

Training and Evaluation Outline Report

Status: Approved

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Task Number: 10-TM-0002

Task Title: Establish Petroleum Laboratory 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 CASCOM, Fort Lee, Virginia 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
	AR 200-1	ENVIRONMENTAL PROTECTION AND ENHANCEMENT	Yes	No	
	AR 385-10	The Army Safety Program	Yes	No	
	ATP 3-34.5	Environmental Considerations	Yes	No	
	ATP 4-43	Petroleum Supply Operations	Yes	No	
	TM 10-6640-264-10	Technical Manual Operator's Manual for Petroleum Quality Analysis System-Enhanced (PQAS-E) NSN 6640-01-547-1760	Yes	Yes	
	TM 4-43.31 (Revision, March 25, 2015)	Petroleum Laboratory Testing and Operations	Yes	No	

Conditions: The petroleum laboratory has received an operations order (OPORD) from higher headquarters (HQ) to establish petroleum laboratory operations. They must establish the petroleum laboratory area of operations in support of company and higher headquarters operational missions. The set up location has been identified, approved, and has primary access to main supply routes, internal, and external logistical support. Continuous digital and analog communications have been established. All applicable regulations, directives, internal and external tactical standard operating procedures (TSOP), technical manuals (TMs), and field manuals (FMs) are on-hand as reference material. The petroleum laboratory has been provided guidance on rules of engagement for this mission. Threat capabilities include opposing forces which have the ability to gather information, interact with hostile force sympathizers, coordinate suicide bombings, set up improvised explosive devices, coordinate air support, and execute reinforced platoon/squad operations in a chemical, biological, radiological, and nuclear (CBRN) environment. Mission, enemy, terrain and weather, troops and support available-time available and civil considerations (METT-TC) identified constraints have been identified and communicated in the OPOrd. The unit is not likely to be attacked with hostile enemy fire or chemical agents. This task will be performed under various environmental and threat conditions as outlined or required in the training evaluation matrix. All petroleum laboratory equipment is serviceable, on hand, and personnel are available to establish the petroleum laboratory for all day and night operations. Petroleum laboratory site has been approved by appropriate command and external agencies. Specified time constraints are identified in the OPOrd. The section has adequate time to establish the area of operations. Unit leaders are present for supervision and additional guidance. This task should not be trained in MOPP 4.

Standards: The petroleum laboratory is fully established and operational to support petroleum quality surveillance testing mission. Section personnel establish the petroleum laboratory with all available assets and resources within the specified time constraints in the mission OPOrd and in accordance with (IAW) the approved Army standards identified in the Task Evaluation Criteria Matrix which is included in this task below, command's guidance, applicable internal and external TSOP's, and approved Army regulations.

LEADER STATEMENT:

An Army leader is anyone who by virtue of assumed role or assigned responsibility inspires and influences people to accomplish organizational goals. Leadership is not limited to or synonymous with an assigned duty, position, or given rank as it also manifests itself in both informal and collective forms. Informal leadership provides knowledge, experience, and technical expertise while collective leadership results through the combined effects and synergies of leaders at different levels and experience collaborating to achieve a common purpose. Informal and collective leadership can include positions with an expanded scope of responsibility, significance and operational / mission implications. Therefore, for the purpose of training this task, Leaders are not only defined as officers, warrant officers, noncommissioned officers, and Army civilians but also include individuals who are Subject Matter Experts (SME) which possess the requisite knowledge and skill set to perform a particular task (For example, conduct an operation, provide logistics, or operate specific equipment, etc.) at the tactical through strategic level as the situation and/or mission(s) dictates.

Live Fire: No

Objective Task Evaluation Criteria Matrix:

Plan and Prepare		Execute					Assess			
Operational Environment	SQUAD & PLT	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)										
Static (Single Threat)	Day	75-84%	75-79%	No	80-90%	80-89%	T-	T-		
		65-74%	60-64%		65-79%	51-64%	P	P		
Static (Single Threat)	Day	60-64%	60-74%	No	51-64%	<All	<=79%	P-	P-	
		<=59%	<=59%		<=50%			U	U	

Remarks:

Task steps and performance measures are arranged in a logical order and are not intended to be interpreted as a "required order" for performance. These task steps and/or performance measures of collective task may not always be applicable to every unit. Prior to evaluation, coordination should be made between the evaluator, the unit itself, and the evaluated units' higher headquarters (if required) to determine the task step(s) and/or performance measure(s) that may be omitted and/or must be performed. Training begins with the execution of pre-combat checks and inspections. Training ends when designated training objectives for the particular training events or exercises are performed to Army standard. Unit leadership should conduct an after action report (AAR) to determine future training requirements for the unit.

