



USAFE - AFAFRICA

Airfield and Infrastructure Support



**OVERALL BRIEFING
CLASSIFICATION:
UNCLASSIFIED**



Overview

- **Introduction**
- **Contingency Airfields**
- **Theater Specific Partnerships**
- **US Air Force Civil Engineer Center**
- **Questions**

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Introduction – 5Ws

- **Who:** Staff, HQ USAFE-AFAFRICA, A4 – Logistics, Engineering, Force Protection Directorate; A4C – Engineer Division, A4CX – Contingency Branch; Rapid Airfield Damage Repair, Agile Combat Employment, and International Engineer Engagements
- **What:** US/Partner Training – To STANAG / US standards / etc; Exercise Integration – NATO / US / ACE || Engineer Civic Action; NATO Engineer Partnership and Integration – KLEs / Conferences
- **When:** Depends on availability of partner nations
- **Where:** Anywhere and everywhere in-theater; shifting focus to Eastern Flank Allies, EST, LTA, LAT, POL, SLO, HUN, ROU, GRC, etc.
- **Why:** Gain hands-on experience with base beddown planning, establishment, recovery, and Airfield Damage Repair (ADR); Build common understanding of respective conditions, capabilities, and limitations; Identify differences/gaps in tactics, techniques, and procedures that affect interoperability (especially regarding ADR); Plan future engagements, exercises, training opportunities to build capacity and enhance interoperability



Contingency Airfields – Preparation and Upgrades

- **An AEF wing, group, squadron or unit may deploy to an austere bare base location that has a runway, taxiways, parking ramp and a source of water that can be made potable.**
- **USAF Civil Engineers are trained and equipped to create “Bare Bases”, given a flat field for a C-130 or C-17 and a source of water**
- **Preparation of contingency airfields is drilled into us from early training and is discussed in our Training, Tactics, and Procedures guidebooks**
- **Initial opening completed by Contingency Response Group engineers, RED HORSE (Heavy Equipment Engineers), Prime BEEF**
- **Upgrades depend on the mission requirements: are your bases strictly expeditionary or enduring?**
- **Upgrading airfields requires outside sources – contractors and Host Nation support**

Chapter 1

INTRODUCTION

1.1. References, Abbreviations, Acronyms and Terms. Related publications, abbreviations, acronyms and terms used in this volume are listed in [Attachment 1](#).

Figure 1.1. Southwest Asia Bare Base Support Facilities.



1.2. Purpose. This volume was developed to provide deployment information, which will allow engineers and logistic planners to plan for, design, establish and sustain Aerospace Expeditionary Force airbases. When used in conjunction with Volume 5 of this series, theater and wing planners, advance echelon (ADVON) team members and deploying units' expeditionary engineers will have the basic tools required to identify and employ consistent standards and expectations across the service components for infrastructure development, security and sustainment support for expeditionary bases. This volume is not intended to provide a definitive design or layout applicable for every type of deployment. Rather, it is intended to provide the planning criteria and background necessary to:

- 1.2.1. Determine what facilities are required to support Air Force and joint service deployments conducted for Aerospace Expeditionary Forces operations.
- 1.2.2. Identify what forces, equipment and resources are required to provide adequate support facilities.
- 1.2.3. Understand the factors that affect transition between initial and temporary standards.
- 1.2.4. Sustain facility operations within conditions that require a range from austere to initial to temporary standard.



