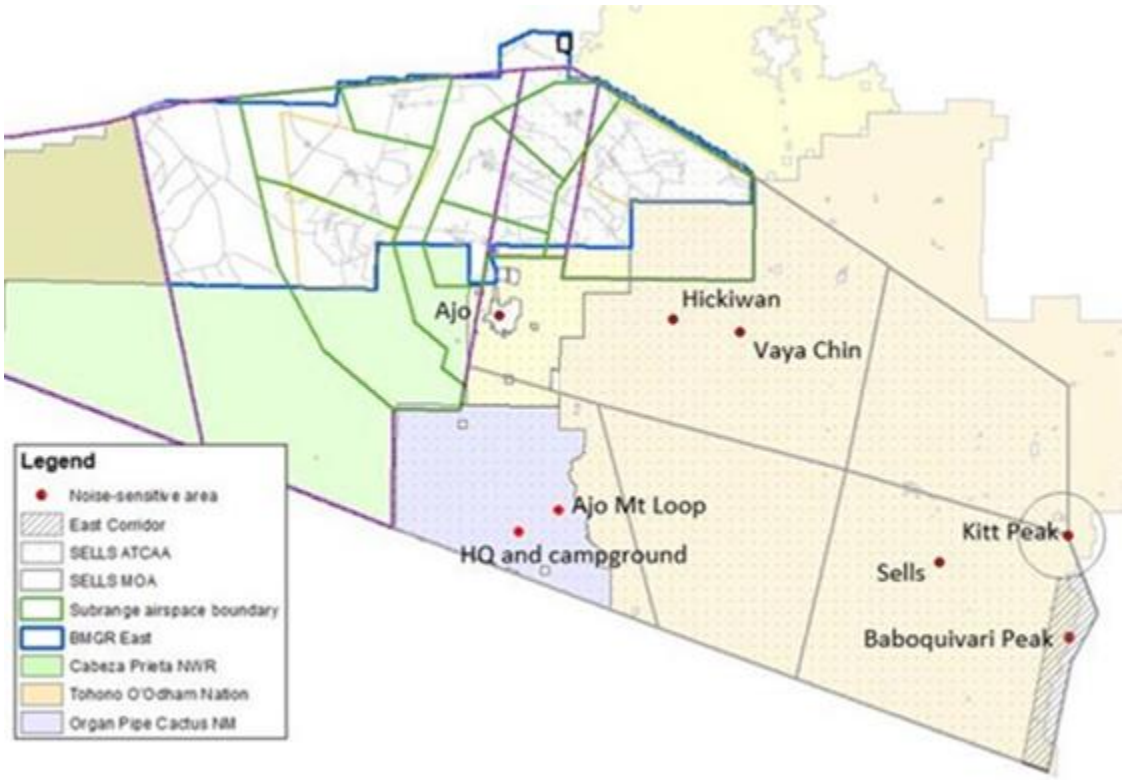


Figure 3.5. SELLS MOA, Internal Subdivisions, and Noise Sensitive Areas.



3.3.2.2. Supersonic flight in SELLS is authorized above 10,000' MSL and will be directed away from villages on the Tohono O'Odham Nation. Supersonic flight is not authorized within 5 NM of Ajo, Hickiwan, Vaya Chin, Sells, and the Kitt Peak National Observatory. Avoid overflight of Kitt Peak. Avoid Baboquivari Peak by 3 NM.

3.3.3. SELLS MOA/ATCAA Altitudes. SELLS MOA altitudes are from the SELLS Low floor to 17,999' MSL. The SELLS ATCAA altitudes are from FL 180 to FL 510. For training purposes, three altitude tiers are used; see **paragraph 3.1.4** for details. The floor of SELLS Low is 3,000' AGL, or 6,000' MSL, whichever is higher. Pilots scheduled for impact ranges may transit below the SELLS Low floor but must ensure they do not interfere with missions operating above them. Note: for SELLS missions that have combined altitude segments, the corresponding 1,000' buffer is also owned by the mission; example, if SELLS A/B Low and SELLS A/B Medium are scheduled, the owning mission has full maneuver airspace from the SELLS A/B floor to 19,000' MSL.

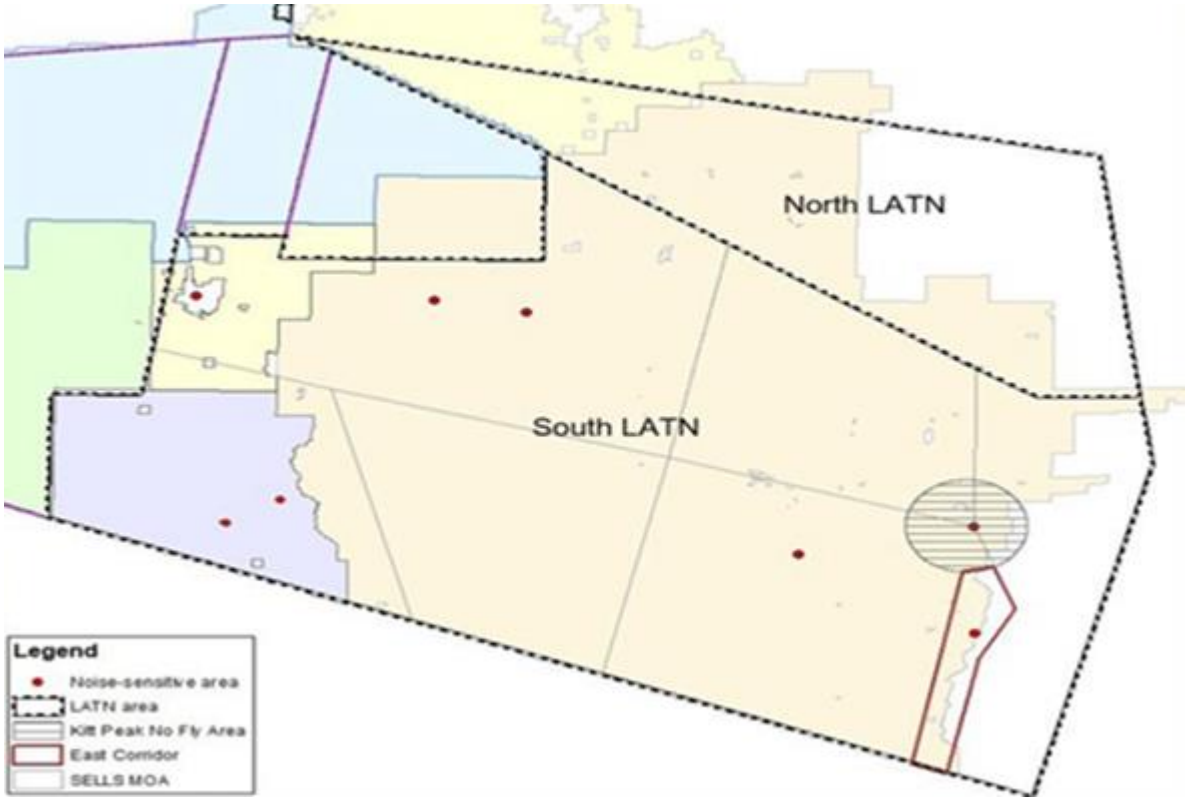
3.3.3.1. SELLS A/B and SELLS C/D/E are typically scheduled as east-west working areas, or as "SELLS All." SELLS A/B is commonly scheduled with ETAC. The five subdivisions (A, B, C, D, and E) and their coordinates are shown on **Figure 3.4**, as well as the noise-sensitive areas described in **paragraph 3.3.2**.

3.3.3.2. SELLS A High is restricted over R-2304 and R-2305 to FL 250 and above.

3.3.3.3. "Slow-Mover" Low Altitude Tactical Navigation (LATN) Areas (**Figure 3.6**.). LATN areas are for random VFR, low altitude navigation training, 3,000' AGL and below, and aircrew must comply with applicable FARs at 250 knots or less. LATN "South" is an

extensive area beneath SELLS Low. The southern boundary of LATN "North" is coincident with SELLS' northern boundary and extends north to a few miles south of Interstate 8. Only A-10s, C-130s and rotary-wing aircraft are authorized to use the North or South LATN area.

Figure 3.6. SELLS North and South LATN Areas.



3.3.4. SELLS ATCAA, AA, STAC, and Range 1 Deconfliction. Extreme caution must be used by flights operating in the Medium and High blocks of SELLS, Air-to-Air, STAC and Range 1 when AR-647 is active. See **paragraph 3.4** for AR-647 details, procedures, and restrictions.

3.3.5. SELLS Entry/Exit.

3.3.5.1. SELLS Low and Low/Medium *North* Entry/Exit. Normal entry is through RAGYN at 9,000' to 11,000' MSL. Flights can also enter at NOLLS and pass thru the NSTC to SELLS A or SELLS E. Normal exit is through BUGGS at 8,000' MSL. Flights exiting SELLS Medium/High using BUGGS at 8,000' MSL will coordinate with SELLS A/B Low missions to use the upper part of their altitude block in the northwest part of the airspace. Flights can also exit through the NSTC to COOLY.

3.3.5.2. SELLS High *North* Entry/Exit. Normal entry is through RAGYN at 20,000' MSL, or as assigned. Flights can also enter at NOLLS and pass thru the NSTC Corridors to SELLS A or SELLS E. Normal exit is through RAGYN at 21,000' MSL, or as assigned. Flights can also exit through the NSTC to COOLY.

3.3.5.3. SELLS Low or Low/Medium *East* Entry/Exit. Normal entry is through KITT at 8,500’ MSL. Another option for A-10s is to enter/exit use the South LATN area. Flights exiting SELLS will depart WHISKEY or SIERRA at 9,500’ MSL; if only SELLS Low is scheduled, use caution for missions working in SELLS Medium.

3.3.5.4. SELLS High *East* entry/exit (East Corridor). See **Attachment 7** for East Corridor coordinates. The purpose of the East Corridor is to enable 162 WG fighters to enter and depart SELLS High when SELLS Medium is scheduled for other users. Normal SELLS High entry is through SIERRA at 17,000’ MSL. From SIERRA, flights will track south and climb along the southeast boundary of SELLS D to 20,000’ MSL or higher and enter their assigned SELLS High airspace. Normal SELLS High exit is through the southern part of the East Corridor at 21,000’ MSL, then track north and descend to 9,500’ MSL along the southeast boundary of SELLS D. Pilots using the East Corridor for entry/exit will call Snakeye 5 minutes prior to entry/exit East Corridor ops so that Snakeye can advise mission in SELLS Medium that the corridor will be active for the next 10 minutes.

3.4. AR-647/AR-647A (see Figure 3.3).

3.4.1. AR-647. The AR-647 refueling anchor lies within the SELLS MOA/ATCAA and the southeast portion of AAHI and STAC. When activated, AR-647 restricts the use of SELLS, AAHI and STAC and will be posted in the Range NOTAMs. Therefore, when 56 RMO receives an air refueling requests for AR-647, the standard approach is to schedule the tanker for random refueling and direct that the refueling track remain within the SELLS boundaries. SELLS tactical missions are a higher priority than the use of AR-647, which can impact training in SUA. Therefore, AR-647, or random refueling in SELLS, will only be scheduled if the requesting unit also owns the SELLS MOA/ATCAA. Units are highly recommended to schedule a backup anchor in the event they do not have the SELLS MOA/ATCAA when the schedule is published.

3.4.1.1. AR-647 Deconfliction. AAHI, and STAC missions must remain at least 1,000’ above or below the AR-647 block in use. AR-647 Low-block altitude is 10,000’ MSL to 17,000’ MSL; AR-647 Mid-block altitude is FL180 to FL230; AR-647 High-block altitude is FL 240 to FL290. The high and low blocks will not be scheduled simultaneously. The low and mid or mid and high blocks may be scheduled simultaneously. When AR-647 is active, all flights scheduled to work in AAHI, and STAC airspace will confirm Range NOTAMs with Snakeye.

3.4.2. AR-647A (Figure 3.3). The AR-647A anchor lies within the SELLS MOA and will be used only for 355 WG A-10 refueling training unless specifically approved by 56 RMO/ASM. SELLS MOA missions are a higher priority than the use of AR-647A. If there are no SELLS MOA conflicts, the 355 WG will be accommodated to the maximum extent possible.

3.4.2.1. AR-647A altitude block is 10,000’ MSL to 14,000’ MSL**.** When AR-647A is activated, a restriction for other SELLS MOA users to remain 15,000’ MSL and above will be posted in the Range NOTAMs. When AR-647A is activated, a Range NOTAM will be posted restricting other SELLS MOA users to 15,000’ MSL and above.

3.4.2.2. AR-647A will not be scheduled when AR-647 is scheduled.

3.4.3. AR-647 and AR-647A Entry/Exit Procedures. All military flights using AR-647/ 647A are under Military Assumes Responsibility for Separation of Aircraft (MARSA) flight rules.

To avoid possible conflicts while entering/exiting AR-647/AR-647A, tanker and receiver aircraft will adhere to the following procedures.

3.4.3.1. Tanker aircraft operating in AR-647/AR-647A anchors shall:

3.4.3.1.1. Coordinate with Albuquerque Center prior to entering the SELLS MOA/ATCAA and to activate the anchor.

3.4.3.1.2. Enter/exit SELLS at scheduled refueling anchor altitudes.

3.4.3.1.3. Clear receivers to enter AR-647/AR-647A.

3.4.3.2. Receiver aircraft operating in AR-647/AR-647A anchors shall:

3.4.3.2.1. Contact Snakeye before entering/exiting SELLS.

3.4.3.2.2. Climb or descend on the border of SELLS or outside the SUA under ATC control when entering or exiting AR-647 to avoid active portions of SELLS.

3.4.3.3. Refueling operations will be conducted on the appropriate ultra-high frequency (UHF) published in FLIP AP/1B.

3.4.3.4. Flights requesting ground control intercept (GCI) assistance must coordinate with Venom GCI (DSN 896-3882/3880) and the scheduled tanker unit.

3.4.3.4.1. Contact Snakeye before entering SELLS.

3.5. Random Air Refueling.

3.5.1. Random aerial refueling (unpublished aerial refueling) is authorized in Luke managed SUA and must be scheduled with 56 RMO/ASMS.

Chapter 4

BMGR EAST COMPLEX OPERATIONS PRODECURES AND RESTRICTIONS

4.1. BMGR East Complex Operations Procedures and Restrictions.

4.1.1. In this chapter, procedures for and restrictions on operations are outlined. Aircrew must review the most current edition of this instruction and published Range NOTAMs as a part of mission planning. Strict adherence to these requirements is essential.

4.2. Command, Control, and Communication.

4.2.1. The ROCC, call sign Snakeye, provides real-time command and control of the BMGR East Complex and all 56 FW-managed SUA. Although not an air traffic control agency, Snakeye will take a proactive role in managing access to BMGR East and is responsible for approving and or denying range access to any flight or ground party. Snakeye manages access to and movement within BMGR East during scheduled military flight operations. Snakeye has the authority to grant or deny access to ranges within restricted airspace and may provide suggestions for holding outside designated subranges for deconfliction. Through the use of an FAA radar feed, Snakeye will provide flight and situational awareness advisories to military aircraft for safety.

4.2.1.1. All flights will use Snakeye primary (UHF 264.125) for range entry/exit and flight advisory service. Flights operating in the LATN area or on an MTR below the SELLS Low MOA will monitor UHF 379.4.

4.2.1.2. Airspace/Range Access. All flights will contact Snakeye for access into working airspace before entering and will check out with Snakeye upon exiting the BMGR East Complex or other 56 FW-managed SUA. Flight leads will provide the following information to Snakeye when checking in for their respective tactical maneuver area:

4.2.1.2.1. Call sign, number in flight, range/airspace scheduled, intentions and applicable Range NOTAM identifier (for example, “Snakeye, Viper 1, 4-ship MARSA Weasel 4-ship for CDE with Bravo") and working frequency if other than standard. Casual users also must include unit and home/deployed base.

4.2.1.2.2. Pilots will also confirm, if applicable, use of combat LASER, live ordnance, or heavyweight inert weapons (e.g., GBU-24/31) use, MARSA operations, and/or use of other than established tactical area frequencies.

4.2.1.2.3. Snakeye will respond first with potential traffic conflicts/point outs, then airspace status, additional appropriate NOTAMS, and KGXF status. Note: For flights checking in on the east side of the BMGR East Complex, Snakeye will acknowledge and provide traffic advisory as required.

4.2.1.3. To avoid safety incidents, coordination with Snakeye is required when transitioning from one range to another to conduct training. Therefore, flight leads must contact Snakeye when departing a range to enter another range (example, after checking-in/conducting CAS on NTAC, then moving to Range 1 for dry or hot strafe). This process will allow Snakeye to provide status updates for the appropriate range, in particular when personnel are present (range maintenance, RCO, Border Patrol, Illegals, etc.).

4.2.1.4. Airspace/range check out. Pilots will state what airspace they are departing and approximate range/DME from a known reference point (for example BUGGS) for identification. Snakeye will advise flights of potential traffic conflicts/point outs, altimeter setting, GXF active runway (BMGR East and SELLS traffic only), and any other pertinent information. Pilots will advise Snakeye of anything that impacted effective mission accomplishment (e.g., weather, capping, Border Patrol on range). All flights must report weapons expenditures on tactical range target(s) to Snakeye with: call sign, type and quantity of ordnance, and target identifier(s).

4.2.2. All ground personnel will contact Snakeye for approval before entering/exiting BMGR East at control points identified with stop signs or other signs indicating entry to a hazardous area entering the range or moving to an area of operations not previously scheduled (for example, moving from one Observation Point (OP) to another). Ground users working on a numbered range or tactical range require a Range NOTAM to ensure all pilots using the ranges are fully aware. Ground parties requesting access to a numbered range will be directed to contact the RCO on a numbered range if present. Ground users must also coordinate with Snakeye before of personnel that could be at risk. Contact 56 RMO/ARO or 56 RMO/DO for NOTAM assistance.

4.2.3. Snakeye is responsible for managing the BMGR East daily schedule (to include all Luke AFB assigned SUA). If it becomes necessary to divert aircraft from one range to another, Snakeye will be the final approval authority.

4.2.3.1. Squawks.

4.2.3.1.1. Mode 2. Regular users will squawk IFF Mode 2 IAW with **Attachment 8** (**Note:** Mode 2 is not required during adversary replication). Casual users will coordinate a Mode 2 squawk with Snakeye during mission planning. Any unit may coordinate a different squawk with Snakeye for a given tactical scenario.

4.2.3.1.2. Mode 3. Flight lead will squawk IFF Mode 3/C at all times, and all wingman will squawk 4000 Mode 3/C while in SUA.

4.2.3.1.3. The FAA assigned a block of Mode 3 codes (0001-0077) for use by aircraft in Luke SUA. 56 OSS/OSK has developed a Mode 3 plan for use in LFE and non-LFE scenarios. A small subset (0020-0027) of codes are reserved for range management missions.

4.2.3.2. Snakeye operators will monitor the BMGR East Complex as well as GLADDEN/BAGDAD MOAs to detect non-participating (civilian/unscheduled) traffic and will advise affected flights.

4.2.3.3. Snakeye will advise GXF tower of all inbound emergency, practice approach, and PFO/SFO aircraft. Snakeye will advise aircraft of Range 3 status (hot or cold).

4.2.4. Reduced Lighting Conditions (Lights Out) operations are authorized in the SELLS 1 MOA/ATCAA at or above 10,000’ MSL. Aircraft operating under reduced lighting conditions must be monitored by Snakeye. On check-in, pilots will inform Snakeye of lights out operations in the MOA. Snakeye will advise using flights when non-participating aircraft enter the airspace and issue traffic information anytime a non-participating aircraft is within 5 NM of military flights. If flights are unable to visually de-conflict when the non-participating

aircraft is within 3 NM, military pilots will return to normal lighting. Pilots may resume lights out ops when the non-participating traffic is no longer a factor. Snakeye will terminate lights out operations in the event of radar or communications failure, or any other situation that precludes continuous monitoring.

4.2.5. HAVE QUICK/Secure Voice Use. HAVE QUICK, Secure Voice or any non-standard frequency must be coordinated with Snakeye, and the flight must monitor GUARD to provide Snakeye a means to contact the flight. During LFEs supported by E-3A assets, HAVE QUICK operations are authorized provided the E-3A has radio contact with all airborne players and Snakeye.

4.2.6. BMGR East Dry Overflight.

4.2.6.1. Range Closures without Personnel on Range. During range closures, with no personnel on range (e.g., night missions during EOD/maintenance closures), missions may be scheduled for "dry-only" operations with no minimum altitude restrictions other than standard operating procedures.

4.2.6.2. Range Closures with Personnel on Range. Missions may be allowed to operate on the ranges when personnel are present. For example, when EOD and/or range maintenance personnel are on range, missions may be scheduled for dry overflight above 3,000' AGL. Only simulated weapons deliveries, IAW aircraft specific directives, and eye-safe laser operations are authorized during range closures with personnel on range. Chaff and flare employment is not authorized. Pilots will apply MDS and AFMAN 11-214, simulated off-range attack procedures when operating on a closed range.

4.2.6.3. EOD Operations. When EOD detonations are planned, missions may be scheduled for "dry only" operations above 10,000' AGL. During EOD operations that do not include detonations, missions may be scheduled for "dry only" operations above 3,000' AGL. Chaff and flares are not authorized.

4.3. North/South Transit Corridor (NSTC).

4.3.1. Corridor Defined. The NSTC splits the BMGR East north/south with Range 4, NTAC, and STAC west of the corridors, and Range 3, Range 2, Range 1, and the SELLS MOA east of the corridors (**Figure 3.2**.). The NSTC altitude block is SFC to 19,000' MSL. The North Corridor is the transit airspace between Range 3 and Range 4. The South Corridor is the transit airspace between NTAC/STAC and Range 1/2. The airspace 20,000' MSL to FL 800 above the South Corridor may be used when a flight is scheduled for a combination of NTAC/STAC High and Range 1/2 High. When the above combination also includes Range 3/4 High, the airspace 20,000' MSL to FL 800 above the North Corridor may be used by the scheduled flight. The coordinates for the corridor are listed in **Attachment 7**.

4.3.2. Snakeye Coordination. Snakeye plays a pivotal role in managing aircraft utilizing the NSTC. However, aircrew need to keep in mind that Snakeye is not an ATC function; rather, their role is to provide traffic advisories, and to identify potential conflicts early enough for aircrew to deconflict from each other. The key to safe operations in the NSTC is clear, concise communication between aircrew and Snakeye. **It is imperative that flight leads clearly state their intentions for transit, especially with respect to their transit altitude and destination.** In the absence of this, assistance from Snakeye will be adversely affected and safety of flight may be compromised.

4.3.2.1. Tactical maneuvering in the NSTC. The NSTC can be used for mission execution provided the mission participants own the entirety of the surrounding airspace (Ranges 1-4, NTAC, STAC, Sells A, and Sells E). Notify Snakeye prior to use (state which aircraft will be using the corridor and respective working frequency for traffic advisory) and verify all other aircraft are clear of the NSTC. Plan to complete tactical maneuvering in the NSTC at least ten minutes prior to the end of the airspace window to allow transit by follow on aircraft. Inform Snakeye when tactical maneuvering in the NSTC is complete. If Snakeye reports traffic, stranger traffic is detected, or an inbound aircraft makes direct contact and coordinated deconfliction cannot be established, cease tactical maneuvering in the NSTC.

4.3.3. NSTC Entry/Exit.

4.3.3.1. North Corridor entry is via NOLLS or BRRRT. NOLLS entry altitudes are 16,000' MSL (Davis-Monthan AFB departures with ABQ Center) or 8,000' MSL (Luke departures with Luke RAPCON). BRRRT entry altitudes are 10,000' to 19,000' MSL. South Corridor entry is via MTRs or LATN/transit airspace below SELLS, using altitudes below 3,000' AGL or 6,000' MSL, whichever is higher.

4.3.3.2. North Corridor exit is via NOLLS, COOLY or BRRRT. NOLLS exit altitude is 11,000' MSL (Davis-Monthan AFB recoveries with ABQ Center). COOLY exit altitude is 7,000' MSL (Luke AFB recoveries with Luke RAPCON). BRRRT exit altitudes are 10,000' to 19,000' MSL. South Corridor exit is via LATN/transit airspace below SELLS, using altitudes below 3,000' AGL or 6,000' MSL, whichever is higher.

4.3.4. Deconfliction Procedures. **All flights entering and exiting range via the NSTC will confirm status of adjacent ranges and coordinate deconfliction.** Remain outside of other range boundaries if clearance is not granted for overflight. Aircrew will adhere to the two deconfliction "contracts" described below; following these safety of flight procedures is critical so that pilots can confidently predict the actions of those sharing the NSTC. Unsafe conditions are likely to occur if pilots do not comply with the contract items in this section.

4.3.4.1. Lateral Deconfliction Procedures (Standard Contract). In the NSTC, missions will achieve lateral deconfliction by establishing a flight path that is biased to the right based on direction of travel. For southbound traffic, flights will bias their flight path to the west side of the corridor. For northbound traffic, flight will bias their flight path to the east side.

4.3.4.2. Vertical Deconfliction Procedures (Standard Contract). In the NSTC, missions will achieve vertical deconfliction by using whole number altitudes that are aligned in the same way as VFR hemispheric altitudes. Specifically, missions transiting north or east will fly at odd MSL altitudes (example 9,000' or 19,000', based on planned entry altitude for the assigned range, or for departing at a northern IFR fix to comply with recovery procedures per the filed flight plan); missions transiting south or west will fly at even MSL altitudes (example 8,000' or 18,000', based on the same entry altitude and filed recovery considerations for north or east transit).

4.3.5. Transiting near Active Numbered and Tactical Subranges. Transition thru an active tactical impact area or numbered range is only allowed if cleared by Snakeye. In all cases, all pilots will contact Snakeye, the specific RCO, or owning flight for advisory/clearance and deconfliction. Avoiding active numbered and tactical ranges is particularly important with NSTC operations specified in **paragraph 4.3**. All pilots using impact ranges must ensure all

weapons employment patterns/setups remain within the lateral boundaries of their assigned range. This is critical with respect to the boundaries that are shared with the NSTC corridors.

4.4. Electronic Attack (EA), Chaff, and Flares Employment.

4.4.1. EA and Chaff Use. The current authorizations are available on the Range Operations SharePoint; contact 56 RMO/ASM or 56 RMO/ARO for questions.

4.4.2. Chaff and Flares Use.BMGR East supports both chaff and self-protection flare employment IAW the following guidance:

4.4.2.1. Chaff use. Chaff use is authorized surface to FL500 in R-2301E, R-2304, R-2305 and the SELLS MOA. The types listed in **Table 4.1** are authorized.

Table 4.1. Authorized Chaff.

Type	Frequency (GHZ)
RR-129/AL	2.0 – 10.0
RR-144/AL	8.0 – 9.0
RR-144A/AL	7.0 – 16.0
RR-170/AL	2.0 – 15.0
RR-179/AL	0.9 – 17.0
RR-184/AL	2.0 – 12.0
RR-188/AL	7.0 – 16.0
RR189/AL	7.0 – 19.0

Note: Operators must comply with restrictions in the chaff approval memo posted on SharePoint site at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**

4.4.2.2. Self-protection flares and Smokey Devils. Based on USDA Forest Service *Fire Danger Forecast*, employment altitude restrictions within R-2301E, R-2304 and R-2305 (over military controlled land only) are IAW **Table 4.2**. Restrict employment to a minimum of 3,000 AGL in the SELLS MOA, over the Cabeza Prieta NWR in the southern half of R-2301E (see paragraphs **7.17.1** and **7.17.2**), and over the Tohono O'odham Nation in the southeastern portion of R-2304 (see **paragraph 7.18.1**.). Caution will be used to avoid employment over ground personnel.

Table 4.2. Fire Danger Forecast and Corresponding Flare Restrictions.

USDA Fire Danger Rating	Altitude Restriction
Low	300' AGL Minimum
Moderate	300' AGL Minimum
High	700' AGL Minimum
Very High	1,000' AGL Minimum
Extreme	1,000' AGL Minimum

4.4.3. LUU-Series Flare Employment. LUU-1/B, LUU-2/B, LUU-4, LUU-5/B, LUU-6/B and LUU-19 flares and M257 and M278 illuminating rockets may be employed in R-2301E, R-2304 and R-2305 IAW **Table 4.3** (note the planned minimum burnout altitudes). Pilots must

plan illumination flare employment so that flares remain within restricted airspace and canisters land on range.

Table 4.3. LUU-Series Flare and Illuminating Rocket Authorizations.

Fire Danger Rating	Type			
	LUU-1/B*	LUU-5/B*	LUU-6/B*	LUU-2/B, LUU-4, LUU-19, M257, M278
Low	X	X	X	X (500' AGL Min Burnout)
Moderate	X	X	X	X (500' AGL Min Burnout)
High				X (1,000' AGL Min Burnout)
Very High				X (1,500' AGL Min Burnout)
Extreme				X (1,500' AGL Min Burnout)

Note: *LUU-1/B, 5/B, 6/B target marking flares may be employed only on main airfield target groups.

4.4.4. Based on forecast conditions for BMGR East, 56 RMO will post the current day Fire Danger Rating in the Range NOTAMs on CSE, with a link to the latest USDA Forest Service Fire Danger Forecast.

4.4.5. The 56 RMO may further restrict flare and weapons employment based on the fire danger via the NOTAMs.

4.5. Weapons Employment.

4.5.1. BMGR East supports live and inert air-to-ground and air-to-air weapons employment. General information on types of ordnance approved for use on specific BMGR East targets is provided in **Attachment 6**; however, all users must refer to the Range Operations SharePoint site at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx** for current target and attack restrictions.

4.5.2. Inertially Aided Munitions (IAMs) Employment. In addition to IAMs procedures published in AFMAN 11-214 paragraph 5.2.6, the following must be followed when employing IAMs on the BMGR East.

4.5.2.1. To use published GPS/IAM guided munition WDZs, the following requirements must be met: 1) target coordinate verification must be accomplished via at least three independent checks and should include a combination of procedures that mitigate human error that would produce erroneous weapon targeting; 2) releasing aircraft must be within the published release envelope for the WDZ at the time of launch; 3) releasing aircraft must be within the Launch Acceptable Region (LAR) at the time of weapon release; and 4) releasing aircraft must have a functioning onboard GPS/INS to provide accurate position handoff to the weapon. If these conditions cannot be met, the legacy maximum-energy footprints must be used.

4.5.2.2. Pilots are allowed to employ IAMs through the weather on the tactical ranges IAW the following guidance.

4.5.2.2.1. Only GBU-31/32/38/54 are allowed to be employed through an undercast. Successful BIT-check of the IAM is required. For all deliveries, bomb-on-coordinates (BOC) and GPS bombs will be used (INS-only bombs are not authorized).

4.5.2.2.2. Target (DPI) must be visually cleared prior to employment; aircraft must be VMC above the weather for employment.

4.5.2.2.3. In addition to following published attack restrictions, pilots must ensure the trajectory of weapons delivered in IMC will remain well clear of adjacent airspace not scheduled/owned by the mission.

4.5.3. Live (HE) Ordnance Employment. Live bombs are authorized on three targets only, referred to as HE Hills: Target 110 on NTAC, 207 on STAC, and 320 on ETAC. Targets designed for live AGM/AGR employment are available on NTAC (103 and 123) and ETAC (310).

4.5.3.1. AGM-65 and AGM-114. Because of the very large WDZ footprints associated with these weapons, multiple ranges must be scheduled for each mission, and ground parties may not remain on OPs unless controlling the flight. See **Chapter 7** for additional information.

4.5.3.1.1. Target 310 on ETAC will be schedule for live AGM employment unless ETAC is closed or otherwise unavailable, or the unit specifically requests NTAC. AGM employment on Target 310 requires scheduling both ETAC and Range 3. Ground parties (including JTACs on NATO Hill if not controlling the flight and/or personnel working at the Range 3 consolidation point) on both ranges are affected and must relocate to either OP Charlie or the Range 3 main tower during these missions.

4.5.3.1.2. NTAC Targets 103 and 123 are also authorized for live AGM employment. AGM employment on these targets requires scheduling NTAC, STAC, and Range 4, which may not be possible during periods of peak range demand. Allowed attack parameters are somewhat less restrictive than those for ETAC Target 310. Ground parties on both NTAC and STAC are affected, including any JTACs not controlling the mission. One OP on NTAC or STAC may be occupied during a NTAC AGM mission by JTACs controlling the flight. All other personnel must relocate to the Water Well or Range 4 main tower.

4.5.3.1.3. If necessary, NTAC and ETAC HE Hills may be used for AGM employment.

4.5.3.2. Live AGR employment. Like AGM, live AGR employment is authorized on Targets 103, 123, and 310. Because their footprints are smaller than those associated with AGM, AGR-20 may be employed on Target 103 without scheduling STAC or Range 4. Employment on Target 123 requires scheduling both NTAC and STAC. AGR-20 may be employed on ETAC Target 310 without scheduling Range 3. If necessary, NTAC and ETAC HE Hills may be used for AGM employment.

4.5.4. Armed Hot Conditions. All aircraft are allowed to be in an “armed hot” condition when in restricted airspace and over USAF-managed land (**Figure 4.1**.). Operating in an “armed hot” condition over non-military lands, including the Cabeza Prieta NWR and the Tohono O’odham Nation, is not permitted.

4.5.5. Weapons Release. The following conditions are required for any weapons release: 1) within restricted airspace; 2) over military controlled land; 3) the hazard area (weapons

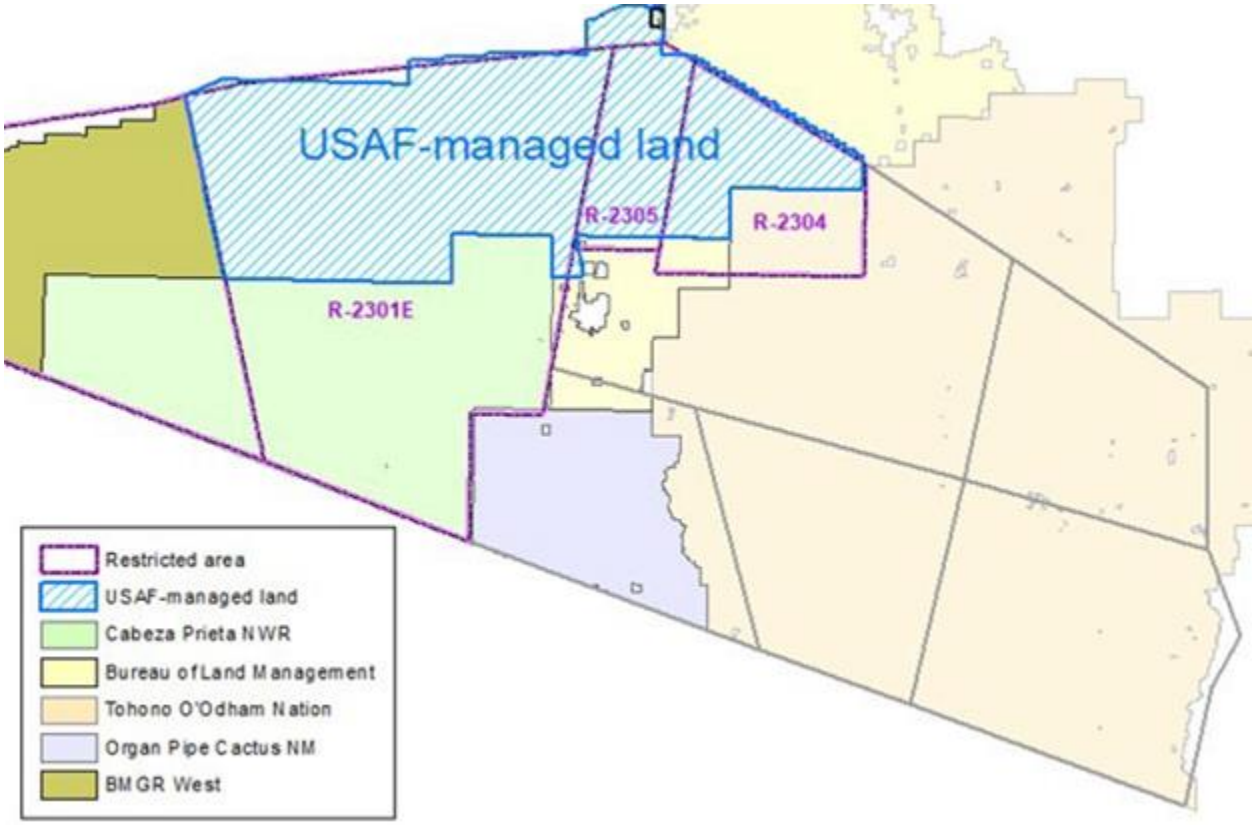
footprint) is contained within military controlled land; 4) the desired point of impact is directed against an authorized target.

4.5.6. For weapons impacts greater than 1000 meters from intended target, pilots will report details of the incident to Snakeye. If pilots have awareness that weapons impacts might have occurred off-range (outside the boundaries of their assigned range), they will discontinue weapons employment and report their release parameters to either Snakeye, 56 RMO/ARO or the 56 RMO/DO.

4.5.7. Users will report expenditures to Snakeye IAW **paragraph 1.3.2.2.3**.

4.5.8. Arizona Smart Pack. The 355 WG/OG maintains ownership of the Arizona Smart Pack (CAS and CSAR standards); information may be obtained by contacting the 355 OSS/OSK at DSN 228-5050 or COMM 520-228-5050.

Figure 4.1. BMGR East Complex Restricted Areas and USAF-Managed Land.



4.5.8.1. SPINS Content. The Arizona Smart Pack provides standard procedures to be used by units executing close air support or combat search and rescue training missions in BMGR East. The SPINS represent procedures used in a cross-section of AORs. If any doubt exists, use clear communications to immediately resolve any potential conflicts.

4.6. Laser Operations.

4.6.1. 56 RMO/ARO is the laser safety office for BMGR East. On Class A ranges, the RCO is the Laser Safety Officer (LSO); on Class C ranges, the flight lead or JTAC, if controlling the flight, is the designated LSO.

4.6.2. BMGR East subranges are certified and approved for laser operations. Reference **Attachment 5** for specific laser systems authorized for use on the BMGR East complex and target lasing restrictions.

4.6.3. Use of combat laser is NOT AUTHORIZED ON ANY RANGE unless coordinated in advance with Range Scheduling, reflected on the BMGR East daily range schedule in CSE, and confirmed on check-in with Snakeye or Class A Range RCO. Ground parties will contact 56 RMO/ARO LSO for guidance prior to employment. Combat Laser use is not authorized when overflying or in the vicinity of ground personnel without their knowledge and use of laser eye protection.

4.6.4. Laser operations include the use of Air Commander's Pointer (ACP); however, ACP use does not have to be annotated on the daily range schedule.

4.6.4.1. Use of ACP when nonessential personnel are present (for example demonstrations and tours) is not authorized.

4.6.5. In addition to the guidance provided in AFMAN 13-212v1 and AFMAN 11-214, ground- based laser operators will:

4.6.5.1. Be briefed on laser operations on BMGR East by the 56 RMO LSO or designated representative prior to employment.

4.6.5.2. Have received training in the proper and safe use of laser systems being employed.

4.6.5.3. Have positive communication with the RCO, LSO, or Snakeye as appropriate during laser operations. Notify the RCO or Snakeye when commencing and terminating laser activities on range.

4.6.5.4. Ensure that personnel in the laser safety danger zone (LSDZ) wear appropriate LEP (OD must be 6+ at wavelength 1064 nm).

4.6.5.5. Advise all personnel on the range of imminent laser operations and ensure that all personnel in the vicinity of operations remain outside the laser target area and LSDZ or wear the required LEP.

4.6.5.6. Inform aircraft in adjoining airspace when using lasers.

4.6.6. An approved combat laser may be activated while the aircraft is over lands not controlled by the Air Force provided the aircraft is within restricted airspace, the laser is aimed at an authorized target on the BMGR East, and all requirements of the current BMGR East laser certification are met.

4.6.7. Pilots and/or JTACs may activate lasers only after positive identification of the target and after ensuring the laser target area and LSDZ are clear of unauthorized personnel. The laser may be energized only when pointing at the laser target area. Scanning targets while lasing is not authorized.

4.6.8. Class 3b or 4 lasers shall not be fired above the horizon or backstop (e.g., hills, trees, or large targets). In unique cases where above-horizon laser operations are required, contact the 56 RMO (prior coordination with DoD Laser Clearinghouse and the FAA is required).

4.6.9. On Class A ranges, no lasing of targets is permitted if standing water is observed within 3,000' of the target. On Class C ranges, the onsite LSO (pilot/JTAC) must identify and consider the effects of standing water.

4.6.10. Laser Termination. Aircrew will immediately terminate laser operations if unauthorized personnel are observed in the LSDZ, equipment malfunction is observed, target is lost in field of view, or anytime laser safety cannot be assured.

4.6.11. Other requirements.

4.6.11.1. Snakeye must be aware of JTAC movements and locations and must ensure that nonessential personnel are not allowed to access the NHZ. For example, if JTACs on OP NATO Hill are lasing Targets 302, 303, or 305, only essential personnel with approved LEP may be on OP Charlie.

4.6.11.2. During non-eye safe laser Class, A operations on numbered ranges, the RCO must ensure that no nonessential personnel are on range. If non-eye safe laser use has not been properly scheduled in advance and shown in CSE, it will not be supported.

4.6.11.3. Contractors must take reasonable precautions to ensure that nonessential, unprotected personnel are excluded from ranges when non-eye safe lasers are in use.

4.6.12. Laser Hazards.

4.6.12.1. Buildings, towers, radar reflectors, UMTEs and JTEs located on range are not targets. Laser use at these facilities is not authorized.

4.6.12.2. A potential laser hazard exists on the EOD training range (N3245.10 W11253.03). A highly reflective metallic rectangular security fence has been installed around a closed munitions burial site, and aircrew using lasers and other IR/optical devices will exercise caution when operating in this area.

4.6.12.3. To reduce specular hazards, range maintenance contractors shall ensure that windows, mirrors, chrome, and other reflective surfaces are removed from vehicles and other items before they are placed on range, and targets are painted with non-reflective paint.

4.7. Bird Watch Procedures.

4.7.1. The RCO (or Snakeye on numbered ranges scheduled Class C) and GXF Tower will issue bird hazard warnings and ensure both Snakeye and the Command Post are notified. The RCO/Snakeye will advise flights on range if the Bird Watch Condition (BWC) is other than LOW at numbered ranges according to the following criteria:

4.7.2. Bird Watch Condition SEVERE: bird activity in the immediate vicinity representing high potential for strikes. The respective range or airfield will be closed.

4.7.3. Bird Watch Condition MODERATE: bird activity near the specific location representing increased potential for strikes. BWC Moderate requires increased vigilance by all

agencies and supervisors, and caution by aircrew. For 56 FW, only required syllabus events or Ready Aircrew Program (RAP) required events may be flown.

4.7.4. Bird Watch Condition LOW: no restrictions.

4.8. Contingencies within BMGR East.

4.8.1. GXF tower continuously monitors the Luke AFB Supervisor of Flying (SOF) frequency.

4.8.2. Penetrating Other Subrange Airspace. If flight path will penetrate another range's airspace, make a call on Guard (for example, "This is Tiger 2, F-16, IFE, departing Air-to-Air High, direct Gila Bend at 8,000 feet").

4.8.3. Emergency with No-Radio (NORDO) Communications. Squawk emergency Mode 3 code of 7700 (7600 if NORDO without an emergency) and use all available means to clear for flight path conflicts. Snakeye will advise users of airspace affected by emergency/NORDO aircraft and alert GXF tower.

4.8.4. Runaway Gun. Various ranges are located in close proximity to each other as well as manned sites. In the event of a runaway gun following a firing pass; recover the aircraft, employ appropriate aircraft procedures, and fly straight ahead until the gun ceases to fire. On Ranges 1 and 3, personnel may be 5 NM west of the strafe targets—a turnout of traffic is recommended, safety permitting.

4.8.5. Hung Ordnance. Gila Bend AFAF is available for recovery of aircraft with live/inert ordnance that will not jettison. When diverting to Gila Bend AFAF with hung ordnance pilots will advise GXF tower and follow control tower instructions for parking (expect to remain within end of runway turn around areas).

4.8.6. Jettison. Aircrew are allowed to jettison external tanks, inert ordnance, and launchers/ dispensers on any open numbered range Nuclear Weapons Delivery (NWD) target or on a tactical range. Pilots will coordinate with Snakeye and RCO, if applicable, for jettison. If required, call on Guard to coordinate. For numbered range jettison, obtain clearance from the RCO, fly toward the NWD target at or above 1,000' AGL IAW respective attack headings, and jettison stores when over the target. If jettison is unsuccessful, avoid flying over buildings or highways while repositioning. For tactical ranges, jettison on any target authorized for non-HE employment (that is, not an HE hill or live Maverick target).

4.8.6.1. Alternate jettison procedure (tactical range not available or IMC/above the weather). Pilots will contact Snakeye, ETAC, and Range 3 to coordinate using the alternate jettison procedure. The alternate jettison area is defined off the Gila Bend VORTAC (Channel 113) 150 radial, 12 NM outbound between 1,000' AGL and 17,000' MSL. This jettison point places the aircraft in the northwest corner of ETAC with the intended weapons point of impact within the range boundaries.

4.8.6.2. Jettison HE ordnance on one of the HE Hills no lower than 1,000' AGL above the frag distance.

4.8.7. Inadvertent/Unintentional Release. Pilots will report all inadvertent/ unintentional releases to the RCO and Snakeye with call sign, type of aircraft, time and description of incident, and impact point (if known) as soon as possible. Snakeye will relay to the Luke AFB

Command Post, who will notify the appropriate unit's command post (if necessary) of the inadvertent release.

4.8.8. Off-Range Impact. Pilots must be thoroughly aware of range land boundaries at all times and ensure mission materials are sufficient for in-flight assessment of off-range impacts. Pilots will immediately notify Snakeye of all off-range impacts. Notification will include call sign, type of aircraft, time and description of incident, and impact point, if known. Snakeye will immediately notify 56 RMO/DO, 56 RMO/ASM, 56 RMO/ARO, and the Luke AFB Command Post of all known or suspected off-range impacts.

4.8.9. HE Coordination. Pilots must notify Snakeye whenever HE ordnance is jettisoned or delivered on other than an authorized, HE target, and/or does not function properly. Snakeye will notify EOD.

4.9. Customs and Border Protection (CBP) Operations.

4.9.1. The 56 RMO supports planned and contingency air and ground law enforcement operations on the BMGR East. Every effort is made to maximize airspace use for both military and CBP without adversely affecting their respective missions.

4.9.2. Ground operations. Border Patrol ground personnel require access to the BMGR East on a regular basis. Routine patrols are conducted outside range operating hours; however, Border Patrol ground parties may require access during scheduled operating hours. If ground parties need access to an active subrange during operating hours, ordnance deliveries on that subrange will be suspended. In addition, if ground parties are working within NTAC or STAC, strafing on Ranges 1 and/or 2, depending on the location of the ground party, will not be allowed. If ground operations move northward, Range 4 may be similarly restricted. Unless approved in advance by 56 RMO, ground parties must remain at least 500 feet from a target used for live (HE) ordnance and 300 feet from all other targets.

4.9.3. CBP Manned Aircraft Operations in SELLS.

4.9.3.1. CBP aircraft routinely support Border Patrol ground operations and can fly VFR anywhere in the SELLS MOA at 17.5K MSL and below. Snakeye will make every effort to establish communications with all CBP pilots operating in SELLS; military aircrew must remain vigilant for CBP aircraft.

4.9.3.2. Military flight leads may be directed to come up on Snakeye frequency to receive information or work pilot-to-pilot deconfliction real time with CBP pilots. Military pilots are not to intercept or harass any unscheduled aircraft (e.g., using self-protection flares to highlight their presence in the MOA).

4.9.4. CBP Manned Aircraft Operations in Restricted Areas.

4.9.4.1. The 56 RMO supports preplanned CBP missions including a variety of aircraft at varying altitudes in different parts of BMGR East. Scheduled military flights will be advised of planned CBP operations (call sign, track, altitude, and frequency) in order to aid mission planning and deconfliction.

4.9.4.2. In all cases, Snakeye will update military pilots with position of the CBP aircraft and their intentions on initial contact. Pilots may be required to deconflict real time in support of CBP operations.

4.9.4.3. Occasionally, CBP aircraft require immediate access to restricted airspace in support of Border Patrol ground operations on the BMGR East. Snakeye will notify affected RCOs, aircraft, and ground parties, restricting all operations to dry overflight and 500’ AGL minimum or as directed.

4.9.5. CBP Unmanned Aircraft Operations.

4.9.5.1. CBP operates an MQ-1 Predator at FL 190, in an area that extends from the US/Mexican border to approximately 15 NM north, for the entire width of SELLS and R-2301E. Unless otherwise coordinated and approved by Snakeye, the Predator will operate in a 5 NM corridor along the border within SELLS only. The Predator will use call sign “Troy” (Mode 3: 4410).

4.9.5.2. The Predator operator, or the CBP Air Marine Operations Center (AMOC), will provide advance notice of Predator operations to Snakeye.

4.9.5.3. When operating in SELLS ATCAA, the Predator pilot communicates with Snakeye, who in turn provides advisories to military pilots. Snakeye may request pilot-to-operator deconfliction.

Chapter 5

BMGR EAST COMPLEX CAPABILITIES

5.1. BMGR East Complex Capabilities.

5.1.1. This chapter describes the capabilities of the BMGR East Complex. Specific information about facilities available at Gila Bend AFAF is provided in **Chapter 11**.

5.2. Tactical Ranges.

5.2.1. Three Class C tactical ranges (NTAC, STAC, and ETAC) support aircrew training in gunnery, bomb, rocket, and missile employment. Targets simulate tactical features such as airfields, railroad yards, missile emplacements, truck convoys, urban areas, and enemy compounds. The fourth tactical range, Air-to-Air, does not include targets of any type, and is a no-drop area. The tactical ranges are described in detail in **Chapter 7**.

5.3. Numbered Ranges.

5.3.1. There are four numbered ranges on BMGR East capable of supporting Class A operations. They are similarly configured to accommodate training in radar bombing and conventional visual delivery. All numbered ranges are equipped with electronic scoring systems (Improved Range Strafe Scoring System (IRSSS) and Weapons Impact Scoring System (WISS)). The numbered ranges are described in detail in **Chapter 6**. The south side of Range 3, referred to as the Rescue Range, is equipped with silhouette targets that can be raised and lowered remotely; real-time scoring is available through the operating software. The Rescue Range is available for helicopter gunnery using .50 cal and 7.62 only (see **paragraph 6.18**.).

5.4. Air Combat Training Systems (ACTS).

5.4.1. The BMGR East is equipped with advanced scoring and feedback systems which offer engagement monitoring and debriefing capabilities. BMGR East is ACMI compatible and the ACMI facility (Building 500) supports real-time monitoring and playback equipment to support debriefs.

5.4.2. ACMI Scheduling. Squadron schedulers will use GTIMS or coordinate support with ACMI at DSN 896-6509 or (commercial) 623-856-6509 NLT 1600L the working day prior to the mission. 56 FW priorities for ACMI support are: 1) LFEs; 2) D/ACT; 3) ACM; 4) 2v2 TI;5) BFM; 6) LASDT; 7) 1v1 TI and 8) A/G sorties.

5.4.3. Communication. ACMI (call sign *Quickdraw*) will monitor the primary frequency of the working area. Squadrons may schedule a Range Training Officer (RTO) for any mission.