Task Evaluation Criteria Matrix Definitions:

Static: Aspects of operational variables (PMESII-PT) needed to stimulate mission variables (METT-TC) are fixed throughout the unit's execution of the

task.

Dynamic: Operational variables and Threat TTPs for assigned counter- tasks change in response to the execution of BLUFOR's task.

Complex: Requires a minimum of four (Terrain, Time, Military [Threat], and Social [Population]) or more operational variables; brigade and higher units require all eight operational variables (PMESII-PT) to be replicated in varying degrees based on the task being trained.

Single Threat: Regular, irregular, criminal, or terrorist.

Hybrid Threat: The diverse and dynamic combination of regular forces, irregular forces, terrorist forces, and/or criminal elements unified to achieve mutually benefitting effects.

To obtain a T or T- this task must be conducted in a dynamic and complex environment with 4 plus OE variables and a hybrid threat at night with 75% or more leaders present, greater than 80% of Soldiers present, receive a "GO" on 80% or more of the performance measures, ALL of the critical performance measures and at least 80% "GO" on the leader performance measures. Must be conducted during an external evaluation.

Task steps and measures were developed using the Plan, Prepare, Execute and Assess (PPEA) construct to reinforce the operations process and is implied throughout the T&EO as applicable.

Notes: REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS: You can help improve this collective task. If you find any errors, or if you would like to recommend any improvements to the procedures in this collective task, please let us know. The preferred method is to submit a DA Form 2028 (Recommended Changes to Publications and Blank Forms) with your recommended changes via email to usarmy.lee.tradoc.mbx.cascom-g3-collective@mail.mil. Your recommended changes will be reviewed, validated to ensure approved Army or joint doctrine supports your recommendation(s), implemented as applicable, and a reply will be furnished to you.

Safety Risk: Medium

Task Statements

Cue: The petroleum laboratory has received an operations order (OPORD) from higher headquarters (HQ) to establish petroleum laboratory operations.

DANGER

Petroleum Quality Analysis System - Enhanced (PQAS-E) weighs approximately 15,700 lbs. (7,100 kg). Stand clear while container is lifted and placed on trailer. If trailer shifts or falls, serious injury or death to personnel may result. Ensure to keep body and limbs clear from laboratory equipment when leveling and establishing the petroleum shelter. DO NOT use stair assembly without stair interface bracket. Failure to properly install stair assembly may cause falls resulting in serious injury or death to personnel. Applying electrical power to any shelter interior component or circuit before successfully purging the shelter could result in an explosion. All circuit breakers must be OFF before connecting electrical cables. If hydrocarbons are repeatedly detected, DO NOT enter shelter. Follow applicable hazardous material (HAZMAT) and CONFINED SPACE procedures per Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and unit TSOP. Failure to observe these warnings could result in personnel injury or death, or damage to equipment.

WARNING

Ensure shelter is properly grounded and all power distribution unit (PDU) circuit breakers are off before connecting electrical cables. Lack of equipment grounding or improper grounding can cause severe injury or death to personnel, or damage to equipment. Wear Army approved hearing protection at all times when performing service checks or operations on the generator and Environmental Control Unit (ECU). The ECU remote (interior) control panel must have been set to OFF during the previous shutdown process or the purge cycle cannot be started. Do not enter shelter until properly cleared using HAZMAT confined space procedures. If tent and bootwall are in place, the gas analyzer port must be closed during purging to prevent fumes from being purged into tent. Never enter the shelter until the interior atmosphere tests clear. Failure to observe these warnings could result in personnel injury or death, or damage to equipment.

CAUTION

Secure your footing while retrieving items from the storage room, limited space is available for foot placement. While connected to shore power, the generator must be run at least once every two or three days for one hour to charge the batteries. A very low battery can damage the circuit breaker DC coil. Ensure the shore power cable is properly hardwired to a three-phase, 208 V, 60 Hz, 100A source configured for right-hand rotation or damage to equipment may result. Failure to set the equipment control unit fan circuit breaker to OFF allows the equipment control unit return air fan to continue to operate. Failure to follow these warnings may result in injury or death to personnel or damage to equipment.

Task Performance Summary Block										
Training Unit			ITERATION							
			1		2		3		4	
Date of Training per Iteration:										
Day or Night 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 Rating per Iteration T, T-, P, P-, U										

Mission(s) supported: None

MOPP 4: Never

MOPP 4 Statement: This task is not intended to be performed in MOPP 4. However, if necessary during an unexpected interim chemical, biological, radiological, and nuclear (CBRN) situation, ensure personal protective measures have been taken before proceeding with any measure to protect or decontaminate equipment. Failure to observe this precaution may result in serious illness, injury, or death to personnel by CBRN agents. Perform immediate operational or thorough decontamination procedures in accordance with applicable equipment TM's, CBRN doctrine, and unit TSOP as the mission, resources, and tactical situation permits. The CBRN Specialist should test unit equipment for levels of contamination after the all clear signal has been given and prior to resuming mission operations.