Airfield Contingency Repairs

- **Over the last decade, engineers developed robust ADR capes**
 - **Extensive personnel, vehicle and equipment footprint**
 - **Use of special material sourced from US**
 - **Does not move swiftly (80 tractor trailer loads)**
 - **Preferred for well-established bases**
 - **Not acceptable for ACE employment**
- **Limitation of ADR drove the need for a leaner more agile capability**
 - **Development of Expeditionary Airfield Damage Repair (EADR) with PACAF and HHQ**



Set the Theater ADR/EADR Comparison

4FWCR (Airfield Damage Repair)	4FWEA (Expeditionary Airfield Damage Repair)
18 small (8.5-ft) or 2 large (50-ft) craters	40 small (10-ft) or 2 large (50-ft) craters
6.5-hr repair timeline	48-hr repair timeline
Asphalt, concrete, and/or FRP over flowable fill	FRP over crushed stone (indigenous)
3,000 passes of all mission aircraft	100 passes of most mission aircraft (No B-1, C-5, or P-8)
Requires repositioning	C-130 liftable (repositioning preferred)
29 personnel not counting C2	16 personnel not counting C2
21 vehicles (with 33 attachments)	6 vehicles (with 17 attachments)
Inclement weather and spall capabilities (water mitigation for 18 repairs, material for 300 spalls)	Limited inclement weather and spall capabilities (water mitigation for 4 repairs, material for 100 spalls)
Requires augmentation of 2 LRS tractors to haul attachment trailers	Requires preparation time on ground prior to attack (gather backfill materials)
Requires augmentation of batching, FOD, material, and warehouse UTCs to be fully capable	Requires augmentation of FRP (x2) UTC to be fully capable
	Includes Fuel Filtering and Pumping



Set the Theater

ADR

Three Tiers of USAF ADR Capability

Sourcing and planning infrastructure to properly store and maintain ADR assets at each location

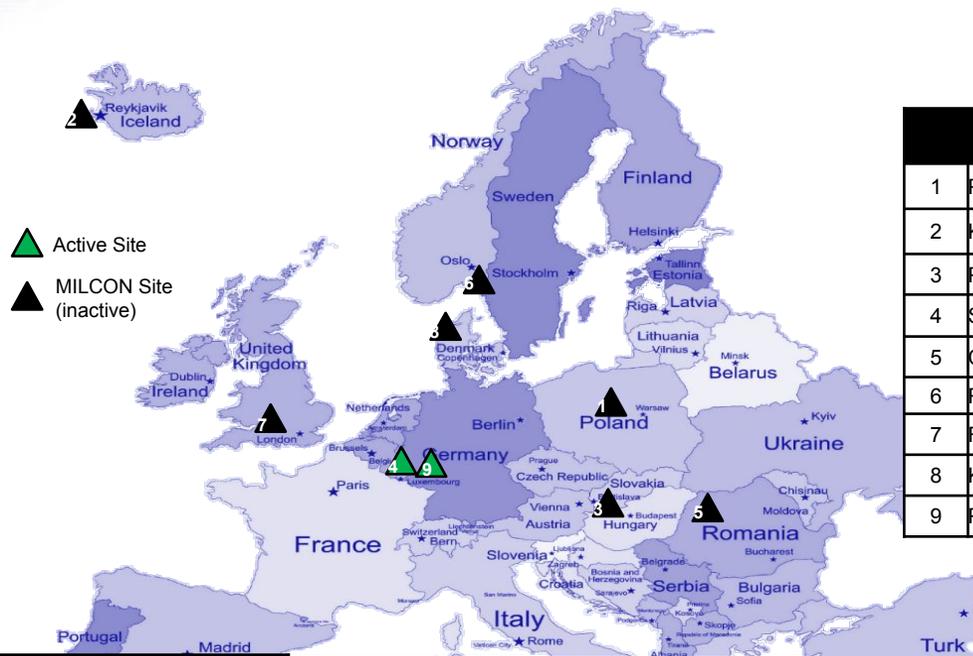
	Main Bases, 8 Locations "RADR"	DABS-FEV, 9 Locations "Small RADR"	ACE, 36 Locations "Expeditionary ADR"
# Kits	Large/Med RADR Kit (Varies by MOB)	Small RADR Kit 17 Kits across 9 Locations	FRP (Fiber Panels) + Min. Equip Prepo at all Hub/Spoke Locations
Capacity	54+ Small Craters or 6+ Large Craters (<7 hr)	18+ Small Craters or 2+ Large Craters (<7 hr)	10' dia: 10 craters / 20' dia: 6 craters 30' dia: 3 craters / 50' dia: 1 crater
Repair Method	Concrete, Asphalt, or FRP over Flowable Fill	Concrete, Asphalt, or FRP over Crushed Stone	FRP Cap over Crushed Stone
Duration	3,000 passes of all aircraft	3,000 passes of all aircraft	100 passes most mission aircraft
Optimal Pax	Large: 247 personnel Medium: 170 personnel	93 personnel	<15 personnel
Equip	Large: 187 Vehicles/Equip Medium: 117 Vehicles/Equip	47 Vehicles/Equip	< 10 Vehicles/Equipment
Additional Capabilities	Spall repair, inclement weather package	Spall repair, inclement weather package	Spall repair, limited inclement weather
LIMFACS	Will not move from MOBs	80 truck loads, 30 days transport	Reliance on HN/contract support for CL IV, vehicles/equip