5.5. Threat Simulation.

5.5.1. BMGR East includes four fixed-site UMTEs and seven mobile JTEs. In addition, internal to the restricted areas of the BMGR East complex are six remotely operated GTR-18A Remote Smokey SAM (RSS) launch locations. For the UMTEs and RSS sites, **Figure 5.1** identifies the location and type of each threat system on the BMGR East, and **Table 5.1** provides site coordinates. For the JTEs, **Figure 5.2** identifies JTE comm site locations, and **Table 5.2** provides site coordinates. Actual JTE locations can be found on the Range Operations SharePoint at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**.

5.5.2. Scheduling. "Dagger" is the call sign for BMGR East Threat Operations. Coordination of mission support should be accomplished using the form available on the Range Operations SharePoint at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**. Questions or special requests may be coordinated with Dagger at DSN 896-9672 or commercial 623-856-9672. Requests should be submitted NLT 1600L the working day prior to the mission. Missions with short notice coordination may still be supported depending on Dagger's work schedule.

5.5.3. Communication. Contact Dagger on the primary tactical range frequency (**Attachment 9**).

Figure 5.1. UMTE and RSS Locations.

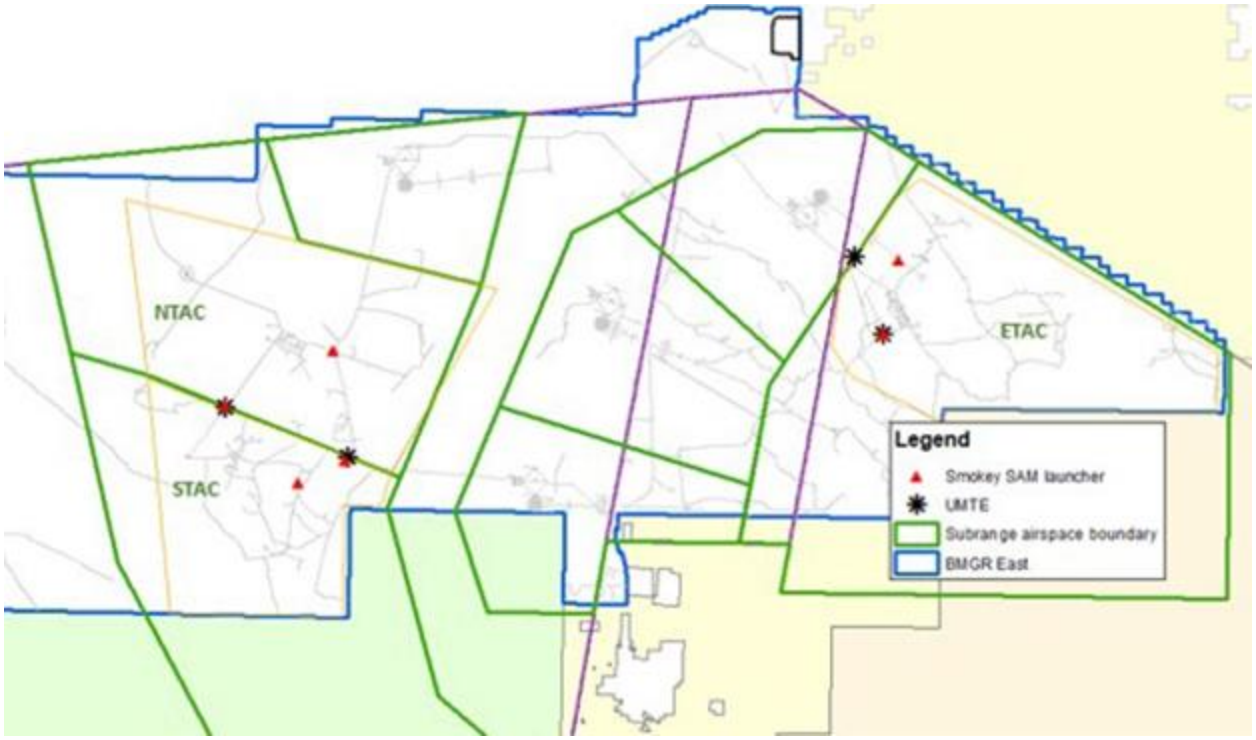


Table 5.1. UMTE—RSS Site Coordinates.

Range / Site ID	Threat Type	Latitude	Longitude	MGRS
NTAC				
UMTE–RSS	SA-2	N 32 35.060	W 113 15.385	12S TB 88208 07454
RSS (OP A)	Autonomous IR	N 32 37.963	W 113 09.245	12S TB 97924 12620
STAC				
UMTE–RSS	SA-6	N 32 32.759	W 113 08.321	12S TB 99176 02973
RSS	Autonomous IR	N 32 31.659	W 113 11.179	12S TB 94660 01031
ETAC				
UMTE	SA-6	N 32 42.867	W 112 39.608	12S UB 44410 20850
RSS (T335)	Autonomous IR	N 32 42.780	W 112 37.060	12S UB 48388 20627
UMTE–RSS	SA-8	N 32 39.139	W 112 37.908	12S UB 46960 13919

Figure 5.2. JTE Comm Sites.

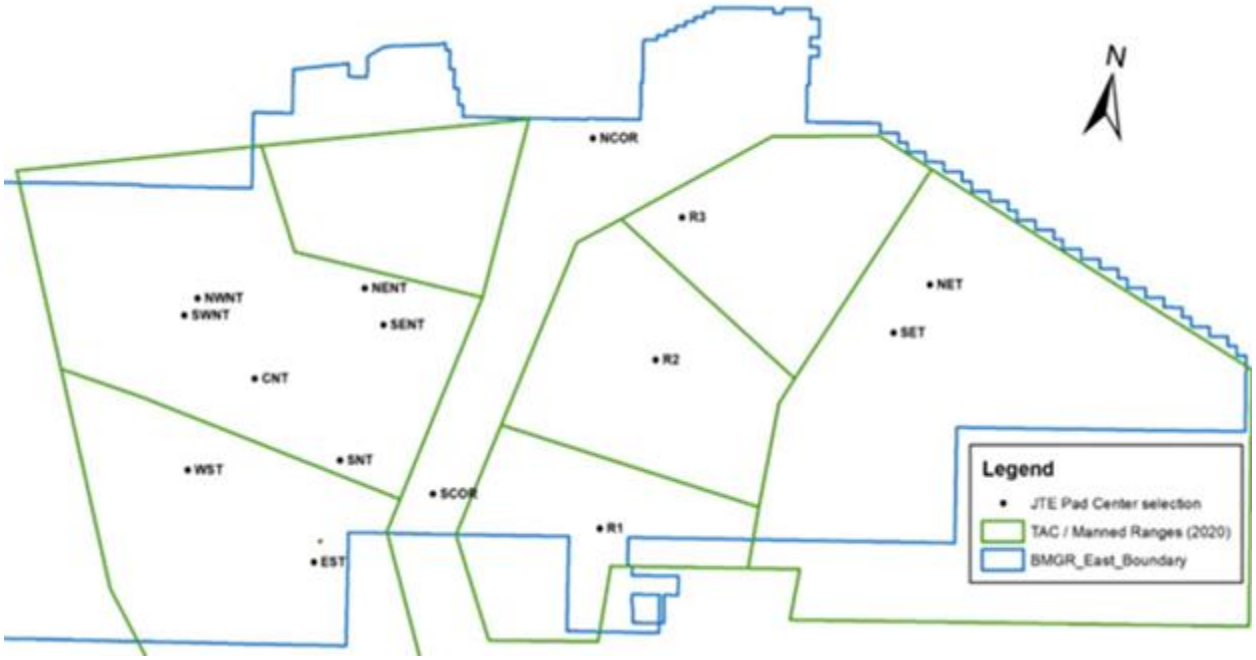


Table 5.2. JTE Comm Site Coordinates.

Site ID	Latitude	Longitude	Elevation
NET	N 32 42.189	W 112 36.066	1539
SET	N 32 39.949	W 112 38.043	1564
NCOR	N 32 48.654	W 112 54.974	818
SCOR	N 32 32.156	W 113 03.520	1035
R3	N 32 45.088	W 112 49.920	1022
R2	N 32 38.522	W 112 51.267	1150
R1	N 32 30.713	W 112 54.220	1284
NENT	N 32 41.560	W 113 07.543	732
SENT	N 32 39.875	W 113 06.457	808
SNT	N 32 33.615	W 113 08.721	904
CNT	N 32 37.282	W 113 13.562	766
SWNT	N 32 40.134	W 113 17.542	668
NWNT	N 32 40.922	W 113 16.827	669
EST	N 32 28.910	W 113 10.060	818
WST	N 32 33.018	W 113 17.182	688

5.5.4. BMGR East Threat Operations information and mission support coordination materials, including the Threat Operations Request Form, can be found on the Range Operations SharePoint site at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**.

5.5.5. AN/TPT-T1 (V) UMTE. The UMTE consists of two major equipment groups: the Operator Control Group (OCG) and four Remote Emitters. The OCG (located within the

ACMI facility at Luke AFB) provides all necessary interfaces, control, and display functions to operate the emitters.

5.5.5.1. Aircraft position data is supplied to UMTE from the best available source to produce correlated target tracks. Remote emitters are then slaved to the desired target. Specific scenario requests for UMTE engagements must be included in the coordination/request form. Operators have two-way UHF radio communications for real-time coordination of scenario changes and limited feedback capability. In addition, threat operators will record engagement specifics on an engagement worksheet and fax to squadron after mission.

5.5.6. GTR-18A (Smokey SAM): The Smokey SAM is a visual cueing system used in coordination with UMTE and the TRTG or independently. Smokey SAMs resemble large “bottle-rockets” that are deployed by a 4-bay launcher from remote locations downrange. Once a target is considered "in-range", a Smokey SAM is launched to simulate an actual surface-to-air attack. Certain parameters must be followed by the launch operator (including wind speed and distance to target) to avoid injury to personnel and possible damage to aircraft.

5.5.6.1. Launch Site Overflight. **WARNING:** Smokey SAMs have a nominal altitude of 1,500’ and must be overflown at least 2,000’ AGL vertically and 2,000’ horizontally. Smokey SAM rocket fragments are foreign object damage (FOD) hazards and must be avoided. Aircraft will not under fly these rockets, as they may take 25 seconds to fall back to the ground.

5.6. Threat simulators.

5.6.1. Both stationary and mobile threat simulators will be added at various locations on the BMGR East in the near future. Information about that equipment will be posted on the Range Ops SharePoint site and updated as needed. Contact 56 RMO/ARO or DO for specific details.

5.7. Laser Evaluator Systems - Mobile (LES-M).

5.7.1. LES-Ms are in place on NTAC, STAC, and ETAC. The system works only with a combat laser and is designed to provide an aural tone when the laser is seen by the system. The tone will be heard on the respective tactical range frequency indicating a good laser spot on target. This is a dry only, no-drop system.

5.7.2. LES-Ms are positioned at four locations on the tactical ranges.

Table 5.3. LES-Ms Positioned on the Tactical Ranges.

LES-Ms Positioned	Tactical Ranges
NTAC, north of Target 102	N 32 39.660 W 113 12.687 791
STAC, northwest of Target 202	N 32 34.647 W 113 15.732 725
ETAC 45 IP	N 32 41.797 W 112 35.782 1578
ETAC Target 329 (no drop)	N 32 41.469 W 112 29.844 1913

5.8. Tactical Data Link (TDL).

5.8.1. The 56 RMO manages and operates the BMGR East TDL network, which supports Link 16 and Situational Awareness Data Link (SADL) equipped aircraft.

5.8.2. Scheduling. “Overlord” is the call sign for the BMGR East TDL network manager. Entry into the network for routine use is available 24 hours a day, Monday through Friday. Mission support (tactical scenario support, virtual track generation, etc.) will be coordinated with Overlord at DSN 896-8385 (alternate 623-856-9672) or commercial 623-856-8385 (alternate 623-856-9672) NLT 1600L the working day prior to the mission. Missions requesting other than routine TDL support and those with short notice coordination may still be supported depending on Overlord’s work schedule.

5.8.3. BMGR East TDL information and mission support coordination materials can be found on the Range Operations SharePoint site. Posted documents include the BMGR East Operations Task Link (OPTASKLINK) and Overlord Coordination/Request Form.

5.9. Tactical Drop Zones (DZ) and Assault Landing Zones (ALZ).

5.9.1. Tactical DZs and ALZs have been designated within the BMGR East. Unless otherwise specifically approved, DZ use is limited to personnel and small tactical equipment drops only. Coordinate all requests to drop heavy equipment with 56 RMO/ARO. Use of the facilities described below must be scheduled through 56 RMO/ASMS. Although the 56 RMO has approved the use of these facilities/areas as DZs or ALZs, operational surveys must be completed by user(s) IAW Air Force requirements. Users must complete a survey, if needed, before scheduling these facilities. If a local survey is completed, prospective users must provide a copy to 56 RMO/ASMS. Additional information is available on the Luke CSE homepage at: **https://cseaf.eglin.af.mil/cse/home.aspx.**

5.9.2. White Hills Circular DZ (ZAR index 0509, expired, cannot be scheduled pending recertification).

5.9.2.1. Description. Small diameter gravel pit located next to a dirt road.

5.9.2.2. Location. DZ center point is located west of SR 85 along a dirt access road (DZ is 2954 yards, bearing 286 magnetic from SR 85/dirt access road intersection) at N 32 52.43 W 112 47.41 (12S UB 3253 3871).

5.9.2.3. Uses. Personnel drops only.

5.9.3. Don-Kay DZ (ZAR index 0507, expired, cannot be scheduled pending recertification).

5.9.3.1. Description. Unimproved DZ co-located with triangular auxiliary airfield.

5.9.3.2. Location. DZ center point is located at the center of Williams AUX-6 LZ at N 32 53.10 W 112 48.99 (12S UB 30078 39994).

5.9.3.3. Uses. Personnel and small tactical equipment drops only.

5.9.4. AUX-6 CDZ (ZAR index 0680).

5.9.4.1. Description. Unimproved DZ co-located with triangular auxiliary airfield.

5.9.4.2. Location. DZ center point is N 32 53.02 W 112 48.90 (12S UB 30216 39851).

5.9.4.3. Uses. Personnel and small tactical equipment drops only, unless approved in advance by 56 RMO/ARO.

5.9.5. PTWOB Circular DZ (ZAR index 1359). A small prepared circular DZ (175 yards in diameter) is located on Gila Bend AFAF near the helipads and is approved for MFF only.

Because of the pace of airfield operations, use of this DZ will rarely be approved. Requests must be submitted to 56 RMO/ARO at least 30 days in advance.

5.9.6. Williams AUX-6 ALZ (KGAX).

5.9.6.1. Description. Triangular auxiliary field. Runways are roughly 150’ by 3,600’. RWY 01/19 was repaired/improved in 2015 and a survey is published (ZAR index 1581). No survey is published for RWY 13/31; however, this runway is available for fixed-wing use with approval of 56 RMO if the user provides a current survey. RWY 07/25 is approved for rotary-wing use only; no fixed-wing operations. The western portion was asphalted in 2016 and tie-downs and grounding points added.

5.9.6.2. Location. WSW of Gila Bend AFAF (257/5 NM from Gila Bend AFAF runway or 228/8.4 NM from GBN TACAN).

5.9.6.3. Uses. Assault landing and/or touch and go by fixed wing and helicopter aircraft, rapid ground refueling (RGR), and forward area operations.

5.9.6.4. Operations. AUX-6 ALZ is on the boundary of the Gila Bend AFAF Class D airspace north of BMGR East Complex restricted airspace (R-2301E). The runway is uncontrolled; however, pilots will maintain communication with GXF tower throughout AUX-6 flight operations for traffic advisories. Strict adherence to ground track and altitudes depicted at **Figure 5.3** is mandatory. Standard pattern entry will be from the north/northwest to avoid the Class D airspace and fighter pattern flows. CFR support is available on a very limited basis, but maintaining required coverage at GXF is the priority. Generally, CFR support at AUX-6 will be available at no cost to users on the first consecutive Tuesday and Wednesday of each month, 1800-2200L. Support may be provided at other times, staffing and scheduling requirements permitting, at user’s cost if requested at least 5 working days in advance.

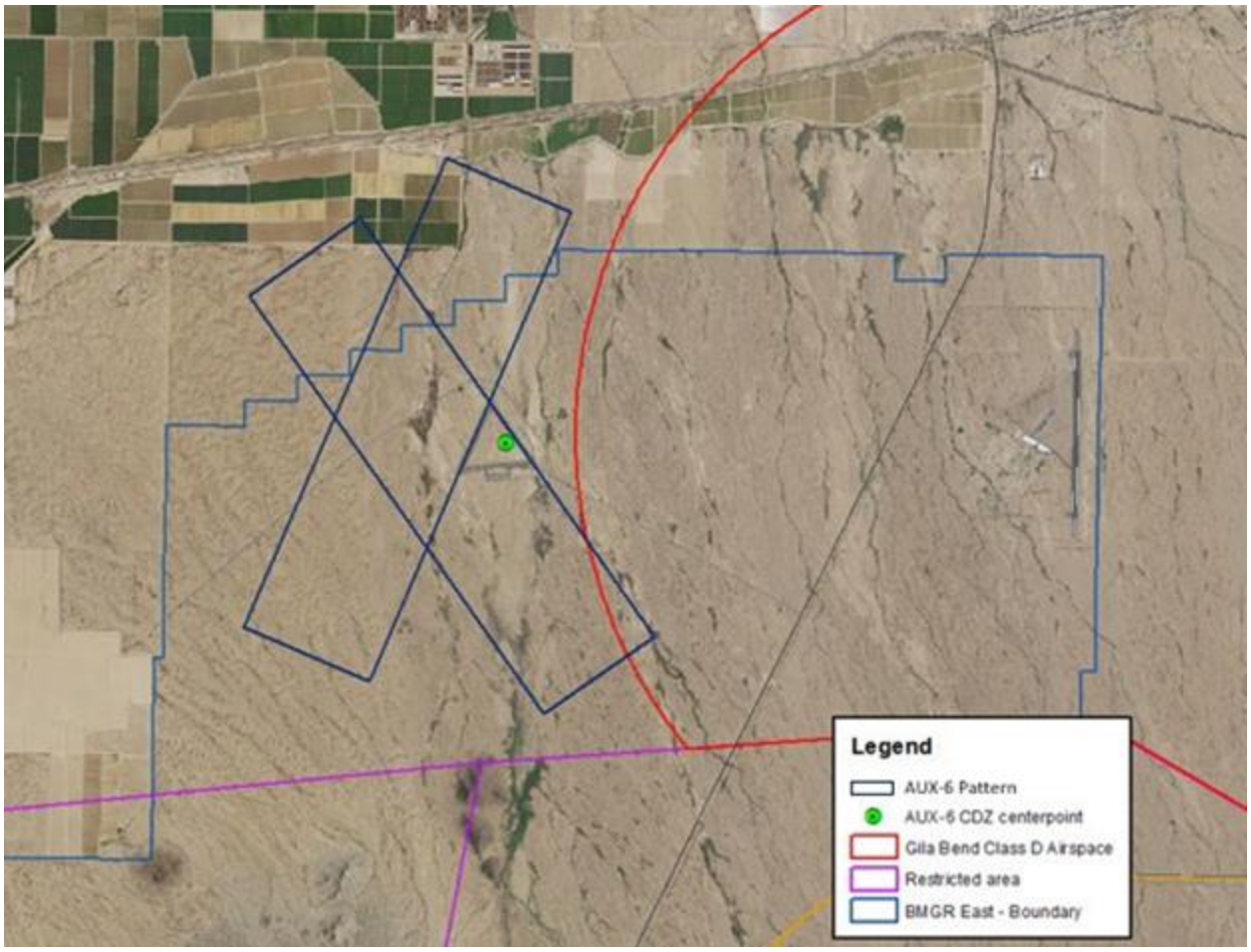
5.9.7. Stoval ALZ.

5.9.7.1. Description. Triangular auxiliary field. Two assault landing strips bearing 080-260, approximately 3,600’ long, and 020-200, approximately 3,900’ long.

5.9.7.2. Location. Northwest corner of R-2301E south of Dateland Arizona, at coordinates N 32 43.75 W 113 37.50 (12S TB 54000 24311).

5.9.7.3. Uses. Assault landing, touch and go, aerial deliveries, and rapid ground refueling (RGR) by fixed- and rotary-wing aircraft.

Figure 5.3. AUX-6 Traffic Patterns.



Note: Pattern altitude is 1800' MSL, max 2nm finals.

5.10. Observation Points (OPs).

5.10.1. OPs have been designated on NTAC, STAC, and ETAC. All OPs are near approved range roads; however, some require a steep climb. Precise locations and other information are provided below in the discussions of individual tactical ranges in **Chapter 7**. An additional OP has been established within the Rescue Range on Range 3. It may be used only as a part of Rescue Range operations. See paragraphs **5.13** and **6.18**. Coordinates of all OPs are provided in **Attachment 7**.

5.11. Helicopter Landing Zones (HLZs).

5.11.1. HLZs have been identified at various locations on the tactical ranges, including several OPs. Although the 56 RMO has approved the use of these locations as HLZs, operational surveys are the responsibility of the user(s). Contact 56 RMO/ARO for additional information.

5.12. CSAR/Special Operations Training Range.

5.12.1. A portion of Range 3 has been reconfigured to support helicopter gunnery and special operations training. It includes static targets (vehicles) and pop-up silhouette targets that are user operated. This area, called the Rescue Range, is described in detail in **Chapter 6**, **paragraph 6.18**.

5.13. Range Munitions Consolidations Points (RMCPs).

5.13.1. Four fenced areas provide secure locations for temporarily storing range residue (**Figure 5.4**.). These compounds are fenced and locked, and EOD controls access. Water, power, and sanitation facilities are not available.

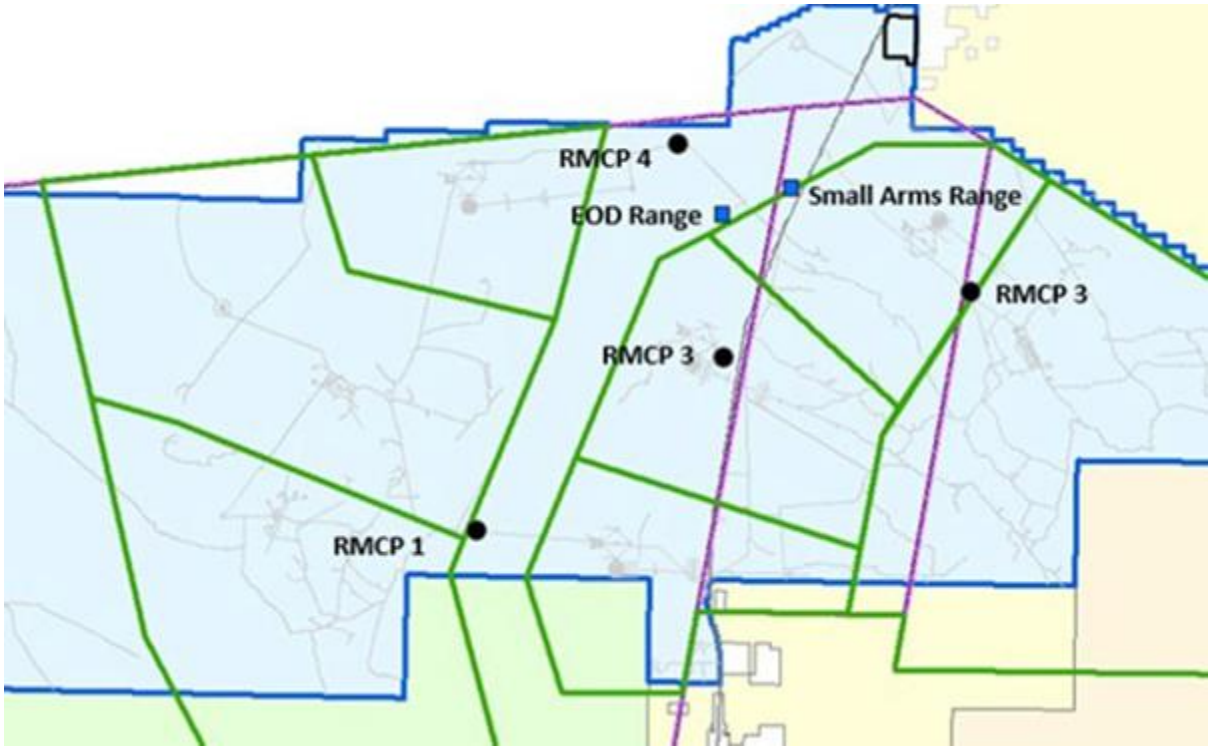
5.14. EOD training and disposal range (Figure 5.4).

5.14.1. The EOD range is located approximately 2 NM west of Black Gap, at N32 45.311 W112 52.081, 12S UB 25004 25690 (GXF 205/16). It is accessed using the Range 4 road. When the EOD range is hot, aircrew in the Range 4 NWD pattern will not descend early from downwind altitude and will avoid the EOD range by 1 NM or overfly above 10,000’ AGL.

5.15. Small Arms Range (Figure 5.4).

5.15.1. The approximately three-acre small arms range is located roughly 8 NM southwest of Gila Bend AFAF, west of SR 85, along the boundary between R-2301E and R-2305 (N32 47.17 W112 49.367, 12S UB 2930529049). Aircrew will avoid the small arms range by 3 NM or overfly above 5,000’ AGL.

Figure 5.4. Location of EOD Range, RMCPs, and Small Arms Range.



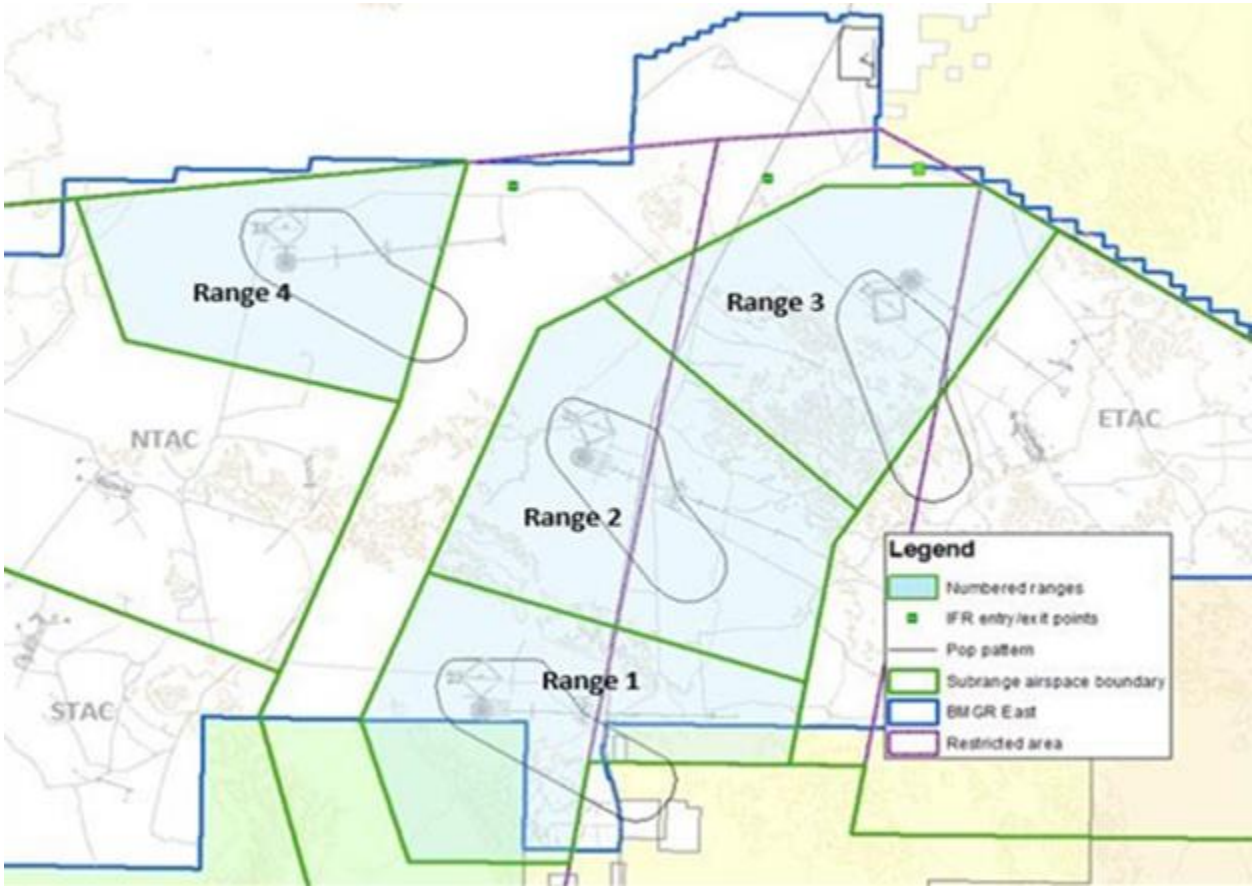
Chapter 6

NUMBERED RANGES

6.1. General.

6.1.1. BMGR East contains four separate numbered ranges. Ranges 1, 2 and 4 have a right conventional target, a nuclear weapons delivery (NWD) target, a tactical target, two strafe pits and one tactical strafe target. A left conventional circle is visible, but no associated target exists, and weapons employment is not authorized. Range 3 has a right conventional target, a nuclear weapons delivery (NWD) target, two strafe pits and one tactical strafe target. There is no tactical target on Range 3. With one exception, the NWD target is on the south side of the range; Range 3 is configured with the NWD target to the north (**Figure 6.1**.). Range 3 is also unusual in that the south half of the range has been reconfigured to support helicopter gunnery and CSAR-type training; this area is referred to as the Rescue Range and is described in **paragraph 6.18** below. Based on the unique nature of each range and their proximity to other maneuver areas, each range is further defined in this chapter. For purposes of discussion and deconfliction, fast movers are defined as F-15E, F-16, F-18, and F-35, or any aircraft that typically flies patterns in excess of 400 knots ground speed. For all numbered range operations, AFMAN 11-214 will be complied with, but may be altered slightly based on specific procedures in this chapter.

Figure 6.1. Numbered Range Locations Within BMGR East.



6.2. Airspace Defined.

6.2.1. Airspace for each numbered ranges is: altitude IAW BMGR 3-tier altitude ROE and lateral boundaries, specifically polygons with coordinates provided in **Attachment 7** (boundaries depicted in **Figure 6.1**.).

6.2.1.1. Pilots must assume a hot numbered range extends 10 NM east of the main tower up to 6,500' MSL to accommodate NWD patterns. When the pop pattern is active, flights may operate as far as 8 NM southeast or northeast of the conventional targets.

6.2.2. Ranges 1 and 2. Main and flank towers on Ranges 1 and 2 lie within R-2301E; however, the pop and NWD patterns extend into R-2305. NTAC and STAC are approximately 5 NM west of the main towers; the North and South Transit Corridors are approximately 2.5 NM west. AA HI airspace overlies Ranges 1 and 2, FL 250 and above.

6.2.3. Range 3's main and flank towers lie within R-2305; however, fast mover patterns extend into the ETAC portion of R-2304. Therefore, fast movers will not be scheduled for Range 3 only.

6.2.4. Range 4. Range 4 main and flank towers and its patterns lie entirely within R-2301E. The northern border of R-2301E is only 1.25 NM north of the right conventional target. NTAC airspace begins 5 NM south of the main tower. AAHI overlies Range 4, FL 250 and above.

6.3. Range Classifications/Types of Service.

6.3.1. Roads leading to/through numbered ranges provide access to many parts of the range, and the high potential for unauthorized ground parties to enter the numbered ranges without clearance is a safety issue. For this reason, Class A operations are the norm. At all times aircrew must be aware of the potential for ground intrusions within the range boundaries and must cease weapons employment if ground parties are observed. Class C operations may be scheduled only under circumstances described below. Use of numbered range airspace for dry overflight also may be scheduled and must be shown as such in CSE.

6.3.2. Class A operations. Numbered ranges are typically scheduled Class A, and a Range Control Officer (RCO) is present. Exception: Range 3 is often scheduled for Class C operations on the Rescue Range. See **paragraph 6.18** for information.

6.3.2.1. RCO Communication. The numbered ranges are equipped with radios for communication on the specific UHF range operating frequency, UHF GUARD and a multi-channel UHF/VHF radio. See **Attachment 9** for specific numbered range frequency assignments.

6.3.2.1.1. If the range working frequency is unusable, an unused numbered range frequency may be used. VHF may be used if the flight on range has a squadron-assigned VHF frequency available. If no contact is made with the RCO, contact Snakeye for assistance/instructions.

6.3.2.2. Flight leads will notify the RCO of lineup of events to include any combat LASER events. If the flight is planning on Turning Maneuver Level Turn (TMLT) safe escape recovery for any events other than LAHD or System/Visual Level Deliveries, it must be briefed to the RCO. These items can be pre-briefed by telephone.

6.3.2.3. RCO clearance on range will include target and pattern direction (for example, "Call sign, cleared on Range 2, right range (target), left traffic, alternating strafe."). The RCO will also advise flights if the Bird Watch Condition (BWC) is other than LOW (see **paragraph 4.7** for BWC definitions). If no contact is made with the RCO, contact Snakeye for assistance/instructions. Exit after accomplishing an armament safety check.

6.3.2.4. The RCO must maintain communication with all aircraft on the range and will clear each aircraft before every hot or dry pass and each LASER designation. The RCO must clear all ordnance deliveries before release.

6.3.2.5. Flight Lead Control is authorized at RCO discretion (e.g., dry Maverick or high-altitude release bombs where maintaining visual contact is difficult). If under flight lead control during HADB/HARB events, aircraft releasing actual or simulated ordnance will call "in" or "in, dry," and "off dry," as appropriate. No clearance to expend will be transmitted by the RCO or flight lead. The intent is to issue an advisory radio call to the RCO/flight members that an aircraft is committed to a weapons release pass. RCOs will continue to spot actual ordnance releases to validate weapons expenditure and impact location.

6.3.3. Class C operations. Class C operations on numbered ranges must be scheduled as such NLT 1400 the day prior and must be shown as such in CSE. With the exception of the RCO, who may remain in the tower or ground shack (which are not within any approved weapons footprint) between Class A missions, only mission essential ground personnel may be present on range during Class C operations.

6.3.3.1. Use of strafe panel targets is not authorized during Class C operations. HAS may be accomplished on the tactical target, NWD circle, or right conventional target.

6.3.3.2. Prior to executing any range events, flight leads will make a call in the blind on the numbered range frequency to verify that no one is on range.

6.3.3.3. Attack helicopters may schedule Ranges 2, 3, or 4 Class C, but will not use the tactical strafe targets or strafe panels.

6.3.3.4. Rescue Range users will schedule Range 3 Class C. "Rescue Range" will be annotated in the remarks section in CSE. See **paragraph 6.18** and **Attachment 11** for additional information.

6.4. Numbered Range Entry/Exit/Holding Procedures.

6.4.1. Ranges 1/2/3.

6.4.1.1. Ranges 1/2/3 Entry Procedures.

6.4.1.1.1. Range entry is NOLLS or BRRRT, then via the North and South Transit Corridors (see **paragraph 4.3.3** for additional details). Contact Snakeye IAW **paragraph 4.3.2**, and the specific numbered range RCO for range entry. Caution: high volume traffic areas are GXF (surface to 13,000' MSL) and for BRRRT entries lookout for missions entering NOLLS (9,000' and 16,000' MSL), exiting NOLLS (11,000' MSL) and exiting COOLY (7,000' MSL).

6.4.1.1.2. Low level/ MTR Entry (see **paragraph 4.3.3** for details).

6.4.1.1.3. LATN/Transit Airspace Below SELLS Low Entry (see **paragraph 4.4.5** for details).

6.4.1.2. Ranges 1/2/3 Holding. Preferred numbered range holding is over the scheduled range. With Snakeye approval, missions can hold in a different range that is not active.

6.4.1.3. Ranges 1/2/3 Exit. Range exit is reverse routing via the NSTC (see **paragraph 4.3.3** for additional details). Range 3 may exit VFR east/northeast, avoiding the North Transit Corridor and ETAC. All flights exiting will confirm status of adjacent ranges and coordinate deconfliction. Remain outside other range boundaries if clearance is not granted for overflight. See high volume caution **paragraph 6.4.1.1.1**. Range 1 south departures will remain north of Ajo on a southeasterly heading at an altitude that remains below the SELLS Low floor. Avoid overflight of Eric Marcus Municipal (Ajo) Airport and the town of Ajo below 4,000' MSL. Monitor Snakeye until clear of R-2304/2305.

6.4.1.4. LATN/Transit Airspace Below SELLS Low Exit (see **paragraph 4.3.3** for details).

6.4.2. Range 4.

6.4.2.1. Range 4 Entry Procedures.

6.4.2.1.1. NOLLS/BRRRT Entry. From NOLLS proceed direct to Range 4 (see **paragraph 4.3.3** for additional details). Contact Snakeye IAW **paragraph 4.3.2**, and the Range 4 RCO for range entry. If approaching NOLLS or BRRRT from the east, remain north of R-2305 and deconflict overflight of KGXF. See high volume caution **paragraph 6.4.1.1.1**.

6.4.2.1.2. Low Level/MTR Entry. Typical entry is west-to-east or north to south. If missions arrive early for NTAC and it is hot with scheduled activity, remain clear; if Snakeye approves, proceed to Range 4 while remaining clear of NTAC's northern maneuver airspace.

6.4.2.1.3. LATN/Transit Airspace below SELLS Low Entry (see **paragraph 4.3.3** for details).

6.4.2.2. Range 4 Holding. Preferred numbered range holding is over the scheduled range. With Snakeye approval, missions can hold in a different range that is not active.

6.4.2.3. Range 4 Exit. Exit via the North Transit Corridor, then direct NOLLS, COOLY or BRRRT (see **paragraph 4.3.3** for additional details). For IFR pick-up, contact Luke approach prior to COOLY. See high volume caution **paragraph 6.4.1.1.1**. If proceeding to the LATN North area after COOLY, avoid Gila Bend AFAF Class D airspace (unless cleared by KGXF tower) and Range 3/ETAC.

6.4.2.3.1. LATN/Transit Airspace below SELLS Low Exit (see **paragraph 4.3.3** for details).

6.5. Weather Requirements.

6.5.1. Pilots will operate IAW aircraft-specific directives. Based on Pilot Reports (PIREPs) or other available information, RCOs will close the ranges when the ceiling is less than 1,500' for day operations, 3,000' AGL for night operations, and/or visibility is less than 3 NM for day and 5 NM for night operations. Pilots will discontinue events and advise the RCO whenever

weather prevents positive range or target identification throughout the pattern. RCOs will advise Snakeye when surface winds exceed 35 kts. Snakeye will also advise the command posts at Luke AFB, Davis-Monthan AFB, and Tucson IAP when surface winds on BMGR East exceed 35 kts. Range winds are available from Snakeye on request. When sustained winds exceed 25 kts (including gusts), strafe targets will be lowered.

6.6. Target Specifics.

6.6.1. Targets consist of salvaged vehicles and strafe panels. Target and reference point coordinates for respective ranges are located at **Attachment 10**. Numbered range layouts are shown in Figures **6.1** and **6.2**. **Note:** The descriptions below apply to conventional ranges only; Rescue Range targets are described in **paragraph 6.18** and **Attachment 11**.

6.6.2. Target classification. All targets are considered "hard" except the strafe panels.

6.6.3. Right Conventional Target. The right conventional target, inside a graded circle 600’ in diameter for bomb, is approved for bomb, rocket (TP), and HAS events.

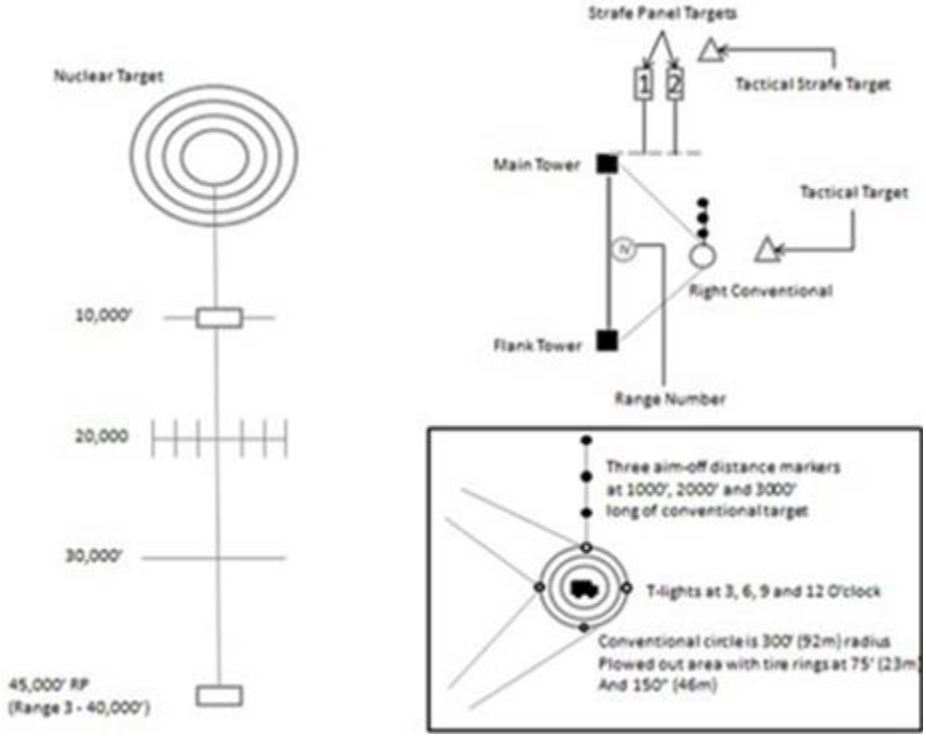
6.6.4. Tactical Target. The tactical target, located approximately 1,000’ outside the right conventional target, is approved for bomb, TP rockets, and HAS events. The tactical target is not identified by a graded circle. There is no tactical target on Range 3.

6.6.5. NWD Target. The NWD target is within graded concentric circles at the end of a 7 NM (approximate) run-in line, with four reference points situated at approximately 10,000’ intervals. Bomb, rocket (TP/WP), and HAS events are authorized on the NWD target.

6.6.5.1. Visual Reference Markers. Each range has visual reference markers located at 10,000’, 20,000’, 30,000’, and an entry marker consisting of white barrels welded together to form the roman numeral for that range is located near the beginning of the run-in line (40,000’/45,000’ IP).

6.6.6. Strafe Panels. There are two strafe panels located on the right side of the main tower, identified as Panel 1, the closest to the tower, and Panel 2, outside Panel 1 and the farthest from the tower. The aiming reference is a LUU-2 chute centered approximately 11’ AGL. Panel 2 on Ranges 1, 2, and 4 is configured for HAS. A double line of white tires identifies the 2000’ foul line.

Figure 6.2. Typical Numbered Range Layout.



6.6.7. Tactical Strafe. All numbered ranges have a tactical strafe target located outside Panel 2, approximately 3,500’ beyond the foul line. The foul line also applies to strafing this target.

6.6.8. Scoring. All targets are remotely scored using a camera and computer-based scoring (WISS). Bullets on the conventional and applied tactical targets are scored like bombs (mean point of impact). For strafe panel scoring, an IRSSS (acoustic scoring system) is used to score bullet impacts.

6.7. Authorized Ordnance.

6.7.1. Expenditures on numbered ranges are limited to the training ordnance listed in **Attachment 6**, with some requiring special permission from 56 RMO/ARO. Exceptions to listed ordnance require approval by the 56 RMO/DIR.

6.8. Ordnance Procedures.

6.8.1. System checks and delivery procedures will be IAW AFMAN 11-214, MAJCOM MDS- series guidance, and this instruction.

6.9. Numbered Range Pattern Considerations.

6.9.1. Normal Procedures. During the day, a maximum of four aircraft are authorized in the pattern. The first weapons delivery pattern or pass on the range for any event may be hot (first run attack) if Class A. Minimums are according to applicable directives for each aircraft system and/or each flying unit involved.

6.9.2. Patterns. All ranges allow for box/curve, pop, and NWD patterns. Standard patterns are from east-to-west using right range, left traffic. West-to-east patterns may be flown as a first

run attack only. When requesting the west-to-east attack heading option, the right conventional target will still be referred to as right range. See **Figure 6.2** for specific range pattern layouts. The following paragraphs describe specific pattern requirements.

6.9.2.1. The NWD target may be used for a first-run west-to-east system level delivery (SLD) attack on Ranges 1, 3, and 4.

6.9.2.2. Box Pattern. Standard box patterns for strafe, conventional and tactical targets are east to west, right range, left traffic; the standard box patterns for the NWD target are east to west, left range, right traffic, keeping the range towers inside the turns.

6.9.2.3. Pop Patterns. Standard Pop Pattern for the conventional and tactical targets are east to west, right range, left traffic, keeping the range towers inside the turns. On all numbered ranges, pop patterns must be left turn patterns to remain within the airspace boundary.

6.9.3. HAS. Pilots can utilize the right conventional target, the tactical strafe target (hard) and strafe panel 2 (soft) for HAS. **Note:** The berms for strafe panel 2 are much higher than the berms for panel 1; the higher berm protects the microphones for the strafe scoring system. Allowing HAS on panel 1 would put the microphones at risk and could potentially disable the range's scoring capability.

6.9.4. Long Range Strafe (LRS) and Two-Target Strafe (TTS). The maximum open-fire range for LRS and TTS is 9,000' slant range. Aircraft firing prior to passing abeam the flank tower (10,000' slant range) will be assessed a foul.

6.9.5. Nonstandard Box Patterns. For BDU employment the following pattern options may be used:

6.9.5.1. Opposite direction (west to east). BDU level or diving bomb deliveries only on right conventional or NWD Target for first run attacks; afterwards, flights will establish right range, left traffic for east to west attacks.

6.9.5.2. Early Turns. Early turn to crosswind (between the towers) can be authorized by the RCO with the aircraft nose above the horizon, for rockets and dry passes only. Keep the crosswind turn as far from the main tower as possible.

6.9.6. Turning Maneuver Level Turn (TMLT). TMLT safe escape maneuver is the standard recovery for LAHD deliveries or System/Visual Level delivery. Any other planned recovery for those two events must be briefed to the RCO on a numbered range in advance.

6.9.7. NWD Pattern Specifics**.**

6.9.7.1. NWD Pattern. All NWD patterns will be left traffic with downwind altitude 5,500'. All flights in the NWD pattern will remain within 12 NM of the target due to competing airspace boundaries. Normal NWD final is 7-10 NM.

6.9.7.2. Range 1/2. Due to the proximity of NWD patterns, flights must exercise caution for conflicts between Range 1 final and Range 2 base positions (16 NM east of NWD target).

6.9.7.3. Communications. Report over the 40/45 IP with "*call sign*, final, event." When final run-ins are extended beyond 7 NM, make the "base" and "final" calls with an exact range from the target. After the final call, the RCO will reply "cleared hot," "continue," or

"abort." Do not expend ordnance unless cleared hot. Call "off wet/dry," as appropriate, when off target.

6.9.7.4. Abort Procedures. If the RCO calls for the pass to be aborted, clear the run-in line away from the towers so as to fly outside the 2,000' NWD circle. After passing the circle, start a normal turn to downwind.

6.10. Numbered Range Delivery Considerations.

6.10.1. Opposite direction attacks are allowed on the conventional targets and NWD only as a first run attack and are limited to diving bomb deliveries with BDU-33s on Ranges 1, 3, and 4.

6.10.2. Nonstandard Deliveries.

6.10.2.1. West-to-east loft/toss or stand-off deliveries are not allowed on any range. The first turn after a loft/toss delivery will be away from the range towers.

6.10.2.2. Loft Rockets are approved on the NWD target from east to west on Ranges 1, 3 and 4. Loft Rockets are not authorized on Range 2 due to the requirement to deploy the weapon from the east side of SR 85.

6.10.2.3. Element Attacks (two aircraft attacking the same target with approximately 5-10 second spacing) are allowed (daytime only) provided similar pattern are used (i.e., both either pop or box patterns). Scoring accuracy may be affected if impacts are nearly simultaneous.

6.10.2.4. Split Attacks, the same as element attacks but using two different targets are not authorized.

6.10.2.5. Attacking two different targets that are adjacent (e.g. right conventional and tactical target) is approved (daytime only) when mission is employing standard spacing and using the same type of attack pattern.

6.11. Night Weapons Delivery.

6.11.1. All numbered ranges are night capable, with target lead-in lighting available on the right conventional targets only. Night range operations begin at official sunset. Pattern ground tracks are same as day.

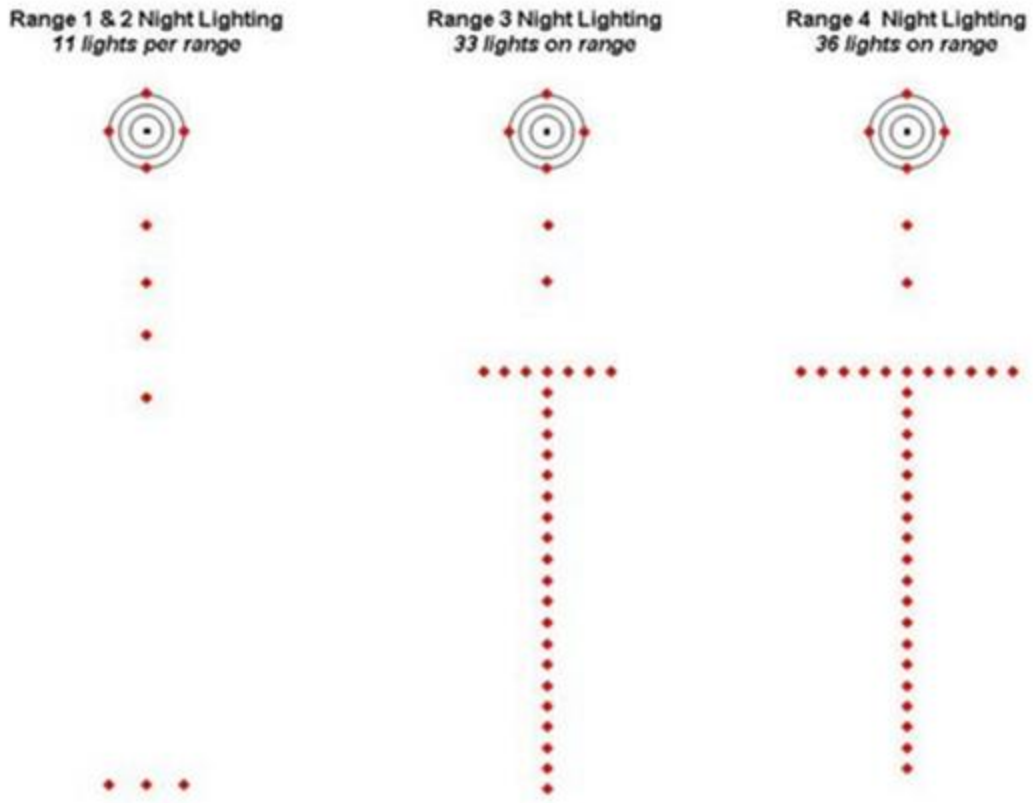
6.11.2. Normal Procedures. Maximum aircraft will be IAW AFMAN 11-214. Minimum altitudes are according to aircraft-specific regulations. Night weapons delivery may be conducted on either illuminated targets or unlit targets. RCOs are equipped with night vision devices (NVDs) to enhance operations.

6.11.3. Numbered Range Tower Illumination. The main tower is illuminated with two flashing lights; one light is red incandescent, and the other is infrared. Both are controllable (ON/OFF) and the RCO can select one light or the other or both depending on pilot preference. The default setting is both lights on. Lights on indicates to arriving pilots that an RCO is in the tower. The flank tower is illuminated with a steady red light.

