

Training and Evaluation Outline Report

Status: Approved

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Task Number: 05-CO-0037

Task Title: Conduct Air Base Damage Repair (ADR) Operations

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the Fort Leonard Wood, MO foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	ATP 5-19 (Change 001 09/08/2014 78 Pages)	RISK MANAGEMENT http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf	Yes	No
	TC 5-340	Air Base Damage Repair (Pavement Repair).	Yes	Yes

Conditions: The Company conducts ADR operations to assist the United States Air Force (USAF) in emergency repair and/or beyond emergency repair of a war-damaged air base.

Note: The Commander must still determine at what level of training they would want the element to perform. Crawl, walk or run. This can only be determined after consideration as to the units training level.

The Commander prior to evaluating an element in the conduct of the task must determine if it will be conducted in a Live, Virtual, or Constructive environment, additionally it must also be determined which condition as described below that the element will conduct the task. The selection made for this task is at a trained level of proficiency. The commander must determine which of the environments below will best suit the unit and the proficiency level at which the unit is. When conducting crawl or walk level training units should not increase the intensity until the unit has achieved the standards and then unit trainers should include variables that increase proficiency in all conditions.

Note: The condition statement for this task is written assuming the highest training conditions reflected on the Task Proficiency matrix required for the evaluated unit to receive a "fully trained" (T) rating.

Note: Condition terms definitions:

Dynamic Operational Environment: Three or more operational and two or more mission variables change during the execution of the assessed task. Operational variables and threat Tactics, Techniques, and Procedures (TTPs) for assigned counter-tasks change in response to the execution of Blue Forces (BLUFOR) tasks.

Complex Operational Environment: Changes to four or more operational variables impact the chosen friendly COA/mission. Brigade and higher units require all eight operational variables of Political, Military, Economic, Social, Infrastructure, Information, Physical environment, and Time (PMESII-PT) to be replicated in varying degrees based on the task being trained.

Single threat: Regular, irregular, criminal or terrorist forces are present.

Hybrid threat: Diverse and dynamic combination of regular forces, irregular forces, and/or criminal elements all unified to achieve mutually benefiting effects.

This task should not be trained in MOPP 4.

Standards: The Company conducts ADR operations under the control of and in the priority established by the air base commander. The quality of repairs conforms to the standards established by the air base commander. The air base is restored to operational capability.

Note: Leaders are defined as the Commander, Executive Officer, First Sergeant, Operations Sergeant, Platoon Leaders, Platoon Sergeants, Squad Leaders, and Team Leaders.

Live Fire Required: No

Objective Task Evaluation Criteria Matrix:

Plan and Prepare		Execute					Assess		
Operational Environment	Training Environment (LV/C)	Training/Authorized	% of Leaders Present at	% of Soldiers Present at	External Eval	% Performance Measures 'GO'	% Critical Performance Measures 'GO'	% Leader Performance Measures 'GO'	Task Assessment
CO & BN									
Dynamic and Complex (4+ OE Variables and Hybrid Threat)	Night	>=85%		>=80%	Yes	>=91%	All	>=90%	T
	Day	75-84%				80-90%		80-89%	T-
Dynamic (Single Threat)	Night	65-74%	75-79%		No	65-79%			P
	Day	60-64%	60-74%			51-64%	<All	<=79%	P-
Static (Single Threat)	Day	<=59%	<=59%			<=50%			U

Remarks: None

Notes: None

Safety Risk: Medium

Task Statements

Cue: None

DANGER

Leaders have an inherent responsibility to conduct Risk Management to ensure the safety of all Soldiers and promote mission accomplishment.

WARNING

Risk management is the Army's primary decision-making process to identify hazards, reduce risk, and prevent both accidental and tactical loss. All Soldiers have the responsibility to learn and understand the risks associated with this task.

CAUTION

Identifying hazards and controlling risks across the full spectrum of Army functions, operations and activities is the responsibility of all Soldiers.

Performance Steps and Measures

NOTE: Assess task proficiency using the task evaluation criteria matrix.

NOTE: Asterisks (*) indicate leader steps; plus signs (+) indicate critical steps.

