



# QUICK LOOK REPORT #9

## TASK FORCE *ENDURING LOOK*



October 2002

## Airfield Operations



Operations *Noble Eagle* and *Enduring Freedom*, adding unexpectedly to the burden of ongoing contingencies, pushed the

demand for airfield operations support to maximum surge levels. Surge operations put further pressure on three already stressed career fields—airfield management, communications–electronics, and air traffic control. As a result, airfield operations (AO) elements deployed to the theaters of operation with ailing 1970s-era equipment (1950s-era for Air National Guard), a deficient concept of operations, and separate management controls for personnel and equipment.

The deployment and employment of air operations systems and personnel surfaced a number of concerns, linked in part to split management controls at Headquarters, United States Air Force (HQ AF). The deputy chief of staff for air and space operations (HQ AF/XO) is responsible for air traffic controllers, airfield managers, and airfield operations officers. The deputy chief of staff for installations and logistics (HQ AF/IL) is responsible for deployable air traffic control and landing systems (DATCALs) equipment and associated maintenance personnel.

Quick and decisive action will help resolve these issues. The most promising first step is for HQ AF to establish working groups to review various aspects of airfield operations in a deployed environment. One working group should conduct a comprehensive study of the Force Module Concept (a quick airfield opening package) and develop initiatives to support the concept (e.g.,

expeditionary airfield operations squadrons). The Air Staff, in conjunction with the MAJCOMs, has already initiated a Working Group to develop Force Modules with estimated completion in 2003.

### BACKGROUND

The expeditionary Air Force relies on the airfield as a critical weapon system. Many airfields are situated in austere locations without much in the way of preexisting infrastructure, equipment, or material resources for sustained high-tempo operations. During deliberate and, especially, crisis action planning, Air Force commanders must account for those capabilities that ensure airfields are well suited for all intended operations. In addition to tactical airlift control elements, combat support, and contingency response units, the Air Force relies upon airfield operations capabilities to prepare airfields for their combat missions.

Airfield operations personnel serve within special operations and conventional force units. As combat forces, Air Force special tactics teams (STT) serve in Air Force Special Operations Command (AFSOC) units. United States Special Operations Command tasks these STTs to execute special operations force (SOF) missions. Those airfield operations capabilities used in SOF missions include limited visual control tower service, a tactical air navigation (TACAN) system, and a precision landing system (Mobile Microwave Landing System—MMLS).

Special tactics teams provide the “first in” airfield operations capability (air traffic control and airfield management) primarily at non-permissive airfields, assault landing zones, and drop zones until

conventional air traffic control forces can assume those functions. STTs are capable of conducting operations for the initial 14 days of operations. After 14 days, STTs will require re-supply and augmentation or replacement for sustained operations. STTs usually begin the AO battlefield support process in austere environments. Conventional AO support flows in afterward to continue operations.

Conventional airfield operations forces deploy worldwide in support of operational forces at austere and bare-base locations. They provide basic to mature airfield services as well as combat airspace support. Conventional AO is not a rapid-response, deployable contingency force. Airfield operations capability is not a part of a core unit type code (UTC) package. Rather, AO is a support UTC organized, trained, and equipped through HQ AF/XO, HQ AF/IL, and the Air National Guard. HQ AF/XO provides airfield operations officers, air traffic controllers, and airfield managers, all stationed in billets at stateside and overseas locations. HQ AF/IL is responsible for active duty DATCALs maintainers, civil engineering personnel, and the system itself. The Air National Guard has organized airfield operations into squadrons consisting of air traffic controllers, maintenance personnel, and deployable equipment. That deployable equipment includes control tower, radar approach control, precision approach radar, TACAN, and MMLS. Notably, MMLS is not part of the Air National Guard's equipage. Airfield operations are called into wartime support through UTC packages developed by theater planners under Air Force Manual 13-220, *Deployment of Airfield Operations*.

## HISTORY

Airfield operations support has been required in various operations over the last 13 years. During Operation *Just Cause* in Panama, extensive AO support proved unnecessary. Conventional forces followed STT into Tocumen Airport in Panama City, Panama, and augmented ATC operations at Howard AFB, Panama. Operation *Desert Storm* required a more robust deployment of AO. The Air Force deployed 14 combat airspace managers to the Saudi-based air operations center, 7 radar

approach control elements (161 personnel), teams to augment 17 airbase air traffic control towers (85 personnel), and 3 liaison elements to host-nation air traffic control centers (60 personnel).