6.11.4. Target Illumination. For visual deliveries pilots must positively identify the target using NVDs, illumination flares, or target lights (T-lights). T-lights are found only on the right conventional target of each range and have variable intensities. T-light settings range from 0

(off) to 5 (highest intensity), with 4 being the default. Based on conditions, pilots may request to have light intensity varied or the lights turned off. Ranges 3 and 4 T-lights are more suitable for basic student training. Target light patterns are illustrated at **Figure 6.3**. Without NVDs or illumination flares to provide positive target identification, the minimum target illumination is at least two of the four ground markers at 3, 6, 9, and 12 o'clock to the target. Plan illumination flare employment so that flares remain within restricted airspace and canisters land on range.

Figure 6.3. Numbered Range Night Lighting Schemes.



6.11.5. Communications. Additional required radio calls in the night conventional pattern are: "CS, off wet/dry" when off target, and "CS, downwind" when abeam the target on downwind. Radio contact between the RCO, fighters, and flaring aircraft is mandatory throughout all night range operations.

6.11.6. Aircraft Lighting. Fighter aircraft will select lights according to individual aircraft lighting instructions. Aircraft are allowed to operate under reduced lighting conditions but only to the extent that RCOs can still visually track each aircraft safely. The preferred lighting is navigation lights set to normal/overt.

6.11.7. Special Procedures and Precautions:

6.11.7.1. Manned Towers. Extreme caution must be exercised to prevent pointing at or overflying the manned towers.

6.11.7.2. Illumination Flare Accountability. The flare-ship will call the number of illumination flares expended per pass. In some instances, the RCO will help in identifying dud flares. Abort all passes when ignited, burned out, or dud flares present a hazard.

6.11.7.3. Night LRS is authorized on the tactical strafe target within the following guidelines: High Illumination conditions as determined by the pilot, and minimum altitude 1,000' AGL. On a Class A range, the RCO will score the event visually (Hit or Miss) if able.

6.12. LANTIRN (Low-Altitude Navigation and Targeting Infrared for Night) Procedures.

6.12.1. LANTIRN patterns are no longer flown on numbered ranges.

6.13. Numbered Range Laser Procedures.

6.13.1. **Attachment 5** identifies lasers certified for use on numbered ranges. All targets are approved for combat laser operations if properly scheduled.

6.13.2. Pilots will advise the RCO before any laser operation. RCO will secure the range for laser operations and don LEP before authorizing laser operations.

6.13.3. Minimum Altitudes. Reference **Table 6.1** for flight profile limitations. Lasing will not be performed below 2,000' AGL while crossing public highways or other active roads.

6.13.4. Heading Restrictions. Attacks are limited to east-west only using the published headings for each numbered range.

6.13.5. NWD Target and/or Delayed Lasing. Practice lasing on the NWD target is authorized once established on published downwind parameters. Delayed lasing for loft deliveries is authorized when the designator turn/recovery is away from the range towers.

6.13.6. Pops. Lasing during pop deliveries is authorized only after roll-in.

Table 6.1. Flight Profile Limitations.

Slant Range to Target (NM)	Minimum Safe Lasing Altitude (feet MSL)	Slant Range to Target (NM)	Minimum Safe Lasing Altitude (feet MSL)
14	16,090	7	5,023
13	14,067	6	4,033
12	12,190	5	6,190
11	10,462	4	2,496
10	8,880	6	1,950
9	7,447	2	1,550
8	6,162	1	1,297

Note: Line-of-sight must be verified for each target prior to lasing.

6.14. Air Commander's Pointer (ACP) Procedures.

6.14.1. Flight leads will inform the RCO of intent to use ACP upon initial check-in. ACP use need not be schedule in advance or noted in CSE.

6.14.2. ACP is authorized on all targets.

6.14.3. ACP operations will terminate if directed by the RCO.

6.14.4. Flight lead will notify the RCO when ACP operations are complete.

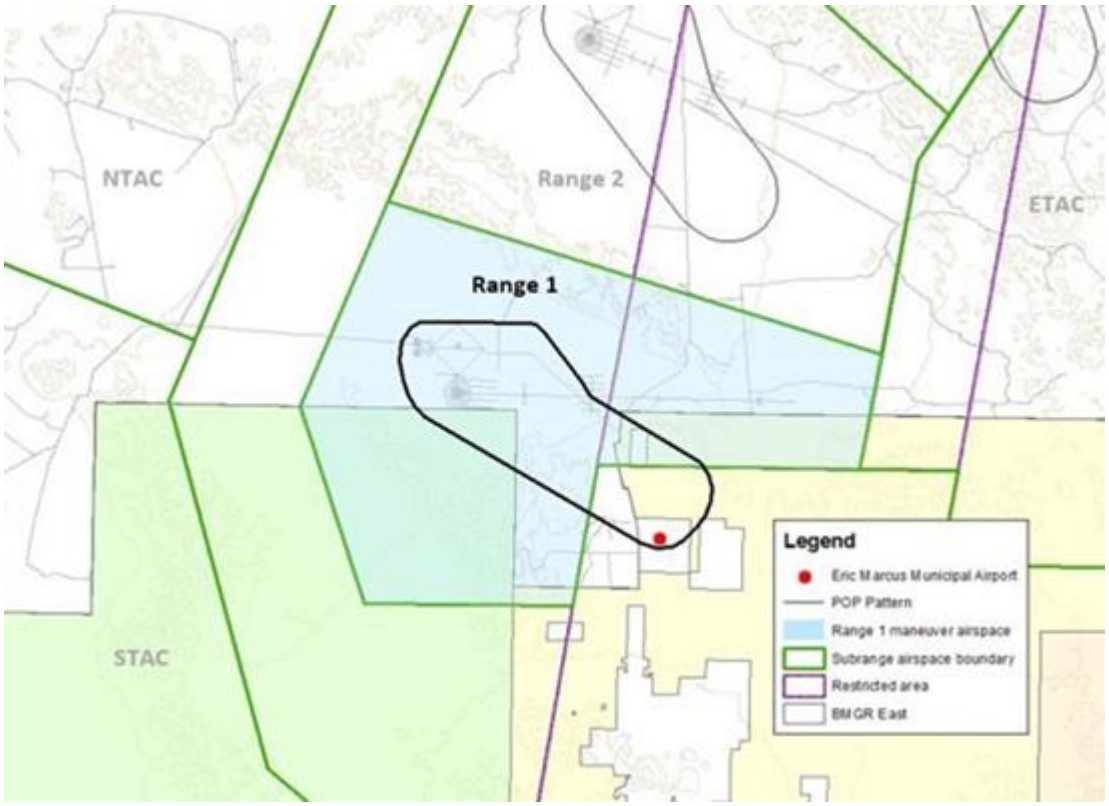
6.14.5. LIGHTING II/Sniper XR Target Illuminator Procedures IAW AFMAN 11-214.

6.14.6. ACP and other target illuminators will not be used during range tours.

6.15. Range 1.

6.15.1. General. Target coordinates and reference points are listed in **Attachment 10**. The location of Range 1 relative to other subranges is shown on **Figure 6.4**.

Figure 6.4. Range 1 and Surrounding Subrange Airspace.



6.15.2. Communications. Radio Call: "Range One" (based on scheduled airspace altitudes add “Low”. “Low/Medium”, “Medium/High” or “High”). See **Attachment 9** for UHF frequencies. Phone: DSN 896-5251.

6.15.3. Attack Headings. Conventional, 266 or 086 magnetic; NWD, 262 magnetic.

6.15.4. Emergency Airfield. KGXF; heading 014/ 24 M.

6.15.5. Pattern Information, Conflicts and Hazards.

6.15.5.1. SR 85. Several patterns cross SR 85 between Ajo and Gila Bend. Special care must be taken when overflying the highway.

6.15.5.2. Pop Pattern. Right range, left traffic. Downwind altitude 4,000’ MSL. Avoid overflying the Ajo Airport below 4,000’ MSL. The pop pattern extends south of R-2305; pop pattern downwind, base turn, and initial run-in flight path extend into the transit

airspace and LATN area beneath SELLS A Low. Release systems will be safed prior to exiting restricted airspace (downwind) and will not be rearmed until inside restricted airspace (approximately 5 NM from the right conventional target).

6.15.5.3. NWD Pattern. Left traffic. Downwind altitude 5,500’ MSL. Remain within the east boundary of the range to remain clear of the southwest part of ETAC. Avoid overflying the Ajo Airport below 4,000’ MSL. Release systems will be safed prior to exiting restricted airspace (downwind) and will not be rearmed until inside R-2305 (approximately 6 NM from the right conventional target).

6.15.5.4. Range Munitions Consolidation Point (RMCP), also referred to as the Water Well. The RMCP for Range 1, NTAC, and STAC is located 7.5 NM due west of the right conventional target and 1 NM east of the STAC border, identified by a cleared area and fenced compound located at N32 32.170’ W113 05.030’ coincident with a water storage tank. Avoid overflight of this location. Aircraft experiencing a runaway gun should attempt a right turn out of traffic as soon as possible, because crossing ground parties may be holding at the water well.

6.16. Range 2.

6.16.1. General. Target coordinates and reference points are in **Attachment 10**. The location of Range 2 relative to other subranges is shown on **Figure 6.5**.

6.16.2. Communications. Radio Call: "Range Two" (based on scheduled airspace altitudes add “Low”. “Low/Medium”, “Medium/High” or “High”). See **Attachment 9** for UHF frequencies. Phone: DSN 896-5252.

6.16.3. Attack Headings. Conventional, 283 or 103 magnetic. NWD, 283 magnetic.

6.16.4. Emergency Airfield. KGXF; heading 017/16 NM.

6.16.5. Pattern Information, Conflicts, and Hazards.

6.16.5.1. SR-85. Several patterns cross SR-85 between Ajo and Gila Bend. Special care must be taken to avoid weapons releases in this area.

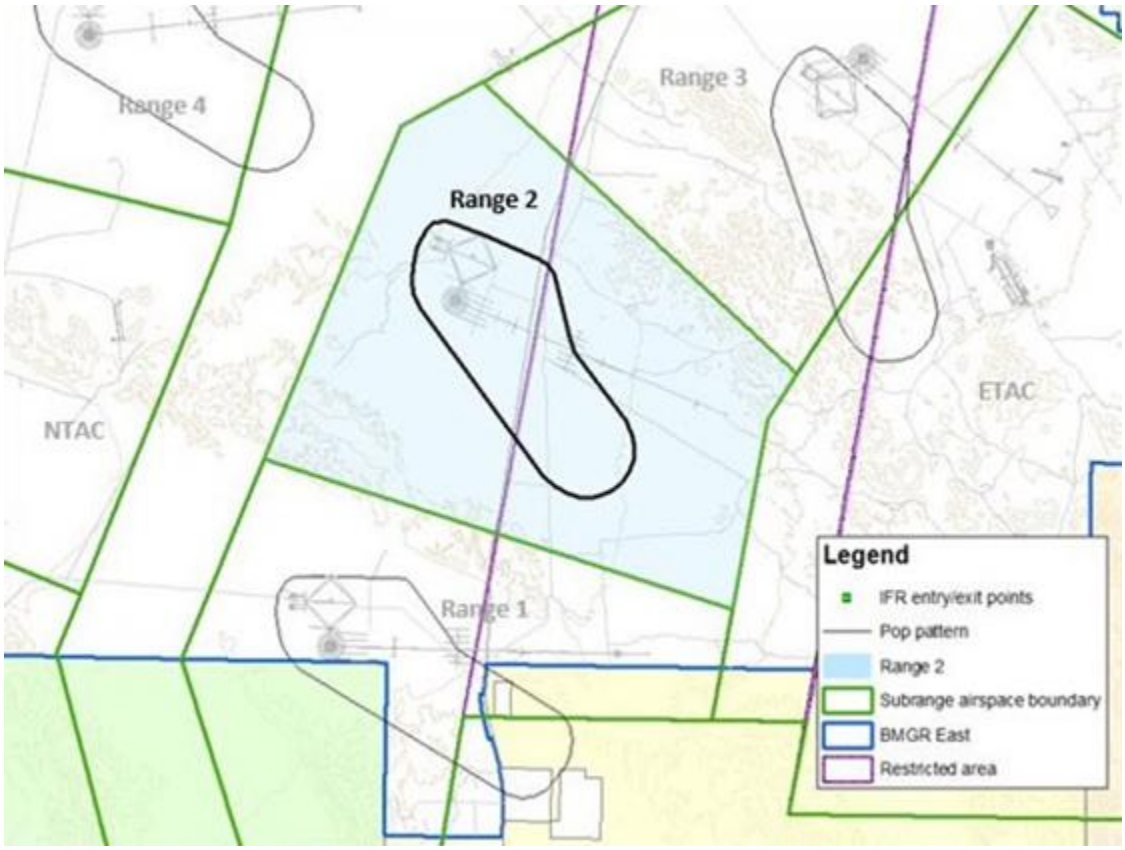
6.16.5.2. TMLT Recoveries. When LAHD or Level deliveries are conducted on the right range, the RCO will contact the Range 4 RCO. Low altitude TFR downwinds on Range 4 will be suspended. Early climbs after TMLTs may conflict with Range 4 NWD patterns. TMLTs may be restricted until coordination is complete.

6.16.5.3. HARB/Pop Pattern. Fast movers on Ranges 1 and Range 2 must use the same direction of traffic for pops and HARBs.

6.16.5.4. Pop Pattern. Right range, left traffic. Downwind altitude 4,000’ MSL.

6.16.5.5. NWD Pattern. Left traffic. Downwind altitude 5,500’ MSL. Remain within eastern boundary to ensure deconfliction with ETAC missions.

Figure 6.5. Range 2 and Surrounding Subrange Airspace.



6.16.5.6. Range 3 Traffic. Traffic between Burro Gap and Range 3 must transit SW of R-2304, then northbound over the eastern end of the Range 2 NWD final.

6.17. Range 3.

6.17.1. General. Target coordinates and reference points are listed in **Attachment 10**. Aircraft employing ordnance larger than .50 cal are restricted to the Right Conventional Target, NWD Target, and strafe targets). The location of Range 3 relative to other subranges is shown on **Figure 6.6**. Due to limited maneuvering airspace, fast movers using Range 3 must also schedule ETAC. See paragraphs **6.2** and **6.2.3** for flight operations relating to Range 3 and ETAC.

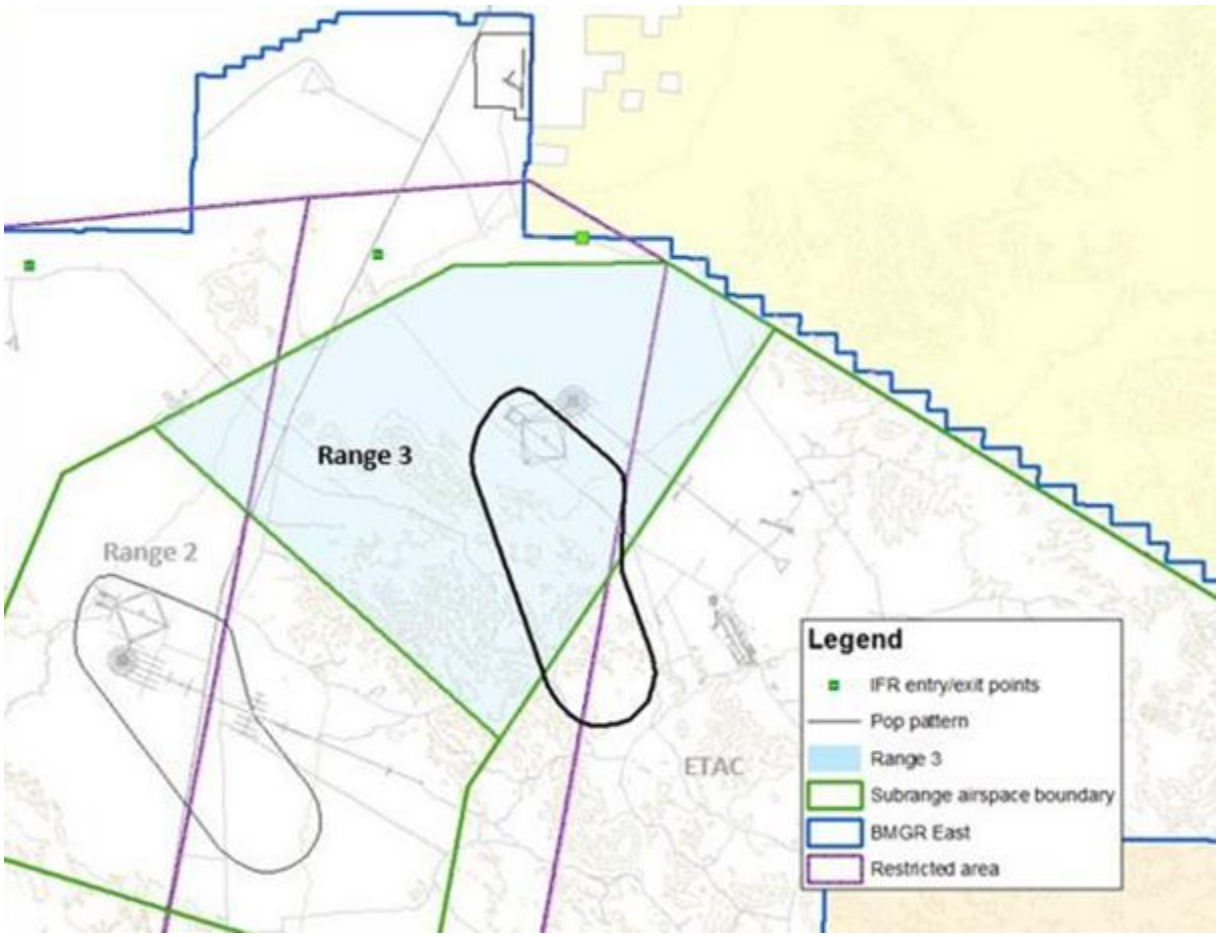
6.17.2. Communications. Radio Call: "Range Three" (based on scheduled airspace altitudes add “Low”. “Low/Medium”, “Medium/High” or “High”). See **Attachment 9** for UHF frequencies. Phone: DSN 896-5253.

6.17.3. Attack Headings. Conventional, 298 or 118 magnetic. NWD, 298 magnetic.

6.17.4. Emergency Airfield. KGXF; heading 345 for 7.5 NM.

6.17.5. Pattern Information, Conflicts, and Hazards.

Figure 6.6. Range 3 and Surrounding Subrange Airspace.



6.17.5.1. Pop Pattern. Right range, left traffic only. Downwind altitude 4,000' MSL. High terrain exists south of the range.

6.17.5.2. Range 3/ETAC Deconfliction. Range 3 may be used individually or in conjunction with ETAC. Fast movers wanting to conduct Class A/C operations on Range 3 must also schedule ETAC, whereas A-10s, C-130s and helicopters may schedule Range 3 individually. When ETAC and Range 3 are scheduled separately, flights on Range 3 must use caution to remain clear of ETAC (west of the double-bladed line/20 IP).

6.17.5.3. NWD Pattern. Left traffic. Downwind altitude is 5,500' MSL. ETAC must be scheduled by flights on Range 3 that want to execute NWD patterns. Remain within eastern boundary to ensure deconfliction with ETAC missions.

6.17.5.4. Emergency Aircraft. Aircraft with emergencies requiring a straight-in approach to KGXF Runway 35 will fly thru Range 3. Emergency aircraft en-route to Gila Bend will transmit on GUARD their flight path, altitude, and distance/time from KGXF. Flights on Range 3 will orbit at or above 8,000' AGL, or as necessary, to deconflict with emergency aircraft. If weather prevents the above procedures, the Range 3 flight will depart the range to the northeast and orbit over ETAC in Visual Meteorological Conditions (VMC) coordinating with ETAC-using flight.

6.17.5.5. Range 3 Pop/Range 2 NWD Pattern Conflict. The Range 3 pop pattern will remain northeast of Hat Mountain to deconflict with Range 2's NWD final.

6.17.5.6. Class D Airspace. The northernmost portion of Range 3 abuts the Gila Bend AFAF Class D airspace.

6.17.5.7. RMCP. The RMCP for Range 3/ETAC is located north of the range road, near the southwest end of the double-bladed ETAC boundary at N 32 42.540 W 112 39.899 or 12S UB 439 203. (**Note:** when AGM employment is scheduled on ETAC, personnel located on Range 3/ETAC border must relocate west to at least Range 3 flank tower.)

6.18. Rescue Range, Range 3.

6.18.1. The Rescue Range was designed to support helicopter gunnery and CSAR training; it provides unique capabilities for rescue units to engage multiple fixed and pop-up targets at varying ranges and azimuths. Only rotary-wing aircraft employing up to .50 caliber ammunition may engage targets on the Rescue Range (**Figure 6.7**.). The Rescue Range incorporates a defined area for limited ground movement to engage targets (**Figure 6.8**.). It also includes six HLZs for integration into terminal area scenarios, and movement between the HLZs and the target area is authorized. Outside the target area, two ground operations areas have been constructed. One of these includes mock buildings with external stairs providing "rooftop" access. These elevated areas are approved for use as OPs and may be used only during scheduled Rescue Range operations. Rescue Range rules of engagement are detailed in **Attachment 11**.

Figure 6.7. Range 3 Showing Rescue Range Area.

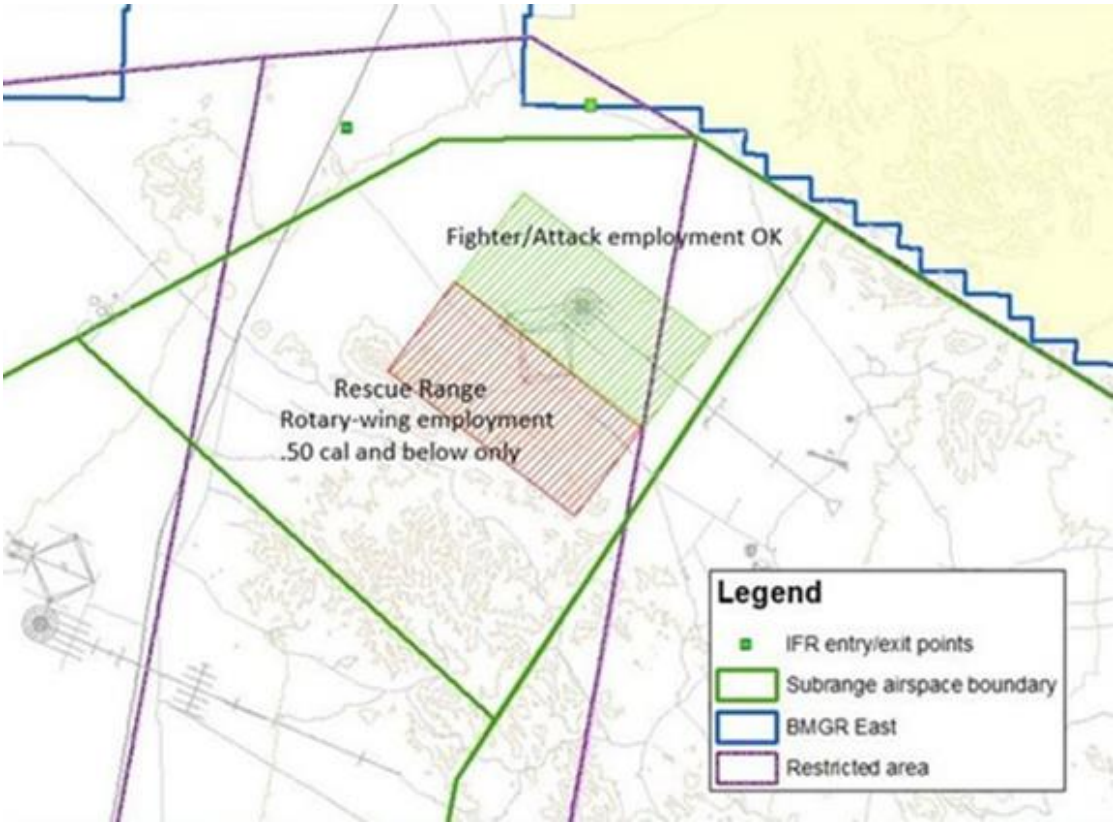
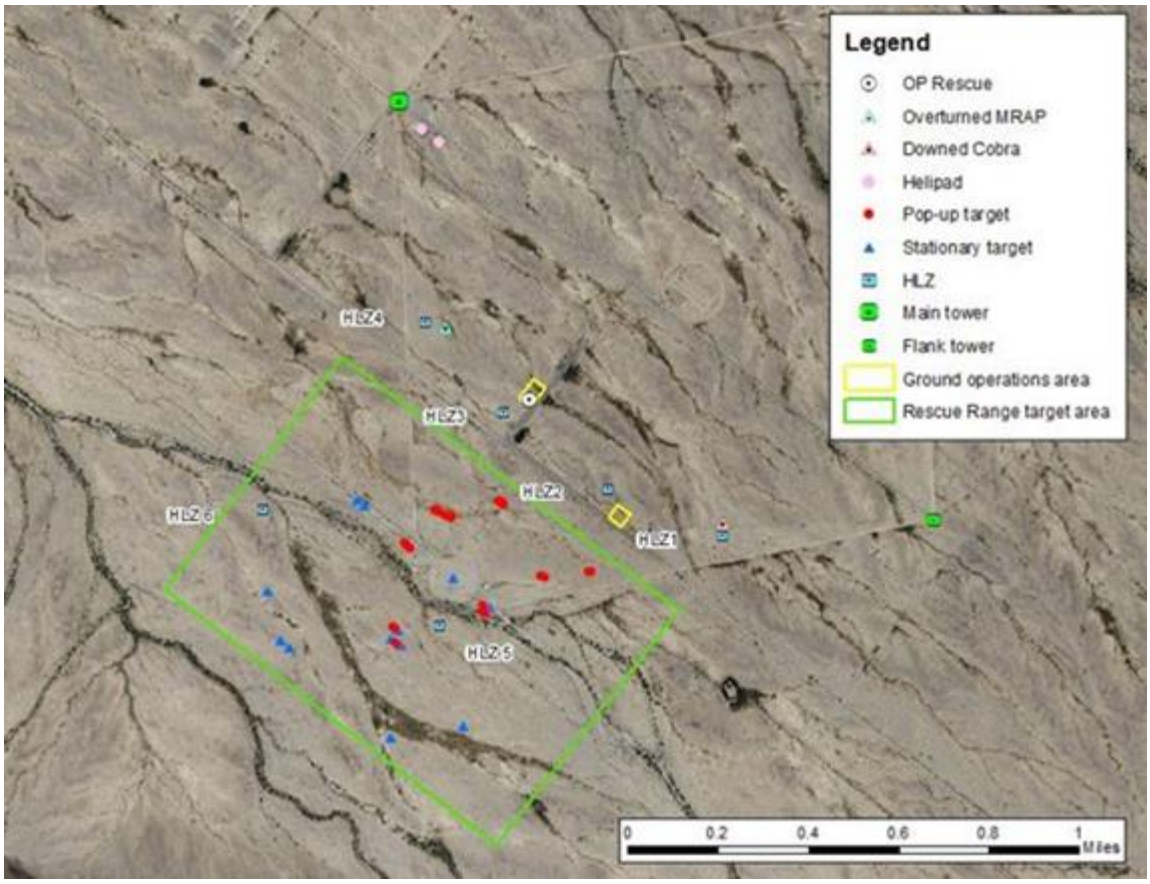


Figure 6.8. Rescue Range Layout.



6.18.1.1. Scheduling and Coordination. Rescue Range users will schedule Range 3 Low and indicate they are requesting Rescue Range operations. Range 3 will be Class C during Rescue Range operations, and a qualified flight lead or aircraft commander will perform the RCO function. Rescue ground units may use the Rescue Range independent of air support; however, flying units have scheduling priority.

6.18.1.2. The pop-up targets require constant attention/maintenance, and users must contact 56 RMO/ARO at least 30 days in advance of proposed use to determine their status.

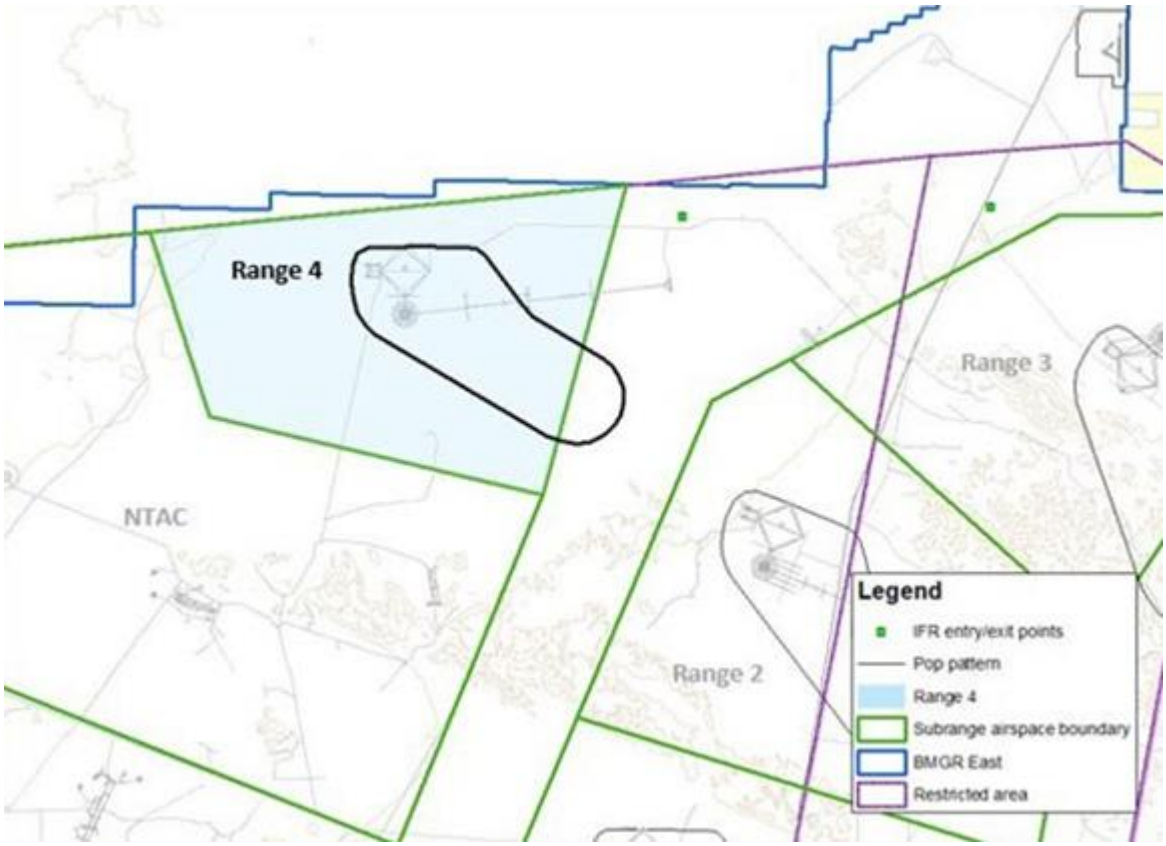
6.18.2. Communications. Radio Call: "Range 3 Low". See **Attachment 9** for UHF frequency.

6.18.3. Operations. All aircraft using the Rescue Range will review and follow the procedures and requirements outlined in **Attachment 11**. Aircraft operating on the Rescue Range will remain at 8,000' MSL and below unless otherwise coordinated with and approved by Snakeye. When the Rescue Range is in use, aircraft operating in ETAC may schedule Range 3 Medium and High airspace for dry overflight only or for integrated CSAR-type operations.

6.19. Range 4.

6.19.1. General. Target coordinates and reference points are listed in **Attachment 10**. The location of Range 4 relative to other subranges is shown on **Figure 6.9**.

Figure 6.9. Range 4 and Surrounding Subrange Airspace.



6.19.2. Communications. Radio Call: "Range Four" (based on scheduled airspace altitudes add “Low”. “Low/Medium”, “Medium/High” or “High”). See **Attachment 9** for UHF frequencies. DSN 896-5254.

6.19.3. Attack Headings. Conventional, 261 or 081 magnetic. NWD, 254 magnetic.

6.19.4. Emergency Airfield. KGXF; heading 056 and 20 NM.

6.19.5. Pattern Information, Conflicts, and Hazards.

6.19.5.1. R-2301E Boundary. The R-2301E boundary is 1.25 NM north of the right conventional target. When using left range, right traffic, use caution to avoid a wide downwind position.

6.19.5.2. Pop Pattern. Right range left traffic. Downwind altitude 4,000’ MSL. Do not extend the left traffic pop pattern south of Malpais Hill to avoid conflicts with NTAC traffic. The base turn and initial run-in ground path extends into the very low portion of the western part of the Northern Transit Corridor. Pilots in the eastern most part of the pop pattern must clear for low altitude corridor traffic. Related, pilots using the western part of the North Transit Corridor should avoid low altitude transit below 4,000’ MSL.

6.19.5.3. NWD Pattern. Left traffic. Downwind altitude 5,500’ MSL. Remain within 12 NM. Caution must be exercised to avoid NTAC.

6.19.5.4. EOD Range. The EOD range is located approximately 2 NM west of Black Gap, at N32 45.311 W112 52.081 (GBN 205/16). When EOD range is hot aircraft in NWD pattern will not descend early from downwind altitude and will avoid the EOD range by 1 NM or overfly above 10,000’ AGL.

6.19.5.5. RMCP. The RMCP for Range 4 is located on AUX-11 north of the range road at N 32 48.801 W 112 54.

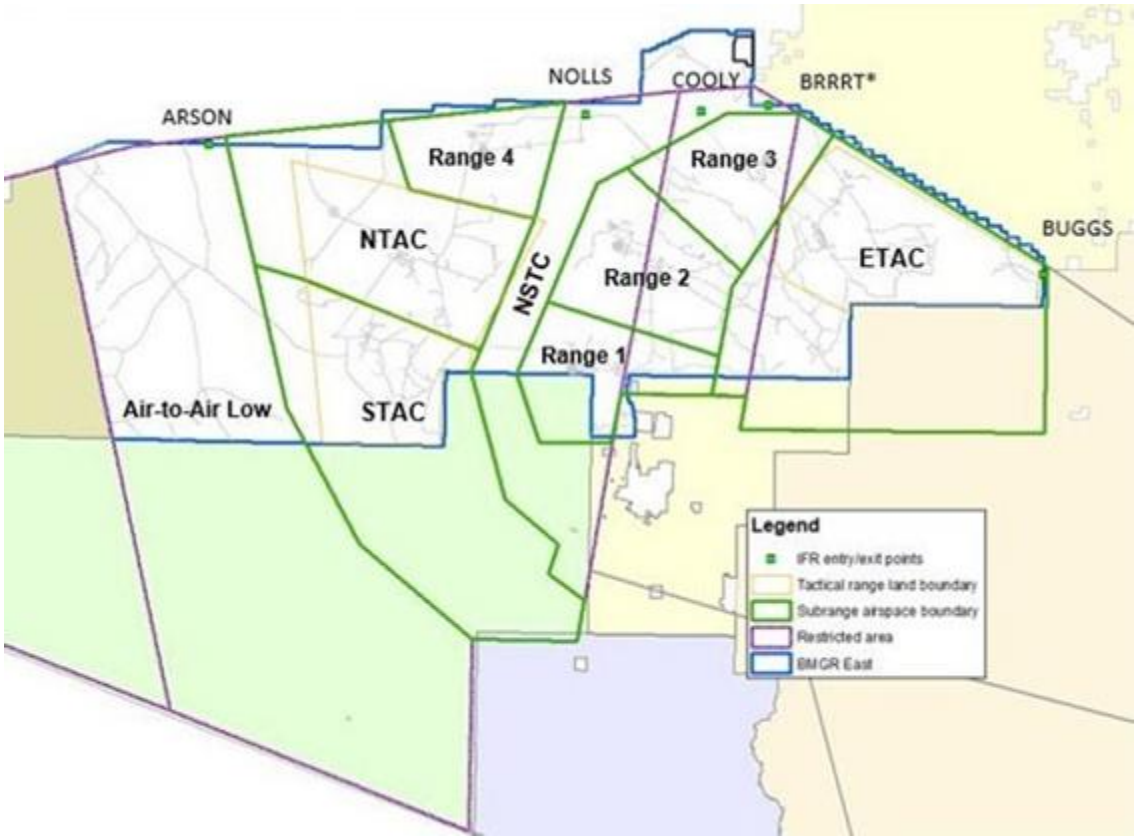
Chapter 7

TACTICAL RANGES

7.1. General.

7.1.1. BMGR East contains four tactical subranges. The Air-to-Air (AA) range is designated for air-to-air combat, while NTAC, STAC, and ETAC are for air-to-ground tactical employment (**Figure 7.1**.). NTAC, STAC, and ETAC include targets that simulate airfields, surface to air missile sites, convoys, and other facilities. Each of these three ranges includes one target each approved for live high-explosive (HE) ordnance delivery. NTAC and ETAC also include targets for live air-to-ground missile employment. Based on the unique nature of each range and its proximity to other maneuver areas, each range is further defined in this chapter.

Figure 7.1. BMGR East Subrange Layout.



7.2. Airspace Defined.

7.2.1. The boundaries of tactical range airspace are shown in **Figure 7.1**. See **Chapter 3** and specific subrange descriptions this chapter for further information. The eastern boundaries of NTAC and STAC are coincident with the western boundary of the NSTC.

7.3. Range Classification/Types of Service.

7.3.1. All tactical ranges operate under Class C conditions at all times.

7.4. Communication.

7.4.1. Contact Snakeye IAW **Chapter 4** for range entry/departure. Tactical range users, who by definition are conducting Class C operations in uncontrolled airspace, must make advisory calls to assigned and adjacent airspace to foster situational awareness. Refer to **Attachment 9** for specific range frequency allocations. If the standard range working frequency will not be monitored, aircrew must inform Snakeye of specific working frequency to be used. Use of HAVE QUICK/Secure Voice or any non-standard frequency must be coordinated with Snakeye. All flights must return to the standard range frequency for the last 5 minutes of their range time.

7.5. Range Access and Range Safety.

7.5.1. Impact Areas. The Impact Area on tactical ranges is that area immediately surrounding the target(s) or desired point(s) of impact (DPI) approved for actual ordnance delivery. The Impact Area is delineated using ORM analysis and must be no less than 500 feet from the center of a target or DPI approved for live ordnance or 300 feet from the center of a target or DPI used solely for inert or practice ordnance. Public access to Impact Areas is prohibited at all times. Access to specific DPIs/Impact Areas is limited to mission-essential personnel when in use and essential personnel at all other times (see **Chapter 9** for additional information on surface access).

7.5.2. Hazard Areas. The Hazard Area is a composite of all Weapon Danger Zones (WDZs), surface danger zones (SDZs), and Laser Surface Danger Zones (LSDZ) for all authorized weapon delivery events. It represents operational hazards as well as residual hazards following munitions deliveries. During operations, access into the Hazard Area is limited to Mission Essential Personnel, unless specifically authorized by the ROA. Routine access to Hazard Areas not in use should be limited to Essential Personnel. Public access to Hazard Areas is prohibited until all live munitions in the applicable portion of the Hazard Area are accounted for. Additional information regarding access to Hazard Areas is provided in **Chapter 9**.

7.5.2.1. Mission Essential Personnel. Mission-essential personnel are directly required for the employment of ordnance in a test, training or evaluation mission. This may include JTACs, RCOs, and any other personnel identified as required by the ROA.

7.5.2.2. Essential Personnel. Essential personnel are not required for ordnance employment but participate in and/or provide essential support for the range test, training or evaluation mission. They include but are not limited to maneuver elements, opposition forces, instructors, evaluators, and range personnel conducting maintenance. Essential personnel may not be within an active hazard area.

7.5.3. Observation Posts (OPs). OPs within a Hazard Area may be used by JTACs or other properly briefed and authorized personnel involved in CAS/air-to-ground training. Personnel within the Hazard Area must remain outside the Minimum Safe Distance (MSD) for Ground Parties (Training Use Only: Live Fire) published in AFTTP 3-2.6, *JFIRE Multi-Service Tactics, Techniques and Procedures for the Application of Firepower*. All personnel will wear Service mandated gear (including eye protection) when training at these distances. IAW AFMAN 11-214, if the planned operations/deliveries are inconsistent with the assumptions used to derive the MSD values, personnel must remain outside the WDZ.

7.5.4. Range Demonstrations and Visitor Procedures. Except under extremely unusual circumstances, range demonstrations will be limited to numbered ranges. All requests to use tactical ranges must be review and approved by the Director 56 RMO. See **Chapter 9** for additional information.

7.6. Areas of Critical Concern (ACCs).

7.6.1. ACCs include OPs, RMCPs, other frequently manned locations, and sensitive equipment and facilities. To avoid loss of life or damage to expensive equipment, pilots must positively identify targets before releasing weapons. Weapons employment restrictions presented in this document and published on the Range Ops SharePoint site clearly distinguish between attack parameters that apply when such locations are manned and unmanned.

7.6.2. Visual Identification of Manned Equipment, Facilities and Sites. To the maximum extent possible, equipment and facilities (manned or unmanned) that are not targets are visually identified using high-contrast paint (white or orange) or other diagnostic markings. Some ACCs are indicated by a white circle, 50 feet in diameter, with a line through it (aka a "no smoking" sign). White or orange paint is not used on any "bombable" targets except for strafe "rags" or specific test targets for which white supports test objectives.

7.7. Target Specifics.

7.7.1. Targets within the air-to-ground subranges consist of sea-land containers, concrete blocks, wooden mock-ups, sheet metal mock-ups, and salvaged aircraft and vehicles. Target centroid data are presented in **Attachment 12**. Refer to the Range Operations SharePoint site **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx** for detailed target information. Weapons employment is strictly limited to only those authorized target groups listed.

7.8. Authorized Ordnance.

7.8.1. The BMGR East is a primary air-to-ground employment range limited to ordnance listed in **Attachment 6**. Employment of ordnance not listed requires approval by the 56 RMO/DIR. Surface fire may be permitted, on a case-by-case basis, with coordination and approval by 56 RMO/ARO.

7.8.2. Air Intercept Missile Employment. Units desiring live air-to-air missile firing must submit requests to the 56 RMO/ARO for coordination and requires 56 RMO/DIR approval.

7.8.3. Aerial Gunnery Employment. Air-to-air gunnery requires 56 RMO/DIR approval and must be conducted as described in AFMAN 11-214, and specific MDS series regulations. See **paragraph 7.15** for additional information.

7.8.4. Live Air-to-Ground Weapons Restrictions. The following are **NOT AUTHORIZED** on HE targets: bombs with other than impact fusing (except FMU-113 or DSU-33), penetration fuzing, and training ordnance. **Cluster submunition-dispensing ordnance and HEI bullets are prohibited** throughout the BMGR East complex.

7.9. Delivery Considerations.

7.9.1. Comply with target-weapon-delivery restrictions listed in WDZ expanded data posted on the Range Operations SharePoint site. If particular aircraft, employment parameters, and/or

weapon(s) type are not mentioned in expanded data, contact 56 RMO/ARO for further guidance.

7.9.2. Personnel in Hazard Areas. IAW AFMAN 13-212v1, access to active hazard areas is limited to mission essential personnel. With very few exceptions, only JTACs and special duty personnel participating in air combat training scenarios are permitted on range during weapons deliveries, and range access during weapons training requires 56 RMO approval. The presence of authorized ground personnel and their locations are included in daily Range NOTAMs. If unauthorized personnel or vehicles are observed on range, aircrew must suspend weapons employment and immediately notify Snakeye.

7.9.3. Clearing Pass. The first flight of the day will make a dedicated clearing pass over their assigned subrange at an altitude that will allow the flight to detect unauthorized personnel or vehicles prior to expending any ordnance. Subsequent flights are also required to perform a dedicated clearing pass if more than 1 hour has elapsed since the previous mission departed the range. If wildlife is observed in the target area, do not employ weapons in the immediate area of the sighting. Night clearing will adhere to the day procedures; however, flights are authorized to accomplish a dry, level delivery first run attack as a clearing pass IAW AFI 11-214, *Air Operations Rules and Procedures*.

7.9.4. All casual users, deployed, and aircrew based outside Arizona will familiarize themselves with subrange boundaries, target locations, and ACCs, and must accomplish at least one dry attack on their assigned tactical range before employing ordnance, with one exception: aircrew that have employed ordnance on their assigned range within the previous 12 months are not required to reaccomplish a dry attack prior to weapons employment. This guidance applies to weapons employment on each individual tactical range.

7.9.5. Before employing HE ordnance, casual users, deployed and non-Arizona based aircrew will accomplish a dedicated orientation pass over the HE target to be used. The purpose of this pass is to ensure visual identification of the HE target and raise awareness of the target's proximity to range boundaries and ACCs.

7.10. Night Tactical Range Procedures.

7.10.1. Night operating hours begin at official sunset.

7.10.2. Dud Illumination Flares. All flight members will be aware of the quantity of flares to be dispensed for each type of event. Duds and relative positions to the target will be called out by the aircraft observing unignited flares.

7.11. Laser Operations.

7.11.1. See **paragraph 4.6**.

7.12. JTAC Operations.

7.12.1. BMGR East is regularly used for JTAC training. When a JTAC is scheduled on range, 56 RMO/ASMS will annotate call sign and location (OP) on the Range NOTAMs and the daily range schedule in CSE. Snakeye will advise all affected flights of JTAC call sign and working frequency on initial check-in. Flights leads are required to contact the JTAC scheduled on range, whether or not they will be working with them, before employing lasers or ordnance. If unable to contact JTACs, aircrew will contact Snakeye for further guidance. If JTACs cannot be contacted, flight lead must ensure that footprint does not overlie the OP.

7.12.2. Scheduling. All BMGR East JTAC activities will be coordinated through 56 RMO/ARO. JTAC units are required to schedule the range prior to securing air support. Agreements with flying units will not result in priority over JTAC units previously scheduled on range. To schedule JTAC operations on BMGR East, units must complete the BMGR East JTAC Request Form available on the Range Operations SharePoint site (**https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**) and submit it to 56 RMO/ARO (**56rmo.aro@us.af.mil**). JTAC units can book up to 2 consecutive weeks but will not be booked for more than 10 weeks per calendar year. At times, special events on range may preclude scheduling JTAC operations or limit JTAC access to ranges. As soon as these events are known, they are posted on the JTAC schedule to support advance planning.

7.12.3. Required Briefing. All JTAC personnel must receive a face-to-face briefing on range safety and operations from 56 RMO/ARO before operating on the BMGR East. Briefings will be documented by 56 RMO/ARO personnel.

7.12.4. JTAC Liaison. Each unit will position a JTAC liaison (someone knowledgeable of JTAC procedures and operations) at Gila Bend AFAF Building 324, Room 11, whenever JTACs are on the range. The JTAC liaison will be the focal point of contact and must be accessible by landline at DSN 896-1793/1794/1795 or cell phone during JTAC operations. Among other duties, the liaison is responsible for ensuring that JTACs are clear of the ranges for all LIVE AGM firing consistent with paragraphs **2.4.5.4.4**, **2.4.5.4.5**, **4.5.3.1**, **4.5.3.2**, and **7.12.10.2**.

7.12.5. JTAC Equipment. JTACs must bring all the equipment they need to operate on the ranges, including at least one cellular phone (satellite phone desired) to be available at each OP to facilitate coordination of complex issues and minimize radio congestion. Units also must bring LEP OD 6 or better for all personnel. 56 RMO will provide range-specific land mobile radios (LMR) for communication; these must be checked out at Gila Bend Base Ops (Building 324), Room 11 before operating on range. A complete list of required and recommended equipment is available on the Range Operations SharePoint site at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**.

7.12.6. JTAC Positions. JTACs will not occupy or control from any points other than those listed in **Attachment 6** without specific written approval from 56 RMO/ARO. See paragraphs **7.16**, **7.17**, and **7.18** for descriptions of OPs on NTAC, STAC, and ETAC. **Note:** OP Phantom, on NTAC, may be used only by JTACs or other mission essential personnel, and only with specific approval of 56 RMO/ARO (see **paragraph 7.16.7.4.3** for additional information). OP Phantom is not treated as an ACC in published footprints, and only JTACs and other authorized mission-essential personnel will be approved to use this location. JTAC/mission-essential personnel must coordinate in advance with 56 RMO/ARO. Depending on circumstances, OP Phantom operations may not be supported. JTACs also may use the OP located on the Rescue Range during scheduled Rescue Range operations only.

7.12.7. JTAC Movement. JTAC entry and exit to and from OPs must be coordinated in advance and annotated in the daily range schedule in CSE. JTACs must remain on approved OPs and outside active weapons footprints unless controlling all aircraft on range. Some limited off-OP movement may be authorized after coordination with 56 RMO/ARO. JTACs will not enter or exit the range, or depart an OP, without specific, real-time approval from Snakeye.

7.12.8. JTAC Communication. Unless otherwise briefed, JTACs will use and monitor the appropriate primary range frequency. JTACs will attempt to maintain two-way radio communication with Snakeye at all times; however, LMR communication is not possible in some areas of the range. In particular, OPs Alpha, Bravo and Echo are known locations for poor LMR coverage. Solar-powered phones are located on these OPs to facilitate effective communication with Snakeye and other calls for official business.

7.12.9. Laser Use. Comply with **paragraph 4.6**.

7.12.9.1. JTACs must notify 56 RMO/ARO of proposed ground designator laser use when scheduling training on range. During operations, JTACs will advise Snakeye before commencing laser use on range. Laser user may be restricted at times due to the presence of ground personnel within the NOHD. JTACs will use appropriate LEP anytime a laser is being used (ground- or air-based). If appropriate LEP is not available, JTACs must depart the range.

7.12.10. JTAC Operational/Weapons Footprint Considerations.

7.12.10.1. JTACs are allowed to be inside the weapons footprint IAW AFMAN 11-214 guidance, when actively controlling missions or delegating "Type 3" control (as defined in JP 3-09.3) to the flight on range. If the JTAC is not controlling the flight and Type 3 is not delegated, then IAW AFMAN 13-212v1, the JTAC must exit the range, or the pilot must restrict weapons employment to ensure the ground party is not within the weapons footprint.

7.12.10.2. HE AGM. IAW 11-214, *Air Operations Rules and Procedures*, JTACs are allowed to remain on an OP on a tactical range during AGM employment only if actively controlling the mission. JTACs must coordinate with mission flight leads in advance; otherwise, they must exit the range. Because OP Charlie is outside the ETAC boundary and not within an authorized AGM footprint, JTACs may remain at this location during HE AGM missions whether or not they are controlling the flight. For specific guidance on JTAC positions and HE AGM footprints, paragraphs **2.4.5.4.4**, **2.4.5.4.5**, **4.5.3.1**, and **4.5.3.2**, and specific information presented below for individual tactical ranges.

7.12.10.3. JTACs must coordinate with mission/flight lead at least 24 hours in advance. On rare occasions, flight lead may require a JTAC unit to vacate an OP or range during the mission.

7.12.11. Position Marking. At night, JTACs must be equipped with illumination devices; their position must be marked with beacons (may be covert when NVGs are used by the controlled aircraft).

7.12.12. Positive Identification (ID). JTACs will ensure pilots have a positive ID on the JTAC position prior to employment. No ordnance expenditure or lasing is authorized until each aircraft has called a positive identification of the manned location.

7.12.13. JTACs may not include non-mission essential personnel in ground parties at OPs on tactical ranges unless specifically approved by 56 RMO in advance. See **Chapter 9** for additional information required of visitors.

7.13. Access to Tactical Ranges for Other Military Purposes.

7.13.1. Small teams of ground personnel may take part in nonstandard training operations on the BMGR East, such as infil/exfil, CSAR, and other special activities. These activities are limited in number and scope and must be submitted to 56 RMO/ARO for review/approval at least 14 days in advance. Ground parties must observe all access, communication, and environmental requirements. Ground party range entry and exit must be coordinated in advance and annotated in the daily range schedule in CSE, and all movement must be accomplished within the specific mission's range period. Ground parties must not enter the range before or remain on range after their scheduled range time. Ground parties will not enter or exit the range, or depart an OP or other approved location, without specific, real-time approval from Snakeye.