STEP/MEASURE	GO	NO-GO	N/A
+* 1. The company commander directs the repair and restoration of a war-damaged air base.			
* a. Establishes a liaison with the Damage Control Center (DCC) and stations an operator with a radio at the DCC.			
* b. Incorporates Host Nation (HN) and other military support, as appropriate.			
+* c. Verifies that the plans and specifications are correct and obtains USAF concurrence.			
+* d. Ensures that the company executes the ADR operation based on the priorities set by Higher Headquarters (HQ) and the air base commanders.			
+ 2. The company provides assistance (within their capabilities) to the USAF ordnance experts, as needed, when clearing Unexploded Ordnance (UXO).			
Note: Explosive ordnance disposal (EOD) personnel may be required to render UXOs safe for disposal.			
+ a. Assists in any phase of the procedure, such as identifying, reporting, marking, demolishing, and/or recovering and disposing of UXO.			
+ b. Waits until UXO are rendered safe by EOD personnel before handling, unless United States Army and USAF commanders jointly agreed and authorized it.			
+ 3. The company conducts emergency repairs of paved surfaces, based on the priorities set by HQ and air base commanders.			
+ a. Implements Quality Control (QC) measures to ensure that repairs meet emergency repair criteria.			
+ b. Removes debris after selecting the Minimum Operating Strip (MOS) and removing UXO.			
+ c. Removes all pavement exceeding surface roughness criteria as determined by the Base Civil Engineer (BCE).			
+ d. Conducts MOS crater repair, using sand-grid repair procedures.			
+ e. Completes MOS repairs within the first 4 hours after an enemy attack.			
+ f. Ensures that final MOS repairs meet specifications and are accepted by the air base commander.			
+ 4. The company conducts beyond emergency repair of paved surfaces, based on the priorities set by HQ and air base commanders.			
+ a. Upgrades emergency repairs for increased aircraft traffic.			
+ b. Begins beyond emergency repairs not later than 12 to 20 hours after emergency repairs are completed.			
+ c. Implements QC measures to ensure that repairs meet beyond emergency repair criteria.			
+ d. Removes pavement that exceeds the surface roughness criteria.			
+ e. Conducts beyond emergency repairs using a concrete cap.			
+ f. Conducts beyond emergency repairs using stone and grout as prescribed in required references.			
+ g. Conducts small repairs as prescribed in required references.			
+ h. Repairs access routes from aircraft shelters or parking areas to the MOS.			
(1) Restores and maintains the access route to the specified width required for fighter aircraft.			
(2) Ensures that the access route is a smooth surface free of debris.			
(3) Uses matting as an expedient to maintain and repair the access route, if appropriate.			
(4) Widens the access route to the specified width when the air base is upgraded to accept large aircraft.			
+ i. Ensures that final repairs meet the specifications required and are accepted by the air base commander.			
+ 5. The company conducts beyond emergency repairs of structures and utilities and assists USAF personnel in the emergency repair effort.			
+ a. Provides personnel and assets to assist the USAF in the repair of minimum-essential facilities, as required.			
+ b. Marks the usable runway surface.			
(1) Paints new markings on the MOS. Marks the runway centerline as a broken line and uses edge markers to delineate the boundaries of the MOS.			
(2) Eliminates any existing markings that could cause confusion.			
+ c. Assists the Air Force in repairing/restoring damaged runway lighting and power distribution systems when the organic capabilities of the Air Force engineering forces are exceeded.			
+ d. Assists the Air Force, as required, in Navigational Aids (NAVAIDS) structure repair and site clearing.			
+ e. Conducts expedient repairs of interior wiring.			
(1) Uses undamaged wire to the maximum extent possible.			
(2) Bypasses damaged areas to complete vital circuits.			
(3) Ensures that temporary wiring is functional and away from heavy traffic.			
Note: It is not necessary for the temporary wiring to have a finished appearance.			
+ f. Conducts expedient repair of water system damage.			

(1) Restores connections to the original source through bypass or repair operations, if damage is not too extensive.			
(2) Develops alternative sources as specified, if the existing source of water can not be restored.			
(3) Restores water treatment capabilities by repairing the existing treatment plant or installing portable water treatment units.			
(4) Repairs leaks and ruptures to water storage facilities or established water storage alternatives.			
(5) Repairs the water distribution system.			
+ g. Assists the Air Force in repairing gas systems, if required.			
+ h. Assists Air Force personnel in repairing damaged heating systems, if required.			
+ i. Repairs damage to existing sewer systems and/or provides temporary sanitation facilities.			
* 6. The company commander submits status reports according to the unit Standing Operating Procedure (SOP) and/or the airfield damage repair plan.			

