Training and Evaluation Outline Report

Status: Approved 03 Feb 2021 Effective Date: 03 Feb 2021

Task Number: 05-PLT-5302

Task Title: Excavate a Pipeline Trench

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 MSCoE 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	Source Information
	ATP 3-34.40	General Engineering (http://armypubs.army.mil/doctrine/DR_pubs /dr_a/pdf/atp3_34x40.pdf)	Yes	No	
	ATP 4-43	Petroleum Supply Operations	Yes	No	
	ATP 5-19	RISK MANAGEMENT, with change 1 dated 8 Sep 2014	Yes	No	
	TM 3-34.70	Plumbing, Pipe Fitting, and Sewerage	Yes	Yes	

Conditions: The element receives a construction directive to excavate a pipeline trench. An engineer reconnaissance report containing specific information and critical path method (CPM) are available from the Operations and Training Officer (US Army) (S3). Respective intelligence information isavailable from the Intelligence Officer (US Army) (S2). All necessary personnel and equipment are available. Work site security is provided.

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 excavates a pipeline trench in accordance with plans, specifications, unit TACSOP, and the construction directive within the allotted time of the directive.

Note: Leaders are defined as the Platoon Leaders, Platoon Sergeants, Squad Leaders, and Team Leaders.

Objective Task Evaluation Criteria Matrix:

Plan	an	d Prepare		Ex	ec	ute			Ass	ess	
Operation Environme SQD & PLT	al nt	Training Environment (L/V/C)	Leaders Present at Training/Required	Present at Training/Required	External Eval	Performance Measures	Critical Performance Measures	Leader Performance Measures	Evaluator's Observed Task Proficiency Rating	Commander's Assessment	
Dynamic		IAW unit CATS statement.	>=85%	. 90%	Ye	>=91%		>=90%	>=90%	Rating P-	т
(Single Threat)			75-84%	>=00%	S	80- 90%	All	80- 89%	T-	T-	
Static (Single Threat)	Day		65-74%	75-79%		65- 79%			Р	Ρ	
			60-64%	60-74%	No	51- 64%		700/	P-	P-	
			<=59%	<=59%	<=59% <=50% <ali <="79%</td"><td><=79%</td><td>U</td><td>U</td></ali>	<=79%	U	U			

Remarks: None

Notes: None

Safety Risk: Low

Task Statements

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 leaders perform troop-leading procedures.			
a. Conducts preliminary construction planning.			
b. Requests augmentation support if required.			
+* 2. The element leader submits a request for changes according to the unit standing operating procedure (SOP) if the construction plans or specifications are incorrect or can be improve.			
+ 3. The element establishes work site security.			
+ 4. The element establishes the work site.			
a. Coordinates with unit providing work site security.			
b. Ensures that materials are off-loaded, identified, inventoried, and stored in a predetermined location.			
c. Identifies equipment location, parking, and break areas.			
d. Camouflages vehicles and equipment at the work site in accordance with the tactical scenario.			
+ 5. The element prepares the pipeline right-of-way as specified in the construction directive.			
+ a. Locates pipe line trace obstacles requiring special treatment, such as underground utilities, communications lines, drain ditches, irrigation canals, and other water courses.			
+ b. Marks the trace.			
+ c. Clears the pipeline right-of-way.			
+ 6. The element excavates a trench for the pipeline.			
a. Determines the method of excavation.			
+ b. Excavates the trench to the required depth.			
+ c. Ensures the minimum clearance with underground structures.			
Note: The clearance with underground structures is 4 inches and 12 inches for metallic structures.			
+ d. Ensures trench provides a smooth supporting surface for the pipe.			
+ e. Fills in rough spots or irregularities in the bottom of the trench with loose material.			
+ f. Ensures finished trench is free of clods, rocks, tree roots, and other debris and hard objects that could damage the pipe.			
+ 7. The element leader supervises the pipeline trench excavation.			
a. Monitors safety.			
+ b. Ensures adherence to the construction plans and directive.			
c. Manages personnel and equipment utilization at the work site.			
+ d. Maintains the critical path method (CPM) and makes adjustments as necessary.			
e. Submits status reports to higher headquarters (HQ) in accordance with unit's standing operating procedures (SOP).			

Task Performance Summary Block									
Trainin	g Unit	ITERATION							
			1		2	;	3		1
Date of Training	per Iteration:								
Day or Nigh	t Training:	Day /	Night	Day /	/ Night	Day /	Night	Day /	Night
		#	%	#	%	#	%	#	%
Total Leaders Authorized	% Leaders Present								
Total Soldiers Authorized	% Soldiers Present								
Total Number of Performance Measures	% Performance Measures 'GO'								
Total Number of Critical Performance Measures	% Critical Performance Measures 'GO'								
Live Fire, Total Number of Critical Performance Measures	% Critical Performance Measures 'GO'								
Total Number of Leader Performance Measures	% Leader Performance Measures 'GO'								
MOPP LEVEL									
Evaluated Ratin T, T-, P	g per Iteration 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-CO-5250	Perform Construction Operations	05 - Engineers (Collective)	Approved

Supporting Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
1.	71-CO-5100	Conduct Troop Leading Procedures	71 - Mission Command (Collective)	Approved
3.	05-PLT-3006	Establish Work Site Security for a General Engineering Mission	05 - Engineers (Collective)	Approved
5.	05-PLT-5116	Provide Excavation Support	05 - Engineers (Collective)	Approved
7.	05-CO-0018	Conduct Report Procedures	05 - Engineers (Collective)	Approved

OPFOR Task(s):

Task Number	Title	Status
71-CO-8502	OPFOR Execute an Ambush	Approved
71-CO-8504	OPFOR Execute a Reconnaissance Attack	Approved

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
	052-120-5100	Develop Base Camp Master Plan	052 - Engineer (Individual)	Approved
	052-120-5107	Plan the Construction of Utility Systems for Non- Permanent Structures	052 - Engineer (Individual)	Approved
	052-120-5111	Develop Project Design Utilizing Standard Capability Tools	052 - Engineer (Individual)	Approved
	052-12T-3300	Prepare a Preliminary Construction Site Analysis	052 - Engineer (Individual)	Approved
	052-239-3036	Supervise the Installation of Pipelines	052 - Engineer (Individual)	Approved
	052-253-1203	Excavate an Area Using a Small-Emplacement Excavator (SEE)	052 - Engineer (Individual)	Approved
	052-255-1166	Perform Ditching Operations With a Hydraulic Excavator	052 - Engineer (Individual)	Approved
	052-256-3020	Interpret a Construction Print	052 - Engineer (Individual)	Approved

Supporting Drill(s): None

Supported AUTL/UJTL Task(s):

Task ID	Title
ART 4.1.7.2.6	Construct Petroleum Distribution Systems

TADSS

TADSS ID	Title	Product Type	Quantity
No TADSS specified			

Equipment (LIN)

LIN	Nomenclature	Qty
No equipment specified		

Materiel Items (NSN)

NSN	LIN	Title	Qty
5120-00-293-3330		Shovel, Hand, 46 Inch Wood Handle, Square Point Open Back Blade, Size 2	1
2420-01-160-2754	T34437	Tractor Wheeled: Diesel 4x4 with Excavator and Front Loader	1
5120-00-222-4505		Shovel, Hand, 37 Inches Long, D-Style Fiberglass Handle, Round Point Open Back Non-Sparking, Non-Magnetic Blade	1

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 current Risk Management Doctrine. 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 current CBRN doctrine.