7.13.2. Contractors (other than BMGR East range maintenance and ACTS contractors) sometimes provide essential support for training activities and require access to the tactical ranges. Contractor access must be reviewed/approved by 56 RMO/ARO at least 14 days in advance. Contractor personnel must complete LUKEAFB Form 338, *Installation Access Affidavit*, receive a safety briefing, and sign a hold-harmless agreement. See **Chapter 9** for additional information. Whenever possible, 56 RMO will provide contractor personnel with range specific LMRs for communication. Contractors must observe all access, communication, and environmental requirements. Contractor must provide all personnel who will be on range during scheduled laser operations with LEP OD 6 or better and must ensure that LEP is worn when needed. LEP cannot be provided by 56 RMO.

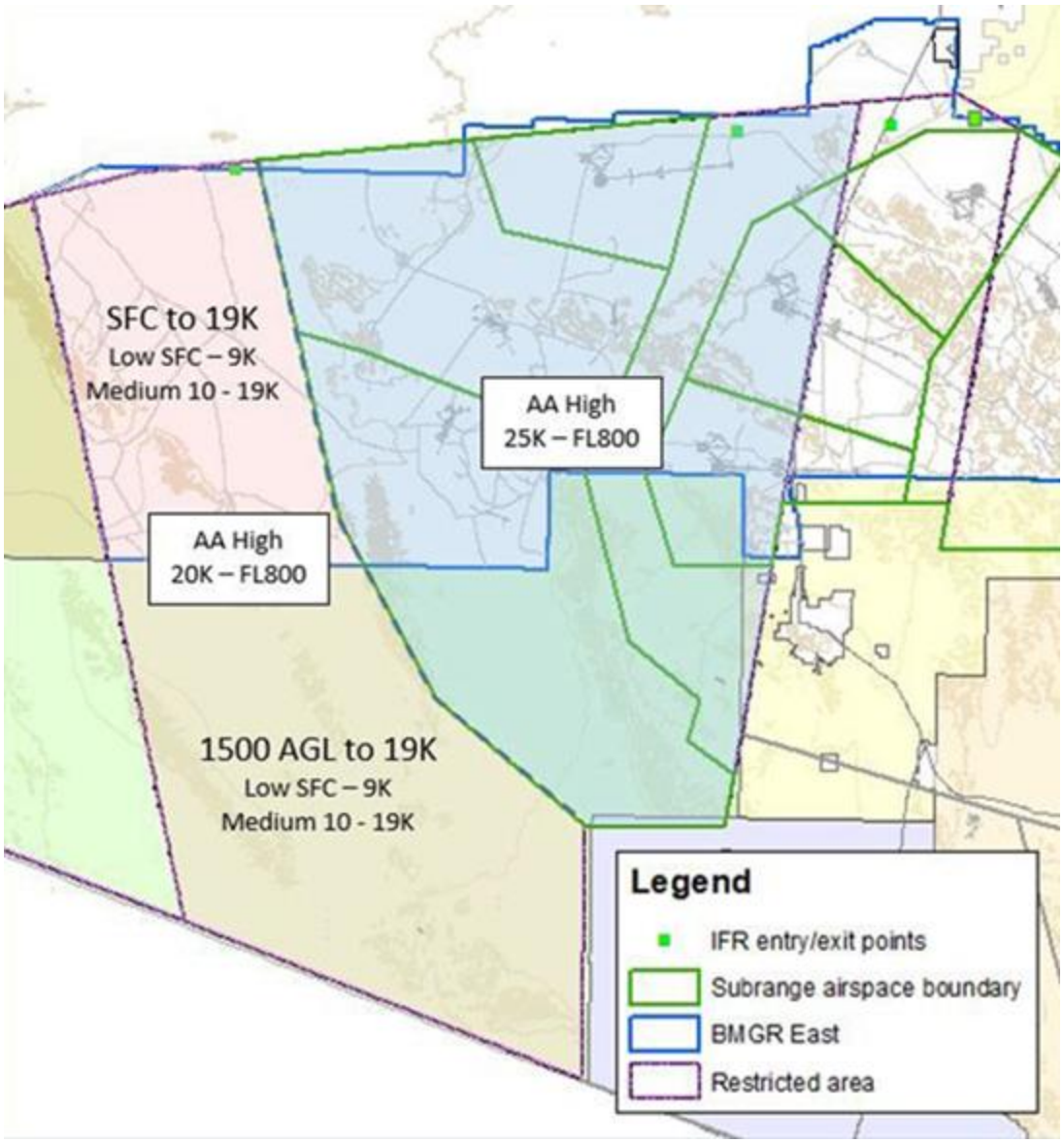
7.14. Helicopter Landing Zones (HLZ).

7.14.1. 56 RMO has approved a number of locations on NTAC, STAC and ETAC for use as HLZs; however, operational surveys are the responsibility of the user. For information on HLZs contact 56 RMO/ARO (DSN 896-8813).

7.15. Air-to-Air (AA) Range (Figure 7.2).

7.15.1. General. The Air-to-Air range is divided by altitude into three vertical segments, AA Low, AA Medium and AA High. Each of the segments may be scheduled separately or together with one exception: AA Medium must be scheduled with either AA Low or AA High.

Figure 7.2. Air-to-Air Range.



7.15.1.1. Historically, this area was used for aerial gunnery training using towed targets; however, it is no longer regularly used for this purpose. Requests to conduct aerial gunnery must be submitted to 56 RMO/ARO at least 45 days in advance of proposed activity and must be specifically authorized by the Director 56 RMO.

7.15.2. Communications. Radio Call: "Air-to-Air" (based on scheduled airspace altitudes add “Low”. “Low/Medium”, “Medium/High” or “High”). See **Attachment 9** for UHF frequencies.

7.15.3. AA Low/Medium. AA Low and AA Medium, the portion of R-2301E west of NTAC and west and south of STAC airspace. AA Low extends from the surface to 9,000’ MSL, with the exception that low altitude ops is restricted 1,500’ AGL and above over the Cabeza Prieta NWR). AA Medium extends from 10,000’ to 19,000’ MSL. See **Attachment 7** for AA Low/Medium coordinates.

7.15.4. AA High. AA High lateral boundaries are coincident with R-2301E (see **paragraph 3.2.2** for coordinates). When over the AA Low/Medium boundaries, the AA HI altitude block is 20,000' MSL to FL 800; when not over AA Low/Medium boundaries, the AA High altitude block is FL 250 to FL 800.

7.15.5. AA High/Medium/Low. A 1,000' buffer separates AA Low and AA Medium, and AA Medium and AA High (9,000' to 10,000' MSL and 19,000' to 20,000' MSL). When flights have two or more of the altitude segments, they also own the applicable 1,000' buffer.

7.15.6. Emergency Airfield. KGXF, 025 heading/49 NM from the extreme southern tip of the Mohawk Mountain Range.

7.15.7. AA Entry/Exit. IFR entry is via ARSON (BXK 205/052). VFR entry is via MTR or VFR altitudes from the northern boundary of R-2301E. Flights must contact NTAC, STAC, and AA mission to ensure awareness and altitude deconfliction. Exit is via ARSON or VFR altitudes along the northern boundary of R-2301E.

7.15.8. Information, Conflicts, and Hazards.

7.15.8.1. NTAC and STAC. The NTAC and STAC subranges are situated immediately east of AA Low/Medium and below the eastern portion of AA High. Aircraft may be working in NTAC and/or STAC, FL 240 and below, during AA HI operations. Aircraft departing NTAC/STAC on the VALLY TWO Recovery will be above 10,000' MSL.

7.15.8.2. Numbered Ranges. Three numbered ranges, Range 1, 2, and 4, underlie AA High; the High segment of all three ranges extend up to FL 240.

7.15.8.3. Stoval Airfield. Stoval is World War II era airfield located in the northwest corner of AA. Use of Stoval for flight operations is authorized during AA operations. Stoval operations are typically restricted to within 3 NM of airfield center and at or below 3,000' AGL. When Stoval is HOT, a Range NOTAM will be published with avoidance criteria for AA LOW flights.

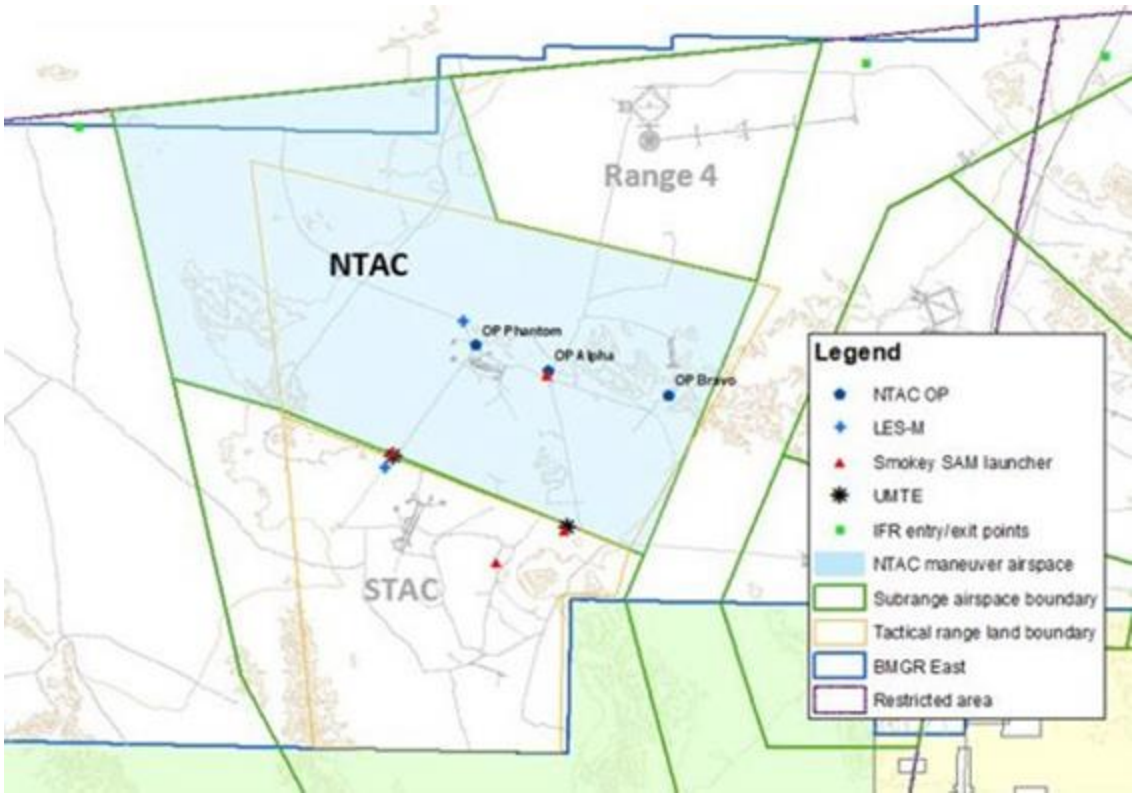
7.16. NTAC.

7.16.1. NTAC Land Boundary. See **Figure 7.3**. NTAC land boundary is defined as:

Table 7.1. NTAC Land Boundary.

Latitude	Longitude
N32 47.991'	W113 13.438' to
N32 43.154'	W113 11.463' to
N32 41.238'	W113 00.975' to
N32 31.885'	W113 05.332' to
N32 36.358'	W113 19.903' to
N32 37.538'	W113 24.342' to
N32 46.607'	W113 27.061' to the beginning.

Figure 7.3. NTAC Land Boundary, Maneuver Airspace Boundary, and OPs.



7.16.2. NTAC Maneuver Airspace. See **Figure 7.3**. For coordinates see **Attachment 6**.

7.16.3. Communications. Radio Call: "North Tac" (based on scheduled airspace altitudes add “Low”. “Low/Medium”, “Medium/High” or “High”). See **Attachment 9** for UHF frequencies.

7.16.4. Emergency Airfield. GXF, heading 044/29 NM from center of NTAC.

7.16.5. NTAC Holding. Preferred NTAC holding is over the scheduled range. With Snakeye concurrence, missions can hold in a different range that is not active.

7.16.6. NTAC Entry/Exit. IFR entry is via NOLLS or BRRRT, then via the North Transit Corridor. IFR exit is via the North Transit Corridor, then COOLY or BRRRT (see **paragraph 4.3.3** for additional details). Exit can also occur through the South Transit Corridor (see **paragraph 4.3.3** for additional details). Deconflict from all numbered range boundaries. Flights must contact STAC to ensure awareness and deconfliction (**Figure 7.3**.).

7.16.7. Information, Conflicts, and Hazards.

7.16.7.1. NTAC is bounded by Range 1, 2, and 4 to the east, AALOW to the west and STAC to the south (identified by a double-bladed road). Use caution for simultaneous operations.

7.16.7.2. Okie Hill. NTAC’s Okie Hill (elevation 1,286’, 2.5 km south of HE Hill) is occasionally mistaken for HE Hill. Okie Hill is not a target. DO NOT drop on Okie Hill.

7.16.7.3. HE AGM employment. With few exceptions, users conducting HE AGM employment on NTAC Target 103 or 123 must also schedule STAC and Range 4 due to

the large WDZ associated with the weapon. Check published restrictions and contact 56 RMO/ARO for coordination and approval. Any JTAC unit on NTAC or STAC not controlling the flight, and any non-mission-essential personnel on NTAC or STAC, must depart the range during an HE AGM mission.

7.16.7.4. NTAC ACCs.

7.16.7.4.1. OP Alpha. Coordinates: See **Attachment 7**. The OP is situated in the saddle of a large, pointed peak, about 2000' from the main access road. Target visibility to the southwest and northwest is very good. When occupied, aircrew must comply with published attack restrictions. Non-mission essential personnel cannot remain on OP Alpha during HE AGM missions but must relocate to the Range 4 main tower or the water well (see paragraphs **2.4.5.4.4**, **2.4.5.4.5**, **4.5.3.1.2**, and **7.12**. 10.2).

7.16.7.4.2. OP Bravo. Coordinates: See **Attachment 6**. OP is situated on the side of a steep hill in a narrow valley commonly referred to as East Pass. The site is a steep climb of approximately 1,000' from the main access road. Visibility to the north and southwest is good. When occupied, aircrew must comply with published attack restrictions. Non-mission essential personnel cannot remain on OP Bravo during HE AGM missions but must relocate to the Range 4 main tower or the water well (see paragraphs **2.4.5.4.4**, **2.4.5.4.5**, **4.5.3.1.2**, and **7.12.10.2**.).

7.16.7.4.3. OP Phantom. Coordinates: See **Attachment 7**. OP Phantom, located on a small mountain top approximately 1km north of Target 104 on NTAC, is not treated as an ACC. Because of its proximity to targets, numerous authorized footprints overlie this location, which was approved for JTAC use to provide a more realistic training opportunity. JTACs will be authorized to occupy OP Phantom or move between OP Alpha and OP Phantom **only if** controlling the flight on range or if the flight overhead is dry. **OP Phantom must be unoccupied if these conditions cannot be met.** JTACs must return to OP Alpha or be off range prior to the arrival of any non-controlled flight. OP Phantom operations require a face-to-face brief by and approval of the RSO or his representative and coordination with/approval of mission flight lead at least 24 hours in advance. Flight lead has final approval.

7.16.7.4.4. ACTS Remote Telemetry Site. ACTS equipment is located in the Aguila Mountains at N32 38.76332 W113 20.50593, 12S TB 80347 14472, below NTAC maneuver airspace.

7.16.7.4.5. Observation Towers. Three twenty-foot observation towers are located around HE Hill. The towers are manned for environmental assessment outside of active range times.

Table 7.2. Observation Towers.

Latitude/Longitude	MGRS
N 32 36.40532 W 113 10.55326	12S TB 95820 09783
N 32 37.02328 W 113 09.61175	12S TB 97316 10895
N 32 36.17944 W 113 08.68055	12S TB 98741 09306

7.16.7.4.6. Threat Emitter Sites. See **Table 5.1**.

7.16.7.4.7. Range Munitions Consolidation Point. The RMCP for Range 1, NTAC, and STAC is located 1 km east of the NTAC border at the water well at N32 32.170 W113 05.030 (12S UB 0430601782). **Both ordnance deliveries and overflight of this facility are prohibited.**

7.16.7.4.8. STAC land area**.** When STAC is closed for required ordnance clearance and range maintenance, it becomes an ACC. Aircrew must comply with published attack restrictions.

7.17. STAC.

7.17.1. STAC Land Boundary. See **Figure 7.3**. The Cabeza Prieta NWR is immediately adjacent to STAC's land boundary to the south and east). Aircrew operating on STAC must be aware of the Cabeza Prieta NWR boundary at all times. The Cabeza Prieta NWR is a **NO DROP / NO IMPACT AREA.**

7.17.2. STAC land boundary is defined as in **Table 7.3**.

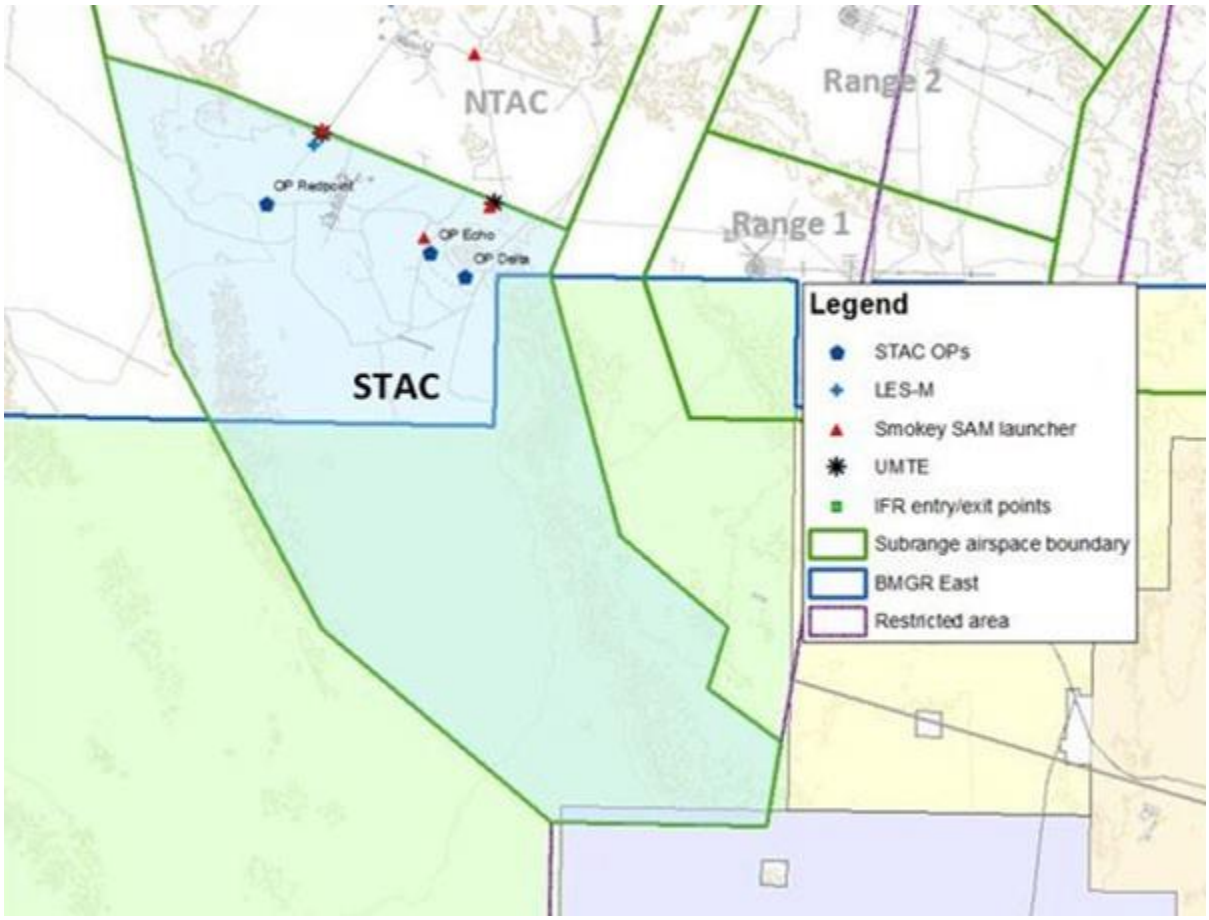
Table 7.3. STAC Land Boundary.

Latitude	Longitude
N32 37.538'	W113 24.342' to
N32 36.358'	W113 19.903' to
N32 31.885'	W113 05.332' to
N32 30.386'	W113 06.038' to
N32 30.306'	W113 08.174' to
N32 25.088'	W113 08.182' to
N32 25.084'	W113 19.738' to
N32 27.503'	W113 21.344' to the beginning.

7.17.3. STAC Maneuver Airspace. See **Figure 7.4**. For coordinates see **Attachment 7**.

7.17.4. Communications. Radio Call: "South Tac" (based on scheduled airspace altitudes add "Low". "Low/Medium", "Medium/High" or "High"). See **Attachment 9** for UHF frequencies.

Figure 7.4. STAC Land Boundary, Maneuver Airspace, and OPs.



7.17.5. Emergency Airfield. GXF, heading 029/ 35 NM from center of STAC.

7.17.6. STAC Holding. Preferred STAC holding is over the scheduled range. With Snakeye concurrence, missions can hold in a different range that is not active.

7.17.7. STAC Entry/Exit. IFR entry is via NOLLS or BRRRT using the NSTC; IFR exit is via COOLY or BRRRT using the NSTC (see **paragraph 4.3.3** for additional details). For SELLS and the LATN area, entry/exit can also occur via the South Transit Corridor (see **paragraph 4.3.3** for additional details). Deconflict from all numbered range boundaries. Flights must contact NTAC to ensure awareness and deconfliction (**Figure 7.4**.).

7.17.8. Information, Conflicts, and Hazards.

7.17.8.1. STAC is bounded by the Cabeza Prieta NWR to the south and east, AA LOW to the west and NTAC to the north (identified by a double-bladed road). Use caution during simultaneous operations.

7.17.8.2. Cabeza Prieta NWR Overflight. Overflight of the Cabeza Prieta NWR is restricted to a minimum altitude of 1,500’ AGL unless on a scheduled MTR. All aircrew will "arm safe" when over the refuge.

7.17.8.3. HE AGM employment. HE AGM employment is not authorized on STAC; however, footprints associated with AGM deliveries on NTAC targets extend into STAC. Any JTAC unit on STAC not controlling the flight, and any non-mission-essential personnel on STAC, must relocate to OP Delta, which is outside the footprint, or depart the range during an HE AGM mission.

7.17.8.4. STAC ACCs.

7.17.8.4.1. OP Delta. Coordinates: See **Attachment 7**. The OP is situated on a small hill some distance from the access road. Visibility to the south is good. When occupied, aircrew must comply with published attack restrictions. Non-mission essential personnel cannot remain on OP Delta if HE AGM missions are scheduled on NTAC but must relocate to the water well or other off-range location (see paragraphs **2.4.5.4.4**, **2.4.5.4.5**, **4.5.3.1.2**, and **7.12.10.2**.

7.17.8.4.2. OP Echo. Coordinates: See **Attachment 7**. This location is easily accessible by existing range roads and provides a good view of the main airfield and numerous other targets to the southeast, south, and southwest. When occupied, aircrew must comply with published attack restrictions. JTACs not controlling the flight and any non-mission essential personnel cannot remain on OP Echo if HE AGM missions are scheduled on NTAC but must relocate to the water well or other approved location (see paragraphs **2.4.5.4.4**, **2.4.5.4.5**, **4.5.3.1.2**, and **7.12.10.2**.

7.17.8.4.3. OP Red Point. Coordinates: See **Attachment 7**. This OP is easily accessible from range roads. Visibility is good to the east and southeast. When occupied, aircrew must comply with published attack restrictions. JTACs not controlling the flight and any non-mission essential personnel cannot remain on OP Red Point if HE AGM missions are scheduled on NTAC but must relocate to the water well or other approved location (see paragraphs **2.4.5.4.4**, **2.4.5.4.5**, **4.5.3.1.2**, and **7.12.10.2**.

7.17.8.4.4. Observation Towers. Three twenty-foot-tall observation towers are located around HE Hill. The towers are manned for environmental assessment outside of active range times. Towers locations are:

Table 7.4. Tower Locations.

Latitude/Longitude	MGRS
N 32 32.31308 W 113 14.79497	12S TB 89025 02358
N 32 32.77534 W 113 14.26923	12S TB 89866 03195
N 32 32.25311 W 113 13.29811	12S TB 91366 02198

7.17.8.4.5. Threat Emitter Sites. See **Table 5.1**.

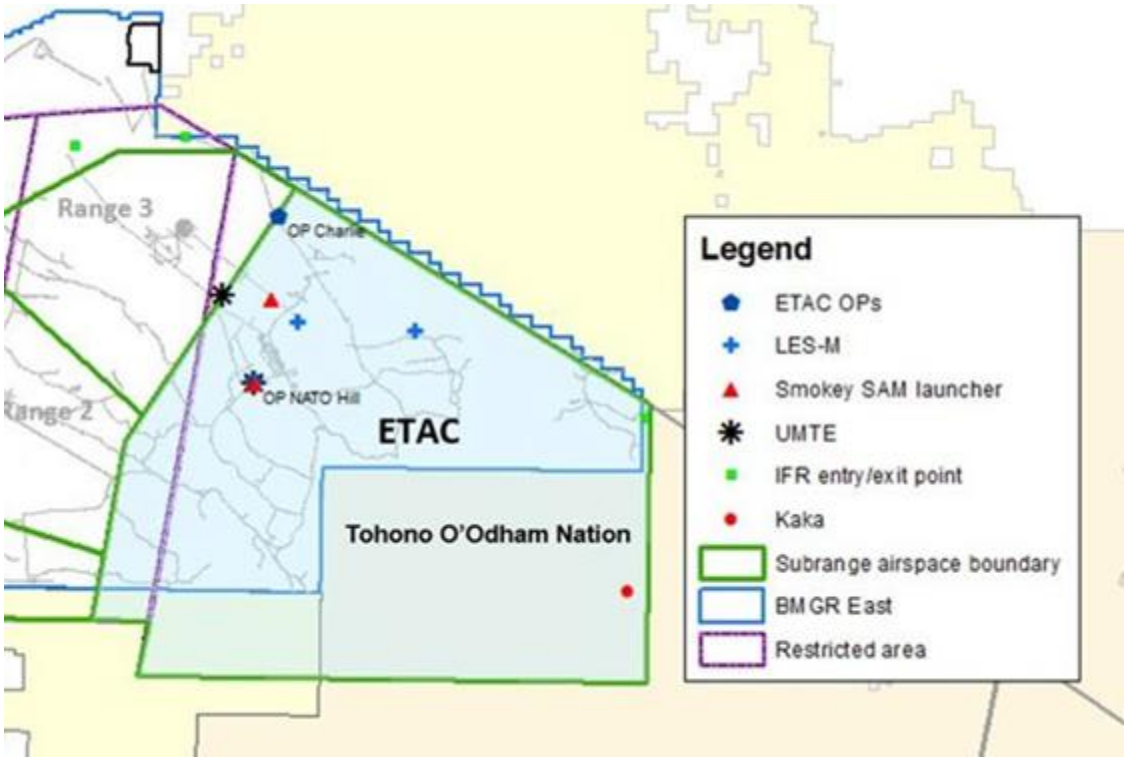
7.17.8.4.6. Range Munitions Consolidation Point. The RMCP for Range 1, NTAC, and STAC is located 1 NM east of the NTAC border at the water well, at N 32 32.170 W113 05.030 (12S UB 04306 01782). **Both ordnance deliveries and overflight of this facility are prohibited.**

7.17.8.4.7. NTAC land area. When NTAC is closed for required ordnance clearance and range maintenance, it becomes an ACC. Aircrew must comply with published attack restrictions.

7.18. ETAC.

7.18.1. ETAC Subrange Land Boundary. See **Figure 7.5**. The Tohono O'odham Nation is immediately adjacent to ETAC's land boundary to the south. Aircrew employing weapons on ETAC must be aware of the Tohono O'odham Nation boundary at all times. **The Tohono O'odham Nation is a NO DROP / NO IMPACT AREA.**

Figure 7.5. ETAC Land Boundary, Maneuver Airspace, and OPs.



7.18.1.1. ETAC land boundary is defined by these coordinates:

Table 7.5. ETAC Land Boundary Defined by Coordinates.

Latitude	Longitude
N 32 47.413'	W 112 35.910' to
N 32 38.676'	W 112 18.382' to
N 32 35.628'	W 112 18.383' to
N 32 35.631'	W 112 34.445' to
N 32 34.960'	W 112 34.446' to
N 32 37.160'	W 112 39.681' to
N 32 38.878'	W 112 41.087' to
N 32 41.660'	W 112 40.527' to the beginning

7.18.2. ETAC Maneuver Airspace. See **Figure 7.5**. For coordinates see **Attachment 7**.

7.18.3. Communications. Radio Call: "East Tac" (based on scheduled airspace altitudes add “Low”. “Low/Medium”, “Medium/High” or “High”). See **Attachment 9** for UHF frequencies.

7.18.4. Emergency Airfield. GXF, heading 312/15 NM from center of ETAC.

7.18.5. ETAC Holding. Preferred ETAC holding is over the scheduled range. With Snakeye concurrence, missions can hold in a different range that is not active. LATN missions may also holding between the Burro Gap and Burro East area at 2,500’ AGL (Figure 7.1).

7.18.6. ETAC Entry/Exit. IFR entry is via NOLLS or BRRRT using the North Transit Corridor; IFR exit is via COOLY or BRRRT using the North Transit Corridor, or via BUGGS (see **paragraph 4.3.3** for additional North Transit Corridor details). Use caution for SELLS missions exiting thru BUGGS. For LATN/transit airspace below SELLS, entry/exit can also occur via the south or southeast boundary of ETAC (for the southeast boundary, avoid BUGGS by 10 NM minimum). Deconflict from all numbered range boundaries (**Figure 7.5**.).

7.18.7. Information, Conflicts, and Hazards.

7.18.7.1. ETAC is bounded by Ranges 1, 2, and 3 to the west and SELLS MOA/ATCAA to the east and south. Range 3 and ETAC share a common border (identified by a double-bladed road). SELLS A and ETAC also share a common border. Use caution during simultaneous operations.

7.18.7.2. Use caution for high-volume traffic transiting/holding south and west of ETAC/R-2304 in the Burro Gap area.

7.18.7.3. Tohono O’odham Nation Overflight (**Figure 7.5**.). The town of Kaka (12S UB 763978) is noise sensitive and will be avoided by 2 NM horizontally. Overflight will be ≥ 3,000’ AGL. All aircrew will “arm safe” when over the Tohono O’odham Nation.

7.18.7.4. HE AGM employment. Users conducting HE AGM employment on ETAC Target 310 must also schedule Range 3 due to the very large WDZ footprint associated with the weapon. Contact 56 RMO/ARO for coordination and approval. The Range 3 con point must be unmanned during HE AGM missions. Any JTAC unit on OP NATO Hill not controlling the flight must depart the range during an HE AGM mission (paragraphs **2.4.5.4.4**, **2.4.5.4.5**, **4.5.3.1.2**, and **7.12.10.2**. Ground parties on ETAC or at the con point must move off range to the vicinity of the Range 3 main tower (roughly 4.5 miles northwest of the con point). Because it is outside all authorized footprints, JTACs not controlling the flight (and other ground personnel) may remain on OP Charlie.

7.18.7.5. ETAC ACCs (**Figure 7.5**.).

7.18.7.5.1. OP Charlie. Coordinates: see **Attachment 7**. OP lies on a hilltop immediately north of the ETAC boundary, and users may enter/exit while ETAC is hot. Good visibility of targets to the east and southeast. When occupied, aircrew must comply with published attack restrictions.

7.18.7.5.2. OP NATO Hill. Coordinates: see **Attachment 7**. This OP provides a good view of the main airfield target and others and is accessible by road. When occupied, aircrew must comply with published attack restrictions. If not controlling the flight,

personnel the OP must relocate to the Range 3 main tower or OP Charlie during HE AGM missions.

7.18.7.5.3. Threat Emitter Sites. See **Table 5.1** for information and coordinates.

7.18.7.5.4. Range Munitions Consolidation Point. The RMCP for Range 3/ETAC is located near the south end of the double-bladed road at N32.70880 W112.66513, 12S UB 43935 20228. **Both ordnance deliveries and overflight of this facility are prohibited.**

7.19. CENTAC.

7.19.1. CENTAC's land boundary is defined as the combination of Range 1 and Range 2. Due to its limited size, CENTAC is primarily for use by A-10 and similar type aircraft. Missions must own Range 1 and 2 simultaneously and all tactical attacks will be south to north on the Range 2 Right Conventional and Tactical targets. CENTAC is limited to Low only, or Low/Medium altitude blocks. Range 1 will be dry overflight only. There is no designated "CENTAC" in CSE; instead, units need to schedule Range 1 and Range 2 at the same time with "CENTAC" noted in the remarks.

7.19.2. Communications. Radio Call: "CENTAC" (based on scheduled airspace altitudes add "Low" or "Low/Medium"). See **Attachment 9** for UHF frequencies.

7.19.3. Emergency Airfield. GXF, heading 015/19 NM from center of CENTAC.

7.19.4. CENTAC Holding. Preferred CENTAC holding is over the scheduled range. With Snakeye concurrence, missions can hold in a different range that is not active. LATN missions may also holding between the Burro Gap and Burro East area at 2,500' AGL (Figure 7.1).

7.19.5. CENTAC Entry/Exit. IFR entry is via NOLLS or BRRRT using the transit corridor; IFR exit is via COOLY or BRRRT using the transit corridor, or via BUGGS (see **paragraph 4.3.3** for additional North Transit Corridor details). For LATN/transit airspace below SELLS, entry/exit can also occur via the south boundary of Range 1.

7.19.6. Information, Conflicts, and Hazards.

7.19.6.1. CENTAC is bounded by Ranges 3 to the north, ETAC to the west and SELLS MOA/ATCAA to the south and the transit corridor to the west. Use caution during simultaneous operations.

7.19.6.2. Weapons employment is limited to BDU-33, 2.75-inch rockets and strafe.

7.19.6.3. SR-85. Some tactical patterns may cross SR-85 between Ajo and Black Gap. Special care must be taken to avoid weapons releases in this area.

7.19.6.4. No range tours are not authorized during CENTAC operations.

Chapter 8

RANGE CONTROL OFFICER (RCO) PROCEDURES

8.1. General.

8.1.1. RCOs are under the supervision and control of the 56 RMO ACTS Contractor. Extenuating circumstances may make it necessary for pilots to augment the RCOs. In this event, 56 RMO will task specific units allowing sufficient time for training and certification in accordance with this chapter. RCOs are responsible for respective numbered range ground and air space and the safe conduct of weapons employment operations.

8.2. Tour of Duty. The normal RCO tour of duty will be 8 hours. The maximum number of duty hours in any 7 days will be 60, which may be waived on a case-by-case basis by the ROA. Only qualified officers, NCOs, or civilians (government employees or contractors) may perform RCO duties. All RCOs (military or civilian) will meet the qualification, training, certification, currency, evaluation, and recordkeeping requirements listed in Attachments **13** and **14**.

8.2.1. RCO crew rest is compulsory before performing any duties involving aircraft operations and is a minimum of 8 non-duty hours before the RCO duty period begins. Crew rest is free time and includes time for meals, transportation, and rest. This time must include an opportunity for at least 8 hours of uninterrupted sleep. The RCO crew rest period cannot begin until after the completion of official duties.

8.3. RCO Training, Checkout, and Certification.

8.3.1. General. Training and certification requirements are established in and will be conducted IAW this instruction (see Attachments **13** and **14**).

8.3.2. RCO Training and Certification. The 56 RMO representative, or a current and qualified RCO, will conduct RCO training. Certification will be accomplished by the 56 RMO representative or by a designated RCO. RCO certification and annual recertification will be documented on an *RCO Certificate for BMGR East* (**Attachment 14**) and maintained by the contractor.

8.3.3. RCO Currency. The contactor will ensure RCOs meet the following requirements. Additionally, RCOs will complete an annual evaluation by demonstrating control of two-day missions (at least one of which will be a four-ship, if able) and passing a written examination. The evaluation will be administered by a 56 RMO representative or designated representative. RCOs who fail their annual evaluation are immediately decertified.

8.3.4. RCO Meetings. The 56 RMO will conduct semiannual RCO meetings as a minimum. All RCOs must attend each meeting or be briefed on the meeting subjects. Meeting minutes will be maintained by the 56 RMO.

8.3.5. Aircrew Training and Certification. In the event pilots are required to augment the contract RCOs, training and certification will be conducted by a 56 RMO representative. Certification will be documented on the *RCO Certificate for BMGR East* and maintained in respective training folders. The *RCO Certificate for BMGR East* will be maintained in the respective RCO’s training folder, maintained by BMGR ACTS contractor.

8.4. Instructions, Regulations, and Manuals.

8.4.1. Each numbered range tower will have a quick response checklist for items regarding divert instructions, backup communications, crash and emergency procedures, safety items, etc. Additionally, each numbered range tower will have current copies of AFMAN 13-212v1 plus applicable extracts from the F-16 AFI 11-series, A-10 AFI 11-series, and AFMAN 11-214.

8.5. Other Range Publications and Documents.

8.5.1. Local Publications. The 56 RMO/COR will ensure applicable local publications are established and maintained at each range, and that one copy of each publication is forwarded to 56 RMO/ARO.

8.5.2. Tours and visitors on range will be noted in the daily log.

8.5.3. LUKEAFB Form 57, *Range Officer's Report*. CSE is the primary method for scheduling, NOTAMS and recording of expenditures. In the event of a computer outage or restricted access to CSE, RCOs will complete LUKEAFB Form 57. The completed LUKEAFB Form 57 will be forwarded to the 56 RMO RCO COR and ACTS contractor lead for review, tracking, and filing.

8.5.4. Down Range Computer. The RCO will ensure the down range computer (located in the tower cab) is on and operational. It will be used by the RCO to receive and provide information on weather, NOTAMs, BWC advisories (per 56 FW OPLAN 91-2, *Bird/Wildlife Aircraft Strike Hazard*), CSE (scheduling updates and weapons expenditure logging), Incident Reports, foul tracking log, and to access digitally stored required AFIs and range regulations. Information gained from using the computer and local area network access will be used in the Command, Control, and Communications (C3) of numbered range operations (Class A range). In the event of a computer outage or restricted access to local area network and CSE, Snakeye will be notified of the failure and RCO will inform ACTS Contractor to initiate a work order. Manual back up for required manuals and regulations must be available until computer access is restored. RCO will contact GXF Base Ops for weather and NOTAMs. Snakeye will notify affected RCO of NOTAM changes.

8.6. Range Opening Procedures.

8.6.1. RCO Showtime. The RCO will be at the scheduled range a minimum of 1 hour before the first scheduled Class A mission to complete range opening duties.

8.6.2. Communication with Snakeye. The RCO will communicate with Snakeye to request access onto the range.

8.6.3. RCO Inspection Checklist. Prior to the first mission, the RCO will complete the Range Officer's Inspection Checklist.

8.6.4. RCO Range Status Report. No later than 15 minutes before the first mission, the RCO will notify Snakeye of range status. Upon notification, Snakeye will relinquish control of the numbered range air and ground space to the RCO.

8.7. Operations.

8.7.1. Range Schedule. The RCO is responsible for managing their respective Range Flight Schedule. RCO will advise flight leads when 5 minutes remain in their scheduled period if

another flight is scheduled immediately afterward. Do not allow flights to extend their period without concurrence of the inbound flight. Day range activities will cease NLT official sunset, or 1800 whichever occurs first (for range scheduling purposes only).

8.7.1.1. Last mission of the day extensions. RCOs will support requests for last mission of the day extensions within the constraints allowed by the contract. At no time will airspace be extended beyond what is scheduled with Albuquerque Center without prior coordination with 56 RMO/ASM. **Note:** Operations beyond what is scheduled with Albuquerque Center will require an FAA NOTAM with a minimum 2-hour lead time.

8.7.2. Communication. Flights are responsible for obtaining current altimeter setting and GXF active runway from Snakeye before checking in to a numbered range. Clearance onto a numbered range not previously scheduled and range diversions must be coordinated with Snakeye. Snakeye will inform the affected RCO. Flight lead will be notified of any EOD detonation activity or range clearance activities on range, as applicable. The RCO will confirm scheduled airspace with using flight on check in.

8.7.2.1. Lineup/Recoveries. Prior to weapons delivery, flight leads will confirm the lineup (number of aircraft), events and targets. All flights are expected to execute a TMLT for any LAHD delivery or System/Visual delivery; prior notice is not required. All other conventional deliveries will execute a climbing safe escape maneuver, unless otherwise briefed by the flight lead.

8.7.2.2. Range Traffic/Data. The RCO will confirm right or left range and traffic, strafe panel assignment, and when requested, the current altimeter, surface winds, and any other information requested by the flight lead that can be obtained while safely controlling the flight.

8.7.2.3. RCO Integration. RCOs are expected to become part of the using flight, sequencing radio calls with the flight to enhance communication flow. The RCO will insist that flight members acknowledge all directive RCO radio transmissions (other than normal bombing pattern standard communication).

8.7.2.4. Clearing. The RCO will clear every pass hot or dry ("cleared hot" or "continue dry") after the pilot has called "in" and ensuring that the target area is clear, the requesting aircraft is on range, in sight, and aligned with the correct target.

8.7.2.5. Flight Lead Control. The RCO will allow flight lead control when requested by flight lead. Authorization of flight lead control is at the RCO's discretion. "Flight lead control" must be accepted and acknowledged by both the flight lead and the RCO. Under flight lead control during HADB/HARB events, aircraft releasing actual or simulated ordnance will call "in" or "in dry", and "off dry", as appropriate. No clearance to expend will be transmitted from the RCO or flight lead. The RCO will continue to spot actual ordnance releases to validate weapons expenditure and impact location. When the range is released to flight lead control, the RCO will monitor the flight as a ground safety observer. The RCO will not allow any range maintenance to be conducted when ordnance is being expended under flight lead control.

8.7.2.6. Spacing. If spacing affects safety or scoring capability, direct the flight to open or close spacing, where needed, or go through "high and dry" until corrected.

8.7.2.7. Ground Access Restrictions during Strafe. Transit to or through numbered ranges during strafe events will be restricted as shown in **Table 8.1**. Range maintenance activities will not be allowed during hot strafe events.

8.7.2.8. Strafe Restrictions. Strafe pits will be closed due to hazards posed by any of the following conditions: insufficient soil depth to reduce bullet velocity; when the soil consistency turns to a powdery texture; when standing water exists within the pits or on the aprons around the pits; when the pit soil has crusted to an extent where it does not break when walked upon (**Exception:** A-10 LAS is authorized with standing water on the Range 2 and 4 strafe pits provided the aircraft does not penetrate the 3-9 line of the strafe panels).

8.7.2.8.1. On Range 1 or 3, the tactical strafe target will be closed if there is standing water nearby.

Table 8.1. Numbered Range Ground Access Restrictions.

Range	Entering from	Restriction*
1	SR 85	Hold at main tower during strafe
1	Water Well	Hold at water well during strafe or low-angle rocket employment
2	SR 85	No restriction on access to main tower
3	SR 85	Hold at stop sign during strafe; no access during Rescue Range operations
3	ETAC / Con Point	Hold at con point during strafe employment or when the rescue range is in use
4	SR 85	Hold at stop sign when right range is being used for HARB, LALD, LAT, MAT, 2.75, HAS
4	NTAC	Hold at stop sign when left range is in use

Note: *Regardless of location, no ground movement is authorized during combat laser employment.

8.7.2.8.2. On Range 2 or 4, the tactical strafe target will be closed to all aircraft except A-10 if there is standing water nearby, and A-10s must not penetrate the 3-9 line of the target.

8.7.3. Communications.

8.7.3.1. Main Tower. Each numbered range is outfitted with a primary UHF radio, UHF Guard; UHF/VHF multichannel secondary radio; LMR; and hot mic capability to the scoring position. The primary UHF radio is tuned to the specific range frequency. The multi-channel is available for backup, set on Snakeye frequency. On Range 3, the multi-channel will be set to ETAC discrete if joint-use procedures are in effect. If the primary radio fails, contact the aircraft on the multi-channel. If no contact, notify Snakeye to inform the flight of the situation and the anticipated delay, if known.

8.7.3.2. Minimum Radios. The range may be opened with one operational UHF radio (either primary or secondary; if secondary, one channel will be tuned to UHF guard). In

this instance, advise Snakeye and incoming flights of limited capability. Advise ACTS contractor of outage to initiate a work order.

8.7.3.3. Aircraft Radio Failure. The RCO will advise other flight members when an aircraft flies past the tower rocking its wings as a NORDO signal. If the aircraft remains in the traffic pattern, the RCO may attempt, with coordination with the flight lead/wingman, to contact the NORDO aircraft on backup frequency with the multi-channel UHF. If contact is established, advise the flight lead/wingman, and recommend that the entire flight work on the backup frequency. Continue the mission after all flight members are in contact with the range. If the aircraft breaks out opposite traffic, an emergency is indicated—advise other flight members as appropriate.

8.7.3.4. Digital Recorder. All ground-to-air, air-to-air, and ground-to-ground communications on numbered ranges are digitally recorded. Recordings will be held a minimum of 24 hours before reuse.

8.7.3.5. FM Radio Operations. FM or land mobile radio (LMR) is a necessary means of communication on the numbered ranges to talk with Snakeye or equipped ground parties. The FM radio in the main tower may be turned down to a low but readable volume during missions. Under no circumstances will the FM radio be turned off or audio full down while the range is manned.

8.7.3.6. Clearance to Enter/Cross Numbered Ranges.

8.7.3.6.1. Aircraft. All aircraft must be cleared on range by the RCO prior to entry (through Snakeye coordination if necessary). Crossing traffic may be cleared if the range is cold or after using flight coordination (altitude and or distance deconfliction) and permission.

8.7.3.6.2. Ground Parties. Ground parties requesting access to numbered ranges will not proceed beyond the range entry point(s) until clearance is granted. If there is no RCO on range, Snakeye must approve access. Permission to enter may be requested by LMR, telephone call box at the entry point, or cell phone. When a mission is in progress, only the RCO can authorize ground party entry; clearance authority cannot be delegated. No ground access/crossing is permitted during Class C operations. Restrictions in **Table 8.1** apply for travel between main and flank towers during weapon employment due to weapons safety footprints.

8.7.4. Night Range Operations. Night minimum altitude devices are available; however, they are not as effective as the daylight devices. Increased emphasis is required for aircraft position and attitude. Diving deliveries on the conventional target will be permitted if the target area is illuminated by airborne flares or at least two ground marking devices within 300’ of the target or if illuminations conditions exist where in the pilot can positively identify the target (for example, with night vision goggles). When working flare missions, the RCO will call out the number of flares observed, if less than indicated by the flare ship, and warn aircrew if a flare could affect the pattern.

8.8. Fouls/Dangerous Passes.

8.8.1. References. Assess fouls according to AFI 11-MDS Vol. I, AFI 11-MDS-Vol III and AFMAN 11-214, to include:

8.8.1.1. Descending below minimum altitudes for the event.

8.8.1.2. Firing inside 2,000’ during LAS delivery.

8.8.1.3. Double burst on LAS/LRS.

8.8.1.4. A lazy recovery on LAS, all recoveries not IAW T.O. -34-1.

8.8.1.5. Dropping without clearance.

8.8.1.6. A violation of range or flight safety (dangerous pass as assessed by the RCO).

8.8.1.6.1. A single violation of range or flight safety, as judged by the RCO or flight lead, may be considered dangerous by the RCO or flight lead, which will require the flight member to discontinue events and hold high and dry above the range.

8.8.2. Fouls. Advise pilots of minimums or other deviations/violations that occur. Include specific reasons for fouls. Do not clear follow-on passes of that aircraft until that pilot acknowledges the foul. Aircrew will discontinue and hold high and dry above the range after receiving a second foul.

8.8.3. Foul Recording. The RCO will ensure foul/dangerous pass information is recorded on the online foul report. RCOs will notify the RMO Range Safety Officer of any single dangerous pass, multiple fouls by a single aircraft or any event that requires the aircraft to cease all operations or RTB.

8.9. Weapons Delivery Scoring.

8.9.1. Bullseye Point is the center of the target.

8.9.2. Score Passing. RCOs will pass scores by miss distance and clock positions (for example, 8 at 6). A score of three meters or less will be passed as a "Bull." If warranted, a "Shack" may be passed as a direct hit on the bullseye. No score will be given over the radio or on the computer score sheet when a foul related to that event occurs.

8.9.3. Strafe. When possible, RCOs will advise pilots of strafe impacts outside of the center of the impact area**.**

8.10. Curtailed Range Operations.

8.10.1. Weather Reporting. When weather is a factor, the RCO will obtain range weather information from GXF Weather Station or local PIREPs and make independent observations; this information will be relayed to arriving flights on check in or as soon as possible. The RCO will close the range when PIREPs, RCO observation, or other sources indicate the weather is below minimums.

8.10.2. Flight Terminate or "Knock-It-Off" calls, or Aircraft Emergency.

8.10.2.1. The RCO will: acknowledge the call, then maintain radio silence and assist as required; visually monitor flight members to assist in safe separation; if the emergency aircraft proceeds to GXF for a precautionary/emergency landing, advise Snakeye.

8.10.3. Unauthorized Airspace Incursions. Call “knock-it-off” and then advise the flight lead of the intruding aircraft's location. If possible, assist aircraft to deconflict flight paths. If necessary, make a call on Guard to alert the aircraft of their position on range and the best direction to leave the airspace (for example, "Range 4 on Guard, F-16 over Range 4 work west

immediately"). Report airspace violations to Snakeye and initiate a BMGR East Incident Report (**Attachment 2**).

8.10.4. Crash. Close the range and direct the using flight to either breakout/depart the range or act as Rescue Combat Air Patrol (RESCAP). RCOs will remain in the tower and assist as required. RCO will advise Snakeye of status as soon as possible and alert Gila Bend AFAF ECC for crash net activation with all available details to include:

8.10.4.1. Call sign/flight position.

8.10.4.2. Type aircraft, tail number, and home base.

8.10.4.3. Exact location and time.

8.10.4.4. Status of aircrew members, if known.

8.10.4.5. Ordnance on board, if known.

8.10.5. Unauthorized Personnel. If unauthorized personnel are observed or reported by RMO or LE personnel, the RCO will suspend operations immediately and notify Snakeye of the situation and anticipated delay. During range closures for unauthorized personnel, the RCO may allow missions to work the range "dry only" above 500’ AGL; however, if the search involves law enforcement aircraft, the restriction will be "dry only" and 1,000’ AGL above the search aircraft. Based on information provided by RMO and/or LE personnel, as well as local observations, the RCO will reopen the range to ordnance delivery when it is safe to do so.

8.10.6. Ricochet. If an aircraft experiences an impact due to ricochet, suspend all LAS activities and provide emergency assistance to the affected aircraft, as necessary. Complete an incident report according to **paragraph 8.12.1** below.

8.10.7. Abnormal Occurrences. On numbered ranges, the RCO will immediately notify Snakeye, 56 RMO DO, and the RCO COR of any abnormal occurrences. Document any abnormal occurrence (e.g., jettison, inadvertent release, range incursions, etc.) on a BMGR East Incident Report (**Attachment 2**) and forward to 56 RMO/DO and ARO by end of day.

8.11. Normal Range Closing.

8.11.1. Under normal conditions, the range may be closed through coordination with Snakeye.

8.12. Reports and Logs.

8.12.1. RCOs will review discrepancy logs and other documents to ensure accuracy and legibility. The RCO will upload weapons expenditures in CSE and annotate fouls on the BMGR East foul tracking excel spreadsheet by the completion of numbered range tour. As a backup to computer downtime, the LUKEAFB Form 57, *Installation Access Affidavit,* will be used.