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Set the Theater Deployable Air Base System

Deployable Air Base System Cost = \$86M



DABS MILCON Site	Planned Kits (17)	Est. Finish	Occupy By	On-Site Mgmt	MOB-GSU Alignment
1 Powidz, Poland	4	2025	2025	GPMS / PPLS	52 FW
2 Keflavik, Iceland	1	2026	2026	GPMS	48 FW
3 Papa, Hungary	1	2025	2026	GPMS	31 FW
4 Sanem, Luxembourg	4	2026	2027	LUX	52 FW
5 Campia Turzii, Romania	2	2025	2025	GPMS	31 FW
6 Rygge, Norway	1	2026	2027	GPMS	48 FW
7 Fairford, England	2	2026	2027	GPMS	501 CSW
8 Karup, Denmark	1	2027	2028	GPMS	52 FW
9 Pirmasens/Husterhohe	1	2030	2030	GPMS	86 AW

% DABS UTCs In-Theater by Site		DABS Capability	
		Equipment Category	
		Basic Expeditionary Airfield Resources	
Sanem	72%	Fuels Support Equipment	
Pirmasens / Husterhohe / Opel	27%	Munitions Support Equipment	
		Rapid Airfield Damage Repair	
Sola / Bodo	1%	Vehicles (General & Special Purpose)	
		Security Forces Equipment	

Each DABS kit supports a squadron of aircraft, up to 550 personnel, & is comprised of 1,557 pallet positions. Nine (9) sites identified for storage

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CAO: 10 Jan 24



4FWEA – EADR (Proposed UTC)

- **4FWEA proposal agreed on by both MAJCOMs & AFCEC, Oct 2023**
- **USAFE requires prepo of a small kit at ACE & alt afd locations**
- **Prepo'd kits will enable flushing of aircraft from damaged afd**
- **Minimum solution package for fixing large craters and spalls**
- **Moved via ground trans**
- **Main users: USAF engineers belonging to an XAB, EABS, CET**
- **Others: Trained Joint Services, Allied military (NATO), or contractor forces**
- **Prepositioning of similar FRP-lite kits already started under “Set The Theater” initiative**
 - **Will transition to this new UTC once approved by HAF**
- **Will drive rework of other ADR aspects (EOD, MOS selection...)**



Theatre Specific Partnerships – AIRCOM and Host Nation Support

- **NATO AIRCOM Overview (from website): Air and Space Power for the Alliance on the European continent is delivered by NATO's Allied Air Command, the single service command for all Alliance air and space matters. It provides Command and Control of NATO's Integrated Air and Missile Defence mission, which incorporates all measures that contribute to the deterrence of any air and missile threat or to reduce or nullify the effectiveness of hostile air action.**
 - **Chairs STANAG conferences including ADR, contingency airfields**
 - **Connects us with MODs, other NATO Ally military officials**
- **Host Nation Support**
 - **Depends on level of interaction our office is able to sustain with various nations**
 - **Involves invitations to observe / train on USAF TTPs**
 - **Also depends on HN availability to host contingency training events for USAF personnel**