Operation *Desert Storm* was the last AO deployment using the dispersed controller program. The dispersed controller program allocated wartime-dedicated active duty controllers to fixed bases. In peacetime, the controllers maintained currency and proficiency at fixed bases. In crisis and wartime situations, they returned to combat communications squadrons for deployment. This system provided a more streamlined and rapid approach to deploying airfield systems. Personnel were trained on the equipment and had an established indoctrination into combat operations.

In the early 1990s, after Operation *Desert Storm*, the dispersed controller program ended and the wing-level air traffic control function moved from communication squadrons into the newly created operations support squadrons (OSS). Airfield management joined ATC and formed airfield operations flights within the OSS. Deployable air traffic control functions remained within the combat communications squadrons. Additionally, the 3<sup>rd</sup> and 5<sup>th</sup> Combat Communication Groups each stood-up one additional squadron with air traffic system flights. Accordingly, the ANG took on an increased role in deployable airfield operations. Currently the Guard is responsible for 63 percent of the Air Force's deployable capability.

During Operation *Joint Endeavor* an active duty radar approach control deployed to Tuzla, Bosnia-Herzegovina. This was the first deployment after the Air Force discontinued its dispersed controller program. Without the dispersed controller program, problems had arisen, such as personnel arriving for deployment without the necessary equipment and lacking deployable equipment and combat operations training. In addition to the active duty system, the ANG deployed a radar approach control to Tazsar, Hungary. Benefiting from its peacetime training for such contingencies, the ANG's air traffic control squadron organization provided a smooth, seamless deployment.

## CURRENT OPERATIONS

Operation *Enduring Freedom* brought new challenges to airfield operations. In early October 2001, two austere bases were opened in the Afghan theater. Additionally, the Combined Air Operations Center at Prince Sultan Air Base, Saudi Arabia, was manned with combat airspace managers. The operation evolved to include nine more airfields and two liaison locations. SOF personnel and equipment were among the first forces deployed. Time-compressed adaptive planning, delayed coordination, and the absence of dedicated, tailorable, contingency-response planning contributed to difficulties in supporting the initial bases with follow-on conventional forces. STTs were left in place for extended periods of time, well past established time lines.

Due to antiquated equipment and limited manning, active duty Air Force radar units did not deploy. Additionally, there were problems procuring deployable airfield lighting systems. Air National Guard, Marine Corps, and Army units helped provide the necessary combat support. Active duty Air Force support to *Enduring Freedom* consisted of 16 AO officers, 75 controllers, and 34 airfield managers. The events of 11 September 2001 precipitated this 276 percent increase in airfield operations tasking. The ANG provided an additional 57 personnel and DATCALS to support *Enduring Freedom*. The high demand for this limited personnel asset made adherence to the planned construct of three-month rotations difficult. In fact, many personnel were extended in-place to 135 days and some were deployed for 179 days.

## ENDURING FREEDOM LESSONS LEARNED

As the Air Force's lead agency for airfield operations, Air Force Flight Standards Agency (AFFSA) solicited feedback on airfield operations from participants in Operations *Noble Eagle* and *Enduring Freedom*, collecting over 300 preliminary lessons learned. AFFSA, along with the Task Force *Enduring Look*, hosted a conference from 18 to 20 June 2002 with AO personnel from across the Air Force in attendance. Attendees divided into four working groups: integration, command and

control, austere basing, and deployment and employment. The working groups analyzed lessons learned and organized them into six categories: structure, command and control, deployment and employment, planning, equipment, and training. They consolidated areas of concern and recommended actions. There was widespread agreement on the need for a joint AF/XO/IL working group to further study conference results.

### Working Group Results

*1. Structure.* Multiple spans of control affect AO employment.

- HQ AF/XO and IL have operational control over parts of AO (AF/XO for personnel, AF/IL for equipment and personnel). Disconnects between the two chains hindered the deployment process.
- The lack of cohesion, problems with employment, poor equipment, and inadequate combat training brought to light the need for a better-postured airfield operations capability. The proposed expeditionary airfield operations squadrons (EAOS) could replace current active duty airfield systems flights and provide a "one-stop shop" for deployable airfield operations.
- Terminal Instrument Procedures (TERPS) survey needs were not met in a timely manner. Site surveys for DATCALS were delayed due to unclear command structure.

*2. Command and Control.* The flow of accurate information proved crucial to mission success.