8.12.2. Ricochet information. Report the following to Snakeye, 56 FW/SE, and Luke AFB command post:

8.12.2.1. Aircraft type, call sign, home base.

8.12.2.2. Time of occurrence, type event, and target.

8.12.2.3. Target condition, opening inspection results, time of last plowing/hand policing, and any other pertinent information.

8.12.2.4. Description of Pass. Approximate dive angle, recovery altitude, and recovery maneuver, rounds fired, hits scored, and description of impact appearance.

8.12.2.5. Probable cause, if known.

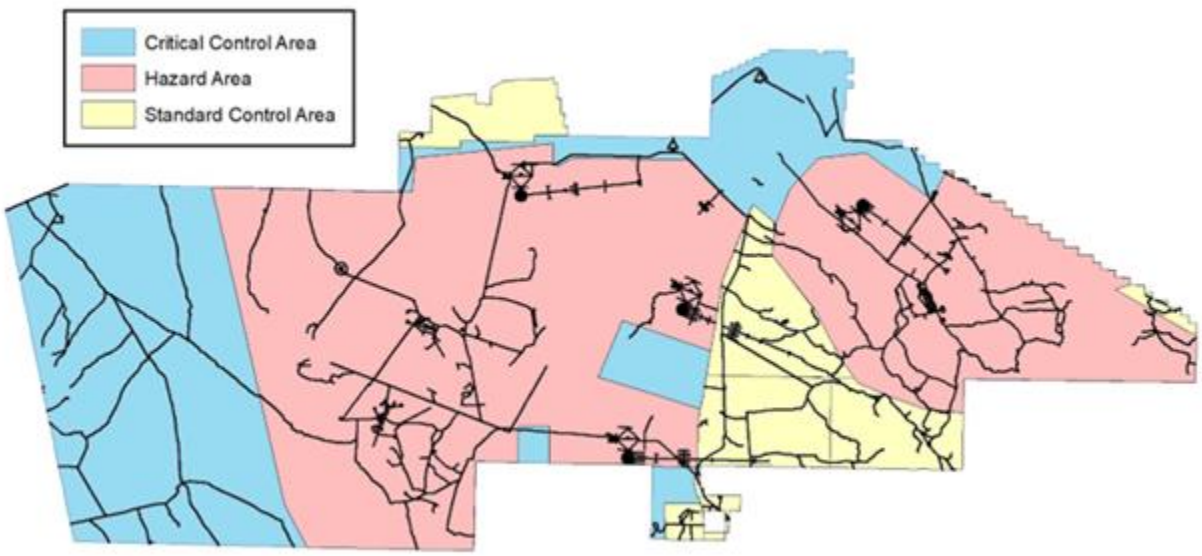
Chapter 9

SURFACE ACCESS TO BMGR EAST

9.1. General.

9.1.1. This chapter outlines procedures for surface access to the BMGR East. Strict adherence to these procedures is absolutely necessary to ensure safe and efficient operations. All of the BMGR East is considered a controlled area. Specific locations are classified as either standard control areas (SCA), critical control areas (CCA) or hazard areas as shown on **Figure 9.1**.

Figure 9.1. Standard Control, Critical Control and Hazard Areas on BMGR East.



9.2. Ground Party Medical Emergency.

9.2.1. BMGR East is a very remote area. No medical facilities are available in the immediate area; medical attention is limited to first response stabilization. Gila Bend AFAF Fire and Emergency Services (FES) will respond to reported medical emergencies whenever they are available. Serious injuries or medical conditions will require transport to the Phoenix metropolitan area for treatment. The ECC will coordinate transportation either by ambulance or medical evacuation helicopter if needed. Typically, civilian contract helicopter medivac will respond to an accident. If necessary, military search and rescue assets from Davis- Monthan AFB may be requested to assist.

9.3. Standard Control Areas (SCAs).

9.3.1. Three discontiguous areas of BMGR East are defined as SCAs and are open to public use through a permitting process (see **paragraph 9.3.4**.). Although air-to-ground weapons employment is not authorized in these areas, access to SCAs must be carefully managed due to the potential for employment errors that may result in weapons impacts outside of the intended target area, as well as potentially hazardous material that may be present. Depending on military operations, some areas may be temporarily closed to public access.

9.3.2. Specific SCAs are Area B, the Ajo Air Force Station area, and Bender Springs. These areas are clearly identified on maps provided as part of permit materials.

9.3.3. SCA Controlling Agency**.** The controlling agency for all SCAs is the ECC at Gila Bend AFAF (DSN 896-5200, Commercial 623-856-5200).

9.3.4. Permitting. Permits for entry into these SCAs are issued using the bmgr.recaccess.com online permit process, which includes a safety video and acknowledgement of a Hold Harmless Agreement. Each permitted individual must check-in via the online program prior to entry. The permit is valid from the date of issue through the next 30 June and should be displayed on the vehicle dashboard. All visitors must be prepared to present the permit when requested by 56 RMO personnel or other government official.

9.3.5. Range Safety Briefing. In rare instances, an in-person range safety briefing, rather than the video available on bmgr.recaccess.com, may be required before entering the BMGR East. This briefing may be conducted at Luke AFB (56 RMO/ARO or 56 RMO/ESM) or at Gila Bend AFAF (COR or Range Security). Contact the ECC at Gila Bend AFAF (DSN 896-5200, Commercial 623-856-5200) for additional information. LUKEAFB Form 11, *Acknowledgment of Danger; Release and Hold Harmless Agreement,* must be signed by each individual at the completion of the briefing. The safety briefing/agreement must be accomplished annually.

9.3.6. SCA Communication. Visitors use bmgr.recaccess.com to document each visit to the range with proposed entry time and destination, and to update this information with exit time after departure. If unable to use the online process, visitors should call the ECC to provide this information. Cell phone coverage within SCAs is inconsistent.

9.4. Critical Control Areas (CCAs).

9.4.1. All areas of the BMGR East other than SCAs are considered CCAs; this includes all numbered and tactical ranges, AUX-6, Stoval, the EOD range, the small arms range, and all areas between them. There are locked gates at most CCA entry points. During range operating hours, all ground parties must contact Snakeye before entering any CCA and again on exit. If Snakeye is closed, ground parties must contact the ECC. CCAs are routinely accessed for official business only. Official business is defined as those activities performed or sanctioned by the 56 RMO, including operating and maintaining the range complex, military training and exercises, and other governmental or civilian agency uses authorized by the USAF in writing. Requests for access to CCAs for official duties other than military training must include endorsement by a 56 RMO-sponsoring office. Access to Hazard Areas (see below), whether active or inactive, will not be authorized for other than military training and supporting activities.

9.4.2. Access to CCAs. Except for military training and supporting activities, access to CCAs will be limited and must be authorized under a Special-Use Permit issued by 56 RMO. Final approval to issue a special-use permit rests with the 56 RMO/DIR. Once a permit is issued, specific requests for access to CCAs (including dates, times, specific locations, numbers of individuals/vehicles) must be coordinated at least 14 calendar days in advance with 56 RMO/ARO, scheduled through 56 RMO/ASMS, and shown on the daily range schedule in CSE. Ground access to any CCA during regular range operating hours for other than direct operational support will rarely be approved and must be annotated on the daily range schedule.

9.4.2.1. Contractor access. Contractors supporting military training (other than 56 RMO range O&M, ACTS and other contractor personnel issued a network DoD Common Access Card [CAC]) who require unescorted access to Gila Bend AFAF and other range areas for official duties must complete LUKEAFB Form 338 and attach copies of two forms of identification. Access will be granted only if approved by 56 SFS. This process includes a background check, and applicants must begin the process at least 45 days in advance of desired entry date. In rare cases, contractors may be considered mission essential personnel; if so, they may be allowed within the hazard area during operations (see AFMAN 13-212v1 paragraph 4.17.2.).

9.4.2.2. Range Safety Briefing. Military, DoD civilian, and contractor ground personnel must receive a range safety briefing before entering a CCA. Briefings may be conducted at Luke AFB or Gila Bend AFAF by 56 RMO/ARO personnel. Briefings also may be conducted by 56 RMO/ESM with approval of 56 RMO/ARO. Completion of the required safety briefing must be documented on a form provided and maintained by 56 RMO/ARO. Briefings must be re-accomplished annually.

9.4.2.3. LUKEAFB Form 11 (or its Office of Management and Budget equivalent) will be completed and signed by all personnel other than 56 RMO staff and contractors and military personnel requesting access to CCAs.

9.4.3. CCA Controlling Agency. During scheduled range operating hours, the controlling agency for all CCAs is Snakeye, or the RCO on a numbered range, if present. Outside scheduled range operating hours, the controlling agency is the ECC at Gila Bend AFAF.

9.4.4. CCA Communication. During operating hours, contact Snakeye on entering any gate that provides access to a CCA. Snakeye will acknowledge this advisory call. Within CCAs, all ground parties must contact Snakeye/RCO at internal entry control points (signed) to request entry approval, describe area of operations and expected exit time, maintain radio communication while on range, and advise when exiting the range as described below. Due to the inherent hazards of access to CCAs, failure to adhere to communication rules will result in notification of the individual's supervisor/unit commander and may lead to suspension of range access privileges.

9.4.4.1. Communication Methods. Snakeye, RCOs, and the ECC can be contacted by LMR and telephone (on-range cell phone coverage is spotty). Phones are available at the entrances/exits to numbered ranges. LMRs are available for check out at Gila Bend AFAF Base Operations and should be used by all ground parties accessing areas other than numbered ranges. All ground parties are encouraged to check out LMRs.

9.4.5. Entry/exit authorization. All scheduled users of CCAs must contact the controlling agency for specific entry and exit authorization.

9.4.5.1. Entry. During regular operating hours, contact Snakeye/RCO to request entry onto a CCA. Ground parties scheduled to access a CCA must be prepared to enter at the time shown on the daily range schedule; however, there is no implied automatic entry approval associated with scheduling an entry window. If approval is denied, the controlling agency will direct personnel to hold outside the area and await further instructions. If Snakeye/RCO does not respond or communication is garbled and unreadable, personnel will hold outside the requested area and continue to attempt contact. Under no

circumstances is entry to a CCA authorized without explicit, real-time approval. When requesting entry, personnel will specify their proposed destination(s) and projected departure time. This information facilitates search and rescue, if required, and destinations should identified as specifically as possible using range facility name or number (examples: OP Echo, Target 301, AUX-6), a commonly used geographic reference (such as East Pass), or a specific location in UTMs, Lat/Long, or MGRS.

9.4.5.2. Exit Coordination. For an active CCA, personnel will hold at the briefed destination until cleared to depart by Snakeye/RCO. If scheduled for an exit window on the daily range schedule, personnel must be prepared to exit at the beginning of the window after requesting approved from the controlling agency. Immediately after exiting any area, personnel must report clear of the appropriate area boundary to the controlling agency. If unable to establish immediate contact, personnel will continue to use every means available to report clear, to include using the nearest available land line. Because the controlling agency must assume personnel remain in the area until they report clear, failure to do so may require suspension/termination of training on the range.

9.4.6. Failure to Clear a Range. If personnel fail to notify the controlling agency of range exit, the controlling agency will make every attempt to contact the personnel in question. If unable to establish contact one hour after the projected departure time, the controlling agency will report this situation to 56 RMO/DO, Range Security, and Gila Bend COR. The 56 RMO/DO will determine if a ground search is warranted.

9.5. Hazard Area. The Hazard Area is a composite of all WDZ and SDZ footprints for all authorized ordnance delivery events against targets or DPIs approved for actual ordnance expenditures. Access during operations into the hazard area is limited to Mission Essential Personnel, unless specifically authorized by the range operating authority. There are stop signs and/or warning signs at hazard area entry points, and ground parties will not proceed beyond them without approval from Snakeye, or from the RCO on a numbered range, if present.

9.6. Tours and Visit Requests.

9.6.1. The 56 RMO Public Affairs Office (PA), supports occasional visits to numbered ranges on a non-interference basis; for information call 56 RMO/PA at 623-856-7216 (DSN 896) or the RMO main office 623-856-8520. Visitor access must comply with DAFMAN 13-212v1 paragraph 4.17.2**.**.

9.6.2. Safety. To provide for the safety of range visitors, the following process must be observed.

9.6.2.1. Tour participants must receive a safety briefing by 56 RMO or designated authority and sign both the Hold Harmless Agreement and the visitors log upon arrival. Potentially hazardous ordnance (UXO), ordnance debris, and explosive residue exist throughout BMGR East, and these hazards must be acknowledged by all visitors.

9.6.2.2. Vehicles must remain on approved roads at all times. Off-road foot travel is prohibited without prior approval from the 56 RMO and completion of the mandatory range safety briefings.

9.6.2.3. All visitors to the range must either be accompanied by an authorized escort or have received approval from 56 RMO/DO to enter the range without an escort.

9.6.2.4. All ground parties (escorted and unescorted) will enter and exit the BMGR East through an authorized entry point and check-in/out with Snakeye by radio or phone. For safety reasons, continued travel to/through the numbered ranges requires a check-in/check-out with the RCO or Snakeye, as appropriate, from designated on range locations indicated by signage.

9.6.2.5. Approved ground parties/ground party escorts will review the daily range schedule and restrictions before entering the BMGR East.

9.6.3. Scheduling. All tours and visits must be scheduled in advance. Tours will not be authorized during scheduled laser operations.

9.6.3.1. Tours of numbered ranges must be scheduled at least a week in advance. Range 2 will be used for tours unless it is closed. Range 1 will be used if Range 2 is not available.

9.6.3.1.1. Access. Only the RCO on duty may grant access for approved visitors to and from an active Class A range. RCOs and escorts will make sure the presence of visitors does not adversely impact the mission, and RCOs may interrupt or terminate visitor activities as needed, based on mission or safety concerns.

9.6.3.1.2. Stairways to tower cabs will not be used as observation platforms; they are for access only. The catwalk around the outside of the tower cab may be used for observation; however, the RCO and scoring cameras must have unobstructed line of sight to mission aircraft, traffic patterns, and target areas at all times. At no time will there be more than 10 persons, including operators, allowed in any range tower during active range operations.

9.6.3.2. Other CCAs. Tours and visits to tactical ranges will be supported only rarely and must be approved by the 56 RMO/DIR.

Chapter 10

SNAKEYE RESPONSIBILITIES

10.1. Snakeye Responsibilities.

10.1.1. Snakeye plays a critical role in the safety of operations on the BMGR East. Snakeye is not an ATC facility but will take a proactive role in granting access, monitoring airspace, and advising military flights in the interest of flight safety.

10.2. Staffing and Operations.

10.2.1. Due to the unique nature of the BMGR East Complex and associated SUA, all radar operators are required to have been previously rated in an ATC RAPCON or MRU/GCI facility. Proof of rating will be required before assuming duties in Snakeye and will be maintained in the individual's training records (see **Attachment 15**). All duties related to work the Northern and Southern Airspace positions, as well as the Ground South Assist positions, require this minimum experience rating. Meeting the minimum experience requirements and completion of training will determine a Snakeye—Certified Operator.

10.2.2. Operators will track and report violations of safety rules by aircraft and ground personnel via the BMGR East Incident Report (**Attachment 2**).

10.2.3. Snakeye will be operational anytime missions are scheduled for 56 FW managed airspace. Exceptions may be granted through coordination with 56 RMO/DIR. Snakeye will open one hour before the start of the first scheduled range/airspace mission and will close 15 minutes after all aircraft have cleared the airspace.

10.2.4. A normal operator shift is considered 8 hours and will not exceed 10 hours. The 8 hours beginning with the first scheduled mission will be considered "dayshift" operations; the period following this time frame will be the evening shift. A scheduled off-duty period between shifts will occur for each operator; the duration of the off-duty period will be at least 8 hours. When unforeseen events prevent staffing as scheduled (emergency leave, short- notice, unexpected loss of personnel, etc.), shift limitations may be waived by 56 RMO/ASM.

10.2.5. During periods of peak demand, the South Assist position will be scheduled; sharing the workload allows the South Operator to maintain radar awareness at all times. South Assist coverage will coincide with the South Operator's projected busiest 8-hour window each day.

10.3. Operational Responsibilities.

10.3.1. Snakeye will:

10.3.2. Review local area FAA and Range NOTAMs and provide advisories to pilots as required (e.g., fire restrictions, TFRs, CBP operations, etc.).

10.3.3. Coordinate and communicate with respective SOFs, RCOs, GXF tower, and CBP agents as required. In the event 56 FW flying status changes, (for example, from VFR to IFR DM) operators will contact open numbered ranges and pass updated field status information to ensure flights on range are notified. GXF tower will validate the status of the Radar Acquisition and Display System (RADS) with Snakeye at the beginning of each dayshift. Advise GXF tower when the RADS is inoperable, or the system has been degraded.

10.3.4. Upon initial check-in for MTRs, Snakeye will pass any known bird advisory (for example, "*Caution, bird activity reported 5 NM west of Point Bravo, 1,000' AGL*"). Bird advisories are valid for 15 minutes unless subsequent reports reveal activity still exists or is no longer a factor. Pilots will report any significant bird activity to Snakeye so that information can be passed to subsequent flights and the 56 FW SOF.

10.3.5. Provide flights the current traffic information, GXF runway-in-use and altimeter setting upon entering and exiting the airspace.

10.3.6. Provide immediate airspace situational awareness to incoming/departing flights. Example: for a flight approaching ARSON for STAC, the operator will provide potential traffic conflicts/point outs, airspace status, additional appropriate NOTAMs, then GXF runway, altimeter; grant access if range time and airspace is clear. **At no time will aircraft be held outside of SUA**.

10.3.7. Monitor the radar for emergencies, downed aircraft, aircraft spill-ins/outs, law enforcement aircraft, and general airspace intrusions/traffic. Proactively provide situational awareness (traffic information) to flights regarding stranger traffic that could affect mission (safety).

10.3.8. Upon recognition of an intruding aircraft, operators will immediately advise the effected flight(s) on the respective range/airspace frequency. In some cases, this may mean communicating with numbered range RCOs for their awareness. Maintain intruder awareness until affected flight acknowledges and deconflicts or until the traffic is no longer a factor. Pass traffic information IAW FAAO 7110.65, *Air Traffic Control*. Provide as much amplifying information as required. **Note:** The RADS is a non-certified air traffic radar; traffic will be given from fixes or known geographical points.

10.4. Scheduling Responsibilities.

10.4.1. Snakeye assumes control of the CSE flying schedule from ASMS at 1400L the day prior to execution. Snakeye is responsible for the current day schedule to include all 56 FW SUA and military training routes. If Snakeye receives a current-day request that affects a numbered range, Snakeye will notify the RCO on the affected range, the lead RCO, or RCO office immediately.

10.4.2. Add-ons and changes to the schedule under Snakeye control. Snakeye can accept add-ons when the requested times are after the first scheduled unit and before the last scheduled unit; for add-on request outside of these times, contact 56 RMO/DO for coordination and direction. If Snakeye receives an add-on request for a Class A mission on the following day, Snakeye will notify the lead RCO or RCO office POC as soon as possible.

10.4.3. Last mission of the day extensions. Snakeye will support requests for last mission of the day extensions within the constraints allowed by the contract. At no time will airspace be extended beyond what is scheduled with Albuquerque Center without prior coordination with 56 RMO/ASM. **Note:** Operations beyond what is scheduled with Albuquerque Center will require an FAA NOTAM with a minimum 2-hour lead time.

10.5. Data Gathering Responsibilities.

10.5.1. Using CSE, operators will:

10.5.1.1. Annotate flight entry and exit times for specific airspace and/or subrange.

10.5.1.2. Log munitions expenditures by airframe, unit, munitions type and number, and target group.

10.5.1.3. When required, update number in flight and/or make changes to the ranges that will be used.

10.5.2. Operators will maintain a daily events log which will be used to document any "non-standard" events that occur throughout the shift (weather capping; spill-out/spill-in; CBP operations impacting airspace).

10.5.3. Opening/closing checklist status. This includes passing/receiving status of personnel on range with GXF security and CBP/BP operations.

10.5.4. Range Closure Reporting. Annotate and log range closure as a result of unforeseen personnel on range (e.g., CBP or illegal aliens) or any other unusual circumstance.

10.5.5. Weather capping data.

10.5.6. Pilot-reported impact to mission (if non effective, provide reason).

10.6. Ground Access Management and Tracking.

10.6.1. The ground position controls ground party access to all ranges and cross checks schedule to determine land access availability with respect to weapons hazard area(s). A dedicated ground position will be manned based on the demands of the flying schedule. The ground position will coordinate with the Southern radar operator for ground movement within the ranges.

10.6.2. Snakeye will ensure that ground parties are tracked and logged when on range.

10.6.3. Snakeye will complete the EOD detonation checklist when requested by EOD personnel.

10.7. Range and Airspace Coordination and Supervision.

10.7.1. Snakeye is the single point of contact for airspace and range access and has the authority to grant or deny access as appropriate.

10.7.2. Snakeye will:

10.7.2.1. Advise flight leads when their scheduled period is over and if another flight is scheduled immediately afterward. Do not allow flights to exceed their period without concurrence of the inbound flight.

10.7.2.2. Advise flights when EOD detonation activity or EOD operations are in progress, as applicable.

10.7.2.3. Ensure a dedicated radar position for each geographically separated operating area (e.g., BMGR East complex and GLADDEN/BAGDAD MOAs/ATCAAs) is manned. The main point of reference for situational awareness is radar and will be backed up by the daily schedule. RADS and Air Marine Operations Surveillance System (AMOSS) will be used for traffic surveillance and identification.

10.7.2.4. Comply with range incident reporting procedures, airspace violation procedures, emergency response procedures, and utilization/report information requirements.

10.7.2.5. Ensure military aircraft squawk IAW paragraphs **4.2.3.1.1** and **4.2.3.1.2**.

10.7.2.6. Provide assistance when deemed necessary (for example, an aircraft waiting for NTAC range period). Communicate that AA is available for holding, request pilot to state his/her intentions in order to have situational awareness and be able to pass traffic information to other flights in the vicinity.

10.7.3. Snakeye is an integral part of the 56 FW Bird/Wildlife Aircraft Strike Hazard (BASH) program. Operators will reference 56 FW OPLAN 91-2 and **http://www.usahas.com/** for bird conditions and advise flights of conditions upon check-in.

10.7.3.1. Snakeye will coordinate with RCOs to ensure that current information is passed.

10.7.4. Plot Sonoran pronghorn sightings as reported by ground parties and confirm closed targets. Advise 56 RMO/ASMS for Range NOTAM updates; contact respective SOFs and squadrons as appropriate to ensure operators are aware of any target closures (prior to NOTAM being issued).

10.7.5. For emergency response activation, call GXF ECC and advise them of aircraft crash, ground incident, or injury to personnel. Operators will assist the on-scene commander as necessary during an aircraft crash or ground incident. Identify other assets in the vicinity that may be of assistance. Provide information to the SOF and/or respective command posts as necessary.

10.7.6. Communicate with CBP and USBP (Ajo and Wellton Stations) upon opening to determine status of agents and air assets as it pertains to the BMGR East complex.

10.7.7. Communicate with the AMOC with opening and closing of Snakeye. During CBP unmanned aerial vehicle (UAV) operations, confirm status of UAV IAW existing Letter of Procedure.

Chapter 11

GILA BEND AIR FORCE AUXILIARY FIELD

11.1. General Description.

11.1.1. Gila Bend AFAF (GXF) is located 4.7 NM southwest of the Gila Bend VORTAC (GBN) N 32 53.25 W112 43.20 (**Figure 11.1**.). Airfield elevation is 883' MSL with touchdown elevations of 883' MSL for Runway (RWY) 35 and 826' MSL for RWY 17. A rotating beacon operated according to JO 7110.65, *Air Traffic Control* identifies the airfield.

11.2. Airfield Capabilities and Equipment.

11.2.1. Arresting Systems. GXF is configured with E-5 and BAK-12 arresting systems. The approach end E-5 is disconnected and removed from the under-run. Approach and departure end BAK-12s (modified with 8-point tie-down system) are connected approximately 1,200' from the threshold at each end. Aircraft arresting system locations are depicted in **Figure 11.1**.

11.2.2. Airfield Lighting. GXF lighting includes Precision Approach Path Indicators (PAPIs), Medium Intensity Runway Lights (MIRLs), taxiway lights, and IR lighting to support night visibility training. All are controlled by tower operators. Obstruction lighting is controlled by photo cells. Standard, IR, or no-lights conditions are available based on scheduled mission requirements. See **paragraph 11.17** for specific NVG operations. Airfield lighting is operated in accordance with **Table 11.1**.

Table 11.1. GXF Lighting.

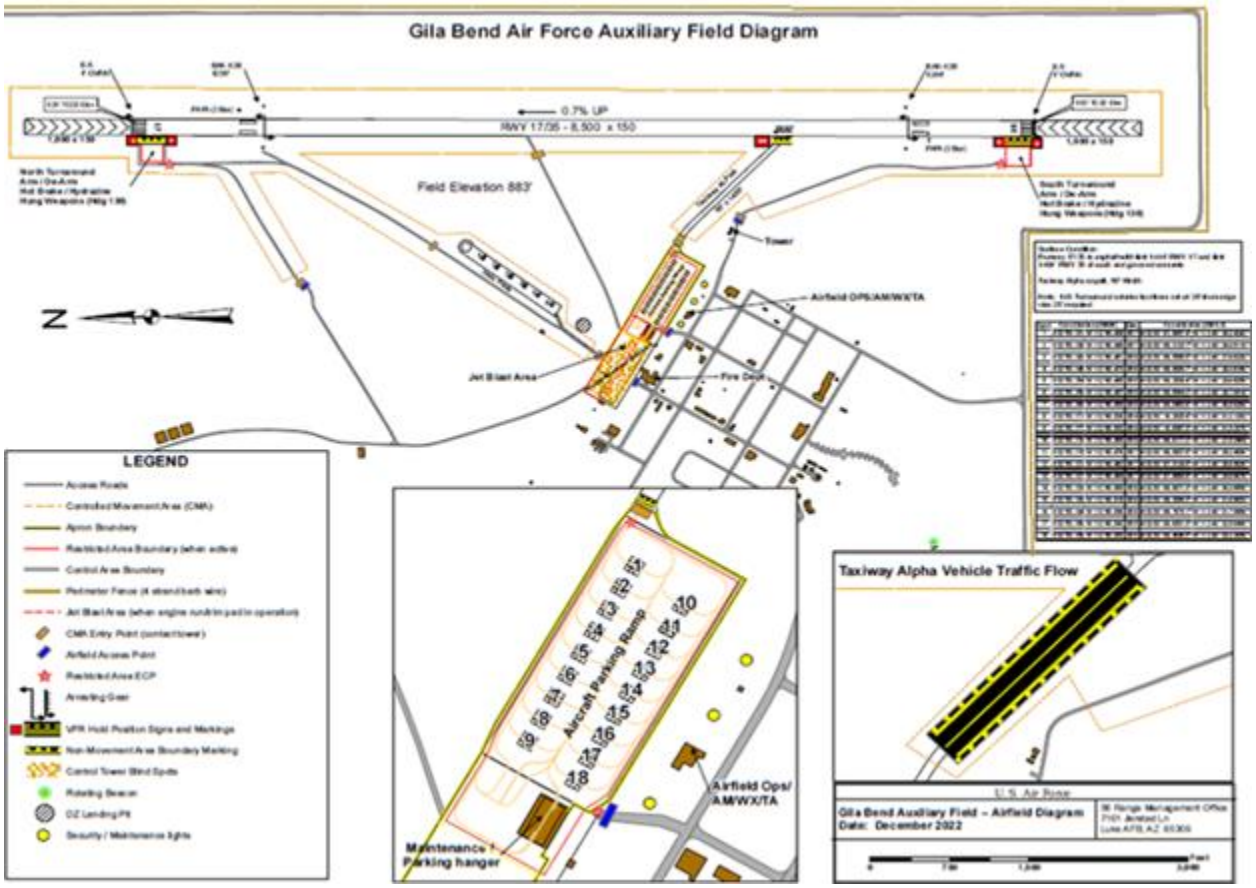
Precision Approach Path Indicators (PAPIs)	**Turn on:**	
Step 2	Sunrise to sunset	
Step 1	Sunset to sunrise	
Medium Intensity Runway Lights (MIRLs)	**Turn on:** when visibility is	
	DAY	NIGHT*
Step 3	Less than 2 miles	Less than 1 mile
Step 2	2 to 3 miles	1 to 3 miles
Step 1	When requested	More than 3 miles
Taxiway Lights	**Turn on:** sunrise to sunset	
IR Lighting	**Turn on:** when airfield is scheduled for NVG use	
*__Note:__ Based on the location of GXF, runway lights will always be on at Step 3 at night unless pilots request a different setting.		

11.2.2.1. To support NVG training, IR runway lights are installed on RWY 35. IR lights are visible only to those using night vision devices. IR lights are permanently secured to the ground using frangible couplings, located 10 feet from runway edge in parallel with existing runway lights spaced 1,000 feet apart. Airfield markings for NVG operations include AMP-3 and AMP-4, described in AFMAN 13-217.

11.2.2.2. Unlit obstructions. Pilots landing under normal conditions will not see IR light fixtures, and pilots aided by NVGs will not see standard lighting fixtures. Under normal NVG operations, the rotating beacon will be turned off.

11.2.2.3. GXF is a VFR-only facility. Operation of airfield lighting during periods of reduced visibility will be at pilot's request.

Figure 11.1. Gila Bend AFAF Layout.



11.3. Radar Acquisition and Display System (RADS).

11.3.1. Gila Bend tower is equipped to view a RADS feed from the FAA's ARSR-4 long range radar located on Childs Mountain. The RADS updates every 12 seconds and does not meet FAA/USAF criteria for use as a certified tower radar display. Gila Bend tower controllers may utilize the Childs Mountain RADS in an **uncertified tower display/workstation capacity** under the following conditions:

11.3.1.1. RADS shall be used only as an aid to assist controllers in visually locating aircraft or in determining their spatial relationship to known geographical points. **Radar services and traffic advisories are not authorized.** General information may be given in an easy-to-understand manner, such as "to your right" or "ahead of you" IAW JO 7110.65/FAAO 7210.3.

11.3.1.2. Tower controllers shall verify the status of the RADS daily with Snakeye. If the RADS cannot be verified as usable, the system shall not be displayed for controller use.

11.3.1.3. Snakeye will advise Gila Bend tower of any discrepancy that will limit the capabilities of the RADS feed from Childs Mountain radar. Tower controllers shall not utilize or display the RADS feed when advised of system limitations/malfunctions.

11.3.1.4. The status of RADS will be verified, briefed, and documented on the opening and relief checklists. Additionally, the RADS status will be documented on the Daily Events Log.

11.4. Gila Bend Class D Airspace.

11.4.1. GXF Class D airspace is defined as a 4.2 NM radius of GXF, excluding that airspace within R-2305 from the surface up to and including 3900' MSL. GXF Class D published hours of service are 1430-0630Z Mon-Fri, 1500-2359Z weekends, closed on holidays and all other times reverts to Class G airspace. Gila Bend Municipal airport is 4.7 NM northeast of GXF, just outside the Class D airspace.

11.5. Operating Hours.

11.5.1. The airfield and tower will be open 30 minutes before the first scheduled range/SELLS mission or 15 minutes before the first scheduled takeoff at Luke AFB, whichever occurs first.

11.5.2. Tower will remain open until 15 minutes after the last range/SELLS departure of aircraft operating from other than Luke AFB, or until all Luke AFB local flying is complete and Luke aircraft have landed, whichever is later. Tower will coordinate with the Luke SOF to determine when Luke AFB local flying is complete.

11.5.3. Extensions for "day of" services can be approved, but requires coordination with 56 RMO/COR.

11.6. Airfield Operations.

11.6.1. Traffic inbound to or overflying GXF will contact tower as soon as possible for landing instructions/advisories. Upon initial contact, tower will issue landing runway, wind, altimeter setting, BWC (see **paragraph 4.7** for BWC definitions), and status of Range 3 when required or requested. Aircraft will remain clear of Range 3 and ETAC range to the maximum extent possible.

11.6.2. Aircraft Priorities. GXF tower applies the priorities in FAA JO 7110.65, *Air Traffic Control* (e.g., aircraft in distress, medical evacuation, flight check, etc.). In addition, the following priorities are established for GXF:

11.6.2.1. Check rides.

11.6.2.2. Syllabus Transition Training (to include night NVG patterns)

11.6.2.3. Straight-in SFOs/PFOs

11.6.2.4. Overhead SFOs/PFOs

11.6.2.5. Random entry SFOs/PFOs

11.6.2.6. Tactical Arrivals

11.6.2.7. Parachute Operations

11.6.2.8. Other traffic.

11.6.3. Runway Utilization. RWY 35 is designated as the preferred runway and will be used when the tailwind component is 10 knots or less.

11.6.4. Barrier Status. Airfield Management (AM) in coordination with Gila Bend AFAF CE will ensure procedures are established for the proper maintenance and operation of the arresting systems.

11.6.4.1. Barrier maintenance will inspect all arresting systems prior to airfield opening and report status to AM Operations (AMOPS).

11.6.4.2. Recycle time for the E-5 arresting system is normally several hours. Most of the arresting gear must be replaced and heavy equipment is needed to return the chains to their normal position.

11.6.4.3. After release of an aircraft from the cable, the minimum rewind time for the BAK-12 is 3-1/2 minutes. A minimum of an additional 2-1/2 minutes is required to position the cable supports. A 20-minute period is required for atmospheric cooling of braking gear. Each BAK-12 at GXF can accommodate three aircraft engagements per hour.

11.7. Control of Ground Traffic and Vehicle Operations.

11.7.1. Taxi operations.

11.7.1.1. Pilots will monitor GXF ground control frequency during engine start and taxi. IAW stop alert procedures, pilots will advise tower prior to engine start. Pilots shall read back all hold short instructions.

11.7.1.2. RWY end turn around areas. There is one located at each end of the RWY and are designed for fighter aircraft. Caution must be used due to clearance limitations, based on aircraft size. When taxing into one of the turnaround locations, pull to the most forward position to allow subsequent aircraft to exit the RWY. Aircraft landing RWY 35 can expect back-taxi.

11.7.1.3. FOD remains a concern. Pilots and other vehicle operators must notify tower if FOD is encountered or suspected in the turnaround areas. AMOPS will monitor condition and sweep as necessary to keep this area free from FOD.

11.7.1.4. C-130 operations. C-130s will not use turnarounds, but will turn around on the concrete portion of the RWY. For operations on taxiway, operate outboard engines at idle power, using caution as taxiway is only 50’ wide rather than the standard 75’ft wide. When operating on the parking apron, a "follow-me" vehicle or transient alert (TA) marshalling is required.

11.7.1.5. Parking Plan. The parking ramp is primarily designed for F-16 and F-35; other aircraft can expect assistance (follow-me or TA) with parking.

11.7.2. AM will notify all section managers with airfield drivers of any scheduled construction activity and/or airfield closures (e.g., runways, taxiway, etc.) and when the construction activity is complete, and area is back open.

11.7.3. Tower responsibility for control of vehicular traffic will be limited to those in the controlled movement area (CMA) as shown on **Figure 11.1**, or IAW **paragraph 11.18**.

11.7.4. Vehicles granted access to the CMA will maintain two-way radio communication with the control tower at all times. Approval from the tower is required before vehicles proceed within 250’ of the runway.

11.7.5. In the event two-way radio contact is lost between the tower and vehicles on or near the runway, the tower will turn the runway and taxiway lights on and off rapidly for a period of not less than 30 seconds. This signals all vehicles that are on or near the runway to depart or immediately withdraw to a point at least 250’ from the runway. If time permits, tower will issue a flashing red light gun signal to the vehicles on the runway. Vehicle operators experiencing actual or suspected loss of radio contact with the tower must exit the runway or taxiway immediately.

11.7.6. AM in coordination with tower will temporarily suspend runway operations to allow AMOPS or civil engineering personnel to inspect the arresting systems or perform maintenance as needed.

11.7.7. A designated airfield representative will inspect the runway as soon as practical following any emergency. If an airfield representative is not available, then FES will conduct the inspection.

11.7.8. Engine Runs.

11.7.8.1. In accordance with stop alert procedures, crew chiefs will inform AMOPS of any impending engine run-up.

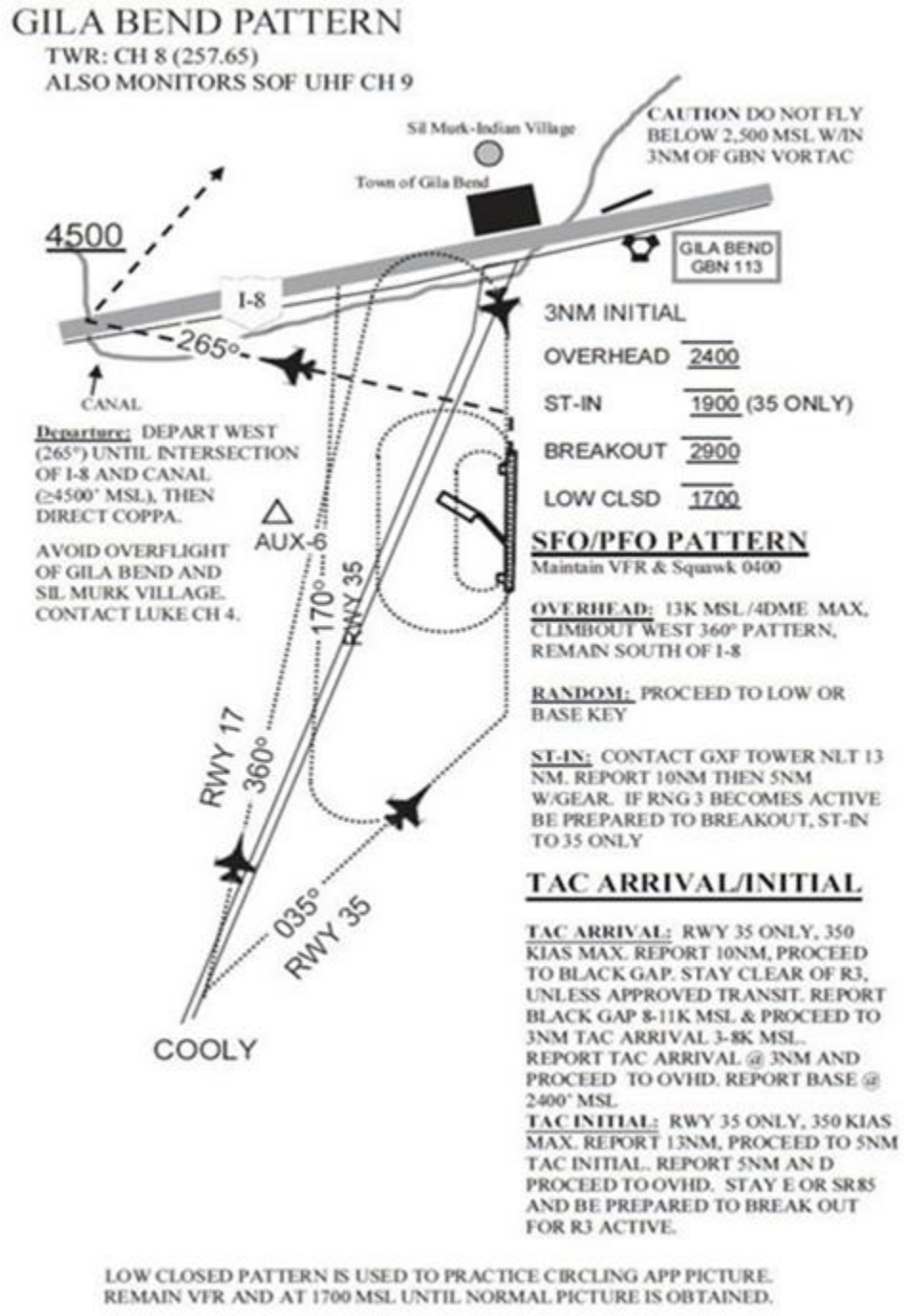
11.7.8.2. AMOPS will notify the tower, TA, and the fire department of the engine- run-up.

11.8. Air Traffic Control Procedures. Personnel performing engine run-ups will establish radio contact with the tower before the run-up begins and will continue to monitor ground frequency throughout the run-up. The run-up will be terminated if tower personnel so direct Traffic Patterns. (**Figure 11.2**.).

11.8.1. Except for emergency or divert situations, the maximum traffic density is four (4) aircraft with similar ground speeds (F-16 and F-16; F-35 and F-35, F-16 and F-35, A-10 and A-10; A-10 and C-130). Exception: only 2 x C-130s allowed at one time. The number of aircraft allowed in the pattern is limited due to control tower manning.

11.8.2. Aircraft operating in Class D airspace must remain clear of restricted airspace.

Figure 11.2. GXF Typical Overhead Pattern.



11.8.3. VFR traffic pattern is 2,400’ MSL and 300 KIAS with normal breaks to the west. (Normal initial is 3 NM). Tactical initial/arrival is allowed to RWY 35, 350 KIAS maximum.

11.8.4. Low closed traffic pattern (to simulate a circling approach) altitude is 1,700’ MSL.

11.8.5. Straight-in and conventional pattern altitude is 1,900’ MSL.

11.8.6. Breakout altitude is 2,900’ MSL.

11.8.7. Straight-in approaches to RWY 17 are authorized only for emergency/divert aircraft.

11.8.8. Night VFR/NVG pattern downwind is 3,900’ MSL. Night VFR/NVG patterns will not be used during Range 3 operations. NVG operations are described in detail in **paragraph 11.17**.

11.8.9. Helicopter pattern altitude is 1,400 MSL.

11.9. Overhead/Rectangular Pattern Entry Procedures.

11.9.1. Outside BMGR East. Pilots will contact Luke Radar Approach Control (RAPCON) for radar flight following en route to GXF. Avoid the ARLIN intersection (LUF 215/24; GBN 344/22; BXK 131/12) and vicinity between 12,000’ MSL and FL 180 en route to Woolsey Peak (LUF 216/34; GBN 307/17; or BXK 176/17). Avoid overflight of the town of Gila Bend and the Gila Bend Municipal Airport.

11.9.2. Inside BMGR East. Avoid subrange airspace or deconflict with operations in those areas. Normal BMGR East exit points are ARSON, COOLY, and BUGGS. Contact GXF tower NLT 10 NM from the field, stating number in flight and intentions.

11.9.3. Reentry Procedures. Turn westerly climbing to 2,400’ MSL and 300 kts to intercept normal flow of traffic abeam AUX-6 (GBN 227/8.5) or as directed and enter a 3-mile initial or request a straight-in (RWY 35). Tower will ensure Range 3 is cold.

11.10. Tactical Initial.

11.10.1. Tactical initial will be flown to RWY 35 only, 350 KIAS maximum. Pilots will give an accurate position report NLT 13 NM and proceed to 5 NM tactical initial. Be prepared to breakout if Range 3 becomes active. Remain east of SR 85. Report 5 NM tactical initial and proceed overhead.

11.11. Tactical Arrival.

11.11.1. Tactical arrival will be flown to RWY 35 only, 350 KIAS maximum. Pilots will give an accurate position report NLT 10 NM and proceed to Black Gap. Remain clear of Range 3 unless status confirmed, and transit approved by tower. Report Black Gap between 8,000’ MSL – 11,000’ MSL and proceed to 3 NM tactical arrival between 3,000’ MSL – 8,000’ MSL. Report 3 NM tactical arrival and proceed to overhead. Report base position at 2,400’ MSL.

11.12. Simulated Flameout (SFO)/Precautionary Flameout (PFO) Procedures.

11.12.1. SFOs/PFOs will be conducted in VMC between sunrise and sunset when GXF weather is at least 1,000’ above High Key altitude and 5 SM visibility. PFOs are similar to an F-16 overhead SFO pattern with a slightly wider downwind and longer (approximately 1.5NM) final.

11.12.2. Contact GXF tower with SFO/PFO request when below 8,000’ MSL and able to maintain VMC.

11.12.3. SFO/PFO/Range 3 traffic deconfliction. Use extreme caution to remain clear of Range 3 airspace while inbound to the SFO/PFO pattern.

11.12.4. Overhead (High Key) SFO/PFO.

11.12.5. SFOs/PFOs may be practiced to RWY 17 or 35 (left- or right-hand turns). Entry may be from any position with tower approval. Pilots in the SFO/PFO pattern will remain south of Interstate 8.

11.12.6. Pattern Description.

11.12.6.1. SFO High Key altitude is 12,000’ MSL. Normal overhead SFO windows are as follows: High Key 8,000’ - 12,000’ MSL, Low Key 4,000’ - 6,000’ MSL, Base Key 3,000’ MSL. See **Figure 11.2**. GXF traffic pattern for depiction.

11.12.6.2. PFO High Key is 9,000’ - 13,000’ MSL, and Low Key is 5,500’ - 7,500’ MSL. The pilot will keep the aircraft within 4 NM of the airfield while turning base and transition to a normal straight. Tower will confirm Range 3 status with Snakeye for PFO approaches to RWY 35. If Range 3 is hot, tower will advise aircraft Range 3 is active. Straight-in SFOs/PFOs will be flown to RWY 35 only. Upon initial contact with the control tower, the pilot will report his position and altitude and request the straight-in SFO/PFO. Initial contact must be made prior to entering Range 3 airspace and allow sufficient time for the tower controller to coordinate with Snakeye.

11.12.6.3. Tower will confirm Range 3 status with Snakeye prior to straight-in approval. If Range 3 is hot, the straight-in SFO/PFO will be denied. If Range 3 is cold, the pilot will be instructed to report 10 NM and 5 NM.

11.12.6.4. If aircraft check-in with Snakeye for Range 3 after SFO/PFO is approved, Snakeye will direct tower to discontinue any SFO/PFO greater than 10 NM on final. Tower will direct SFO/PFO traffic to discontinue straight-in SFO/PFO and report GXF at High Key. Use caution for other aircraft holding High Key.

11.12.6.5. Report 5 NM with the gear.

11.12.6.6. When the straight-in SFO/PFO reaches 5 NM, other aircraft in the pattern will be directed as follows. Aircraft at high key will be instructed to hold at High Key. Aircraft on initial will be directed to carry straight through. The break/pitch-out will be extended for sequencing behind the straight-in SFO/PFO aircraft.

11.12.7. Random-Entry SFOs/PFOs.

11.12.7.1. Random-entry SFO/PFO assumes the pilot is not in a position to either make high key or a true straight-in entry. It is imperative that pilots give an accurate position report and intentions (normally random entry SFOs/PFOs proceed direct to low or base key). Random entry SFOs/PFOs can be flown to either runway. Tower will provide position report requirements. Tower will confirm Range 3 status with Snakeye for PFO approaches to RWY 35. If Range 3 is hot, tower will advise aircraft Range 3 is active.

11.12.7.2. If outside restricted airspace, remain south of I-8 and avoid restricted airspace en route to GXF. If approaching from within restricted airspace, remain clear of Range 3 until status is confirmed and transit approved by tower.

11.12.7.3. Pilots executing a random-entry SFO/PFO are expected to funnel through the following areas: 10 NM west (north of R-2301E); 10 NM southwest (if entry is from Range 4/NTAC/STAC); 10 NM south (entry from Range 1/2); 10 NM southeast (entry from ETAC); 10 NM east (north of R2304). Use caution for VFR traffic north of the BMGR East Complex and other military traffic IVO BUGGS, COOLY, and NOLLS.

11.12.8. Straight-in/RandomSFO/PFO Controller Checkout**.** Initial controller checkout/training will be accomplished in the following manner:

11.12.8.1. Academics (taught by tower manager and 56 OGV instructor pilot.)

11.12.8.2. DASH 1 SFO/PFO pattern procedures, potential traffic conflicts, breakout procedures, cut off points, and hand-off procedure.

11.12.8.3. Controller SFO/PFO Certification.

11.12.8.3.1. To the extent possible, an experienced Instructor Pilot/FCP pilot will fly patterns for controller certification.

11.12.8.3.2. Traffic pattern will be sanitized to minimize conflicts during certifications.

11.12.8.3.3. Tower controllers will train using watch one, control one.

11.12.8.3.4. Completion of training will be documented in controllers' training records.

11.13. GXF Departures.

11.13.1. Departures from GXF will be VFR. (**Note**: pilots are required to file a VFR or IFR flight plan prior to takeoff.) File the flight plan with GXF AMOPS or respective base operations at least 30 minutes prior to departure. Obtain flight clearance once airborne from either Luke Approach or Albuquerque Center.

11.13.2. RWY 17 and 35 departures are to cross the departure end of runway at or below 1,900' MSL.

11.13.3. Intersection departures are not authorized for attack or fighter aircraft. For aircraft requesting RWY 35 intersection departures, there is 6,700' available.

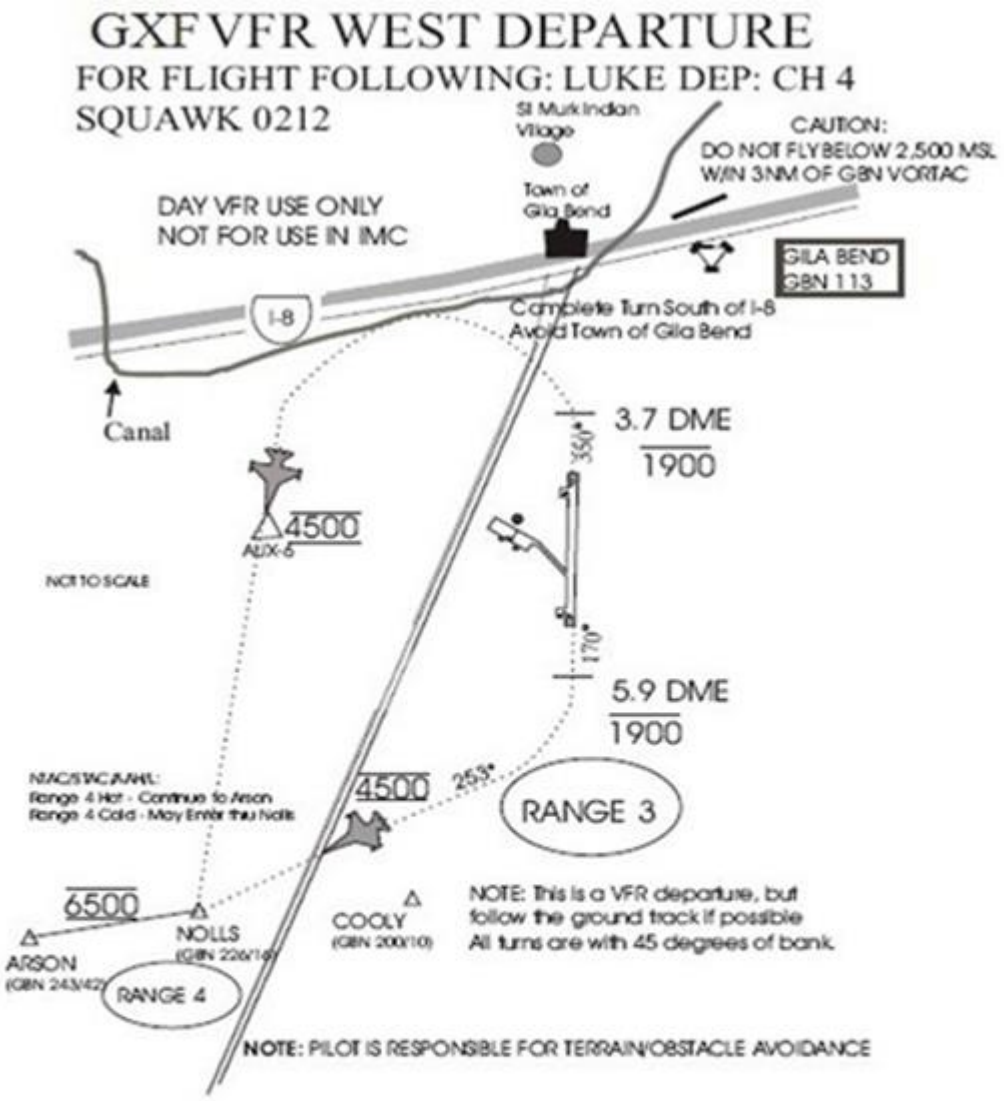
11.13.4. Fighter-type aircraft staging out of GXF (flying directly into BMGR East), will follow departure routing as depicted in Figures **11.3** and **11.4**.