Air Force Civil Engineer Center – Material Developments & Requirements

- **AFCEC - responsible for providing responsive, flexible full-spectrum installation engineering services. AFCEC missions include facility investment planning, design and construction, operations support, real property management, energy support, environmental compliance and restoration, and audit assertions, acquisition and program management.**
- **Acts as one of two HQs for Air Force Civil Engineers (other is the Pentagon / HAF/A4C)**
- **Their Readiness Directorate serves as the source for civil engineer research, development and acquisition to the Air Force civil engineer community. Through technical information, guidance and standardized methodology, the directorate enables civil engineers worldwide to execute their expeditionary combat support and emergency services missions safely, effectively and efficiently. The directorate has five divisions: Explosive Ordnance Disposal; Emergency Management; Fire Emergency Services; Expeditionary Engineering; and Requirements, R&D and Acquisition.**



Air Force Civil Engineer Center – EOD

- **Serves as the Air Force Functional Center of Expertise for EOD and is responsible for organizing, training and equipping 1,900 Total Force EOD Airmen at 84 locations worldwide. Provides subject matter expertise, guidance and EOD program management to meet service and Department of Defense objectives. Manages demolition munitions for 17 career fields, service support to Joint EOD Very Important Person Protective Support Activity, force development, modernization efforts for a \$1 billion portfolio, \$300 million, 5-year program for procurement of centrally procured assets, and EOD-specific operational and technical non-directive publications.**



Air Force Civil Engineer Center – Expeditionary Engineering

- The expeditionary engineering division develops total force posturing and wartime planning guidance, as well as relevant training products to ensure Air Force Prime Base Engineer Emergency Force, or Prime BEEF, and RED HORSE personnel possess the capabilities to execute global expeditionary engineering contingency missions. The division serves as the focal point for expeditionary engineering operational and tactical functional issues and concerns, and assists in civil engineering research, development, and acquisition processes. It also oversees the distribution of newly fielded equipment and specialized systems.



Air Force Civil Engineer Center – Requirements, R&D, and Acquisition

- **The civil engineer requirements, research & development, and acquisition division supports all phases of the civil engineer research, development and acquisition process for the CE enterprise. It plans and executes programs for research, developing and acquiring systems, equipment and technology to fulfill civil engineering needs for in-garrison, expeditionary and contingency installations and air bases. The division also is responsible for the Air Force Contract Augmentation Program, which provides the full spectrum of civil engineer capabilities and logistics support, sustainment and maintenance of deployed forces and can rapidly deliver materials, services and construction for contingencies, disasters and international conflicts.**



Air Force Civil Engineer Center – Emergency Management

- **The emergency management division manages and oversees the Air Force's Installation Protection and Emergency Management programs enabling Airmen to effectively prepare for, respond to and recover from emergencies. The division includes the Air Force Chemical, Biological, Radiological and Nuclear program subject matter experts, evaluates emergency management personnel, strategic and tactical training, and manages enlisted and civilian career path requirements. The division develops guidance, manages manpower and determines training and equipment needs. The division also works sustainment efforts and provides technical guidance and reach-back support.**



Air Force Civil Engineer Center – Fire Emergency Services

- The fire emergency services division establishes technical and administrative policy guidance for fire emergency services operations, fire prevention, and command and control. The division develops training curriculum and designs tactics, techniques and procedures for Air Force firefighters. The division also provides direction and input for manpower, centrally procures firefighting equipment and vehicles, develops training courses and manages the certification program used by all Department of Defense firefighters and other emergency responders.



Air Force Civil Engineer Center Technology Developments

- **Can't discuss technology in this conference, much is still in development and close-held at the HQ level**
- **Our team at HQ USAFE can put you in contact with AFCEC representatives**
- **Encourage nations to request training/observer slots during training events**



Questions?

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