TASK PERFORMANCE / EVALUATION SUMMARY BLOCK							
ITERATION	1	2	3	4	5	M	TOTAL
TOTAL PERFORMANCE MEASURES EVALUATED							
TOTAL PERFORMANCE MEASURES GO							
TRAINING STATUS GO/NO-GO							

ITERATION: 1 2 3 4 5 M

COMMANDER/LEADER ASSESSMENT: T P U

Mission(s) supported: None

MOPP 4: Never

MOPP 4 Statement: None

NVG: Never

NVG Statement: None

Prerequisite Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
	05-BDE-0029	Provide Engineer Support for Area Damage Control(ADC)	05 - Engineers (Collective)	Approved
	05-CO-0007	Prepare an Operation Order (OPORD)	05 - Engineers (Collective)	Approved
	05-CO-0735	Provide Engineer Support to Area Damage Control (ADC) Operations	05 - Engineers (Collective)	Approved

Supporting Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
	05-BDE-0029	Provide Engineer Support for Area Damage Control(ADC)	05 - Engineers (Collective)	Approved
	05-BN-0045	Control Airfield Damage Repair (ADR) Operations	05 - Engineers (Collective)	Approved
	05-BN-0732	Prepare an Air Base Damage Repair Estimate	05 - Engineers (Collective)	Approved
	05-CO-0735	Provide Engineer Support to Area Damage Control (ADC) Operations	05 - Engineers (Collective)	Approved
	71-CO-5100	Conduct Troop Leading Procedures for Companies	71 - Combined Arms (Collective)	Approved
6.	05-CO-0018	Conduct Report Procedures	05 - Engineers (Collective)	Approved

OPFOR Task(s):