11.14. Helicopter Operations.

11.14.1. GXF helipads (**Figure 11.1**.). The six helipads are designed to limited-use VFR criteria and are used to accommodate tactical helicopter operations. Cargo helicopter use of the helipads may be approved if coordinated in advance. Helipads are considered a CMA. Helicopter units forward-deploying to GXF will stage at the helipads to the maximum extent possible; during deployed unit operations, the first vehicle into the area will gain tower approval for continued operations throughout the flying window and call out when flying operations are complete for the day. This allowance applies only to units operating from the helipads on an extended basis with approval of the AM. During these operations, helicopter landing/departure will be at pilot discretion/risk due to uncontrolled movement in the area.

11.14.2. The helipads are not lighted for nighttime use; however, deployed units may use the helipads at night under their own tactical lighting scheme with written agreement between 56 RMO/DIR or DO and the user (see letter template at **Attachment 16**). Departure and landing will be at unit risk under tower advisement.

Figure 11.3. GXF VFR West Departure.

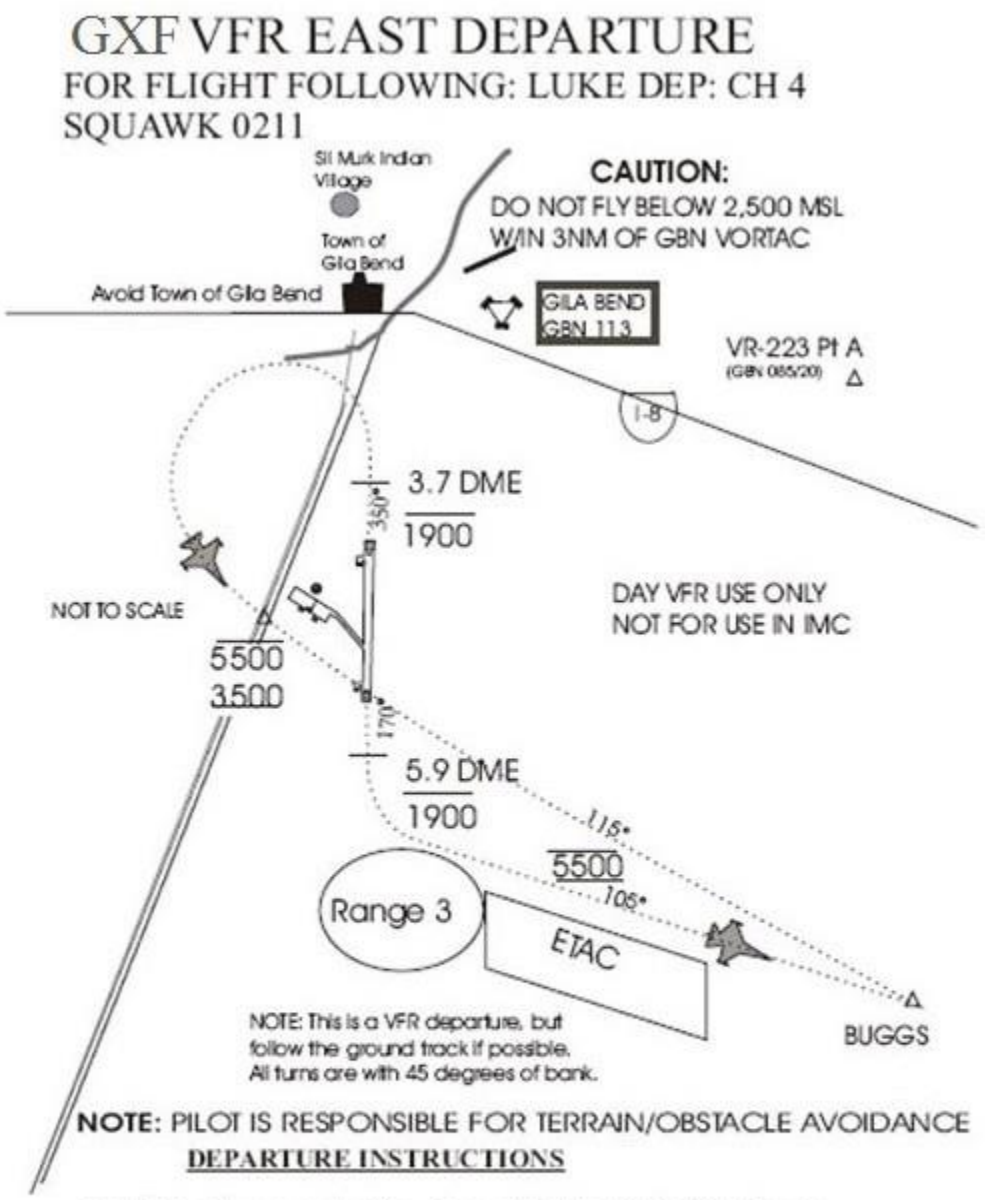


DEPARTURE INSTRUCTIONS

RWY 35: Fly runway heading. Cross 3.7 DME (GBN 206/3.7) at or below 1900'. Make a left turn out of traffic and climb and maintain 4500' or as directed by Luke Approach. Maintain VFR.

RWY 17: Fly runway heading. Cross 5.9 DME (GBN 191/5.9) at or below 1900'. Turn right out of traffic and climb and maintain 4500' or as directed by Luke Approach. Maintain VFR.

Figure 11.4. GXF VFR East Departure.



11.14.3. The helipad area is considered a FOD-free area, meaning access FOD checks are not required. AMOPS will conduct FOD checks daily and sweep as required. Ground crews must be cognizant of FOD.

11.14.4. Skid-type helicopters are authorized direct access to the ramp for landing and departing. Helicopters with landing gear will use the helipads or main runway and align with the runway in use centerline for landing and departing.

11.14.5. Armed helicopters must use helipads or approved portions of the main ramp.

11.14.6. Arrival and departure routes must avoid overflight of aircraft, the base, or any other populated area. Extreme caution must be used to minimize FOD potential on the runway, taxiway, and ramp area. The AM or designated representative will accomplish a FOD check following any helicopter runway landing.

11.15. Reduced Same Runway Separation (RSRS).

11.15.1. IAW AFMAN 13-204V3_AETCSUP, *Air Traffic Control*, RSRS is authorized for AETC-assigned aircraft. The OG/CC may enter into a Letter of Agreement with non-AETC units and organizations (including contractor operations) to utilize AETC RSRS, and RSRS will be applied IAW FAA JO 7110.65 and AFMAN 13-204V3.

11.15.2. Requirements for similar fighter-type aircraft operations are shown in **Table 11.2**.

Table 11.2. RSRS for Similar Fighter-Type Airframes.

Activity	Full Stop	Low Approach	Touch and Go
Full Stop Behind	3,000’	3,000’	3,000’
Low Approach Behind	3,000’	3,000’	6,000’
Touch and Go Behind	6,000’	3,000’	3,000’

11.15.3. Night or wet runway operations: 6,000’.

11.15.4. Formation landings provided all aircraft involved are the same type: 6,000’.

11.15.5. For all dissimilar airframe operations 6,000’ minimum is required in all cases.

11.15.6. RSRS will not be applied when the following conditions exist:

11.15.6.1. When aircraft are cleared for the option.

11.15.6.2. When the tower determines safety of aircraft will be jeopardized.

11.15.6.3. Any situation involving an emergency aircraft.

11.15.6.4. When braking action less than “medium” is reported.

11.15.7. It is a pilot’s responsibility to accept or reject RSRS. Pilots must inform tower as soon as possible that RSRS cannot be accepted, so that traffic sequencing can be adjusted as necessary. Aircraft will not overfly landing aircraft. Responsibility for separation rests with the pilot. Controllers must provide appropriate traffic advisories to landing aircraft.

11.15.8. Pilots are responsible for wake turbulence separation when maintaining visual separation.

11.16. Drop Zone (DZ) Operations.

11.16.1. Use of all BMGR East published DZs affects GXF Class D airspace. When DZ operations are scheduled, dates and times will be posted in appropriate NOTAMs. 56 RMO/ASM will coordinate use with Albuquerque Center and Luke RAPCON.

11.16.2. Pilots using the AUX-6, Don-Kay, or White Hills DZs will communicate with GXF tower as described in **paragraph 5.10** to ensure deconfliction with airfield operations.

11.16.3. PTWOB Circular DZ. On very rare occasions, DZ operations may be scheduled at PTWOB Circular DZ, which is located near the helipads on GXF (see **paragraph 5.10.4**); however, normal flight training operations and emergencies have priority over DZ operations for the use of GXF. Coordination with GXF tower is essential to minimize the potential disruption of pilot training and maximize safety. Drop aircraft will be in contact with GXF tower during all DZ operations. If any safety risk is observed by tower personnel or pilots, DZ operations will be terminated immediately. Simultaneous helicopter and DZ operations are not authorized.

11.16.3.1. During GXF SFO/PFO and VFR pattern operations, pilots must be aware of the potential for slow-moving aircraft in the pattern and deconflict through communication with GXF Tower. Tower will suspend DZ operations while GXF is being used for pilot training.

11.16.3.2. Aircraft arriving at GXF from other than southern ranges will approach from north of I-8, avoid overflight of the town of Gila Bend, and contact GXF tower as soon as possible with intentions.

11.16.3.3. Luke aircraft should minimize the use of COOLY for recovery from the numbered ranges due to the high conflict potential. At minimum, pilots must contact Snakeye prior to COOLY for an update on DZ operations at GXF.

11.16.3.4. Emergency or divert aircraft will contact GXF tower as soon as possible to inform them of their situation. Tower will suspend DZ operations, and if necessary, direct DZ aircraft to depart the pattern until emergency/divert aircraft have landed.

11.17. Night Vision Goggle (NVG) Operations.

11.17.1. Airfield lighting options for NVG operations are IR runway lights or no runway/taxiway lighting. Aircraft will keep overt lighting on at all times.

11.17.2. For pilots requesting a single approach, runway lights may be turned off based on other pattern traffic.

11.17.3. Scheduling Procedures**:**

11.17.3.1. Due to pattern/airspace/ground requirements, C-130 and extensive fighter NVG takeoff/landing and operations involving ground activities (e.g. rapid infil/exfil) will be scheduled through 56 RMO/ASMS in coordination with GXF AMOPS a minimum of one week in advance of proposed operations. Range 3 must be scheduled by the requesting unit to support the request.

11.17.3.2. Requests for NVG operations will include the following information at minimum: requested date, operations plan, start/end time, number and type of

aircraft/vehicles involved, aircraft call sign, specific lights-out requirements, and a POC with an operational phone number in the local area which can be reached during operations.

11.17.3.3. C-130 or multiple fighter operations desiring multiple approaches (no ground operations) must coordinate with scheduling agency a minimum of six hours in advance and be approved by GXF AM. Multiple approaches are not authorized if AUX-6 and/or Range 3 are active.

11.17.4. Notification/Coordination Requirements: Appropriate Range/FAA NOTAMS will be issued no later than 4 hours in advance of extended NVG operations.

11.17.5. Weather/Lunar Illumination Requirements: NVG takeoff and landing operations may be conducted only when reported ceiling and visibility is equal to or greater than 5,000' AGL and 5 SM (1,000' AGL and 3 SM for rotary wing). Pilots will adhere to appropriate MDS-specific guidance related to illumination conditions.

11.17.6. NVG Aircraft Taxi Routes/Night VFR/NVG Traffic Pattern**:**

11.17.6.1. NVG taxi routes are the same as daytime operations. Aircraft may be required to turn around at the end of the runway and taxi on the single taxiway to and from the ramp.

11.17.6.2. The night VFR pattern is depicted at **Figure 11.5**.

11.17.6.3. Night VFR/NVG Traffic Pattern Entry Procedures (with tower approval):

11.17.6.3.1. AUX-6 downwind entry (GBN 228/09).

11.17.6.3.2. Black Gap base leg entry (GBN 198/15).

11.17.6.3.3. 9 NM final (GBN 179/14).

11.17.6.4. Re-entry procedures will be from AUX-6 on a 45-degree inbound to downwind.

11.17.6.5. Mandatory pilot reports are: base leg, turn to final, and 4 NM final with gear and intentions.

11.17.7. Traffic Pattern/Flow Restrictions:

11.17.7.1. The tower will not mix nonparticipating aircraft with NVG aircraft on the ground or in the air.

11.17.7.2. Emergency traffic always takes priority. At the first notification of an emergency inbound, tower will notify aircraft in the pattern and turn on normal airfield lighting. Pilots may request normal lighting at any time.

11.17.8. Termination/Restart Procedures. Scheduled NVG operations will have priority over other, nonemergency, operations for the duration of the NVG operations. Any flight safety deviation or unauthorized encroachment onto the taxiways or runway will result in suspension of NVG operations, activation of airfield lighting, and notification of AM. Once the safety issue is resolved, NVG operations may resume with coordination between the tower, AM, and NVG aircraft.

Figure 11.5. GXF Night VFR Straight-in Pattern (NVG Pattern).

11.17.9. NVG Vehicle Operations: During periods of reduced airfield lighting, operation of vehicles not participating in NVG operations will be kept to a minimum. IAW DAFI 13-213, *Airfield Driving*, vehicles that operate during NVG operations must use hazard warning flashers or an infrared (IR) strobe on the vehicle's roof. Other vehicles with normal lighting (headlights) shall remain clear of the CMA (see **Figure 11.1**.).

11.17.9.1. Designated NVG Vehicle Routes. All vehicles will remain on main access roads, ramp areas, and/or the edges of the taxiway or runway unless conditions warrant otherwise. All vehicle access must be coordinated through tower.

11.17.10. Upon completion of NVG operations, the tower will resume normal airfield lighting.

11.18. GXF Infil/Exfil Operations.

11.18.1. Infil/exfil operations are unique and separate from normal GXF operations. This type of operation must be coordinated with and approved in advance by the 56 RMO. GXF infil/exfil operations must coordinate with GXF AM to obtain a PPR and with 56 RMO/ASMS for additional guidance. Infil/exfil operations must be deconflicted from range operations so the GXF runway remains available for emergency situations. The dynamic nature of GXF operations could change at a moment's notice, and infil/exfil operations may be cancelled, suspended, or delayed as required.

11.18.2. Runway infil/exfil operations

11.18.2.1. Prior to landing, infil/exfil aircraft will request on-runway infil/exfil operations.

11.18.2.2. All aircraft and vehicle operations will remain on the prepared runway surface.

11.18.2.3. Aircraft will contact tower as soon as all ground operations are complete.

11.18.3. Taxiway infil/exfil operations are NOT permitted.

11.18.4. Ramp infil/exfil operations.

11.18.4.1. Operators of participating ground vehicles must receive GXF airfield driving instruction and certification.

11.19. GXF Emergency Procedures.

11.19.1. Primary Crash Alarm System (PCAS) Operation.

11.19.1.1. Tower operates the PCAS for all in-flight and ground emergencies. Tower will test the PCAS prior to 0800 daily or within 30 minutes of opening at other times. AMOPS and FES have two-way telephone capability. AMOPS personnel will respond to all aircraft in-flight and ground emergencies. (**Note**: Anytime the PCAS is activated the Secondary Crash Net will be activated.)

11.19.1.2. Tower will activate the PCAS and relay pertinent information (including wind) for:

11.19.1.2.1. In-flight and ground emergencies.

11.19.1.2.2. Aircraft mishaps.

11.19.1.2.3. Unplanned cable or barrier engagements.

11.19.1.2.4. Suspected or confirmed hot brakes.

11.19.1.2.5. Confirmed or suspected hung ordnance.

11.19.1.2.6. Stop alerts (Reference LUKEAFB OPLAN 502, *Stop Alert*).

11.19.1.2.7. Carbon fiber mishaps, when directed by FES.

11.19.1.2.8. Hydrazine mishaps.

11.19.1.2.9. Fuel spills and other emergency information when directed by FES.

11.19.1.2.10. Unscheduled aircraft carrying injured personnel.

11.19.1.2.11. Tower evacuation and bomb threats.

11.19.1.3. Tower will relay emergency updates or changes to AMOPS via landline and to the fire chief via the FM net. Controllers will use the phrase "emergency update" when passing this information. (**Note:** The PCAS will be activated if there is doubt regarding the category of updated information.)

11.19.1.4. If the PCAS is out of service, the tower will pass emergency information to the ECC and AMOPS via direct landline.

11.19.2. Secondary Crash Net (SCN) Operations.

11.19.2.1. Airfield Management operates the SCN. Fire Department, Emergency Coordination Center (ECC), Security, Transient Alert, Vehicle Maintenance, Power Production and the COR office have two-way telephone capability. Additional agencies are Luke Command Post via hot line, Luke Airfield Management, Davis-Monthan Command Post and Tucson ANG Command Post have commercial telephone capability.

11.19.2.2. The SCN will be used to relay information critical to aircraft and airfield operations. Airfield Management will activate the SCN each time the PCAS is activated, and relay emergency information received from the Tower. If Airfield Management receives emergency information from other reliable sources, they will activate the SCN and advise Tower. Airfield Management will test the SCN daily immediately after ATC conducts the check of the Primary Crash Phone.

11.19.3. Contingencies.

11.19.3.1. Controlled Bailout Area. Located 4 NM east of GXF, defined on the Gila Bend VORTAC radial/heading 150, at 10,000 MSL. Eject after passing abeam the southern boundary of GXF (GBN 150/005).

11.19.3.2. Controlled Jettison. Reference procedures in **paragraph 4.8.6**.

11.19.4. In-Flight and Ground Emergency Procedures.

11.19.4.1. Initial notification of an airborne emergency recovering to GXF should be on UHF Guard with ETA to GXF. Switch to GXF tower frequency as soon as practical before landing. When an emergency aircraft calls tower, other aircraft will be instructed to depart the pattern. Emergency chase aircraft will normally fly on the east side of the runway to avoid overflight of base facilities. For 56 FW aircraft, initial notification can be made on the SOF frequency. Tower can transmit and receive on Luke SOF UHF frequency.

11.19.4.2. Aircraft with emergencies requiring a straight-in approach to GXF RWY 35 may fly within 2 NM west of Range 3. Emergency aircraft en route to GXF will transmit on Guard their flight path, altitude, and distance/time from GXF. Reference **paragraph 6.17.5.5** for Range 3 deconfliction.

11.19.4.3. For all ground emergencies, the pilot will contact tower.

11.19.5. Hot Brakes.

11.19.5.1. If a pilot suspects hot brakes after landing, they will taxi and park in the north or south turnaround areas and immediately advise the tower and identify which brake assembly(s) is/are suspected to be hot. A ground emergency will be declared**.**

11.19.5.2. If hot brakes are discovered in the parking area, pilots will notify the tower and taxi to the south turnaround area. A ground emergency will be declared.

11.19.6. Hydrazine Spill and Emergency Power Unit (EPU) Activation Actions (in-flight or ground emergency).

11.19.6.1. Pilots will notify the tower as soon as possible if the aircraft's EPU activates. If the EPU activates while taxiing, pilot will stop the aircraft and notify the tower.

11.19.6.2. The tower will:

11.19.6.2.1. Activate the PCAS.

11.19.6.2.2. Direct airborne emergency aircraft upon landing to stop straight ahead on the runway or taxi to the north or south turnaround area.

11.19.6.2.3. Advise taxiing emergency aircraft to hold their position on the taxiway. Aircraft in parking that have a hydrazine spill or EPU activation will not taxi.

11.19.6.2.4. Direct other aircraft and vehicles away from the area.

11.19.6.3. FES crews will establish an initial cordon 100’ upwind and 300’ downwind and adjust the cordon based on the situation.

11.19.7. GXF NORDO procedures. Pilots of NORDO aircraft recovering single ship to GXF should attempt to determine the active runway by observing traffic in the pattern and proceed according to DoD Flight Information Handbook.

11.19.8. Hung or Unexpended HE Ordnance (to include hung flares)**.** When notified of an inbound aircraft with hung ordnance or unexpended HE ordnance, the following procedures apply:

11.19.8.1. GXF Tower will activate PCAS.

11.19.8.2. Advise pilot with HE ordnance or an unsafe gun to park in the north turnaround area on a magnetic heading of 130° or in the south turnaround area on a magnetic heading of 130° to avoid populated areas. Aircraft will remain parked in the turnaround area until safe or de-armed.

11.19.8.3. GXF TA will contact Luke EOD and provide personnel to safe the suspension equipment on aircraft recovering with live (HE) munitions. The unit possessing the aircraft must provide munitions personnel to download and safe the munitions for temporary storage in the Gila Bend AFAF MSA. Munitions may be stored in the MSA for a period not to exceed 45 days. The unit must coordinate storage and removal with the Gila Bend AFAF COR office.

11.19.8.4. Although some munitions-handling equipment is maintained on site, any special tools or Aerospace Ground Equipment (AGE) requirements shall be the responsibility of the specific unit handling the munitions. HE munitions may be removed from GXF either by uploading on an aircraft or trucked out by qualified personnel.

11.19.9. Emergency Locator Transmitter Procedures. When an emergency locator lasts longer than three audio sweeps, tower personnel will notify GXF AMOPS. AMOPS will notify Luke Command Post and Luke SOF. The crash phone will not be activated.

11.19.10. Backup Power**.** The control tower will be placed on generator power any time thunderstorms are reported within 5 NM of GXF.

11.19.11. Tower Evacuation Procedures.

11.19.11.1. When high winds occur or are forecast, tower personnel will remove all loose items from the catwalk and place them in the tower cab.

11.19.11.2. Tower will evacuate to Base Operations (or other safe location) when wind velocity reaches 42 knots or for bomb threat, fire, power failure, or other emergency situation. GXF will then operate as an uncontrolled airfield, and aircraft should use GXF only in an emergency.

11.19.11.3. Broadcast the following message on all available frequencies, "*Attention all aircraft in the Gila Bend area, Gila Bend tower is being evacuated due to* (state reason)."

11.19.11.4. Tower will notify AMOPS via PCAS. AMOPS will notify Luke RAPCON, Snakeye, and Luke, Davis-Monthan, and Tucson SOFs.

11.19.11.5. Tower will direct all aircraft in the pattern to maintain VFR, and if able, to depart the pattern. All ground traffic will be instructed to return to parking. Instruct all vehicles to remain off the runways.

11.19.11.6. When the situation that forced evacuation is resolved or when the GXF weather observer estimates the wind velocity has subsided to less than 42 knots, the observer will notify the tower controllers. After returning to the tower, controllers will broadcast, on all available frequencies, "*attention all aircraft in the Gila Bend area, Gila Bend tower is back in service*."

11.19.12. RQ-4 Emergency Divert Procedures. Gila Bend AFAF and GXF are designated as an Emergency Divert Base for the Global Hawk RPA (RQ-4) operated by the National Aeronautics and Space Administration's Dryden Flight Research Center (DFRC). Procedures for emergency response at GXF are detailed in GXF Global Hawk Emergency Guide and Engineering Technical Letter (ETL) 09-1: *Airfield Planning and Design Criteria for Unmanned Aircraft Systems (UAS)***.**

11.20. Runway Change Procedures.

11.20.1. Tower is responsible for determining the active runway predicated upon existing and forecast wind conditions. When a change of runway is deemed necessary tower will:

11.20.2. Notify AMOPS of the runway change and request a barrier change.

11.20.3. Notify the Luke SOF, RAPCON, Snakeye, and AMOPS when the runway change is in progress and when it has been completed.

11.21. Air Evacuation Aircraft Procedures.

11.21.1. AMOPS will serve as a single point of contact for air evacuation aircraft. On unscheduled arrivals, tower will notify AMOPS when they receive notice of an air evacuation aircraft diverting to GXF. As a minimum, tower will obtain the following information for relay to airfield management operations:

11.21.2. ETA

11.21.3. Load message.

11.21.4. Fuel required.

11.22. Tower and AMOPS Coordination.

11.22.1. GXF AMOPS will:

11.22.1.1. Advise the tower of all construction or obstructions within the airfield movement area.

11.22.1.2. Coordinate with the tower all known requests for crop-dusting operations within 5 NM of GXF.

11.22.1.3. Advise tower of all VFR inbound and outbound proposals.

11.22.1.4. Advise tower of personnel or agencies requesting to operate within the CMA.

11.22.1.5. Ensure all aircraft maintenance crews contact tower to request access to the CMA for last-chance maintenance inspections of departing aircraft.

11.22.2. Tower will:

11.22.2.1. Issue bird hazard advisories IAW FAAO 7110.65.

11.22.2.2. Relay aircraft arrival and departure times to GXF AMOPS.

11.22.2.3. Report to AMOPS all observed and previously unreported construction or unusual activity on the movement area.

11.22.2.4. Relay to AMOPS all reports of FOD.

11.22.2.5. Relay GXF capacity for divert aircraft upon initial contact with the Luke, D-M, and Tucson SOF(s) and update as required. GXF can accommodate a limited number of aircraft based on ramp space available. Transient aircraft and type may decrease ramp space significantly. AMOPS will determine capacity when multiple type aircraft are utilizing the ramp.

11.23. Airfield Construction.

11.23.1. Construction project managers must coordinate with AM before beginning any work on/near the installation.

11.23.2. Contractors will check in with AMOPS daily before accessing the CMA and pick up a radio and receive instructions (flying ops, airfield hours, etc.). On the first day of the project the AM will provide POV passes, if applicable.

11.23.3. The contractor will initiate a radio check with tower each day prior to beginning any work.

11.23.4. At the end of the day or when project is complete, the contractor will check in with AMOPS and return the radio.

11.24. Civil Aircraft Use of GXF Facilities.

11.24.1. Civil aircraft are NOT AUTHORIZED to use GXF.

11.25. Hijack/Theft Response.

11.25.1. Outlined in 56 FW OPLAN 502, *Stop Alert*.

11.26. UAS Emergency Divert.

11.26.1. 56 RMO Director has approved GXF as an emergency divert field for UAS emergencies in accordance with LOAs approved by MAJCOM.

11.26.2. AM will disseminate appropriate NOTAMs to reflect status of airfield concerning UAS emergency divert actions.

11.26.3. Specific UAS towing operations will be in accordance with LOAs approved by MAJCOM.

JASON RUESCHHOFF
Brigadier General, USAF
Commander, 56th Fighter Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

NFPA1500: *Standard on Fire Department Occupational Safety, Health, and Wellness Program,* 2018 Edition

FAAO JO 7110.65, *Air Traffic Control,* 20 April 2023

AFI 32-2001, *Fire Emergency Services Program*, 28 July 2022

AFI 33-322, *Records Management and Information Governance Program,* 28 July 2021

AFMAN 11-214, *Air Operations Rules and Procedures,* 29 November 2022

AFMAN 13-204V3_AETCSUP, *Air Traffic Control,* 22 July 2020

AFMAN 13-212V1, *Range Planning and Operations,* 14 Mar 2023

AFMAN 13-212V1_AETCSUP, *Range Planning and Operations,* 14 October 2020

AFMAN 13-217, *Drop Zone and Landing Zone Operations,* 22 April 2021

DAFI 13-213, *Airfield Driving*, 4 Feb2020

DAFMAN 13-201, *Airspace Management,* 10 December 2020

RMO OI 13-01, *Sonoran Pronghorn Monitoring,* 29 September 2020

RMO OI 13-03, *Barry M. Goldwater Range Permitting Process*, 1 July 2012

Prescribed Forms

LUKEAFB Form 57, *Range Officer's Report*

LUKEAFB Form 11, *Acknowledgment of Danger; Release and Hold Harmless Agreement, Goldwater Air Force Range Visit*

Adopted Forms

AF Form 483, *Certificate of Competency*

AF Form 616, *Fund Cite Authorization* (FCA)

AF Form 847, *Recommendation for Change of Publication* DD Form 448, *Military Interdepartmental Purchase Request*

Luke AFB Form 338, *Installation Access Affidavit*

Abbreviations and Acronyms

AA—Air-to-Air

AALOW—Air-to-Air Low

AAHI—Air-to-Air High

ABQ—Albuquerque

ACC—Area of Critical Concern

ACMI—Air Combat Maneuvering Instrumentation

ACP—Air Commander ‘s Pointer

ACTS—Air Combat Training System

Add—On—Range Requests Made After 1600 Of the Day Prior

AETC—Air Education and Training Command

AFAF—Air Force Auxiliary Field

AGE—Aerospace Ground Equipment

AGL—Above Ground Level

AGM—Air-to-Ground Missile

AGTS—Advanced Gunnery Target System

AM—Airfield Management

AMOPS—Airfield Management Operations

AMP—Airfield Marking Patterns

AOR—Area of Responsibility

API—Armor Piercing Incendiary

AR—Air Refueling

ARO—Air Range Operations

ATC—Air Traffic Control

ATCAA—Air Traffic Control Assigned Airspace

AUX—Auxiliary

AWACS—Airborne Warning and Control System

BASH—Bird/Wildlife Aircraft Strike Hazard

BDU—Bomb, Dummy Unit

BLM—Bureau of Land Management

BMGR—Barry M. Goldwater Range

BMGR East—Barry M. Goldwater Range East

BWC—Bird Watch Condition

BXK—Buckeye TACAN

C3—Command, Control, and Communication

Call—outs—Purchase of Range Time Outside Normal Duty Periods

CBP—Customs and Border Protection

CCA—Critical Control Area

CFT—Continuation Flying Training

CMA—Controlled Movement Area

COMM—Commercial Phone

COR—Contracting Officer Representative

Conv—Conventional

CS—Call Sign

CPNWR—Cabeza Prieta National Wildlife Refuge

DART—Deployable Aerial Rigged Target

DOI—Department of the Interior

DVRS—Digital Voice Recorder System

DZ—Drop Zone

ECC—Emergency Communications Center (GBAFAF)

ECM—Electronic Countermeasures

ECP—Entry Control Point

ETAC—East Tactical Range

EOD—Explosive Ordnance Disposal

EPCRA—Emergency Planning and Community Right-to-Know Act

EPU—Emergency Power Unit

FAA—Federal Aviation Administration

FL—Flight Level

FLIP—Flight Information Publication

FOD—Foreign Object Damage

FS—Full Stop

ft—Feet

GBN—Gila Bend TACAN

GCI—Ground Control Intercept

GFAC—Ground Forward Air Controller

GMT—Greenwich Mean Time (ZULU Time)

GP—General Purpose

GPS—Global Positioning System

GTIMS—Graduate Training Integration Management System

GXF—Gila Bend Air Force Auxiliary airfield

HAS—High Angle Strafe (above 20 degrees of dive)

HARB—High Altitude Release Bomb

HE—High Explosive

HEI—High Explosive Incendiary

IAW—In Accordance With

IFF—Identification, Friend or Foe

IFR—Instrument Flight Rules

IMC—Instrument Meteorological Conditions

INS—Inertial Navigation System

IP—Initial Point

IR—Infrared

IVO—In Vicinity Of

IRADS—Infra-Red Acquisition and Detection System

JMGT—Joint Modular Ground Target

JTAC—Joint terminal attack controller

km—Kilometer

kts—Knots

LA—Low Approach

LANTIRN—Low-Altitude Navigation and Targeting Infrared for Night

LAS—Low Angle Strafe (less than 20 degrees of dive)

LASDT—Low Altitude Step-Down Training

LADT—Low Angle Dive Toss

LAT—Low Angle Toss

LATN—Low Altitude Tactical Navigation

LES—Laser Evaluator System

LFE—Large Force Employment

LGB—Laser-Guided Bomb

LUKEAFB—Luke Air Force Base

MST—Mountain Standard Time (ZULU - 7)

MTR—Military Training Route

NAD—North American Datum

NLT—Not Later Than

NM—Nautical Mile

NOHD—Nominal Ocular Hazard Distance

NORDO—No Radio

NOTAM—Notice to Airmen

NTAC—North Tactical Range

NVG—Night Vision Goggle

NVD—Night Vision Device

NWD—Nuclear Weapons Delivery

OI—Operating Instruction

OP—Observation Post

OPR—Office of Primary Responsibility

OPTASKLINK—Operations Task Link

ORE—Operational Readiness Evaluation

ORI—Operational Readiness Inspection

PAPI—Precision Approach Path Indicators

PCAS—Primary Crash Alarm System

PIREP—Pilot Report

POC—Point of Contact

POV—Privately owned vehicle

PPR—Prior Permission Required

QAE—Quality Assurance Evaluator

RADS—Radar Acquisition and Display System

RAP—Ready Aircrew Program

RAPCON—Radar Approach Control

RCO—Range Control Officer

RESCAP—Rescue Combat Air Patrol

RMCP—Range Munitions Consolidation Point

RMO—Range Management Office

ROA—Range Operating Authority

ROCC—Range Operations Coordination Center

ROO—Range Operations Officer

RSRS—Reduced Same Runway Separation

RSS—Remote Smokey SAM

RTB—Return to Base

RWY—Runway

SADL—Situational Awareness Data Link

SAM—Surface-to-Air Missile

SCA—Standard Control Area

SDZ—Surface Danger Zone

SFO—Simulated Flameout

SM—Statute Mile

SOF—Supervisor of FlyingSPINS—Special Instructions

SR—State Route

STAC—South Tactical Range

SUA—Special Use Airspace

TACAN—Tactical Air Navigation

TACP—Tactical Air Control Party

TDL—Tactical Data Link

TG—Touch-and-Go

TI—Tactical Intercept(s)

TLE—Target Location Error

TMLT—Turning Maneuver Level Turn

TP—Training Projectile

TTS—Two-Target Strafe

TUS—Tucson TACAN

UAV—Unmanned Aerial Vehicle

UHF—Ultrahigh Frequency

UMTE—Unmanned Threat Emitter

UTM—Universal Transverse Mercator

VFR—Visual Flight Rules

VHF—Very High Frequency

VMC—Visual Meteorological Conditions

VORTAC—Very High Frequency Omnidirectional Range Station and/or Tactical Air Navigation

WDZ—Weapon Danger Zone

WGS—World Geodetic System

WP—White Phosphorus ("Willie Pete")

WTI—Weapons and Tactics Instructor (USMC)

Terms

Air Traffic Control Assigned Airspace (ATCAA)—Defined airspace normally within the Class airspace (above 18,000' MSL) and established in accordance with JO 7610.14 by a LOA with the ATC facility having responsibility for the airspace.

Class A Range—A manned range as defined in AFMAN 13-212v1, *Range Planning and Operations,* where a range control officer is present with two-way radio voice communication capability.

Class B Range—A manned or unmanned range with scoring capability, but no range control officer.

Class C Range—An unmanned range with no scoring or control capability.

Essential Personnel—Those personnel on a range participating in a test, training or evaluation scenario involving the employment of ordnance (air/surface/sea) including Mission Essential Personnel and those personnel not required for ordnance employment including maneuver elements, opposition forces, instructors, evaluators, etc.

Explosive Ordnance Disposal (EOD)—The detection, identification, on-site evaluation, rendering safe, recovery, and final disposal or unexploded explosive ordnance. It may also include explosive ordnance that has become hazardous by damage or deterioration.

Guard—A radio frequency that is normally used for emergency transmissions and is continuously monitored. UHF band: 243.0 MHZ; VHF band: 121.5 MHZ.

Hazard Areas—The Hazard Area is a composite of all WDZs and surface danger zones (SDZs) for all authorized weapon delivery events against targets or DMPIs approved for actual ordnance expenditures. Public access to Hazard Areas is prohibited unless specifically authorized by the ROA.

Impact Areas—The Impact Area is that area on a range immediately surrounding the target(s) or designated mean point(s) of impact approved for actual ordnance delivery. Public access to Impact Areas is prohibited at all times. Access to Impact Areas when the range is inactive will be limited to Essential Personnel.

Instrument Flight Rules (IFR)—Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

Instrument Meteorological Conditions (IMC)—Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling; less than minimums specified for visual meteorological conditions.

Joint Terminal Attack Controller (JTAC)—An individual qualified IAW JP3-09.3 to provide terminal control for the delivery of weapons by aircraft.

Large Force Exercise (LFE)—Training where more than 10 aircraft are operating in the assigned airspace.

Low-Altitude Tactical Navigation (LATN) Area—Usually large geographic areas established for random VFR, low altitude navigation training.

Military Operations Area (MOA)—Airspace designated for nonhazardous military activity, established outside the Class A airspace (below FL 180) and within US territorial airspace.

Military Training Route (MTR)—A low-level, high-speed training route established IAW criteria in FAA JO 7610.14, Special Operations. MTRs are used by DoD to conduct low altitude navigation and tactical training, in instrument and visual weather conditions, below an altitude of 10,000' MSL and at airspeeds more than 250 KIAS. Routes are established as IFR routes (IR) or VFR routes (VR). The FAA has approval authority to implement IRs and the appropriate MAJCOM approves VR implementation. Environmental documentation is required for implementation IAW AFI 32-1015, *Integrated Installation Planning*. VRs are processed through the FAA via the AFREP. MTRs are published in FLIP AP/1B and charted on FAA Sectionals and DoD Low IFR charts. AFREPs assign all route numbers.

Mission Essential Personnel—Those personnel on a range directly required for the employment of ordnance (air/surface/sea) in a test, training or evaluation scenario. This may include JTACs, TACPs, range control officers, scorers, and any other personnel identified as required by the ROA.

Night Vision Device (NVD)—Any electro-optical device that is used to detect visible and infrared energy and provide a visible image. Night vision goggles, forward-looking infrared, thermal sights, and low-light level television are night vision devices.

Night Vision Goggles (NVG)—An electro-optical image intensifying device that detects visible and near-infrared energy, intensifies the energy, and provides a visible image for night viewing. Night vision goggles can be either hand-held or helmet mounted.

Notice to Airman (NOTAM)—A notice containing information concerning the establishment, condition, or change in any aeronautical facility, service, procedures, or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

Range Control Officer (RCO)—The person responsible for range operations and safety. Except in situations where the RCO delegates weapons release clearance to a qualified flight lead, individual pilot or Forward Air Controller, or another briefed person.

Special Instructions (SPINS)—Restrictions, procedures, and scenario elements applicable to specific scenarios, missions, or exercise.

Special Use Airspace (SUA)—Airspace of defined vertical and lateral dimensions wherein activities are confined. Certain limitations or restrictions may be imposed on non-participating aircraft. Except for Controlled Firing Areas, SUA is depicted on aeronautical charts.

Supervisor of Flying (SOF)—A rated officer authorized by the flying unit commander to monitor and supervise current flight operations. A Supervisor of Flying may perform duties from the control tower.

Surface Danger Zones (SDZ)—The ground and airspace designated for vertical and lateral containment of a user-determined percentage of projectiles, fragments, debris, and components

resulting from the firing, launching, or detonation of weapon systems to include explosives and demolitions.

Visual Flight Rules (VFR)—Rules that govern the procedures for conducting flight under visual conditions. The term—VFR‖ is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

Visual Meteorological Conditions (VMC)—Weather conditions in which visual flight rules apply; expressed in terms of visibility, ceiling height, and aircraft clearance from clouds along the path of flight. When these criteria do not exist, instrument meteorological conditions prevail and instrument flight rules must be complied with.

Weapons Danger Zone (WDZ)—The ground and airspace for lateral and vertical containment of a user-determined percentage of projectiles, fragments, debris, and components resulting from the firing, launching, and/or detonation of aviation delivered ordnance. This three-dimensional zone accounts for weapon accuracy, failures, ricochets, and broaches (resurfacing) of a specific weapon/munitions type delivered by a specific aircraft type. Where software selectable, this instruction requires 99.9999% containment for surface fires (expressed as 1:1,000,000 escapement for SDZs), 99.999% containment for aviation-delivered gun ammunition, and 99.99% containment for all other aviation-delivered ordnance.

Attachment 2

BMGR EAST INCIDENT REPORT FORM

A2.1. Incident Reports.

A2.1.1. Incident reports are completed by a Range Control Officer or Snakeye personnel to document range incidents (such as internal airspace violations, ground intrusions, unintentional release, ordnance delivered on closed targets, etc.).

Figure A2.1. Incident Report.

BMGR-E Complex Incident Report

Date Submitted:

Name or person submitting/filling out the report:

Date/Time of Incident:

Location:

Weapons Related:

Who was involved in the incident?

Unit(s):

Squadrons:

Flight/Ground Party Call signs:

Nature of incident (narrative):

Attachment 3

SAMPLE BMGR EAST CASUAL USER AND ROTARY-WING REQUEST WORKSHEET

A3.1. Request Worksheet.

A3.1.1. The request worksheet shown below will be used by casual users to request range time and airspace.

Figure A3.1. Casual User Request Worksheet.

BMGR-E Casual User Range/Airspace Request Sheet

Unit:

POC:

Voice:

Email:

Use blank cells below for your airspace/range request

Date(s) Requested	*Local time (Z-7)*	*Airspace/Ranges requested*	*#/type aircraft*	*HE ordnance?*
4 Feb 20 example	1100-1140	Choices: Air-to-air (high/low), Ntac, Stac, Etac, Range 1, Range 2, Range 4, Sells AB &/or Sells CDE (high/low)	4 x F18	"Y" for yes "N" for no

A Few More Questions

[ ] We will be using a LASER targeting system. (We need to know due to the ground parties [EOD, JTACs, RCOs, etc.] on various ranges each day.)

[ ] I have reviewed and will abide with the current edition of LAFBI 13-212 https://cs3.eis.af.mil/sites/AE-OP-00-66/default.aspx

[ ] I will get a local area orientation brief before operating on the BMGR-E. [from host unit if marsa or from RMO Airspace Management dsn 856-5855]

[ ] I will review Range Notams (located at https://cscaf.eglin.af.mil/csc/home.aspx [Luke site]) prior to operating on the BMGR-E .

[ ] I am aware that I must check-in with Snakeye: UHF: 264.125/VHF 122.775 prior to entering the BMGR-E.

[ ] I will confirm my airspace with you the day prior IAW LAFBI 13-212 Table 2.2 (prior to 1000L MST (1700Z)). Unconfirmed airspace is made available to units on a first-come first-served basis. If you are on a night-flying schedule, then please call us 1.5 days prior, in the afternoon. Call us at DSN 896-8466.

A target, authorized ordnance and authorized attack parameter database is online at https://cs2.eis.af.mil/sites/13246/default.aspx. If you wish to accomplish delivery profiles that are not listed online, please contact 56 RMO Airspace and Range Operations (ARO) at DSN 896-8813.

Save this document and email it as an attachment to UTG_56RMO_BMGRScheduling@us.af.mil . You should receive an acknowledgement within 1 business-day.

Revised Jan 2020

Figure A3.2. Rotary Wing Request Sheet, Page 1.

BMGR-E Rotary-wing Range/Airspace Request Sheet

Unit:
POC:
Voice: Comm: Cell:
Email:

Details about your Range request

Date(s) Requested	*Local time (Z-7)*	*Ranges requested*	*#/type aircraft*	*HE ordnance?*
4 Feb 20 example	1100-1200	Choices: Ntac, Stac, Etac, Range 1, Range 2, Range 4, Helicopter Rescue Range (R3)	4 x HH60	"Y" for yes "N" for no

WEAPONS DANGER ZONE DATA

A target, authorized ordnance and authorized attack parameter database is online at https://cs2.eis.af.mil/sites/13246/default.aspx. If you wish to accomplish delivery profiles that are not listed online, please contact 56 RMO Airspace and Range Operations (ARO) at DSN 896-8813.

Helicopter Platform requirements

1. Where will you be operating from? (ie. From Gila Bend AFAF, Aux-6 LZ, Davis-Monthan AFB, Silverbell Army Heliport) ___ _____
   a. If operating from Gila Bend AFAF or Aux-6 LZ, please advise on what cell phone number will be used for contacting you at your deployed site _____
2. Do you have any fuel requirements for Gila Bend AFAF? ___
3. If so, how many pounds or gallons? _____ \ _____
4. Do you require any services from Gila Bend AFAF prior to or after your range times? (ie. Armament loading, dearming, post mission refuel) _____
5. How much time do you estimate it would take to accomplish your items in #4 above?
   _____
   _____

A Few More Questions

[ ] We will be using the _____ LASER targeting system. (We are required by AFI to log all laser use and types of lasers used on BMGR East.

Revised Jan 2020

Figure A3.3. Rotary Wing Request Sheet, Page 2.

BMGR-E Rotary-wing Range/Airspace Request Sheet

[ ] I have reviewed and will abide with the current edition of LAFBI 13-212
https://cs3.eis.af.mil/sites/AE-OP-00-66/default.aspx

[ ] I will get a local area orientation brief before operating on the BMGR-E. [from host unit if marsa or from RMO Airspace Management dsn 856-5855]

[ ] I will review Range Notams (located at https://cseaf.eglin.af.mil/cse/home.aspx [Luke site]) prior to operating on the BMGR-E .

[ ] I am aware that I must confirm my airspace with you the day prior (prior to 1000L MST). Unconfirmed airspace is made available to units on a first-come first-served basis. If you are on a night-flying schedule, then please call us 1.5 days prior, in the afternoon. Call us at DSN 896-8466.

Save this document and email it as an attachment to udg_56rmo_bmgrscheduling@us.af.mil . You should receive an acknowledgement within 1 business-day.

Attachment 4

SUPPORT FOR TEST AND EVALUATION ON BMGR EAST

Figure A4.1. Support for Test and Evaluation Activities.

Support for Test and Evaluation Activities on BMGR East

February 2021

The Barry M. Goldwater Range (BMGR) East is scheduled and operated by the 56th Fighter Wing Range Management Office (56 RMO). Its size, capacity, and number of users supported make it unique among Air Force Primary Training Ranges (PTRs). As defined in AFMAN 13-212v1, *Range Planning and Operations,* PTRs are established to accommodate training. They are not designed, structured, or instrumented to accommodate test and evaluation activities. The training mission on BMGR East has priority over test and evaluation.

The 56 RMO supports test activities when possible on a noninterference basis. In the past, test users have requested extended periods on several consecutive days on a tactical range or a combination of subranges—especially Range 3 and the East Tactical Range (ETAC). RMO has been able to support some of these requests; however, given the increasing demand on the range schedule from assigned training squadrons, such requests are not often supportable. The typical range period is 40-50 minutes. Users who require longer periods to accomplish their objectives should consider scheduling their mission(s) on weekends. If these missions cannot be accommodated on UTA weekends, when the range is open 0800-1700, the cost of opening the range to support weekend missions must be borne by the requesting unit.

Finally, throughout its history, the BMGR east has been an air-to-air and air-to-ground combat training range, and the activities covered in Environmental Assessments and Environmental Impact Statements prepared in compliance with NEPA reflect this relatively narrow focus. Requests to employ ordnance not previously approved, construct targets, perform different activities, or install or use new equipment on range may require additional analysis under NEPA. If so, all associated costs must be borne by the requestor.

Figure A4.2. BMGR East Request Sheet, Page 1.

BMGR East Test Activity Request Sheet
August 2020

Due to the unique nature of test missions and the increasing number of requests received annually, the 56th Range Management Office (56 RMO) requires all planners of test activities to complete this form. RMO strongly recommends that planners submit the completed form at least 45 days before the proposed test date. The POC identified below will be responsible for providing any additional information needed and for ensuring that any ground party participants who do not have a DoD CAC submit a completed LAFB Form 338 at least ten days before their first range access requirement. **If the Test POC will not be on range during test events,** he/she must identify an individual to serve as on-site POC during the test.

Unit:

Test POC/manager name:

Test POC/manager phone:

Test POC/manager email:

Proposed test date:

Ranges/airspace requested:

Support requested (fuel, building space, etc.):

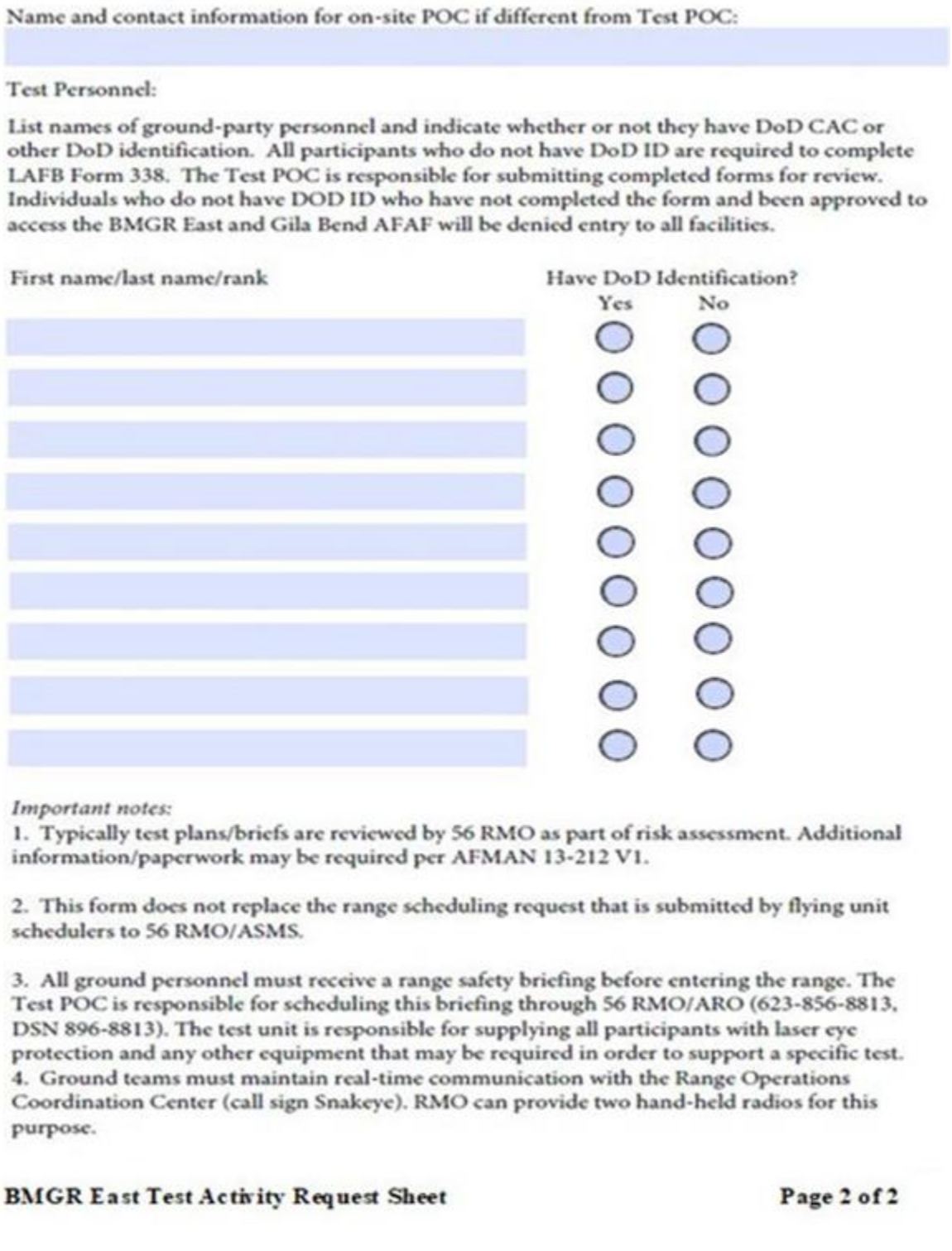
Aircraft (numbers and types):

Ordnance:

Laser:

Brief description of proposed test activities, purpose and need, including use of facilties at Gila Bend Air Force Auxiliary Field and BMGR East (attach maps or additional pages if needed):

Figure A4.3. BMGR East Test Request Worksheet, Page 2.



