

Training and Evaluation Outline Report

Status: Approved

10 Dec 2014

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Task Number: 05-PLT-5506

Task Title: Maintain Underwater Structures

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
	NTRP 4-04.2.8	Conventional Underwater Construction and Repair Techniques	Yes	Yes
	NTRP 4-04.2.9	Expedient Underwater Construction and Repair Techniques	Yes	No
	TM 3-34.72	PILE CONSTRUCTION (https://armypubs.us.army.mil/doctrine/DR_pubs/dr_b/pdf/tm3_34x72.pdf)	Yes	No
	TM 3-34.73	PORT CONSTRUCTION AND REPAIR	Yes	No

Conditions: The element receives an Operation Order (OPORD) directing it to maintain existing underwater structures. All personnel and equipment assigned by Table of Organization and Equipment (TOE) are available. Additionally, the element is given a structures reconnaissance or inspection report. Work site security is provided by the supported unit.

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 element performs maintenance on the underwater structures In Accordance With (IAW) instructions in the OPORD to prevent damages requiring major repairs not later than the time specified in the order.

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 (LW/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
SQD & PLT								
Dynamic (Single Threat)	IAW unit CATS statement:	>=85%		Yes	>=91%	All	>=90%	T
Static (Single Threat)		75-84%	>=80%		80-90%		80-89%	T-
		65-74%	75-79%	65-79%		P		
		60-64%	60-74%	51-64%	<All	<=79%	P-	
		<=59%	<=59%	<=50%			U	

Remarks: None

Notes: All required references and technical manuals will be provided by the local command.

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 element leader conducts Troop Leading Procedures (TLP).			
+* a. Determines the structure's critical maintenance points from as-built drawings and/or existing maintenance records.			
* b. Obtains additional information about the underwater conditions and structures from on site personnel or agencies if needed.			
+* c. Identifies and requests through Higher Headquarters (HQ) any construction equipment or material not organic to the element but required to perform maintenance on the underwater structure.			
+* d. Plans the mission and completes the Operation Plan (OPLAN).			
* e. Develops the work site safety plan.			
(1) Appoints a work site safety Noncommissioned Officer (NCO).			
(2) Produces a risk assessment matrix.			
* f. Briefs the dive team.			
+* g. Inspects personnel and equipment.			
+ 2. The element performs maintenance on the structures.			
+ a. Inspects structures before beginning maintenance.			
+ b. Removes marine growth from structures.			
+ c. Replaces severely corroded zinc/sacrificial anodes on steel structures.			
+ d. Coats steel or concrete surfaces with an underwater grade epoxy as required.			
e. Makes minor repairs not requiring materials or time outside the scope of the mission, such as tightening or replacing readily available hardware items.			
f. Notes repairs that must be made, but will require additional materials, tools, and time.			
+* 3. The element leader supervises the element during maintenance operations.			
* a. Monitors safety of the work site.			
* b. Directs maintenance of critical areas.			
+* c. Records maintenance performed and updates maintenance records of structures.			
+ 4. The element performs recovery operations.			
+ a. Performs Preventive Maintenance Checks and Services (PMCS) on diving equipment and tools.			
b. Inventories and stores diving equipment and tools In Accordance With (IAW) unit Standing Operating Procedure (SOP).			
* 5. The element leader conducts an After Action Review (AAR).			
+* 6. The element leader submits reports and forwards maintenance status reports and recommendations for further repairs to Higher Headquarters (HQ) IAW with unit SOP.			

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): None

Supporting Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
1.	71-CO-5100	Conduct Troop Leading Procedures for Companies	71 - Combined Arms (Collective)	Approved
2.	05-PLT-5507	Perform Surface-Supplied Diving Operations	05 - Engineers (Collective)	Approved
2.	05-PLT-5509	Perform Self-Contained Underwater Breathing Apparatus (Scuba) Operations	05 - Engineers (Collective)	Approved
6.	05-CO-0018	Conduct Report Procedures	05 - Engineers (Collective)	Approved

OPFOR Task(s):

Task Number	Title	Status
71-2-9010	OPFOR Disrupt (Company and below)	Approved

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
	052-12D-1701	Rescue a Diving Casualty Underwater	052 - Engineer (Individual)	Approved
	052-238-1605	Set Up Arc Welding Equipment for Underwater Use	052 - Engineer (Individual)	Approved
	052-238-1606	Set Up Oxygen Arc-Cutting Equipment for Underwater Use	052 - Engineer (Individual)	Approved
	052-238-1626	Perform Underwater Weight-Handling Techniques	052 - Engineer (Individual)	Approved
	052-238-1630	Operate Arc Welding Equipment Underwater	052 - Engineer (Individual)	Approved
	052-238-1631	Operate Oxygen Arc-Cutting Equipment Underwater	052 - Engineer (Individual)	Approved
	052-238-1632	Operate a Hydraulic Power Unit	052 - Engineer (Individual)	Approved
	052-238-1633	Operate Hydraulic Tools Underwater	052 - Engineer (Individual)	Approved
	052-238-1639	Chart a Dive	052 - Engineer (Individual)	Approved
	052-238-1640	Operate a Diving Console	052 - Engineer (Individual)	Approved
	052-238-1645	Charge an Air System	052 - Engineer (Individual)	Approved
	052-238-2511	Direct the Setup of a Scuba Station	052 - Engineer (Individual)	Approved
	052-238-2512	Direct the Setup of a Surface-Supplied Dive Station	052 - Engineer (Individual)	Approved
	052-238-3411	Conduct a Pre-dive Briefing of a Surface-Supplied Dive Station	052 - Engineer (Individual)	Approved
	052-238-3412	Select a Decompression Method	052 - Engineer (Individual)	Approved
	052-238-3413	Supervise a Scuba Dive Station	052 - Engineer (Individual)	Approved
	052-238-3414	Supervise a Surface-Supplied Dive Station	052 - Engineer (Individual)	Approved
	052-238-3416	Calculate Breathing Gas Requirements to Support Diving Operations	052 - Engineer (Individual)	Approved
	052-238-3431	Conduct a Pre-dive Briefing of a Scuba Dive Station	052 - Engineer (Individual)	Approved
	052-238-4508	Prepare a Diving-Mission Operation Order (OPORD)	052 - Engineer (Individual)	Approved

Supporting Drill(s): None

Supported AUTL/UJTL Task(s):

Task ID	Title
ART 1.6.4	Provide Diver Support

TADSS

TADSS ID	Title	Product Type	Quantity
No TADSS specified			

Equipment (LIN)

LIN	Nomenclature	Qty
D32859	DIV EQ ST DIV SUP A	1
D49154	DIV EQ ST IND SWMMR	1
D32927	DIV EQ ST DIV SUP B	1
D32723	DIV EQ ST OPEN CIR	1
92018N	Cylinder Scuba Tanks, 3500 Psi 80-102 Cu Ft	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. .