# **Training and Evaluation Outline Report**

#### Status: Approved 30 Mar 2021 Effective Date: 30 Mar 2021

Task Number: 05-PLT-5309

Task Title: Repair a Pipeline

# **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	Yes	
	ATP 5-19	RISK MANAGEMENT, with change 1 dated 8 Sep 2014	Yes	No	
	TM 3-34.70	Plumbing, Pipe Fitting, and Sewerage	Yes	No	

**Conditions:** The element is directed to repair a coupled pipeline in a secured area. A Tactical Operating Procedure (TACSOP), order, technical specifications, unit SOP or directive has been provided with information on all necessary personnel, tools and equipment that are available. The supported unit has personnel available to assist with shutting down and restarting pumping stations. A fire and emergency services (F&ES) team is available to accompany the element to the repair site.

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:** Standards: The element repairs the pipe in accordance with the TACSOP, order, technical specifications, unit SOP or directive; not later than the time specified in the directive.

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

Live Fire: No

### **Objective Task Evaluation Criteria Matrix:**

Plan	an	d Prepare		Ex	ec	ute			Ass	ess
Operationa 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 (Single Threat)	Dynamic		>=85%	>=80%		>=91%		>=90%	т	т
Threat)		ΙΑΝ	75-84%	>=80%	8	80- 90%	All	80- 89%	T-	T-
	Day	IAW unit CATS statement	65-74%	75-79%		65- 79%		89%	Ρ	Ρ
Static (Single Threat)		ant.	60-64%	60-74%	No	51- 64%		700/	P-	Р-
			<=59%	<=59%		<=50%	<all< td=""><td>&lt;=79%</td><td>U</td><td>U</td></all<>	<=79%	U	U

Remarks: None

Notes: None

Safety Risk: Low

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.			
a. Conducts preliminary planning.			
+ b. Requests F&ES team support.			
+* 2. The element leader conducts detailed project planning.			
a. Conducts a site visit if conditions allow.			
b. Selects required tools and equipment for the project.			
3. The element establishes work site security.			
+ 4. The element occupies the work site.			
a. Parks vehicles a safe distance from the site of the leak.			
+ b. Approaches the leak cautiously from uphill and from the windward side.			
+ c. Observes no-smoking rules.			
+ d. Inspects the pipe, coupling, and gasket to determine the cause of the leak.			
+ 5. The element repairs the leak.			
+ a. Makes temporary repairs of small leaks if unable to shutdown pumping operations.			
(1) Repairs leaks in pipe sections.			
(a) Repairs small holes in pipe sections with a pit-leak clamp.			
(b) Repairs cracks or splits in pipe sections with a split-leak clamp.			
(2) Repairs leaks at a coupling.			
(a) Moves the pipe back and forth, up and down to reseal gasket and tightens bolts on the coupling.			
(b) Uses an overcoupling leak clamp if moving the pipe and tightening bolts on the coupling does not stop the leak.			
+ b. Makes permanent repairs on the pipeline leak according to repair specifications when pumping operations can be shut down.			
(1) Shuts down pumping operations in the affected area, upstream first and then downstream when the suction pressure drops to 15 pounds per square inch (PSI).			
(2) Closes the intermediate isolation gate valves closest to and on either side of the section to be repaired.			
(3) Drains the line away from the pipeline if possible.			
(4) Removes the overcoupling leak clamp if one was used to make a temporary repair, as well as the split-ring coupling and gasket.			
(5) Inspects the pipe, coupling and gasket to determine the cause of the leak, and replaces all defective parts.			
(6) Opens gate valves slowly to put pressure back in the pipeline.			
(7) Restarts the pumping operations.			
(8) Removes air from the repaired section by opening vent valves and sends a scraper through the repaired section if possible.			
(9) Brings the repaired section up to test pressure and checks the repair for leaks.			
+ 6. The F&ES team covers spills with fire-retardant foam.			
+ 7. The element cleans up the spill in accordance with local environmental laws if the tactical situation permits.			
+* 8. The element leader submits status reports to higher HQ in accordance with the unit standing operating procedure (SOP).			

Task Performance Summary Block										
Training U	ITERATION									
		1			2		3		4	
Date of Training pe	er Iteration:									
Day or Night T	raining:	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 Rating per Iteration T, T-, P, 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	71 - Mission Command (Collective)	Approved
1.	05-CO-0017	Conduct Engineer Augmentation Support Planning	05 - Engineers (Collective)	Approved
2.	05-CO-5001	Perform Project Management	05 - Engineers (Collective)	Approved
3.	05-PLT-3006	Establish Work Site Security for a General Engineering Mission	05 - Engineers (Collective)	Approved
5.	05-PLT-5308	Test Pipeline System	05 - Engineers (Collective)	Approved
8.	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
	052-239-3001	Prepare a Bill of Materials	052 - Engineer (Individual)	Approved
	052-239-3029	Schedule Work	052 - Engineer (Individual)	Approved
	052-239-3030	Read Construction Prints	052 - Engineer (Individual)	Approved
	052-248-1014	Repair a Coupled Pipeline	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
K49775 (no longer in FEDLOG)	Invalid LIN – Do Not Use	1
T61908	Truck Cargo: MTV W/E: M1083	1
W48348	Tool Kit Pioneer Engineer Squad: Land Clearing and Building Erection	1
W48622	Tool Kit Pipefitters: 1/8 to 2 Inch Pipe	1
W48759	Tool Kit Pipefitters: 2-12 to 4 Inch Pipe	1
MC8063	Tool Kit Supplemental, Pipeline 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 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.