Name and contact information for on-site POC if different from Test POC:

Test Personnel:

List names of ground-party personnel and indicate whether or not they have DoD CAC or other DoD identification. All participants who do not have DoD ID are required to complete LAFB Form 338. The Test POC is responsible for submitting completed forms for review. Individuals who do not have DOD ID who have not completed the form and been approved to access the BMGR East and Gila Bend AFAF will be denied entry to all facilities.

First name/last name/rank	Have DoD Identification? Yes	No
	○	○
	○	○
	○	○
	○	○
	○	○
	○	○
	○	○
	○	○
	○	○

Important notes:

1. Typically test plans/briefs are reviewed by 56 RMO as part of risk assessment. Additional information/paperwork may be required per AFMAN 13-212 V1.

2. This form does not replace the range scheduling request that is submitted by flying unit schedulers to 56 RMO/ASMS.

3. All ground personnel must receive a range safety briefing before entering the range. The Test POC is responsible for scheduling this briefing through 56 RMO/ARO (623-856-8813, DSN 896-8813). The test unit is responsible for supplying all participants with laser eye protection and any other equipment that may be required in order to support a specific test.

4. Ground teams must maintain real-time communication with the Range Operations Coordination Center (call sign Snakeye). RMO can provide two hand-held radios for this purpose.

BMGR East Test Activity Request Sheet **Page 2 of 2**

Attachment 5

LASER SYSTEMS CERTIFIED FOR USE ON BMGR EAST

A5.1. Laser Systems Certified for Use on BMGR East.

A5.1.1. This attachment lists aircraft- and vehicle-mounted, and man-transportable laser systems approved for use on BMGR East generally, and on specific subranges. It also identifies types of man-transportable lasers that may be used to designate individual targets from each observation point. For information about other systems that may be approved, contact 56 RMO/ARO.

Table A5.1. Fixed-wing Aircraft Mounted Laser Systems Approved for Use on BMGR East.

AN/AAQ-24 LAIRCRM/DIRCM	AN/AAT-3A (AC-130H) PAVE SPECTRE
AC-130U ALLTV	AN/ASQ-153 PAVE SPIKE
HI BEAM LASER SYSTEM	AN/AVQ-19/19A CLDR
AN/AAS-52 MTS-A FIREFLY	AN/DAS-1A MQ-9 REAPER MTS-B
AC-130U LIA	ATFLIR F/A-18
AC-130U LTD/RF	AN/AVQ-19/19A CLDR AC-130H
AN/AAQ-14 LANTIRN	AN/AAQ-40 EOTS (F-35)
AN/AAQ-32 IFTS (UAE F-16)	IRADS
AN/AAQ-33 ATP SNIPER XR	PAVE SPECTRE
AN/AASQ-36 STAR SAAFIRE II MC-130H	WESCAM MX-10/MX-20
AN/AAQ-39 CLDR 5 USAF AC-130U	WESCAM MX-20
AN/AAS-37 OV-10	POP-300D (RQ-7B) SHADOW RPA
AN/AAS-38 38A FA-18 A-F	LITENING BLK2 SWEDISH
AN/AAS-52 MQ-1 PREDATOR MTS	RQ-11A (RAVEN UAV)
HBLOSS (AC-130H)	

Table A5.2. Rotary-Wing Aircraft Mounted Laser Systems Approved for Use on BMGR East.

AIM-1/MLR	LAAT (AH-1S/F)
AN/AAQ-16D AESOP	MMS C (OH58)
AN/AAQ-22 NTIS (UH-1N)	NTS (AH-1W)
AN/AAS-44 LAMPS (UH-1N)	NITE EAGLE (UH-1N)
EAGLE OWL	TADS (AH-64)
FLIR2000 (UH-1)	TELRD (APACHE)

IDWS MINI POP	

Table A5.3. Vehicle-mounted laser systems approved for use on BMGR East.

AN/MAD-1 HPMF	Talon XR AN-VAS-8
CROWS II-Kongsberg LRF	MWSS
ELRF-1MC Laser	AN/KAX-1A MARFLIR Pointer

Table A5.4. Man-transportable Laser Systems Approved for Use on BMGR East.

CT25KAM	AN/PEQ-1BSOFLAM/GLTD II
ACP-2/2A/2B	AN/PEQ-1C MINI SOFLAM P31
AIM-1D/DLR/EXL/MLR	AN/PEQ-15 ATPIAL LA-5
AN/GAQ-T1 LD82LB LDSS	AN/PEQ-2A TPIAL
AN/GVS-5	ATILLA-200
AN/PAQ-1 (LWLD)	AVIAN DISSUADER
AN/PAQ-3 (MULE)	COMPACT LASER DESIGNATOR CLD
AN/PEQ-1 SOFLAM	CSSLAM/HLM
AN/PEQ-2 ITPAL	CARBINE VISABLE LASER CVL
AN/PVS-6 MELIOS	DISSUADER
AT/TVQ-2 G/VLLD	FATS II
AN/PAS-26 RECON III THERMO BINOS	GBD II/III/IIIC
AN/PAS-24 RECON LR IMAGER	MANTIS
GCP-1/1A/1B/1C/1D/1H	MARK VII
GCP-2A/2B	MILES/MILES 2000
GLARE MOUNT 532P-M	NITE EYE
GLBI (GREEN LASER BATON ILLUM.)	SABER-203
HALT	TD-100/100A
HAVIS (M16)	TGO/IR (MODEL 2300A)
IZLID I / IZLID II / 1P/ 200P/ IZLID 1000	VECTOR IV/VIPER
JAVELIN (FIELD TTAC TRAINER)	VITAL-2/VITAL-100
LA-7/PEQ SCAR EGLM	PLDR 1/PLDR II AN/PEQ-17
LAKEODD EOD AIMING LASER	TYPE 163 LTD
LASER GRIPS LG-202IR	LF28A
LASER LIGHT TARGET DESIG LTD	ATPIAL AN/PEQ-15
LP-1000	M HP ATPIAL LA-5/PEQ
LPL-30	JTAC LTD (USMC)
LRR-104 MARK V	OWL
LRTV	M-931

A5.2. Laser, Aircraft Mounted or Handheld.

A5.2.1. Each laser, aircraft mounted or handheld, has an associated laser system buffer zone.

A5.2.2. The following figures identify laser target areas (LTA) certified for laser use from respective lasing points, including main and flank towers on numbered ranges and observation points on tactical ranges.

Table A5.5. LTAs Certified for Use, Range 1.

	From Main Tower			From Flank Tower		
Target	**5 mrad**	**10 mrad**	**15 mrad**	**5 mrad**	**10 mrad**	**15 mrad**
Nuclear	LD	LD	LD	LD	LD	LD
Right Conventional	YES	YES	YES	YES	LD	LD
Applied Tactics	YES	YES	YES	YES	LD	LD
TAC Strafe	YES	LD	LD	NO	NO	NO

Note:
YES - Certified for laser use with the specified buffer zone.
LD - Not certified unless RLSO can verify control of the area of hazardous laser energy out to the NOHD of the laser system used.

Table A5.6. LTAs Certified for Use, Range 2.

	From Main Tower			From Flank Tower		
Target	**5 mrad**	**10 mrad**	**15 mrad**	**5 mrad**	**10 mrad**	**15 mrad**
Nuclear	LD	LD	LD	YES	YES	LD
Right Conventional	LD	LD	LD	LD	LD	LD
Applied Tactics	LD	LD	LD	LD	LD	LD
TAC Strafe	YES	LD	LD	NO	NO	NO

Notes:
YES - Certified for laser use with the specified buffer zone.
LD - Not certified unless RLSO can verify control of the area of hazardous laser energy out to the NOHD of the laser system use.

Table A5.7. LTAs Certified for Use, Range 3.

	From Main Tower			From Flank Tower		
Target	**5 mrad**	**10 mrad**	**15 mrad**	**5 mrad**	**10 mrad**	**15 mrad**
Nuclear	LD	LD	LD	LD	LD	LD
Right Conventional	YES	LD	LD	LD	LD	LD
Applied Tactics	NO	NO	NO	NO	NO	NO
TAC Strafe	YES	YES	LD	LD	LD	LD

Notes:
YES - Certified for laser use with the specified buffer zone.
LD - Not certified unless RLSO can verify control of the area of hazardous laser energy out to the NOHD of the laser system used.

Table A5.8. LTAs Certified for Use, Range 4.

Target	From Main Tower			From Flank Tower		
	5 mrad	10 mrad	15 mrad	5 mrad	10 mrad	15 mrad
Nuclear	LD	LD	LD	LD	LD	LD
Right Conventional	LD	LD	LD	LD	LD	LD
Applied Tactics	YES	LD	LD	LD	LD	LD
TAC Strafe	YES	YES	LD	NO	NO	NO

Notes:
YES - Certified for laser use with the specified buffer zone.
LD - Not certified unless RLSO can verify control of the area of hazardous laser energy out to the NOHD of the laser system used.

Table A5.9.

Target	OP Alpha			OP Bravo			OP Phantom		
	5 mrad	10 mrad	15 mrad	5 mrad	10 mrad	15 mrad	5 mrad	10 mrad	15 mrad
101	NO	NO	NO	NO	NO	NO	LD	LD	LD
102	NO	NO	NO	NO	NO	NO	YES	YES	YES
103	YES	YES	YES	NO	NO	NO	YES	YES	YES
104	YES	YES	YES	NO	NO	NO	YES	YES	YES
105	NO	NO	NO	NO	NO	NO	YES	YES	YES
106	YES	YES	YES	NO	NO	NO	YES	YES	YES
107	YES	LD	LD	NO	NO	NO	YES	LD	LD
108	YES	YES	LD	NO	NO	NO	YES	LD	LD
109	YES	YES	YES	NO	NO	NO	NO	NO	NO
110	LD	LD	LD	LD	LD	LD	LD	LD	LD
111	YES	YES	LD	NO	NO	NO	LD	LD	LD
112	LD	LD	LD	LD	LD	LD	NO	NO	NO
113	LD	LD	LD	NO	NO	NO	LD	LD	LD
114	LD	NO	NO	NO	NO	NO	NO	NO	NO
115	NO	NO	NO	LD	LD	LD	NO	NO	NO
116	NO	NO	NO	NO	NO	NO	NO	NO	NO
117	NO	NO	NO	NO	NO	NO	NO	NO	NO
118	NO	NO	NO	YES	YES	YES	NO	NO	NO
119	NO	NO	NO	YES	YES	YES	NO	NO	NO
120	NO	NO	NO	YES	YES	YES	NO	NO	NO
121	NO	NO	NO	YES	YES	YES	NO	NO	NO
122	NO	NO	NO	YES	YES	YES	NO	NO	NO
123	LD	LD	LD	NO	NO	NO	LD	LD	LD

Note:
YES - Certified for laser use with the specified buffer zone.
LD - Not certified unless RLSO can verify control of the area of hazardous laser energy out to the NOHD of the laser system used.
NO - Not certified because there is no Line of Sight between OP and target.

Table A5.10. Authorized Man-transportable Laser Use from Observation Points on STAC.

Targets	OP Echo			OP Red Point		
	5 mrad	10 mrad	15 mrad	5 mrad	10 mrad	15 mrad
201	YES	YES	LD	LD	LD	LD
202	YES	LD	LD	LD	LD	LD
203	LD	LD	LD	LD	LD	LD
204	LD	LD	LD	LD	LD	LD
205	YES	LD	LD	LD	LD	LD
206	YES	LD	LD	YES	YES	LD
207	YES	LD	LD	YES	YES	YES
208	LD	LD	LD	LD	LD	LD
209	LD	LD	LD	YES	LD	LD
210	YES	YES	YES	LD	LD	LD
211	YES	YES	YES	NO	NO	NO
212	YES	YES	YES	NO	NO	NO
213	YES	YES	LD	NO	NO	NO
214	YES	LD	LD	LD	LD	LD
215	YES	LD	LD	LD	LD	LD
216	YES	YES	LD	LD	LD	LD
217	YES	YES	LD	LD	LD	LD
218	YES	LD	LD	LD	LD	LD
219	YES	LD	LD	LD	LD	LD
220	LD	LD	LD	LD	LD	LD
221	YES	YES	YES	NO	NO	NO

Note:
YES - Certified for laser use with the specified buffer zone.
LD - Not certified unless RLSO can verify control of the area of hazardous laser energy out to the NOHD of the laser system used.
NO - Not certified because there is no Line of Sight between OP and target.

Table A5.11. Authorized man-transportable Laser Use from Observation Points on ETAC.

Targets	OP Charlie			OP NATO Hill		
	5 mrad	10 mrad	15 mrad	5 mrad	10 mrad	15 mrad
301	YES	LD	LD	YES	YES	LD
302	YES	LD	LD	LD	LD	LD
303	YES	LD	LD	YES	LD	LD
304	YES	LD	LD	YES	YES	YES
305	YES	LD	LD	YES	YES	LD
306	YES	YES	YES	YES	YES	YES

Targets	**OP Charlie**			**OP NATO Hill**		
	5 mrad	**10 mrad**	**15 mrad**	**5 mrad**	**10 mrad**	**15 mrad**
307	YES	YES	YES	YES	YES	YES
308	YES	YES	LD	YES	YES	YES
309	YES	YES	YES	YES	YES	YES
310	YES	LD	LD	YES	YES	YES
311	YES	LD	LD	YES	YES	YES
312	LD	LD	LD	YES	YES	YES
313	YES	YES	LD	YES	YES	LD
314	YES	YES	LD	YES	YES	LD
315	YES	LD	LD	YES	LD	LD
316	YES	YES	LD	YES	LD	LD
317	YES	YES	YES	LD	LD	LD
318	YES	YES	YES	LD	LD	LD
319	YES	YES	LD	LD	LD	LD
320	LD	LD	LD	YES	YES	YES
321	NO	NO	NO	YES	YES	YES
322	LD	LD	LD	YES	YES	LD
323	LD	LD	LD	YES	LD	LD
324	LD	LD	LD	YES	YES	LD
325	LD	LD	LD	NO	NO	NO
326	NO	NO	NO	NO	NO	NO
327	NO	NO	NO	NO	NO	NO
328	NO	NO	NO	NO	NO	NO
329	NO	NO	NO	YES	LD	LD
330	NO	NO	NO	YES	LD	LD
331	NO	NO	NO	NO	NO	NO
332	NO	NO	NO	NO	NO	NO
333	NO	NO	NO	NO	NO	NO
334	NO	NO	NO	NO	NO	NO
335	NO	NO	NO	NO	NO	NO

Note:

YES - Certified for laser use with the specified buffer zone.

LD - Not certified unless RLSO can verify control of the area of hazardous laser energy out to the NOHD of the laser system used.

NO - Not certified because there is no Line of Sight between OP and target.

Attachment 6

TACTICAL TARGET - WEAPONS ALLOWANCE TABLES

A6.1. Tactical Target – Weapons Allowance Tables.

A6.1.1. All aircrew must comply with attack restrictions published on the Range Operations SharePoint site at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**. The tables below present summary information on allowable weapons types by target and are current as of the date of this publication; however, users must refer to SharePoint for additional, specific requirements and updated target/attack restrictions.

Note: Use of cluster sub munition-dispensing ordnance and HEI bullets is prohibited throughout the BMGR East.

Table A6.1. NTAC Target – Weapons Allowances.

Target(s)	Authorized Ordnance							
	Bombs			Rockets			HE AGM	Inert Bullet
	Training	Inert Full Scale	HE	Inert	WP	HE		
101	N	N	N	N	N	N	N	N
102	Y	Y	N	N	Y	N	N	Y
103	N	N	N	N	N	N	Y	N
104	Y	Y	N	Y	Y	N	N	Y
105	Y	Y	N	Y	Y	N	N	Y
106 1-14	Y	Y	N	Y	Y	N	N	Y
106 15-22	Y	N	N	Y	Y	N	N	y
107	Y	Y	N	Y	Y	N	N	Y
108	Y	Y	N	Y	Y	N	N	Y
109	Y	Y	N	Y	Y	N	N	Y
110	N	N	Y	N	Y	Y	N	N
111	Y	Y	N	Y	Y	N	N	Y
112	Y	Y	N	Y	Y	N	N	Y
113	N	N	N	N	N	N	N	N
114	Y	Y	N	Y	Y	N	N	Y
115	N	N	N	N	N	N	N	N
116	Y	Y	N	Y	Y	N	N	Y
117	Y	Y	N	Y	Y	N	N	Y
118	Y	Y	N	Y	Y	N	N	Y
119	Y	Y	N	Y	Y	N	N	Y
120	Y	Y	N	Y	Y	N	N	Y
121	Y	Y	N	Y	Y	N	N	Y
122	Y	Y	N	Y	Y	N	N	Y
123	N	N	N	N	N	N	Y	N

Table A6.2. STAC Target – Weapons Allowances.

Target(s)	Authorized Ordnance							
	Bombs			Rockets			HE AGM	Inert Bullet
	Training	Inert Full Scale	HE	Inert	WP	HE		
201	Y	Y	N	Y	Y	N	N	Y
202	Y	Y	N	Y	Y	N	N	Y
203	Y	Y	N	Y	Y	N	N	Y
204	N	N	N	N	N	N	N	N
205 01-12, 15	Y	Y	N	Y	Y	N	N	Y
205 13-14	Y	N	N	Y	Y	N	N	N
206	Y	Y	N	Y	Y	N	N	Y
207	N	N	Y	N	Y	Y	N	N
208	Y	Y	N	Y	Y	N	N	Y
209	Y	Y	N	Y	Y	N	N	Y
210	Y	Y	N	Y	Y	N	N	Y
211	Y	Y	N	Y	Y	N	N	Y
212	Y	Y	N	Y	Y	N	N	Y
213	Y	Y	N	Y	Y	N	N	Y
214	Y	Y	N	Y	Y	N	N	Y
215	Y	Y	N	Y	Y	N	N	Y
216	N	N	N	N	N	N	N	N
217	Y	Y	N	Y	Y	N	N	Y
218	Y	Y	N	Y	Y	N	N	Y
219	Y	Y	N	Y	Y	N	N	Y
220	Y	Y	N	Y	Y	N	N	Y
221	Y	Y	N	Y	Y	N	N	Y
222	N	N	N	N	N	N	N	N

Table A6.3. ETAC Target – Weapons Allowances.

Target(s)	Authorized Ordnance							
	Bombs			Rockets			HE AGM	Inert Bullet
	Training	Inert Full Scale	HE	Inert	WP	HE		
301 1-14	N	N	N	N	N	N	N	N
301 14-26	N	N	N	N	N	N	N	Y*

302	N	N	N	N	N	N	N	N
303	Y	Y	N	Y	Y	N	N	Y
304	Y	Y	N	Y	Y	N	N	Y
305	Y	Y	N	Y	Y	N	N	Y
306	Y	Y	N	Y	Y	N	N	Y
307	Y	Y	N	Y	Y	N	N	Y
308	Y	Y	N	Y	Y	N	N	Y
309	Y	Y	N	Y	Y	N	N	Y
310	N	N	N	N	N	N	Y	N
311	Y	Y	N	Y	Y	N	N	Y
312	Y	Y	N	Y	Y	N	N	Y
313	Y	Y	N	Y	Y	N	N	Y
314	Y	Y	N	Y	Y	N	N	Y
315	Y	Y	N	Y	Y	N	N	Y
316	Y	Y	N	Y	Y	N	N	Y
317	Y	Y	N	Y	Y	N	N	Y
318	Y	Y	N	Y	Y	N	N	Y
319	Y	Y	N	Y	Y	N	N	Y
320	N	N	Y	N	Y	Y	N	N
321	Y	Y	N	Y	Y	N	N	Y
322	Y	Y	N	Y	Y	N	N	Y
323	Y	Y	N	Y	Y	N	N	Y
324	Y	Y	N	Y	Y	N	N	Y
325	Y	Y	N	Y	Y	N	N	Y
326	Y	Y	N	Y	Y	N	N	Y
327	Y	Y	N	Y	Y	N	N	Y
328	Y	Y	N	Y	Y	N	N	Y
329	N	N	N	N	N	N	N	N
330	Y	Y	N	Y	Y	N	N	Y
331	Y	Y	N	Y	Y	N	N	Y
332	N	N	N	N	N	N	N	N
333	N	N	N	N	N	N	N	N
334	Y	Y	N	Y	Y	N	N	Y
335	N	N	N	N	N	N	N	Y

Note: *Up to 30mm.

Table A6.4. Numbered Range Target – Weapons Allowances.

Target	Authorized Ordnance							
	Bombs			Rockets			HE AGM	Inert Bullet
	Training	Inert Full Scale	HE	Inert	WP	HE		
Right Conventional	Y	Y*	N	Y	N	N	N	Y
Nuclear Delivery Target	Y	Y*	N	Y	Y	N	N	Y
Tactical Target	Y	Y*	N	Y	N	N	N	Y
Strafe Panels	N	N	N	N	N	N	N	Y
Tactical Strafe Target	N	N	N	N	N	N	N	Y

Note: *Special permission required.

Attachment 7

BMGR EAST COORDINATE DATA

A7.1. BMGR East Coordinate Data.

A7.1.1. The tables below provide coordinates for BMGR East Complex airspace and facilities.

Table A7.1. SELLS MOA/ATCAA and Subdivisions.

Area	Lat/Long (DDM)
SELLS ATCAA	N 32 50.417 W 112 49.030
	N 32 50.867 W 112 43.050
	N 32 15.167 W 111 36.033
	N 31 57.750 W 111 36.033
	N 31 49.000 W 111 32.050
	N 31 43.500 W 111 35.533
	N 31 31.000 W 111 38.533
	N 31 58.000 W 113 05.550
	N 32 11.500 W 113 05.550
	N 32 11.500 W 112 56.800
SELLS MOA	N 32 38.500 W 112 18.05
	N 32 28.500 W 112 00.00
	N 32 15.167 W 111 36.033
	N 31 57.750 W 111 36.033
	N 31 49.000 W 111 32.050
	N 31 43.500 W 111 35.533
	N 31 31.000 W 111 38.533
	N 31 58.000 W 113 05.550
	N 32 11.500 W 113 05.550
	N 32 11.500 W 112 56.800
	N 32 29.000 W 112 53.55
	N 32 29.000 W 112 43.05
	N 32 26.670 W 112 43.55
	N 32 26.670 W 112 18.05
SELLS A	N 32 38.500 W 112 18.050
	N 32 28.500 W 112 00.000
	N 32 05.280 W 112 05.500
	N 32 12.280 W 112 38.370
	N 32 16.515 W 112 55.807
	N 32 29.000 W 112 53.550
	N 32 29.000 W 112 43.050
	N 32 26.670 W 112 43.550
	N 32 26.670 W 112 18.050
SELLS B	N 32 28.500 W 112 00.000

Area	Lat/Long (DDM)
	N 32 15.167 W 111 36.033
	N 31 57.750 W 111 36.033
	N 32 05.280 W 112 05.500
SELLS C	N 32 12.280 W 112 38.370
	N 32 05.280 W 112 05.500
	N 31 41.300 W 112 11.500
	N 31.47.000 W 112 30.000
SELLS D	N 32 05.280 W 112 05.500
	N 31 57.750 W 111 36.033
	N 31 49.000 W 111 32.050
	N 31 43.500 W 111 35.533
	N 31 31.000 W 111 38.533
	N 31 41.300 W 112 11.500
SELLS E	N 32 16.515 W 112 55.807
	N 32 12.280 W 112 38.370
	N 31.47.000 W 112 30.000
	N 31 58.000 W 113 05.550
	N 32 11.500 W 113 05.550
	N 32 11.500 W 112 56.800
East Corridor	N 31 53.556 W 111 34.061
	N 31 49.000 W 111 32.050
	N 31 43.500 W 111 35.533
	N 31 31.000 W 111 38.533
	N 31 32.058 W 111 41.872
	N 31 52.998 W 111 37.179

Table A7.2. BMGR East Subrange Airspace Boundary Coordinates.

Subrange	Lat/Long (DDM)	MGRS
AA LOW	N 32 44.250 W 113 41.130	
	N 32 45.830 W 113 34.550	
	N 32 46.613 W 113 27.004	
	N 32 27.503 W 113 21.344	
	N 32 18.002 W 113 15.046	
	N 32 11.500 W 113 05.550	
	N 31 58.000 W 113 05.550	
	N 32 06.000 W 113 30.550	
AA HI	Same as R-2301E	

Subrange	Lat/Long (DDM)	MGRS
NTAC	N 32 47.991 W 113 13.438	12STB9175731289
	N 32 43.154 W 113 11.463	12STB9465422284
	N 32 41.238 W 113 00.975	12SUB1097218418
	N 32 31.885 W 113 05.332	12SUB0382401265
	N 32 36.358 W 113 19.903	12STB8119210005
	N 32 37.538 W 113 24.342	12STB7429712341
	N 32 46.607 W 113 27.061	12STB7043229200
STAC	N 32 31.885 W 113 05.332	12SUB0382401265
	N 32 30.386 W 113 06.038	12SUA0266498516
	N 32 21.375 W 113 02.964	12SUA0715781770
	N 32 18.331 W 112 58.550	12SUA1397876016
	N 32 16.168 W 112 59.285	12SUA1275072039
	N 32 14.378 W 112 56.262	12SUA1743768645
	N 32 11.500 W 112 56.800	12SUA1649563341
	N 32 11.500 W 113 05.550	12SUA0274563600
	N 32 18.002 W 113 15.046	12STA8807475917
	N 32 27.503 W 113 21.344	12STA7857593689
	N 32 37.538 W 113 24.342	12STB7429712341
	N 32 36.358 W 113 19.903	12STB8119210005
ETAC	N 32 47.490 W 112 36.065	12SUB5007529307
	N 32 38.500 W 112 18.050	12SUB7798812310
	N 32 26.670 W 112 18.050	12SUA7772190451
	N 32 26.670 W 112 43.550	12SUA3776691017
	N 32 29.000 W 112 43.050	12SUA3413495506
	N 32 29.000 W 112 45.928	12SUA3411295387
	N 32 36.605 W 112 44.371	12SUB3678009397
NSTC	N 32 50.870 W 112 42.930	
	N 32 49.000 W 112 39.050	
	N 32 48.874 W 112 44.995	
	N 32 44.945 W 112 53.322	
	N 32 43.827 W 112 55.774	

Subrange	Lat/Long (DDM)	MGRS
	N 32 35.393 W 112 59.788	
	N 32 30.311 W 113 02.205	
	N 32 25.471 W 113 00.256	
	N 32 25.514 W 112 54.199	
	N 32 14.378 W 112 56.262	
	N 32 16.168 W 112 59.285	
	N 32 18.331 W 112 58.550	
	N 32 21.375 W 113 02.964	
	N 32 30.386 W 113 06.038	
	N 32 31.885 W 113 05.332	
	N 32 41.238 W 113 00.975	
	N 32 49.482 W 112 58.573	
Range 1	N 32 31.817 W 112 45.392	12SUB3510000575
	N 32 29.000 W 112 45.928	12SUA3413495506
	N 32 29.000 W 112 53.550	12SUA2217395589
	N 32 25.514 W 112 54.199	12SUA2105789165
	N 32 25.471 W 113 00.256	12SUA1154889260
	N 32 30.311 W 113 02.205	12SUA0866398262
	N 32 35.393 W 112 59.788	12SUB1262507582
Range 2	N 32 44.945 W 112 53.322	12SUB2305525049
	N 32 37.767 W 112 43.501	12SUB3817511522
	N 32 36.605 W 112 44.371	12SUB3678009397
	N 32 31.817 W 112 45.392	12SUB3510000575
	N 32 35.393 W 112 59.788	12SUB1262507582
	N 32 43.827 W 112 55.774	12SUB1918723052
Range 3	N 32 47.490 W 112 36.065	12SUB5007529307
	N 32 37.767 W 112 43.501	12SUB3817511522
	N 32 44.945 W 112 53.322	12SUB2305525049
	N 32 48.874 W 112 44.995	12SUB3617832086
	N 32 49.000 W 112 39.050	12SUB4545832169
Range 4	N 32 49.482 W 112 58.573	12SUB1501133583

Subrange	Lat/Long (DDM)	MGRS
	N 32 41.238 W 113 00.975	12SUB1097218418
	N 32 43.154 W 113 11.463	12STB9465422284
	N 32 47.991 W 113 13.438	12STB9175731289

Table A7.3. Observation Point Coordinates.

OP	Subrange	Lat/Long (DDM)	MGRS
Alpha	NTAC	N 32 38.075 W 113 09.218	12S TB 9797112826
Bravo	NTAC	N 32 37.315 W 113 04.419	12S UB 0544811272
Phantom*	NTAC	N 32 38.88597 W 113 12.14957	12S TB 93418 14419
Red Point	STAC	N 32 32.591 W 113 17.593	12S TB 8465502965
Delta	STAC	N 32 30.244 W 113 09.448	12S TA 9731898361
Echo	STAC	N 32 30.994 W 113 10.875	12S TA 9511199792
Charlie	ETAC	N 32 46.270 W 112 36.831	12S UB 4884427071
NATO Hill	ETAC	N 32 39.231 W 112 37.912	12S UB 4695614089
OP Rescue**	Rescue Range	N 32 44.629 W 112 42.758	12S UB 39542 24184

Note:
* OP Phantom is not treated as an ACC in published footprints, and only JTACs and other specifically approved mission-essential personnel may use this location. Requires advance coordination with 56 RMO/ARO and approval of the mission commander.
May be used only during scheduled Rescue Range operations.**

Table A7.4. BMGR East Complex Waypoint Coordinates.

Point of Reference	Lat/Long (DDM)	Elevation	TACAN
ARSON	N 32 46.000 W 113 28.300	800’	BXK 205/52
BRRRT	N 32 49.002 W 112 40.984	1066’	GBN 174/8.3
BUGGS	N 32 37.882 W 112 18.247	2400’	GBN 122/27
CIM PEAK	N 32 26.620 W 112 23.980	4049’	GBN 143/34
BURRO GAP	N 32 24.233 W 112 41.607	1795’	GBN 172/33
COOLY	N 32 49.084 W 112 47.111	900’	GBN 200/10
EMBAR	N 32 38.701 W 112 48.969	1100’	GBN 187/20
KITT	N 32 12.090 W 111 30.630	2300’	TUS 270/31
NOLLS	N 32 48.685 W 112 56.735	1000’	BXK 175/39
RAYGN	N 32 28.000 W 112 00.000	1630’	GBN 121/45

Point of Reference	Lat/Long (DDM)	Elevation	TACAN
SIERRA	N 31 49.160 W 111 31.160	3840’	TUS 230/35
WHISKEY	N 32 06.820 W 111 36.080	2640’	TUS 260/35
AJO MTNS	N 32 01.757 W 112 41.371	4800’	GBN 169/56
BABOQUIVARI	N 31 46.304 W 111 35.669	7800’	GBN 130/90
BLACK GAP	N 32 45.000 W 112 49.279	1022’	GBN 198/14
BLACK MTN (AJO)	N 32 19.468 W 112 50.566	3009’	GBN 179/39
CATHEDRAL ROCK	N 32 32.782 W 112 10.456	2850’	GBN 120/35
COFFEE POT	N 32 28.924 W 112 37.271	3466’	GBN 157/29
DRAGONS TOOTH	N 32 38.572 W 112 25.535	3330’	GBN 134/23
GUACHI	N 32 20.845 W 111 52.622	4556’	GBN 120/54
HAT MTN	N 32 38.138 W 112 44.489	2840’	GBN 178/20
KITT PEAK	N 31 57.844 W 111 35.999	6800’	GBN 125/81
LA LESNAS MTNS	N 31 43.773 W 112 12.740	2694’	GBN 148/77
MESQUITES	N 31 53.805 W 112 26.837	3827’	GBN 158/65
PICACHO PEAK	N 32 38.147 W 111 24.020	3382’	GBN 091/68
SAW TOOTH	N 32 36.581 W 111 44.161	2538’	GBN 097/53
SLATE	N 32 32.757 W 111 53.319	3332’	GBN 104/47
SLIVER BELL	N 32 25.039 W 111 30.296	4261’	GBN 103/68
SOUTH MTN	N 32 00.046 W 112 08.729	4180’	GBN 143/63
SQUAW TITS	N 32 50.956 W 112 28.453	2478’	GBN 090/12
TABLE TOP	N 32 45.047 W 112 07.440	4373’	GBN 094/31
GB AUX-6	N 32 53.170 W 112 48.890	807’	GBN 228/09
STOVAL	N 32 43.969 W 113 37.546	365’	GBN 243/50

Attachment 8

BMGR EAST MODE 2 STANDARD SQUAWKS

Table A8.1. BMGR East Mode 2 Standard Squawks.

Location/Unit	Squadron	Mode 2*
Davis-Monthan AFB		
355 WG	354 FS	354X
	357 FS	357X
	47 FS	350X
RQG	55 RQS	550X
	79 RQS	070X
AFRES	305 RQS	305X
As Required	Hosted units	130X
Luke AFB		
56 FW	61 FS	610X
	62 FS	620X
	63 FS	630X
	308 FS	340X
	309 FS	360X
	310 FS	310X
	312 FS	320X
	425 FS	425X
Silverbell AAF		
	Peace Vanguard	112X
Tucson IAP		
162 WG	21 FS	210X
	152 FS	100X
	195 FS	400X
	AATC	300X
Casual Users		660X

Note:
*X denotes position in flight
Other squawks can be coordinated with Snakeye for LFE and other exercises.

Attachment 9

BMGR EAST FREQUENCY MATRIX

Table A9.1. BMGR East Frequency Matrix.

Agency/Area	UHF	VHF	Call Sign / Control
Range Operations C2 (ROCC)	264.125	122.775	Snakeye
ROCC Backup	342.0	None	Snakeye
Gila Bend AFAF Tower	257.65	127.75	GXF Tower
Gila Bend AFAF Ground	233.7	127.75	GXF Ground
Range 1 Low or Low/Med	298.6*	Numbered ranges are VHF capable; but squadron assigned freqs must be used	Range 1 / RCO / Snakeye
Range 1 Hi or Hi/Med	351.925		Range 1 / RCO / Snakeye
Range 2 Low or Low/Med**	262.75*		Range 2 / RCO / Snakeye
Range 2 Hi or High/Med	354.725		Range 2 / RCO / Snakeye
Range 3 Low or Low/Med*	311.3*		Range 3 / RCO / Snakeye
Range 3 Hi or High/Med	354.95		Range 3 / RCO / Snakeye
Range 3 Rescue Range***	311.3*		Range 3 / RCO / Snakeye
Range 4 Low or Low/Med*	308.7*		Range 4 / RCO / Snakeye
Range 4 Hi or High/Med	360.475		Range 4 / RCO / Snakeye
Air-to-Air Low or Low/Med*	274.2	None	Air-to-Air High
Air-to-Air Hi or Hi/Med	308.9		Air-to-Air Low
NTAC Low or Low/Med*	371.4*		North Tac / Snakeye
NTAC Hi or High/Med	361.425		North Tac / Snakeye
STAC Low or Low/Med*	284.475*		South Tac / Snakeye
STAC Hi or High/Med	363.825		South Tac / Snakeye
ETAC Low or Low/Med*	302.3*		East Tac / Snakeye
ETAC Hi or High/Med	364.325		East Tac / Snakeye
SELLS MOA/ATCAA – All	316.7	None	SELLS
SELLS A/B - Low or Low/Med*	234.8*		SELLS A/B Low
SELLS A/B - Hi or Hi/Med	316.7		SELLS A/B High
SELLS C/D/E - Low or Low/Med*	293.8*		SELLS C/D/E Low
SELLS C/D/E - Hi or Hi/Med	365.925		SELLS C/D/E High
LATN / VFR below SELLS	379.4		LATN
56 FW – SOF	369.0	149.4	Luke SOF
355 WG – SOF	327.7	142.6	D-M SOF
162 WG – SOF	392.2	138.525	Tucson SOF

Notes:

* Primary range frequency

** CENTAC missions will use the Range 2 Low-Low/Medium frequency.

*** Rescue Range missions will own Range 3 Low, so will use the Low-Low/Med frequency.

Note: Missions scheduled Low, Medium and High will use the Low-Low/Med frequency.

Attachment 10

NUMBERED RANGE TARGET AND REFERENCE POINT COORDINATES

Table A10.1. Numbered Range Target and Reference Point Coordinates.

Range	DMPI / RP	Latitude (WGS84)	Longitude (WGS84)	Elev (Ft)
1	RT Conv	N 32 32.453	W 112 57.671	1169
1	TAC	N 32 32.650	W 112 57.740	1169
1	NUC	N 32 30.701	W 112 57.652	1193
1	RT Strafe	N 32 31.904	W 112 58.844	1129
1	TAC Strafe	N 32 32.085	W 112 59.086	1122
1	OAP 1	N 32 31.000	W 112 58.505	1165
1	OAP 2	N 32 30.946	W 112 56.855	1213
1	OAP 3	N 32 33.250	W 112 58.960	1120
1	10 IP	N 32 30.685	W 112 55.702	1248
1	20 IP	N 32 30.677	W 112 53.763	1293
1	30 IP	N 32 30.661	W 112 51.806	1292
1	45 IP	N 32 30.641	W 112 48.870	1365
2	RT Conv	N 32 41.131	W112 53.251	1011
2	TAC	N 32 41.300	W 112 53.251	1005
2	NUC	N 32 39.456	W 112 54.019	1032
2	RT Strafe	N 32 40.970	W 112 54.580	994
2	TAC Strafe	N 32 41.195	W 112 54.815	981
2	10 IP	N 32 38.843	W 112 52.172	1108
2	20 IP	N 32 38.262	W 112 50.399	1198
2	30 IP	N 32 37.659	W 112 48.580	1302
2	45 IP	N 32 36.712	W 112 45.679	1501
3	RT Conv	N 32 45.339	W 112 41.978	1216
3	NUC	N 32 45.721	W 112 41.638	1205
3	RT Strafe	N 32 45.500	W 112 43.299	1161
3	TAC Strafe	N 32 45.711	W 112 43.456	1152
3	10 IP	N 32 44.739	W 112 40.080	1289
3	20 IP	N 32 43.744	W 112 38.530	1374
3	30 IP	N 32 42.839	W 112 37.112	1472
3	45 IP	N 32 42.089	W 112 35.938	1578
4	RT Conv	N 32 47.759	W 113 05.437	696
4	TAC	N 32 47.920	W 113 05.420	695
4	NUC	N 32 45.959	W 113 05.416	723
4	RT Strafe	N 32 47.213	W 113 06.600	679
4	TAC Strafe	N 32 47.330	W 113 06.936	669
4	10 IP	N 32 46.169	W 113 03.482	745
4	20 IP	N 32 46.386	W 113 01.567	766
4	30 IP	N 32 46.604	W 112 59.588	791
4	45 IP	N 32 46.900	W 112 57.080	812
4	IR Mav	N 32 46.434	W 113 06.006	720

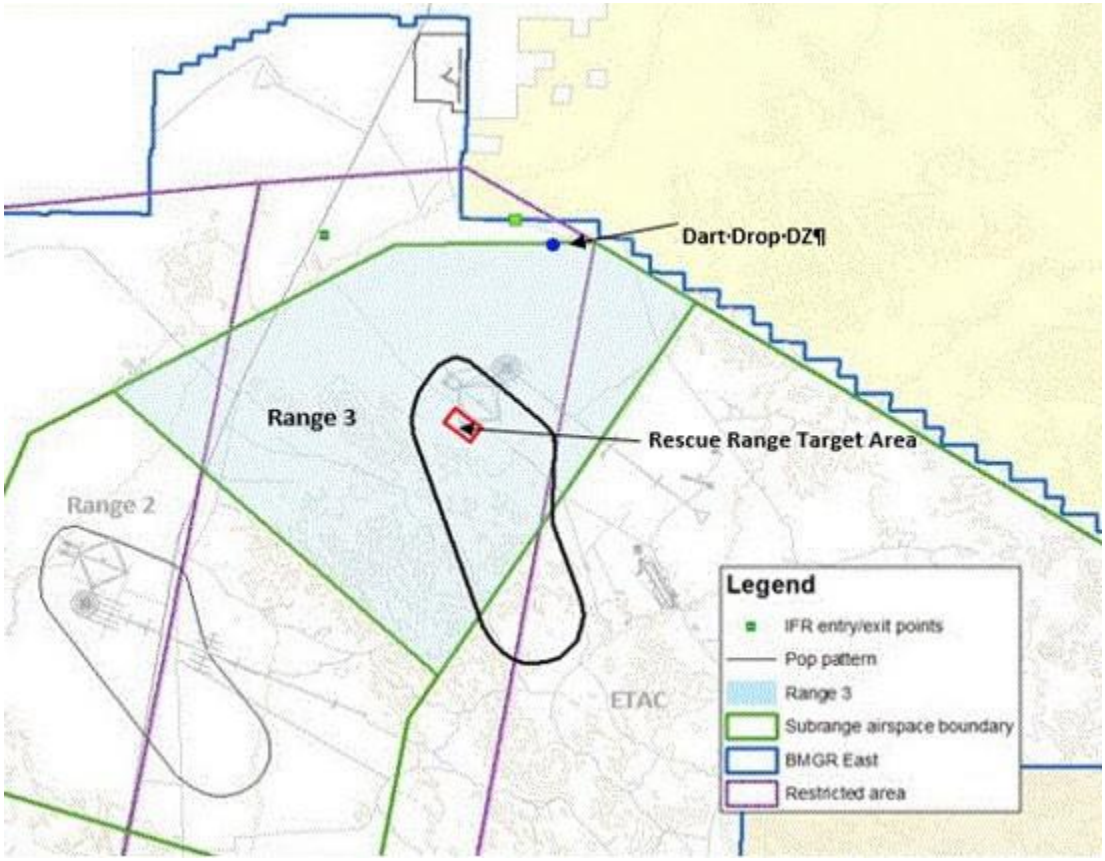
Attachment 11

OPERATING ON THE RESCUE RANGE, BMGR EAST

A11.1. Rescue Location, Range 3 Airspace, and Adjacent Subranges.

A11.1.1. The Rescue Range location, Range 3 airspace, and adjacent subranges which are scheduled separately—are shown in Figure A.11.1; the adjacent airspace may be scheduled and used by other units during Rescue Range operations. Stationary targets on the Rescue Range may be engaged at any time; pop-up targets require attention before each use and operating them requires special consideration. Before requesting training using pop-up targets, users must coordinate with 56 RMO/ARO at 623-856-8813/9469 (DSN 896) at least 30 days in advance.

Figure A11.1. Range 3 and Adjacent Subrange Airspace.



A11.2. Rescue Range Scheduling and Coordination, and Cautions.

A11.2.1. Rescue units will schedule Range 3 Low (SFC – 9,000’ MSL) to use the Rescue Range. Range 3 will be Class C during Rescue Range operations in accordance with AFI 11-214.

A11.2.2. Flying units with regular user status (as defined in LUKEAFBI 13-212, paragraph 2.3.2) have scheduling priority.

A11.2.3. Rescue grounds units may use the Rescue Range independent of air support; however, flying units have scheduling priority. Ground units of the 563 RQG and 943 RQG have priority over other ground units.

A11.2.4. All aircraft using the Rescue Range must remain within Range 3 airspace as shown in **Figure A11.1** unless other subrange airspace is also scheduled. The boundary between ETAC and Range 3 is marked by two closely spaced parallel roads, referred to as the "double-bladed road." Rescue units should also be aware of Range 2 airspace to the southwest, the Gila Bend Class D airspace immediately north of Range 3 airspace, and the transit corridor north and west of Range 3.

A11.2.5. Aircraft operating on the Rescue Range will remain at 9,000' MSL and below unless otherwise coordinated with and approved by Snakeye or unless Range 3 Medium is also scheduled. Range 3 Med and High blocks may be active with other units. No MARSA operations between fighters and rescue aircraft will be allowed within Range 3 Low.

A11.2.6. Aircraft that experience an emergency while operating on the BMGR East may require a straight-in approach to GXF RWY 35. In this event, Snakeye will contact aircrew and ground parties on the Rescue Range, direct them to cease firing, and provide deconfliction advice. Emergency aircraft en route to GXF will transmit on Guard their flight path, altitude, and distance/time from Gila Bend AFAF.

A11.2.7. All aircrew and ground parties must be alert for unauthorized ground movement, especially vehicle traffic in either direction on the Range 3/ETAC road. An immediate "knock-it-off" must be initiated if unauthorized ground movement is observed. Border Patrol and illegal border-related activities create the greatest hazard; however, this road is also used regularly by ground parties accessing ETAC. Rescue Range users must advise Snakeye of unauthorized ground movement; likewise, Snakeye will pass information and advisories as necessary.

A11.2.8. Rescue units may schedule operations using the conventional targets on Range 3. Class A operations may be requested and will be shown as such in CSE. Both Rescue Range and conventional targets may engage during a single scheduled mission but must be separated in time. See **paragraph A11.9** below for details.

A11.3. Contingencies.

A11.3.1. Users will notify 56 RMO/ARO of any safety concerns or incidents during Rescue Range operations.

A11.3.2. Aircraft will "terminate" if an engagement occurs outside of the established firing fans or any other firing restriction is broken. The most conservative training rules, whether military service branch or aircraft specific, will always take precedence.

A11.3.3. In the event a pop-up mechanism is inadvertently damaged or destroyed, user will report the target set and its condition to Snakeye upon check out.

A11.3.4. If a fire is detected on the range, users will immediately notify Snakeye of its location, estimated size, and surface wind direction.

A11.4. Rescue Range targets and facilities.

A11.4.1. Authorized targets are located in an area roughly 1,400 m by 1,000 m labeled "Rescue Range target area" in Figures **A11.1** and **A11.2**, which is also referred to in this document as "the container." Coordinates are listed in **Table A11.1**.

Figure A11.2. Rescue Range Targets and Facilities.

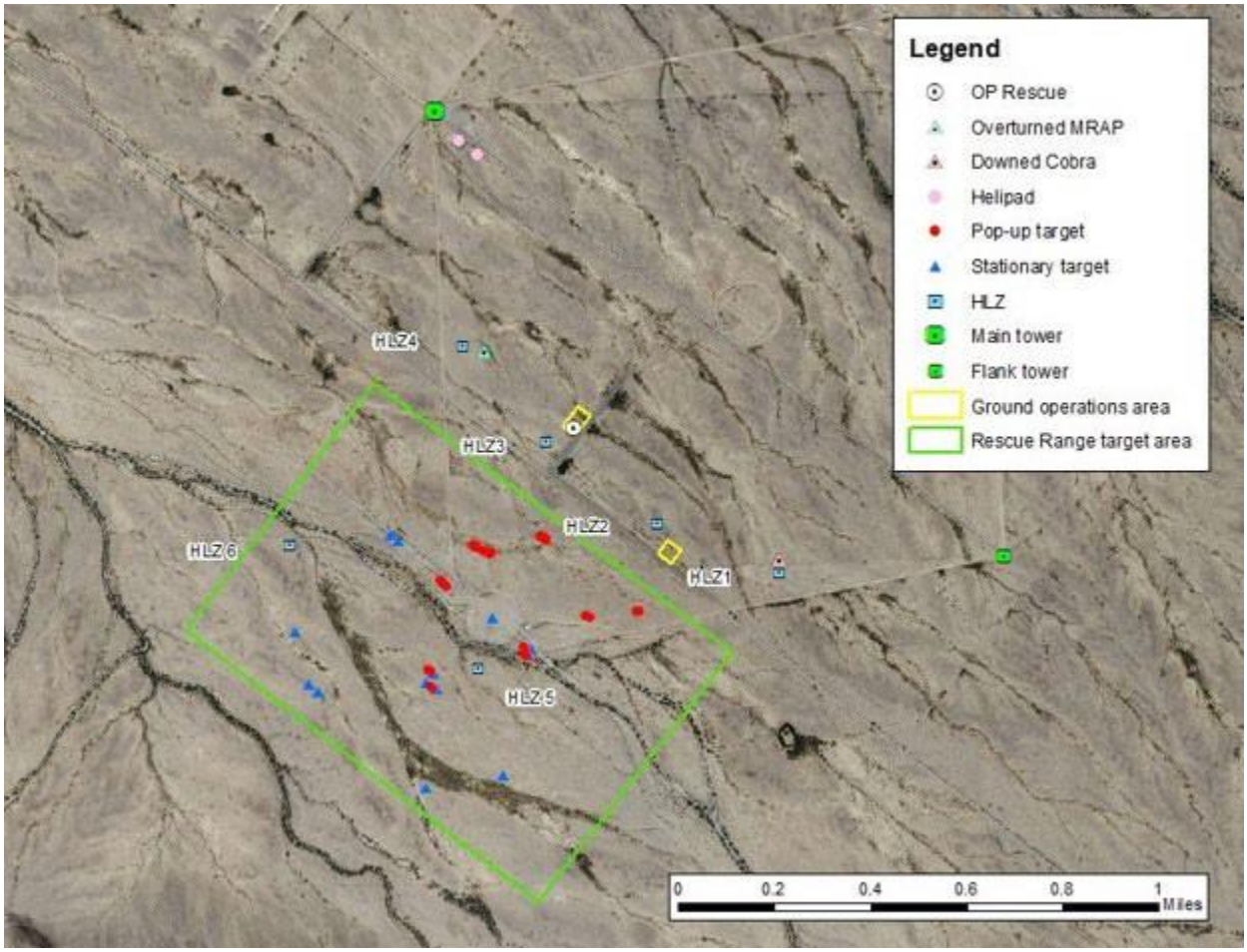


Table A11.1. Coordinates of Rescue Range Targets and Facilities.

HLZs	Lat	Long	MGRS
1	32 44.376	-112 42.308	12S UB 40237 23707
2	32 44.461	-112 42.569	12S UB 39829 23870
3	32 44.604	-112 42.811	12S UB 39457 24144
4	32 44.780	-112 42.995	12S UB 39179 24469
5	32 44.193	-112 42.950	12S UB 39229 23383
6	32 44.412	-112 43.356	12S UB 38602 23799
Static targets			
3-1	32 44.234	-112 42.838	12S UB 39401 23455

HLZs	Lat	Long	MGRS
3-2	32 44.288	-112 42.921	12S UB 39277 23555
3-3	32 44.422	-112 43.128	12S UB 38958 23815
3-4	32 44.433	-112 43.144	12S UB 38932 23837
3-5	32 44.353	-112 42.908	12S UB 39299 23679
3-6	32 44.342	-112 42.888	12S UB 39331 23657
3-7	32 44.318	-112 42.851	12S UB 39388 23612
3-8	32 44.308	-112 42.842	12S UB 39402 23593
3-9	32 44.006	-112 42.892	12S UB 39314 23037
3-10	32 44.170	-112 43.061	12S UB 39054 23340
3-11	32 44.184	-112 43.043	12S UB 39081 23368
3-12	32 44.156	-112 43.039	12S UB 39090 23317
3-13	32 44.255	-112 43.347	12S UB 38611 23509
3-14	32 43.977	-112 43.059	12S UB 39053 22987
3-15	32 44.146	-112 43.293	12S UB 38693 23306
3-16	32 44.159	-112 43.315	12S UB 38657 23331
Pop-up target group centroids			
S1	32 44.408	-112 42.945	12S UB 39244 23780
S2	32 44.433	-112 42.813	12S UB 39451 23824
S3	32 44.303	-112 42.610	12S UB 39763 23578
S4	32 44.291	-112 42.718	12S UB 39595 23558
S5	32 44.346	-112 43.029	12S UB 39111 23669
S6	32 44.225	-112 42.852	12S UB 39383 23440
S7	32 44.173	-112 43.053	12S UB 39067 23350

A11.4.2. HLZs located near the Range 3 main tower and on the Rescue Range may be used during Rescue Range operations.