NVG: Never

NVG Statement: Night vision goggles are not required to conduct this task. However, they may be required when conducting sustainment unit operations, during moment, or Soldier duties as assigned.

Prerequisite Collective Task(s): None

Supporting Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
	63-CO-4017	Maintain Communications	63 - Multifunctional Logistics (Collective)	Approved
	63-CO-4040	Provide Communications	63 - Multifunctional Logistics (Collective)	Approved
	63-CO-4306	Employ Physical Security Measures	63 - Multifunctional Logistics (Collective)	Approved
	71-CO-5145	Conduct Risk Management	71 - Mission Command (Collective)	Approved

OPFOR Task(s): None

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
1.	101-92L-2304	Supervise Environmental Stewardship Measures in a Petroleum Laboratory	101 - Quartermaster (Individual)	Approved
1.	101-23A-6003	Manage Petroleum Laboratory Operations	101 - Quartermaster (Individual)	Approved
1.	101-92L-3404	Direct Mobile Laboratory Operations	101 - Quartermaster (Individual)	Approved
2.	101-92L-1409	Setup The Petroleum Quality Analysis System-Enhanced	101 - Quartermaster (Individual)	Approved
2.	101-92L-1389	Install Equipment in a Petroleum Laboratory	101 - Quartermaster (Individual)	Approved
3.	101-92L-1412	Purge the Petroleum Quality Analysis System-Enhanced (PQAS-E)	101 - Quartermaster (Individual)	Approved
3.	101-92L-1409	Setup The Petroleum Quality Analysis System-Enhanced	101 - Quartermaster (Individual)	Approved
4.	101-92L-1412	Purge the Petroleum Quality Analysis System-Enhanced (PQAS-E)	101 - Quartermaster (Individual)	Approved
4.	101-92L-1389	Install Equipment in a Petroleum Laboratory	101 - Quartermaster (Individual)	Approved
4.	101-92L-1409	Setup The Petroleum Quality Analysis System-Enhanced	101 - Quartermaster (Individual)	Approved
5.	101-92L-2314	Review Petroleum Laboratory Test Reports.	101 - Quartermaster (Individual)	Approved
5.	101-92L-1425	Prepare Petroleum Laboratory Analysis Reports	101 - Quartermaster (Individual)	Approved
7.	101-92L-1411	Prepare the Petroleum Quality Analysis System - Enhanced (PQAS-E) for Movement or Storage	101 - Quartermaster (Individual)	Approved

Supporting Drill(s): None

Supported AUTL/UJTL Task(s):

Task ID	Title
ART 4.1.3.3.3	Provide Petroleum Quality Assurance and Quality Surveillance

TADSS

TADSS ID	Title	Product Type	Quantity
No TADSS specified			

Equipment (LIN)

LIN	Nomenclature	Qty
No equipment specified		

Material 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.

It is the responsibility of all Soldiers and Department of the Army civilians to protect the environment from damage. Ensure procedures are followed for destruction and clearing of large areas, in excess of approximately 100 acres. Submit through the operational chain-of-command with final approving

authority resting with the joint operational commander. Coordinate and attain approval for methods for land clearing operations through the engineer and medical channels. Implement environmental protection measures before, during, and after occupation from a field site.

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.

Leaders must verify the structural soundness of all training and evaluation plans from a safety viewpoint. Leaders must conduct training at levels consistent with the abilities of the Soldiers being trained. They must instill an awareness of individual safety in all subordinate leaders and Soldiers. Soldiers must constantly be alert for and avoid situations that may result in injury or death.

Be aware of the following:

- a. At the training site, leaders must establish training safety overview procedures. Safety procedures should emphasize the adherence to standards, consideration of environmental factors (for example, wet bulb), risk assessment, and factors contributing to and aiding in the prevention of accidents. Responsible individuals must know how to balance the risks against the training requirements and monitor conditions for safety and health hazards (to eliminate or control them). Leaders must ensure the welfare of their Soldiers in all situations.
- b. Leaders must establish a buddy system for safety measures. Soldiers should maintain a safety watch on each other, with emphasis on individual safety training, and first aid responsibilities. All unsafe conditions and unsafe acts must be recognized and reported. Soldiers must be alert to human error and know the capabilities and limitations of the equipment and vehicles they use. Following the proper safety procedures preserves troop strength by preventing personnel losses through accidents.