Task Number	Title	Status
71-CO-8510	OPFOR Disrupt	Approved

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
	052-12N-1004	Interpret Construction Survey Stakes	052 - Engineer (Individual)	Approved
	052-210-1222	Manage Preliminary Site Survey (Topographical/Radial Survey)	052 - Engineer (Individual)	Approved
	052-210-1249	Manage an Airfield Obstruction Survey	052 - Engineer (Individual)	Approved
	052-210-4008	Support the Development of Force Protection	052 - Engineer (Individual)	Approved
	052-236-1141	Construct a Floor System	052 - Engineer (Individual)	Approved
	052-236-1146	Construct a Masonry Wall	052 - Engineer (Individual)	Approved
	052-236-1147	Perform Maintenance on Carpentry/Masonry Tools	052 - Engineer (Individual)	Approved
	052-236-1162	Install Batter Boards	052 - Engineer (Individual)	Approved
	052-236-1163	Construct a Concrete-Wall Form	052 - Engineer (Individual)	Approved
	052-236-1164	Construct a Column Form	052 - Engineer (Individual)	Approved
	052-236-1165	Construct an Overhead Form	052 - Engineer (Individual)	Approved
	052-236-1166	Construct a Concrete-Slab Form	052 - Engineer (Individual)	Approved
	052-236-1168	Place Concrete	052 - Engineer (Individual)	Approved
	052-236-1172	Apply Roof Coverings	052 - Engineer (Individual)	Approved
	052-236-1183	Prepare a Materials Take-Off List	052 - Engineer (Individual)	Approved
	052-236-1201	Install Exterior Finish	052 - Engineer (Individual)	Approved
	052-236-1202	Interpret Construction Drawings and Prints	052 - Engineer (Individual)	Approved
	052-236-1203	Construct a Wall System	052 - Engineer (Individual)	Approved
	052-236-2109	Install Doors and Windows	052 - Engineer (Individual)	Approved
	052-239-3001	Prepare a Bill of Materials	052 - Engineer (Individual)	Approved
	052-239-3030	Read Construction Prints	052 - Engineer (Individual)	Approved
	052-239-3031	Annotate Construction Print Indicating "As-Builts"	052 - Engineer (Individual)	Approved
	052-239-3033	Supervise a Building Layout	052 - Engineer (Individual)	Approved
	052-239-3035	Supervise the Construction of Wood Frame Structures	052 - Engineer (Individual)	Approved
	052-239-3039	Supervise the Construction of Concrete Forms and Structures	052 - Engineer (Individual)	Approved
	052-239-3040	Supervise the Construction of Masonry Structures	052 - Engineer (Individual)	Approved
	052-239-3104	Supervise Repair of Concrete Structures	052 - Engineer (Individual)	Approved
	052-239-3107	Supervise the Erection of Pre-Engineered Buildings	052 - Engineer (Individual)	Approved
	052-243-3029	Design Concrete Mix	052 - Engineer (Individual)	Approved
	052-252-3055	Direct Employment of an M5 Concrete Mobile Mixer	052 - Engineer (Individual)	Approved
	052-253-1049	Roll Material With a 9-Wheel, Self-Propelled Roller	052 - Engineer (Individual)	Approved
	052-253-1206	Backfill an Area Using a Small-Emplacement Excavator (SEE)	052 - Engineer (Individual)	Approved
	052-254-1042	Level Fill Material in a Fill Area With the Angle Blade of a Crawler Tractor	052 - Engineer (Individual)	Approved
	052-256-3041	Direct Soils Stabilization Operations	052 - Engineer (Individual)	Approved
	052-256-3042	Direct Drainage Operations	052 - Engineer (Individual)	Approved
	052-256-3043	Direct Crawler Tractor Operations	052 - Engineer (Individual)	Approved
	052-256-3044	Direct Motorized Scraper Operations	052 - Engineer (Individual)	Approved
	052-256-3045	Direct Motor Grader Operations	052 - Engineer (Individual)	Approved
	052-256-3046	Direct Compaction Operations	052 - Engineer (Individual)	Approved
	052-256-3047	Direct Scoop Loader Operations	052 - Engineer (Individual)	Approved
	052-256-3048	Direct Utility Tractor Operations	052 - Engineer (Individual)	Approved
	052-256-3052	Interpret a Critical Path Method (CPM)	052 - Engineer (Individual)	Approved
	052-256-3054	Direct Runway/Bomb Crater Repairs	052 - Engineer (Individual)	Approved
	052-256-3055	Direct the Construction of a Helipad	052 - Engineer (Individual)	Approved
	052-256-3065	Direct Equipment Operations Using the Laserplane Leveling System	052 - Engineer (Individual)	Approved
	052-256-4143	Schedule Work in a Construction Project	052 - Engineer (Individual)	Approved
	052-304-7106	Direct the Construction of Combat Roads and Trails	052 - Engineer (Individual)	Approved
	052-304-7109	Direct Airfield Damage Repair	052 - Engineer (Individual)	Approved

Supporting Drill(s): None

Supported AUTL/UJTL Task(s):

Task ID	Title
ART 4.1.7.1	Develop Infrastructure

TADSS

TADSS ID	Title	Product Type	Quantity
No TADSS specified			

Equipment (LIN)

LIN	Nomenclature	Qty
T65342	Truck Dump 10 Top wo/Winch	1
E61618	Compactor High Speed: Tamping Self-Propelled (CCE)	1
T05015	Tractor Full Tracked Low Speed: T9	1
T05016	Tractor, Full Tracked: Low Speed - T9 Type II with Ripper	1
T60946	Truck Tractor: (LET)	1
D17191	Instrument Set Reconnaissance and Surveying: AN/TKQ-5	1
E03826	Electronic Test Set: TS-4348/UV	1
S70594	STLR LB 40T 6W M870A3	1
E27792	EXC MULTI CRAWL W/AOA	1
L77147	Loader Skid Steer: Type II	1
H53576	High Mobility Eng Excavator (HMEE): Type I	1
M05001	Motorized Grader	1
S05029	Scraper Earthmoving: 14-18 Cubic Yard	1
E05007	Engineer Mission Module-Water Distribution (EMM-WD): Type II	1
R11127	ROLLER MOTORIZED W/AOA	1
R68044	Radio Set: AN/VRC-90F(C)	1
R68146	Radio Set: AN/VRC-91F(C)	1
E05008	Encryption-Decryption Equipment: KGV-72	1
C05036	Computer Set Digital (JBC-P): AN/UYK-128B(V)3	1
C05002	Computer System Digital: AN/PYQ-10(C)	1

Materiel Items (NSN)

NSN	LIN	Title	Qty
No materiel items specified			

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card. .

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. .