A11.4.2.1. Two prepared helipads are located immediately south of the main tower. These are not part of the Rescue Range complex but may be used concurrently.

A11.4.2.2. Rescue Range HLZs 1 through 4 are north of (outside) the container and are numbered from east to west; HLZs 5 and 6 are located inside the container. These are unprepared.

A11.4.3. Ground operations areas.

A11.4.3.1. Two groups of "buildings" made of sea-land containers are located near HLZs 2 and 3 on the north side of the road from Range 3 to the ETAC border are shown in **Figure A11.3**. Some buildings include stairs for "roof" access and the interiors of some are

accessible (normally kept locked to prevent unauthorized use). Ground movement on foot within and between these areas is authorized.

A11.4.3.2. Weapons employment in and around the building compounds is limited to small arms firing biodegradable airsoft or paintball-type ammunition. Participants must wear required PPE.

A11.4.3.3. External stairs provide "rooftop" access to two stacked sea-land container buildings in the ground operations area near HLZ 3; these may be used as OPs during Rescue Range operations.

Figure A11.3. Ground Operations Areas on the Rescue Range.

A11.5. Rotary-Wing Execution.

A11.5.1. Helicopters are authorized to land only at designated HLZs 1 through 6 (Figures **A11.2** and **A11.3**) or on the helipads at the main tower. HLZs 1-6 are unprepared, and units are responsible for surveys. Hover operations are permitted throughout the Rescue Range.

A11.5.2. The following weapons employment restrictions apply to rotary-wing aircraft employing live fire on the Rescue Range.

A11.5.3. Ammunition is limited to .50 caliber and 7.62 mm.

A11.5.4. A clearing pass will be accomplished prior to arming any weapons.

A11.5.5. Only authorized targets within the container (**Figure A11.2**) will be engaged.

A11.5.6. Gun-to-target line (GTL) between 150 degrees and 260 degrees magnetic will be used. This applies regardless of actual aircraft heading. This restriction does not apply for dry fire. Any expenditure outside of 150 to 260 degrees magnetic will be immediately reported to Snakeye.

A11.5.7. The minimum engagement distance from targets within the container is 300 m for.50 caliber and 100 m for 7.62 mm.

A11.5.8. Guns will not be pointed toward the range towers or structures at any time.

A11.5.9. If either range tower is manned, do not engage targets when the towers are within +/- 30 degrees of the GTL.

A11.5.10. If engaging pop-up targets, the GTL will be limited to within +/- 45 degrees of the target's longitudinal axis and 0 to -17 degrees in elevation. For example, at 300 m spacing the employing aircraft must be no higher than 300' in altitude. At 100 m, aircraft must be no higher than 100'. Exceeding these limits will increase the likelihood of damaging the pop-up mechanisms.

A11.5.11. Gunnery pattern altitude, orientation, and spacing from the targets may be set tactically as long as they meet all applicable restrictions and airspace boundaries.

A11.5.12. When ground personnel are in the area, the following additional weapons employment restrictions apply.

A11.5.13. Do not engage a target when ground personnel are within +/- 30 degrees of the GTL.

A11.5.14. Minimum safe distance between personnel and the engaged target is 500 m.

A11.5.15. The main tower may be used for observation, radio communication, and scenario control. Pop-up targets are typically controlled by a ground party in this tower, although they may be controlled from the flank tower or other location nearer (but outside) the container. Including the OP. If no ground party is present, the targets may be controlled from a helicopter.

A11.5.15.1. Entry into the main range tower requires advance coordination with 56 RMO. The catwalk around the tower is accessible at any time.

A11.6. Fixed-Wing Execution.

A11.6.1. Integrated rescue operations involving rotary-wing rescue aircraft, HC-130, and A-10 aircraft will be supported. For such events, at minimum, both Range 3 Low and ETAC Low must be scheduled.

A11.6.2. Drop zone operations on Range 3 are authorized only on the Dart Drop DZ, roughly 5.25 NM north-northeast of the Rescue Range (**Figure A11.1**.).

A11.7. Ground Team Execution.

A11.7.1. Individuals or teams may move on foot within the container, the HLZs, the ground operations areas, and between the HLZs/ground operations areas and the container.

A11.7.2. Vehicles will remain on established roads at all times. Off-road driving, to include ATV operations, is not authorized.

A11.7.3. Rescue ground (Guardian Angel) units using the Rescue Range independent of air support must check in with Snakeye before entering Range 3 and must notify Snakeye before commencing live fire.

A11.7.4. Rescue ground units will thoroughly clear the range before commencing live fire.

A11.7.5. A range safety monitor must be on the main tower during live fire to maximize the opportunity to detect unauthorized ground movement and maintain radio communication with Snakeye. This monitor must have radio communication with all ground units to order cease fire, if required.

A11.7.6. The following firing restrictions apply to ground parties employing live fire on the Rescue Range. More restrictive service or aircraft training rules take precedence.

A11.7.6.1. Ammunition is limited to .50 caliber and smaller, and M781 40 mm practice grenades.

A11.7.6.2. Only authorized targets within the container will be engaged (see **Table A11.1**.). Engagements may commence from within the container, the HLZs (excluding the tower helipads) or the area between the two.

A11.7.6.3. Small arms engagements will be limited to a GTL of 150 degrees to 260 degrees magnetic. This restriction does not apply to dry fire. Any expenditure outside of 150 to 260 degrees magnetic will be immediately reported to Snakeye.

A11.7.6.4. Do not engage while any ground personnel are within +/- 30 degrees of the GTL.

A11.7.6.5. If engaging pop-up targets, the GTL will be limited to within +/- 45 degrees of the target's longitudinal axis. Exceeding these limits will increase the likelihood of damaging the pop-up mechanism.

A11.7.6.6. M-18 smoke grenades are authorized. All other pyrotechnic devices require prior approval from 56 RMO/ARO.

A11.7.6.7. Laser systems certified for use on BMGR East are listed in **Attachment 5**. Rescue Range targets may be lased from atop the stacked containers in the area near HLZ 3.

A11.7.6.8. The main tower may be used for observation, radio communication, and scenario control as described in **paragraph A11.5.15**.

A11.8. Communications.

A11.8.1. Air.

A11.8.1.1. For all radio communications, refer to the Rescue Range as “Range 3 Low.”

A11.8.1.2. Contact Snakeye on 264.125 / 122.775 for range entry clearance.

A11.8.1.3. Rescue Range operations will be conducted on the Range 3 Low frequency, 311.3. Air units will monitor Guard.

A11.8.1.4. Contact Snakeye or Range 3 RCO to check off when leaving the range. Report ordnance expended (caliber and number of rounds) on the Rescue Range as expended on the “left conventional target.”

A11.8.1.5. The radio in the main tower is available for communication, and scenario control if coordinated with 56 RMO in advance.

A11.8.2. Ground parties without air support.

A11.8.2.1. Ground parties using the Rescue Range without air support must receive a range safety briefing and check out at least one Land Mobile Radio (LMR) from Gila Bend Base Ops before entering Range 3.

A11.8.2.2. Ground parties entering by vehicle will request range entry/exit authorization from Snakeye and will monitor Snakeye channel at all times while on the range.

A11.8.2.3. Ground parties may use the radio in the main tower for communication, and scenario control if coordinated with 56 RMO in advance.

A11.9. Range 3 Conventional Target Operations.

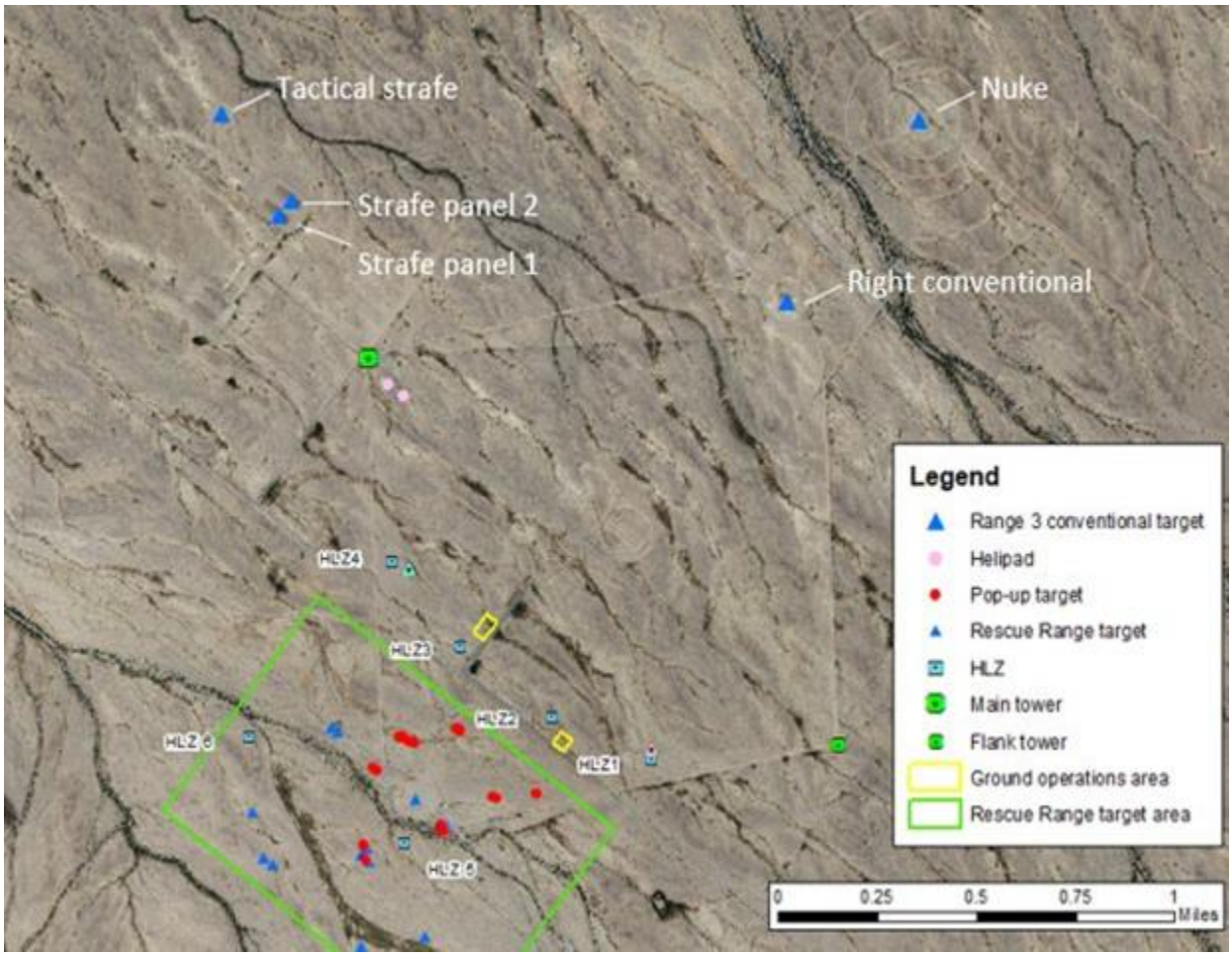
A11.9.1. HH-60 units may schedule use of the conventional targets on Range 3, which are not part of the Rescue Range, including a right conventional target, a nuclear weapons delivery (NWD) target, two strafe pits and one tactical strafe target (see target descriptions in **paragraph 6.6**.). There is no tactical target on Range 3. Scoring is available during Class A operations. Approved ordnance is listed in **Attachment 6**.

A11.9.1.1. Although developed for fixed-wing operations, many of the numbered range procedures outlined in **Chapter 6** also apply to HH-60 Class A operations. These include: check in and communication with the RCO (paragraphs 6.3.2.1 and 6.3.2.3 thru 6.3.2.5); weather requirements (**paragraph 6.5**); and special procedures for night weapons deliveries (**paragraph 6.11**.).

A11.9.2. The following procedures for use of the strafe panel targets are unique to HH-60 Class A operations. These restrictions must be observed when using the strafe panel targets to avoid hazardous conditions with respect to personnel on or at the base of either the main or flank tower.

A11.9.2.1. As described in **paragraph 6.6.5**, there are two strafe panels northwest of the main tower, numbered 1 and 2 from inside to outside of tower centerline (see Figures **6.2** and **A11.4**.). Strafe panel targets may be used only during Class A operations. The aiming reference is a LUU-2 chute centered approximately 11’ AGL. A line of white tires identifies the 2,000’ foul line.

Figure A11.4. Range 3 Layout Showing Conventional Targets.



A11.9.2.2. Weapons employment will be limited to fixed-forward or hover fire employment.

A11.9.2.3. When maneuvering into firing position, plan all ground tracks and turns and so that guns do not swing through or point at the main tower, the support building at the base of the main tower, or the flank tower (east).

A11.9.2.3.1. Typical patterns will be right range left traffic alternating strafe, aircraft must keep the RCO tower inside of their turn. Turns inside of the towers may be approved by the RCO.

A11.9.2.4. The attack heading/GTL will be 297 degrees magnetic. A11.9.2.5. Cease fire no later than the 2000’ foul line.

A11.9.3. Other conventional range targets.

A11.9.3.1. The tactical strafe target is located outside Panel 2, 3,500’ beyond the foul line. The foul line also applies to strafing this target. Scoring (mean point of impact) is available.

A11.9.3.2. The right conventional target is located about 1700 m east of the main tower. Strafe scoring (mean point of impact) is available.

A11.9.3.3. The nuclear delivery target, northeast of the main tower, is identified by concentric grading rings. Scoring is not available.

A11.9.3.4. Range 3 conventional targets may be lased from the main or flank towers.

Attachment 12

TACTICAL RANGE TARGET GROUP LAYOUTS AND TARGET CENTROID COORDINATE DATA

A12.1. Maps and Tables.

A12.1.1. The following pages include maps and tables identifying target groups and their locations on the three tactical ranges. For information on specific ordnance allowed on each target, as well as approved delivery parameters by aircraft, refer to the weapons employment restrictions published on the Range Ops SharePoint site at **https://usaf.dps.mil/teams/BMGR-E-info/SitePages/Home.aspx**.

Figure A12.1. North Tactical Range (NTAC) Target Groups.

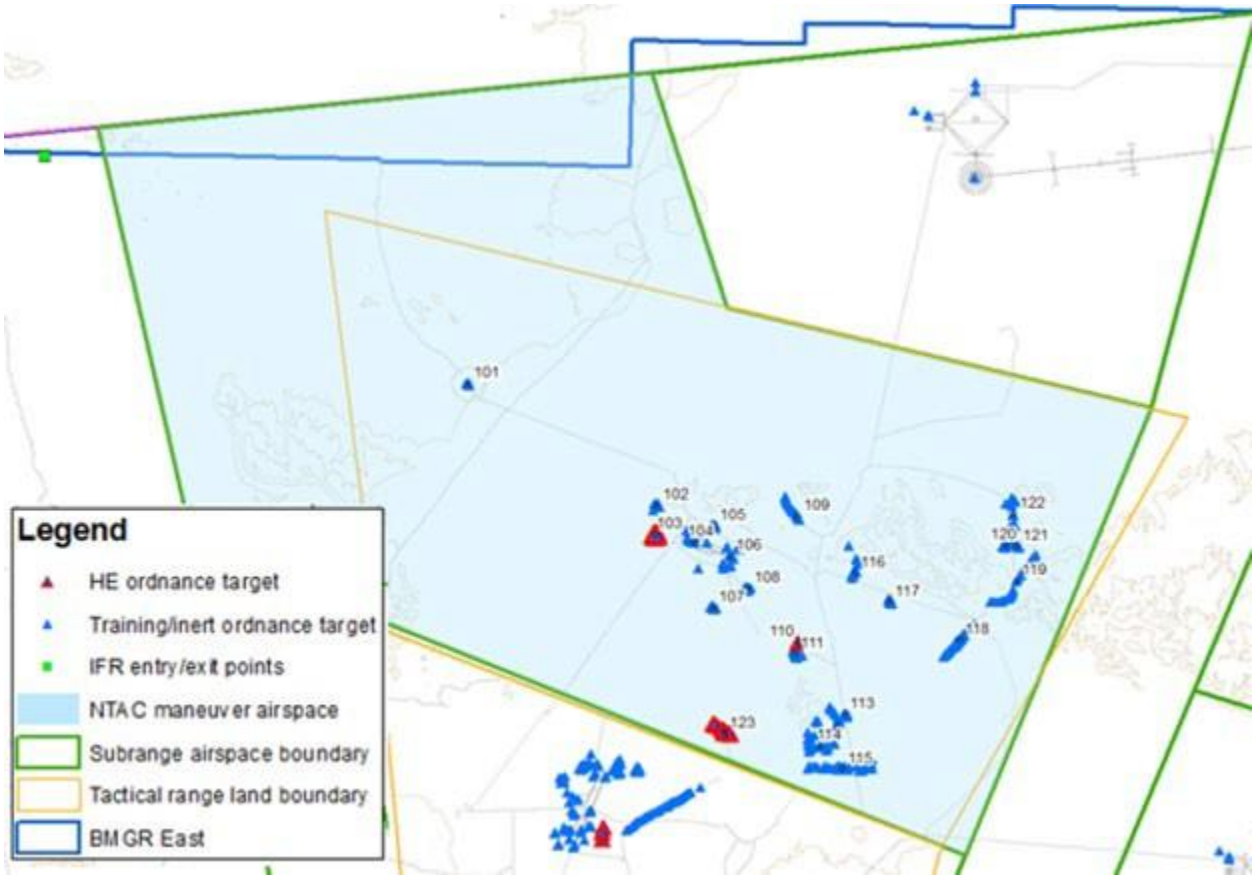


Table A12.1. NTAC Target Coordinate Data.

TGT	Description	MGRS	Lat/Long (DDM)	Elev (ft)
101	To be developed	12S TB 8470019343	N 32 41.449 W 113 17.791	651
102	SA-3 SAM Site	12S TB 9196314662	N 32 39.001 W 113 13.083	754
103	NTAC Live AGM North	12S TB 9192713552	N 32 38.400 W 113 13.091	764
104	North Town West	12S TB 9340013260	N 32 38.259 W 113 12.146	784

TGT	Description	MGRS	Lat/Long (DDM)	Elev (ft)
105	North Town Electric Substation	12S TB 9418513937	N 32 38.608 W 113 11.665	803
106	North Town Airfield – East	12S TB 9490812658	N 32 37.985 W 113 11.261	808
107	Yurt Village/Safe Houses	12S TB 9413510744	N 32 36.906 W 113 11.643	813
108	RAPIER SAM SITE	12S TB 9546311493	N 32 37.326 W 113 10.804	825
109	SCUD / Support Vehicles	12S TB 9713814546	N 32 38.996 W 113 9.773	801
110	HE Hill	12S TB 9740009427	N 32 36.230 W 113 9.539	852
111	Weapons Storage	12S TB 9728108985	N 32 35.990 W 113 9.609	862
112	Tank Column	12S TB 9889806240	N 32 34.523 W 113 8.541	902
113	Maverick Training Target	12S TB 9920206674	N 32 34.761 W 113 8.352	897
114	Tank Group	12S TB 9822605464	N 32 34.096 W 113 8.960	886
115	SAM Site	12S TB 9909004574	N 32 33.624 W 113 8.397	913
116	RR Yard	12S TB 9960712094	N 32 37.697 W 113 8.163	894
117	Tim’s Alley	12S UB 0091911035	N 32 37.138 W 113 7.310	903
118	Tank Column / FROG Battery	12S UB 0359409530	N 32 36.353 W 113 5.582	957
119	East Pass Convoy	12S UB 0580611777	N 32 37.592 W 113 4.197	980
120	HAWK Site	12S UB 0540413148	N 32 38.329 W 113 4.471	916
121	Aux Airfield – South	12S UB 0579713130	N 32 38.324 W 113 4.219	914
122	Aux Airfield – North	12S UB 0568314339	N 32 38.976 W 113 4.307	881
123	NTAC Live AGM South	12S TB 9454105928	N 32 34.306 W 113 11.320	835
124	NTAC Armored Convoy	12S TB 9529003111	N 32 36.791 W 113 10.804	827

Figure A12.2. South Tactical Range (STAC) Target Groups.

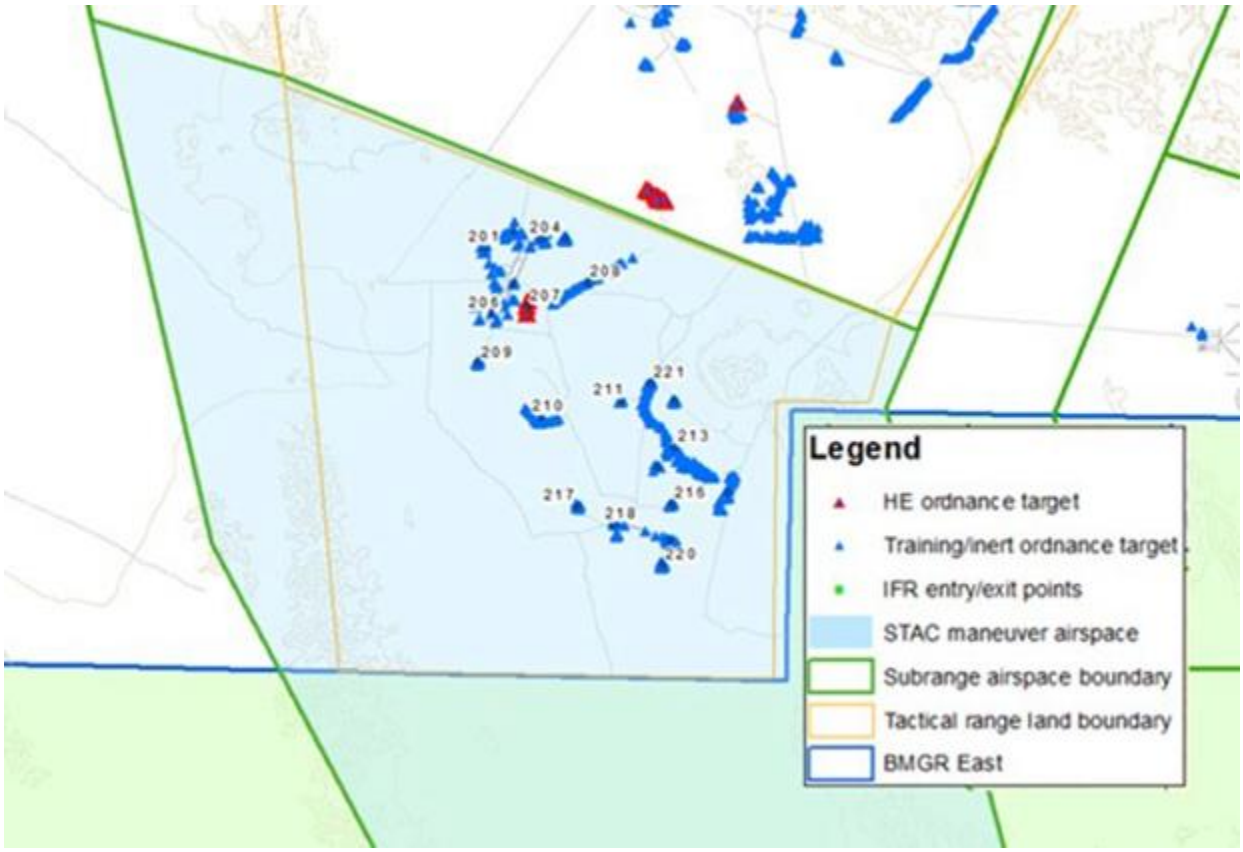


Table A12.2. STAC Target Coordinate Data.

TGT	Description	MGRS	Lat/Long (DDM)	Elev (ft)
201	SA-3 SAM Site	12S TB 8833804209	N 32 33.306 W 113 15.259	731
202	Main Airfield - NW Revetments	12S TB 8938804815	N 32 33.646 W 113 14.596	752
203	Main Airfield - NE Revetments	12S TB 9036704557	N 32 33.517 W 113 13.967	765
204	SAM Site	12S TB 9123804551	N 32 33.525 W 113 13.411	780
205	Main Airfield - Central	12S TB 8935502919	N 32 32.620 W 113 14.592	742
206	Main Airfield - South	12S TB 8858701883	N 32 32.051 W 113 15.068	724
207	HE Hill	12S TB 8989902125	N 32 32.197 W 113 14.234	800
208	Truck Convoy	12S TB 9239103125	N 32 32.685 W 113 12.894	798
209	Maintenance Facility	12S TB 8814800135	N 32 31.083 W 113 15.340	714
210	Truck Convoy	12S TA 9036198172	N 32 30.064 W 113 13.886	732
211	HAWK SAM Site	12S TA 9323698771	N 32 30.420 W 113 12.062	769
212	Training Camp	12S TA 9512998757	N 32 30.434 W 113 10.850	823
213	Tank group	12S TA 9514497109	N 32 29.546 W 113 10.822	780
214	Tank Group – South	12S TA 9701995501	N 32 28.694 W 113 9.602	833
215	Northern Missile Staging Area	12S TA 9455896378	N 32 29.141 W 113 11.184	777

TGT	Description	MGRS	Lat/Long (DDM)	Elev (ft)
216	To be developed	12S TA 9503195086	N 32 28.447 W 113 10.865	775
217	SAM Site	12S TA 9167495005	N 32 28.366 W 113 13.006	712
218	Aux Airfield - West	12S TA 9300194326	N 32 28.014 W 113 12.150	738
219	Aux Airfield - East	12S TA 9495793798	N 32 27.750 W 113 10.895	768
220	Bridge Intersection	12S TA 9470992912	N 32 27.268 W 113 11.042	761
221	Car bomb factory	12S TA 9427599379	N 32 30.760 W 113 11.405	795
222	STAC Armored Convoy	12S TA 9388997251	N 32 29.606 W 113 11.622	771

Figure A12.3. East Tactical Range (ETAC) Target Groups.

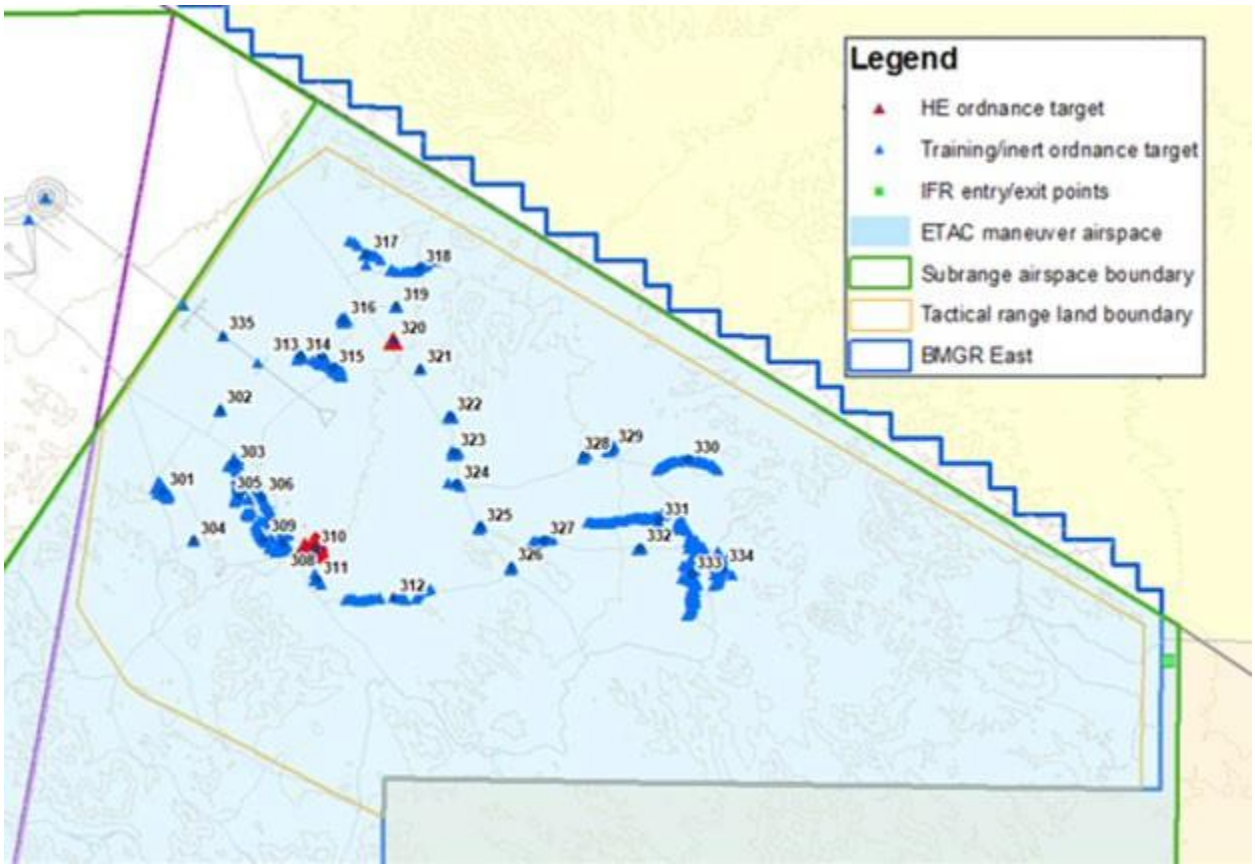


Table A12.3. ETAC Target Coordinate Data.

TGT	Description	MGRS	Lat/Long (DDM)	Elev (ft)
301	RR Yard/CSAR Village	12S UB 4512116623	N 32 40.586 W 112 39.111	1512
302	SA-10 SAM Site	12S UB 4698719299	N 32 42.050 W 112 37.944	1473
303	SA-2 Site	12S UB 4742717539	N 32 41.101 W 112 37.645	1534
304	Bridge	12S UB 4613115073	N 32 39.756 W 112 38.450	1563
305	Main Airfield - NW	12S UB 4761916508	N 32 40.545 W 112 37.512	1560
306	Main Airfield Convoy	12S UB 4834516469	N 32 40.529 W 112 37.047	1572
307	Main Airfield - Ops Complex	12S UB 4865915689	N 32 40.110 W 112 36.839	1602
308	Main Airfield - SE	12S UB 4901214964	N 32 39.721 W 112 36.606	1625
309	Main Airfield - SW	12S UB 4839815131	N 32 39.806 W 112 37.000	1602
310	Live AGM	12S UB 5004114797	N 32 39.639 W 112 35.946	1646
311	Training Camp	12S UB 5013413795	N 32 39.098 W 112 35.877	1674
312	South Convoy	12S UB 5258413212	N 32 38.802 W 112 34.305	1724
313	Aux Airfield - West	12S UB 4957321018	N 32 43.001 W 112 36.306	1490
314	POL Processing/Storage Site	12S UB 5030021010	N 32 43.002 W 112 35.841	1533
315	Aux Airfield - East	12S UB 5061520629	N 32 42.799 W 112 35.635	1557
316	GCI/SAM Site	12S UB 5098622193	N 32 43.648 W 112 35.413	1531
317	West Tank Group	12S UB 5173024324	N 32 44.807 W 112 34.957	1510
318	North Convoy	12S UB 5341523870	N 32 44.575 W 112 33.874	1630
319	Comm Hill	12S UB 5269522630	N 32 43.899 W 112 34.323	1593
320	HE HILL	12S UB 5261521534	N 32 43.305 W 112 34.364	1630
321	Command Post/C2 Site	12S UB 5345320618	N 32 42.816 W 112 33.819	1683
322	Mobile SCUD	12S UB 5443919070	N 32 41.986 W 112 33.173	1752
323	Tank Intersection	12S UB 5455117895	N 32 41.351 W 112 33.091	1733
324	Weapon Storage	12S UB5456016909	N 32 40.817 W 112 33.075	1730
325	Mobile Command Post	12S UB 5540615494	N 32 40.059 W 112 32.521	1797
326	ELINT Base	12S UB 5640614186	N 32 39.364 W 112 31.871	1846
327	Central Convoy	12S UB 5746115075	N 32 39.848 W 112 31.203	1858
328	Artillery Group	12S UB 5874917810	N 32 41.338 W 112 30.404	1924
329	Maverick Training Target	12S UB 5963218047	N 32 41.473 W 112 29.841	1950
330	East Convoy	12S UB 6213217696	N 32 41.302 W 112 28.238	2171
331	Tanks	12S UB 6115515687	N 32 40.208 W 112 28.845	2047
332	To be developed	12S UB 6058214805	N 32 39.726 W 112 29.204	1994
333	CSAR Training Area	12S UB 6223413954	N 32 39.278 W 112 28.140	2085
334	Tanks	12S UB 6324214167	N 32 39.401 W 112 27.497	2140
335	Moving Target System	12S UB 4706821701	N 32 43.350 W 112 37.916	1422
336	Live APKWS (AGR 19/20)	12S UB 5472616501	N 32 40.598 W 112 32.966	1750

Attachment 13

RCO QUALIFICATIONS AND REQUIREMENTS

A13.1. Experience.

A13.1.1. RCOs must have experience in at least one of the following areas:

A13.1.2. Military experience in the tactical air delivery of air-to-ground ordnance and munitions.

A13.1.3. Military or civilian experience in the management, supervision, or control of air operations in the military environment of a conventional or tactical range.

A13.1.4. Military or civilian experience in the management, supervision, or control of air operations in the military environment of an airfield, including fighter or conventional bomber operations.

A13.2. Qualifications.

A13.2.1. RCOs must possess the following qualifications:

A13.2.1.1. The ability to operate ultra-high frequency (UHF), very high frequency (VHF), citizen‘s band (CB), frequency modulation (FM), and telephonic two-way communications equipment.

A13.2.1.2. A working knowledge of range scoring systems, range target systems, and emergency response actions.

A13.2.1.3. Familiarity with the general classes and types of aircraft and ordnance expected to be employed at the range and the general classes and types of pattern deliveries that may be employed.

A13.2.1.4. The ability to assimilate a variety of information in a dynamic environment and react with sound decisions and judgment while adhering to established practices and procedures.

A13.3. Physical Requirements.

A13.3.1. RCOs must have:

A13.3.1.1. Vision correctable to 20/20 and the ability to distinguish primary colors.

A13.3.1.2. Normal depth perception.

A13.3.1.3. Full use of both hands and arms.

A13.3.1.4. Normal hearing.

A13.3.1.5. The ability to climb up steps to a height of 120 feet.

A13.3.1.6. The ability to lift dead weights up to 60 pounds.

A13.3.1.7. The ability to maintain civilian and government driver‘s licenses.

A13.4. RCO Records.

A13.4.1. RCO records will be kept with the ACTS contractor. These records will reflect the training and qualifications of all RCOs and will be available for review as required. As a minimum, each RCO‘s records will include:

A13.4.1.1. Section 1: Personnel Data.

A13.4.1.2. Section 2: RCO Certification and Currency Documentation.

A13.4.1.3. Section 3: Academic, On-Range, and Demonstration Training.

A13.4.1.4. Section 4: Evaluations.

A13.4.1.5. Section 5: Supplemental Data.

A13.4.1.6. Section 6: Certification of Annual Physical Examination.

A13.5. Academic Training.

A13.5.1. Academic training programs for RCOs will include the following items, as applicable: (**Note:** On-range RCO checklists and training will also include potential traffic conflicts with other ranges in the complex or nearby airspace and combat laser and safety procedures, as applicable.)

A13.5.2. Safety.

A13.5.3. Range security.

A13.5.4. RCO authority and responsibility.

A13.5.5. Range weather minimums.

A13.5.6. Communications procedures.

A13.5.7. Aircraft ordnance delivery patterns.

A13.5.8. Foul criteria.

A13.5.9. Range facilities.

A13.5.10. Pattern safety.

A13.5.11. Range records maintenance.

A13.5.12. Handling of training munitions.

A13.5.13. Radio operations.

A13.5.14. In-flight emergency.

A13.5.15. Tape recorder operations.

A13.5.16. WISS/IRSSS operations.

A13.5.17. Minimum altitude measuring devices.

A13.5.18. Dive angle references.

A13.5.19. Fire control and suppression.

A13.5.20. Crash and rescue operations.

A13.5.21. Tactical range operations.

A13.5.22. Night operations.

A13.5.23. Traffic conflicts with other ranges.

A13.5.24. Pattern spacing.

A13.5.25. Strafe impact area inspections, maintenance, berms, scoring devices.

A13.5.26. Helicopter operations.

A13.5.27. Divert procedures.

A13.5.28. General Aviation corridor.

A13.5.29. Automated range scoring systems.

A13.5.30. Combat laser operations and safety procedures.

A13.5.31. Generator operations.

A13.6. RCO Certification.

A13.6.1. RCO certification requires a written examination, an on-range demonstration, and a memorandum of certification.

A13.7. RCO Written Examination.

A13.7.1. An open-book, written examination, consisting of 35 randomly selected, multiple-choice questions, will be administered by an RCO supervisor. The examination will cover the topics and publications listed in **paragraph A13.5**.

A13.7.2. A passing score is 85 percent, corrected to 100 percent.

A13.7.3. The RCO will be immediately decertified if he or she fails the written examination. If the RCO fails a second time, he or she must re-accomplish the entire RCO training program. If the RCO fails a third time, he or she will be dismissed from performing RCO duties.

A13.8. On-Range Demonstration.

A13.8.1. The on-range demonstration involves observing a qualified RCO display the proper methods and techniques for controlling aircraft during air-to-ground operations. After observing a qualified RCO control at least four flights on the range (two at night), the upgrading RCO will control four flights (two at night) under the supervision of a qualified RCO. Day qualification is a prerequisite for night qualification. If four-ship formations frequent the range, the upgrading RCO must also control at least one of these during the on-range demonstration.

A13.9. RCO Currency.

A13.9.1. To maintain currency, each RCO must:

A13.9.1.1. Complete initial qualification and certification training.

A13.9.1.2. Perform RCO duty at least once every 90 days (once a year for fighter aircrew).

A13.9.1.3. Successfully complete the RCO written examination once every 12 months.

A13.10. RCO Recurrency.

A13.10.1. If an RCO becomes noncurrent, he or she must regain currency according to **paragraph A13.9**. Recurrency actions will be documented. The governing operations group commander may waive RCO currency, but only under unusual circumstances. Any waivers will be in writing and for a period not to exceed 24 hours.

A13.11. RCO Evaluations.

A13.11.1. The operations group commander or designated representative will select qualified people to make periodic, no-notice visits to the range to evaluate the on duty RCO. Evaluations will be documented.

A13.12. RCO Certification Training Period.

A13.12.1. The certification training period and requirements vary with each range, but upgrading RCOs will be certified within 30 workdays.

A13.13. Air-to-Air (A/A) RCO Program.

A13.13.1. The A/A RCO program applies to combat crew training (CCT) units involved in aerial gunnery. A/A RCOs must be CCT instructors selected by their squadron commander and certified by the operations group commander or designated representative. The following requirements apply to the program:

A13.13.2. Academic training, supervised by the squadron weapons officer, will include:

A13.13.2.1. AFMAN 13-212v1, *Range Planning and Operations*.

A13.13.2.2. Applicable mission design series (MDS)-specific Air Force tactics, techniques, and procedures (AFTTP) publications.

A13.13.2.3. Applicable MDS-specific, AFI 11-2XX publications.

A13.13.2.4. Applicable MAJCOM publications.

A13.13.2.5. Limits and sources of RCO authority and responsibility.

A13.13.2.6. Aerial gunnery weather minimums.

A13.13.2.7. Communications procedures.

A13.13.2.8. Foul criteria.

A13.13.2.9. Hazards and towed target range safety.

A13.13.3. Certification will include:

A13.13.3.1. An open-book, written examination on the topics listed in **paragraph A13.5**.

A13.13.3.2. A passing score of 85 percent, corrected to 100 percent.

A13.13.3.3. Documentation in the Aviation Resource Management System (ARMS) if available. If ARMS is not available, this documentation will be placed in the aircrew's training folder.

A13.13.4. The A/A RCO will brief all applicable training rules during the preflight DART briefing.

Attachment 14

RCO CERTIFICATION SHEET

Figure A14.1. RCO Certification Sheet.

A. _____ is qualified and recommended for training as:
RCO ____ A/A RCO ____ IAW LUKEAFBI 13-212.

_____ _____
Signature of 56 RMO/RCO Date

Print Name of 56 RMO/RCO _____

B. Has completed RCO ____ A/A RCO ____ academic training and written examination.

_____ _____
Signature of Certifying Official Date

Print Name of Certifying Official _____

C. Has completed initial/re-qualification on-range demonstration.

_____ _____
Signature of Certifying Official Date

Pried Name of Certifying Official _____

D. Is authorized to perform the following duties: Day RCO____ Night RCO____
A/A RCO ____

E. Approved

_____ _____
Signature of Certifying Official Date

Print Name of Certifying Official _____

F. Completion of Annual Recertification.

Table A14.1. Annual Recertification Sheet.

Year	Exam Score	Date	On-Range Demo	Date	Certifying Official

Attachment 15

SAMPLE RANGE OPERATIONS COORDINATION CENTER TRAINING SCHEDULE

Figure A15.1. Sample Operations Coordination Center Training Schedule.

Name: _____

Trainer: _____

Date training started: _____

Date training completed: _____

(Maximum training allowance: 30 work days from start date. Does not include weekends or holidays)

1. **In-brief from 56 RMO/ASM**: ASM will in-brief operators. Items to be covered: phraseology; various stereos/airspace/MTR, unusual occurrences; interface with RCOs and Gila Bend tower.

TR: 56 RMO/ASM

Trainee Initials_____ Trainer Initials_____ Date Completed_____

2. **Safety**: The Range Operations Coordination Center (ROCC), call sign Snakeye, is an integral part of range and airspace safety. Safety of operations will be accomplished through monitoring air operations and providing situational awareness and flight advisories on all incursions, as well as maintaining awareness of all ground operations. Snakeye has the authority to restrict or deny any air or ground operation that may be unsafe.

TR: LUKEAFBI 13-212 Chapters 4 and 10

Trainee Initials_____ Trainer Initials_____ Date Completed_____

3. **Scheduling**: Snakeye is responsible for the current day's schedule for the BMGR East complex and all 56 FW managed airspace and Military Training Routes (MTR). Snakeye assumes control of the schedule at 1400 L the day prior to execution.

TR: LUKEAFBI 13-212 Chapter 10

Trainee Initials_____ Trainer Initials_____ Date Completed_____

4. **Data Gathering**: Snakeye personnel will use CSE to annotate flight entry and exit times for airspace and subranges and log munitions expenditures. Range closure and weather capping data will also be tracked.

TR: LUKEAFBI 13-212 Chapters 4 and 10

Trainee Initials_____ Trainer Initials_____ Date Completed_____

Figure A15.2. Sample Operations Coordination Center Training Schedule (Continued).

5. **Range and Airspace Supervision:** Snakeye is the single point of contact for range and airspace access, with the authority to grant or deny not access. Snakeye is not an ATC facility but will provide GBAFAF runway and altimeter, monitor for aircraft spill-in/spill-out, emergencies, and general airspace intrusions/traffic. Operators will provide situational awareness to flights operating in the airspace.

TR: LUKEAFBI 13-212 Chapters 4 and 10, Airman Information Manual (AIM)

Trainee Initials _____ Trainer Initials _____ Date Completed_____

6. **Airspace Monitoring**: Snakeye operators will ensure military aircraft are squawking the appropriate Mode 2 or Mode 3 beacon code. A dedicated radar position will be manned when the operating areas are active. Operators will provide immediate airspace advisories to incoming/departing as to airspace status to provide aircrews with a picture as to what is occurring in the airspace. **At no time will aircraft be directed to hold outside SUA.**

TR: LUKEAFBI 13-212 Chapters 4 and 10, AIM

Trainee Initials Trainer Initials Date Completed

7. **Traffic Conflicts with other Ranges**: There are numerous potential traffic conflicts depending on the specific ranges and traffic patterns in use. Review airspace and sub-range layouts and traffic flows located in AFMAN 13-212v1 Luke Sup 1 Chapter 3.

TR: LUKEAFBI 13-212 Chapters 3, 4, and 10

Trainee Initials_____ Trainer Initials_____ Date Completed_____

8. **Extension of Airspace Hours**: Snakeye will support requests for last mission of the day extensions within the constraints allowed by the contract. At no time will airspace be extended beyond what is scheduled with Albuquerque Center on the flying schedule without prior coordination with 56 RMO/ASM. **Note:** Operations beyond what is scheduled with Albuquerque Center will require an FAA NOTAM with a minimum 2 hour lead time.

TR: TR: LUKEAFBI 13-212 Chapter 10, 56 FW/Albuquerque Center LOA

Trainee Initials_____ Trainer Initials_____ Date Completed_____

9. **MTR Procedures:** Snakeye operators will pass any known bird advisory information to pilots upon initial check-in for an MTR.

TR: LUKEAFBI 13-212 Chapter 10

Trainee Initials _____ Trainer Initials _____ Date Completed_____

10. **Sonoran pronghorn:** Snakeye will plot sightings as received from ground parties and confirm closed targets, advise 56 RMO/ASMS for range NOTAM updates, and advise respective SOFs/squadrons, as appropriate, of this information.

Figure A15.3. Sample Operations Coordination Center Training Schedule (Continued).

TR: LUKEAFBI 13-212 Chapter 10

Trainee Initials _____ Trainer Initials _____ Date Completed_____

11. Communications: Snakeye operators are the focal point for operations in the airspace and on the ground. Coordination with the SOFs, Gila Bend tower, RCO's, CBP and others is critical to safe and successful operations.

TR: LUKEAFBI 13-212 Chapters 4 and 10, FAAO 7110.65 Ch 2 Sec 4

Trainee Initials_____ Trainer Initials_____ Date Completed_____

12. Opening/Closing/Shift Change: Daily team assignment schedule.

TR: Trainer

Trainee Initials_____ Trainer Initials_____ Date Completed_____

13. Academic Training:

13.1. Publications, Regulations and Study Material: Operators will review the following:

13.1.1. LUKEAFBI 13-212

13.1.2. 56th Fighter Wing/Albuquerque Center Letter of Agreement

13.1.3. Airman Information Manual

13.1.4. FAA Order 7110.65

13.1.5. ROCC Operating Instructions

13.1.6. CBP/56 FW LOP

TR: Operating Instructions

Trainee Initials_____ Trainer Initials_____ Date Completed_____

14. BASH Procedures: There are three levels of bird hazard warnings; Low, Moderate, and Severe. Snakeye will monitor all bird activity visually and through the AHAS WEB Site and advise pilots accordingly.

TR: LUKEAFBI 13-212 Chapters 4 and 10, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials_____ Trainer Initials_____ Date Completed_____

15. CBP Operations: The Snakeye operators will coordinate with CBP for ground, helicopter, fixed wing and UAS operations. Close coordination with the Air Marine Operations Center is crucial in maintaining flight safety.

TR: LUKEAFBI 13-212 Chapter 4, 56 FW/CBP LOP, OI

Trainee Initials _____ Trainer Initials _____ Date Completed_____

Figure A15.4. Sample Operations Coordination Center Training Schedule (Continued).

16. Equipment:

16.1. Primary and Secondary Radios: Snakeye is equipped with two PRM-500 UHF/VHF multi-channel radios, and land mobile radio (LMR) for each position. Demonstrate the ability to operate/transmit utilizing the radio voice switch.

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials_____ Trainer Initials_____ Date Completed_____

16.2. Tape Recorders: Digital voice recorder system (DVRS). All airborne radio and telephone communications will be recorded.

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials_____ Trainer Initials_____ Date Completed_____

16.3. Generator Training: All Snakeye personnel will be properly trained on the operation of the emergency generator.

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials_____ Trainer Initials_____ Date Completed_____

17. Emergency Procedures:

17.1. In Flight Emergencies: If an aircraft develops an emergency situation on the range or in the airspace the Operator will acknowledge the call, maintain radio silence and assist as needed. Snakeye will inform affected agencies (e.g., Gila Bend Tower, Base-ops, SOF).

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials _____ Trainer Initials _____ Date Completed_____

17.2. Lost Communication Procedures: In the event communications are lost, Snakeye will attempt contact on the backup frequency or UHF 243.0.

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials_____ Trainer Initials_____ Date Completed_____

17.3. Crash/Rescue Operations: In the event of an aircraft crash, Snakeye notify affected Base Operations and the respective SOF. Snakeye will assist as possible to coordinate crash/rescue operations with airborne and ground operations until the On-Scene-Commander arrives.

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials _____ Trainer Initials _____ Date Completed_____

18. Divert Procedures: SOFs may request that Snakeye pass divert information to missions they are working. Relay instructions verbatim as received from the SOF.

Figure A15.5. Sample Operations Coordination Center Training Schedule (Continued).

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials _____ Trainer Initials _____ Date Completed_____

19. **General Aviation Corridor Procedures:** This corridor extends from GBAFAF to the Ajo Airport (Eric Marcus/P-50) over Arizona Highway 85 at 500' AGL (day)/1000' AGL (night). Operators will remain vigilant for Ajo Corridor traffic. Coordinate passage authorization with respective manned ranges and GBAFAF tower. (Note: GBAFAF and RCOs will advise Snakeye of any proposed Ajo Corridor requests.)

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials_____ Trainer Initials_____ Date Completed_____

20. **Qualification Training:**

20.1. Written Examination:

TR: LUKEAFBI 13-212 Chapter 4, 56FW OPLAN 91-2, FAAO 7110.65 Ch 2, Sec 1

Trainee Initials _____ Trainer Initials _____ Date Completed_____

21. **Practical Demonstration**

21.1. Day/Night Operations:

TR: LUKEAFBI 13-212 Chapter 10, 56 FW/Albuquerque Center LOA, AIM, FAAO 7110.65

Trainee Initials _____ Trainer Initials _____ Date Completed_____

22. **Currency Requirements:** To remain current after initial qualification/certification the Snakeye Operator must perform duty at least once every 45 days and successfully complete the written examination at least once every 12 months.

Trainee Initials _____ Trainer Initials _____ Date Completed_____

23. **Administrative:**

23.1. ROCC Information File:

TR: 56 RMO Provided Information

Trainee Initials _____ Trainer Initials _____ Date Completed_____

Attachment 16

SAMPLE LETTER OF AGREEMENT HELICOPTER NIGHT OPERATIONS WITHOUT AIRFIELD LIGHTING

Figure A16.1. Sample Letter of Agreement.

DEPARTMENT OF THE AIR FORCE
56TH RANGE MANAGEMENT OFFICE (AETC)
LUKE AIR FORCE BASE ARIZONA 85309-1934

Date:_____

MEMORANDUM FOR 56 RMO/DO

FROM: _____(Unit/Commander)

SUBJECT: Letter of Agreement, Helicopter Night Operations without Airfield Lighting

1. Gila Bend Air Force Auxiliary Field (GBAFAF) does not have helicopter pad lighting. However in order to conduct necessary training, the _____(unit) proposes to use a tactical lighting scheme/no lighting during operations at GBAFAF between official sunset and sunrise. It is understood the unit will be operating at its own risk.

2. The following conditions are agreed upon to conduct night helicopter operations at GBAFAF:

A. Pilots are able to navigate and land using night vision devices (FLIR or NVG).

B. Any tactical lighting will be approved in advance by the GBAFAF Airfield Manager prior to use. Lighting must not interfere with runway operations.

C. All pilots will contract the tower for takeoff and landing instructions. However, due to limited viewing and command and control, the control tower will not issue landing or takeoff clearance, landing/departure will be at pilot discretion. Tower will use the verbiage: *"Call Sign, landing/takeoff area is not visible from the tower, landing/departure will be at your discretion."*

D. The deployed unit conducting tactical operations at GBAFAF assumes all liability for flight and ground operations on the helipads

3. I fully accept responsibility for the _____(unit) to operate at night on GBAFAF without permanent helicopter pad lighting.

_____
Deployed Commander

cc.
GBAFAF/AM

1st Ind, 56 RMO/DO

MEMORANDUM FOR GBAFAF/AM

Concur/Non-concur

_____
Director of Operations, 56th Range Management Office