- The Regional Air Movement Control Center (RAMCC) was a crucial part of *Enduring Freedom*, since Afghanistan lacked an operable ATC structure. The RAMCC provided a centralized facility to coordinate and deconflict certain aircraft movements in the region. Using assigned aircraft slot times for high-use airfields to meter the flow of aircraft (civil and military) helped to overcome the lack of an en route air traffic control capability. This advance-scheduling system, combined with limited terminal radar approach control and tower control, increased flight safety in the region. Publication of notices to airmen (NOTAM) was not timely, due to the lack of an established Afghan air

traffic management structure. The U.S. Federal Aviation Administration (FAA) and the International Civil Aeronautical Organization (ICAO) were slow in responding to NOTAM publication requests. Delays resulted in near midair collisions between civil and coalition aircraft and cancellations of civil aircraft over-flight.

3. *Deployment and Employment.* AO personnel and equipment deployment and employment proved cumbersome. Mission success requires an effective, flexible process.

- Force Modules, a quick airfield opening concept that establishes an instrument flight rules (IFR)-capable airfield within 72 hours, promises to be a more effective method to open an airfield.
- The current AEF deployment process is slow and cumbersome in meeting AO requirements. There was a lack of objective evaluation of theater requirements. Non-qualified personnel were deployed, and positions had wrong special experience identifiers in the line remarks. This resulted in confusion and ineffective use of stressed career field personnel assets. This was especially true in the deployment of combat airspace managers. Personnel deployed without specific and proper equipment. Local personnel readiness units deployed members without uniforms, cold weather gear, weapons, and ammunition. Some people deployed without current qualifications in chemical warfare or weapons.
- The current deployment order (DEPOD) process is slow in reacting to changes, and exhibits problems that delay the process of getting the right people and units to the right place.
- DATCALs lacked focused management in part because capabilities and availability were not readily known. There was confusion on the deployment of DATCALs in general and radar systems in particular. These problems, coupled with the unreliable active duty DATCALs equipment, resulted in the delayed opening of IFR-capable airfields and

in no active duty Air Force radar systems deploying.

- Base operating support was not adequate when provided by other Services less familiar with requirements. Basic items and equipment re-supply was lacking, putting personnel and equipment at risk.
- Confusion over TERPS responsibility and publishing authority resulted in delays developing and publishing instrument approach and departure procedures at deployed locations.

4. *Planning.* The initial manning for *Enduring Freedom* did not include AO expertise in strategic planning, reflecting the current operations concept for the air operations center. The lack of a strategic planner with AO expertise and minimal AO emphasis in deliberate and crisis action plans placed the focus on AO only on the margins and compromised flight safety.

5. *Training.* AO personnel lack wartime training, specifically combat airspace management. Understanding airspace control plans and restrictions is key to mission success.

6. *Equipment.*

- Airfield management and air traffic control (ATC) liaison personnel require deployed equipment packages.
- Current DATCALs are not adequate to provide IFR service to all non-USAF aircraft. Air Mobility Command is the only command with a deployable navigational aid usable by civil carriers.
- Deployable airfield lighting systems were difficult to task and didn't always meet with success. There were not enough systems to go around and owning agencies would not release all systems. Some were kept in "reserve" to support possible future needs instead of addressing current, valid requirements. Lack of airfield lighting affects instrument approach minimums and can affect combat capability.
- The lack of focused logistical support made it very difficult to receive equipment and parts in the field (e.g., radios, boots, weapons, and DATCALs parts).

## RECOMMENDATIONS

### *1. Structure.*

Recommend creation of a HQ AF/XO/ IL working group to review airfield operations deployment. The team should review command and control measures over DATCALs to establish clear guidelines and responsibilities for deployment and employment of AO. Additionally, a working group should review site survey and TERPS procedures. This working group might well consider the Air National Guard's current course on site surveys for Air Force-wide use. These working groups are essential to correct many AO concerns.

Create expeditionary airfield operations squadrons (EAOS). Consolidate DATCALs from AMC and ACC's Combat Communications Groups' Airfield Systems Flights into a new squadron structure that provides a focused management of AO equipment and robust Force Module support. EAOS would consist of DATCALs (radar systems, towers and navigational aids) airfield lighting, weather equipment, and a combat-ready pool of deployable airfield operations personnel (airfield manager, air traffic controllers, DATCALs maintainers, civil engineers, airfield support personnel, and weather specialists). Personnel would require specialized training through establishment of a combat skill training course and exercise participation. Most assigned EAOS personnel would be attached to a wing in peacetime. During contingencies, they would return to the EAOS, as required, to establish a squadron to deploy in the Force Module construct. The new squadron structure would provide a fully trained and easily deployable contingency response force. However, the Air Force will still need to validate manpower requirements for maintenance authorizations to sustain AEF rotations of DATCALs.

### *2. Command and Control.*

The Air Force should validate the concept of operations and institutionalize in doctrine the crucial employment of RAMCC. USAF should work with FAA and ICAO to establish a framework for publishing NOTAMs when a nation's air traffic management system is not functioning.

### *3. Deployment and Employment.*

The AEF process for AO deployments in a crisis situation needs immediate attention. AFFSA, together with the major commands and the Aerospace Expeditionary Force Center, should meet to determine ways to improve the current process. The teaming concept, by which major commands allocate their resources into standard deployable UTCs, does not work for AO capabilities. Wing-level airfield operations flights must still maintain a home station mission and support of the National Airspace System during contingencies. The maintenance of a home station mission restricts the total number of UTCs that can deploy from one location. A waiver to deviate from the policy must be submitted each cycle. Allowing a permanent exception to the teaming concept for AO UTCs would improve this system.

An AF/XO/IL working group should review DATCALs management and oversight. An additional group should establish straightforward TERPS and site survey procedures and rules of engagement.

The Office of the Special Assistant for AEF Matters (AF/CC-AEF) has worked closely with functional area managers to establish the force modules concept. Force modules identify the UTC, required capabilities, and a time line to establish a fully operational air base within 72 hours. Continued Air Force support of force module implementation will provide a solid AO framework for greatly improved AO support to combat operations.

### *4. Planning.*

Change CONOPS in the air operations center to add an airfield operations officer as a strategic planner on the C/J-3 staff.

### *5. Training.*

The Air Force needs to emphasize training in relevant combat skills through re-establishment of a combat skills-training course. Increase allocations to Joint Aerospace Command and Control Course (JAC2C). Then, establish an AO specific combat airspace training course as follow-on to JAC2C.

### *6. Equipment.*

Recommend USAF support for the AFFSA-established airfield management UTC. In

coordination with the major commands, AFFSA should determine equipment requirements for liaison personnel. The Air Force should evaluate the requirement for mobile VORTAC [VHF Omnidirectional Range (VOR) equipment combined with a TACAN]. Additionally, rules of engagement and the availability of airfield lighting equipment need review.

## SUMMARY

Employment of airfield operations in support of Operation *Enduring Freedom* was, and continues to be, difficult. The terrorist attacks of 11 September 2001 and subsequent surge operations further exasperated problems in all three stressed AO career fields. Some confusion and inefficiency resulted. Solid doctrine, deployment and employment procedures, and strict adherence will provide the necessary framework to reduce the confusion and enhance mission capability. A review of lessons learned shows a deficiency in critical wartime skills training, a lack of focused DATCALs management, and a deployment system that is inadequate to support AO requirements.

The establishment of AF/XO/IL working groups as directed by the Chief of Staff is the leading candidate to improve AO employment. Working groups would provide the authority, structure, and functional expertise to review and make improvements to airfield operations in a combat environment. Many of the problems that occur, and continue to occur, would be minimized by a thorough review of AO responsibilities, procedures, equipment, and doctrine. A working group should pay particular attention to the expeditionary airfield operations squadron concept. Additionally, the ability of airfield operations to support combat operations effectively would be improved by a review of the AEF tasking process; Air Force emphasis on combat skills, (JAC2C in particular); and a well thought-out implementation of force modules.

## ENDURING LOOK PUBLICATIONS:

- (U) Quick Look #1. *Quick Look Reports: A Primer (U)*, March 2002.
- (U) Quick Look #2 *Combat Support and Expeditionary Basing*. March 2002. (Secret)
- (U) Quick Look #3. *Eyes on the Ground (U)*, June 2002. (Secret)
- (U) Quick Look #4. *Air Mobility's Global Reach (U)*, June 2002. (Secret//NOFORN)
- (U) Quick Look #5. *Coercive Airpower from the Enemy's Perspective: The Collapse of the Taliban (U)*, July 2002. (Secret//NOFORN)
- (U) Quick Look #6. *Mobilization (U)*, August 2002. (Secret)
- (U) Quick Look #7. *Senior Space Leadership and Command and Control (U)*, August 2002. (Secret)
- (U) Quick Look #8. *The Air and Space Expeditionary Force (AEF) (U)*, September 2002.
- (U) Quick Look #9. *Airfield Operations (U)*, October 2002

### TASK FORCE *Enduring Look*

Established in October 2001, Task Force *Enduring Look* (TFEL) captures lessons learned during Operations *Enduring Freedom* and *Noble Eagle*. Additionally, TFEL is responsible for Air Force-wide data collection, exploitation, documentation and reporting on our air campaign against terrorism and efforts to provide humanitarian relief.

*Enduring Look* publications include Fact Sheets, Occasional Papers, and Interim Reports. A Quick Look represents first round analysis of a topical or functional issue that is deemed relevant for immediate distribution to Air Force units engaged in the war.

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