

Training and Evaluation Outline Report

Status: Approved

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Task Number: 10-GRP-0236

Task Title: Establish Petroleum Laboratory Safety Program

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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 385-10	The Army Safety Program	Yes	No	
	ATP 3-34.5	Environmental Considerations	Yes	No	
	ATP 4-43	Petroleum Supply Operations	Yes	No	
	PAM 385-10	ARMY SAFETY PROGRAM (*RAR 003, 01/19/2010)	Yes	No	
	PAM 385-61	Toxic Chemical Agent Safety Standards	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	No	
	TM 4-43.31 (Revision, March 25, 2015)	Petroleum Laboratory Testing and Operations	Yes	Yes	

Conditions:

The petroleum group quality surveillance and safety branch has received an operations order (OPORD) from higher headquarters (HQ) to establish the petroleum laboratory safety program. The branch must establish branch operations in support of a higher HQ operational and doctrinal mission. Supported units are located in the area of responsibility and have primary access to main supply routes and external logistical support. Operations are accessible to all supported and supporting customers/units and higher headquarters. Continuous digital and analog communications have been established. All applicable regulations, tactical standard operating procedures (TSOP), technical manuals (TMs), and field manuals (FMs), quality surveillance directives are on-hand as reference material. The unit elements have 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 must be considered. The quality surveillance and safety branch is not likely to be attacked with hostile enemy fire or chemical agents. This task will be performed under either/or a combination of a static, dynamic, complex, single, or hybrid operational environment as outlined in the training evaluation matrix. All authorized personnel and equipment is on hand and operational. All assigned personnel are available to conduct petroleum quality surveillance during all day and night operations. Specified time constraints are identified in the operations order. The section has adequate time to prepare. Unit leaders are present in the area of operations. Some iterations of this task should be performed in MOPP 4.

Standards:

The petroleum group quality surveillance and safety branch establishes the petroleum laboratory safety program with the use of all available equipment and personnel 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, commanders guidance, applicable internal and external TSOPs, 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	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
BDE & Above									
Dynamic and Complex (All OE Variables and Hybrid Threat)	Night	>=85%	>=80%	Yes	>=91%	All	>=90%	T	T
		75-84%							
Dynamic and Complex (All OE Variables and Single Threat)	Day	65-74%	75-79%	No	65-79%	<All	<=79%	P	P
		60-64%	60-74%		51-64%				
Dynamic and Complex (<All OE Variables and Single Threat)		<=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: Low

Task Statements

Cue: The petroleum group quality surveillance and safety branch has received an OPOrd from higher HQ to establish and supervise the petroleum laboratory safety program.

DANGER

Failure to provide petroleum safety directives to subordinate units may result in personal injury or death of petroleum laboratory personnel.

WARNING

Ensure to warn petroleum laboratory personnel that safe and efficient petroleum laboratory operations depend on the observance of well-established safety practices and a thorough knowledge of testing procedures. The testing procedures often involve using equipment and materials that are potentially hazardous. Injury to personnel and damage to equipment by fire, chemicals, dangerous pressures and vacuums, or misuse of equipment can be avoided by alert and responsible laboratory technicians. Comply with all warnings, safety precautions, and safety regulations. Strict observance of established safety, care, and handling procedures will allow laboratory personnel to perform their duties in a safe and hazard-free environment.

CAUTION

Branch personnel must caution laboratory personnel to make sure that they follow correct laboratory safety procedures, warnings, and do not attempt short cuts for they may result in personal injury or death.

l. Ensure adequate security includes specific and appropriate countermeasures against tampering, adulteration, substitution, contamination, and other actions that could make the fuel unusable or potentially damaging to the end user and/or government equipment.

m. Identify safety and environmental considerations for operator calibration procedures.

n. Inspect equipment, safety devices, and work areas frequently to ensure safety and to correct hazards.

+ 5. Petroleum Quality Surveillance and Safety Branch personnel establish general laboratory safety procedures.

a. Ensure that approved safety procedures are implemented during all laboratory operations.

b. Ensure Material Safety Data Sheets are available and easily accessible in the laboratory.

c. Prevent laboratory personnel from consuming any food or beverages in the laboratory or storage rooms.

d. Check equipment for leaks in the oxygen, gas or vacuum systems by listening for hissing sounds, checking unexplained drops in pressure and applying soapy water to the joints and fittings.

e. Always have someone else with you in the laboratory when performing test procedures.

f. Ensure that there is no horse playing or loud talking that would divert the attention of laboratory technicians. If it is necessary to leave the laboratory or to leave a test in progress, make certain no safety hazard will result from your absence.

g. Maintain a professional clutter free laboratory.

h. Perform one test at a time unless each test can be given the required attention.

i. Request assistance whenever in doubt concerning any operation, consult qualified authority for advice.

j. Discourage unauthorized shortcuts to save time, as they generally are not in accordance with safe laboratory procedures or valid test results.

k. Ensure personnel are prepared for any emergency that may arise, and that they are familiar with the proper action to take in event of emergencies.

l. Close daily operations by making a thorough and orderly check of laboratory, equipment, and facilities to ensure that no hazards may develop during the time the laboratory is unattended.

m. Inspect laboratory when it is unoccupied for an extended length of time.

n. Ensure to use only approved petroleum containers and other laboratory testing equipment.

o. Secure chemical and petroleum storage areas yet maintain them well lit and keep walkways free from obstructions and clearly mark two or more exits.

p. Properly mark hazardous petroleum, vehicles, containers, and storage areas.

q. Maintain appropriate amount of petroleum supplies and maintain inventories of stored chemicals.

r. Ensure laboratory equipment, storage areas, shelving, and shelters are inspected and maintained to standards.

+ 6. Petroleum Quality Surveillance and Safety Branch personnel establish fire prevention procedures.

a. Post NO SMOKING WITHIN 50 FEET signs where they can be seen.

b. Enforce the NO SMOKING rule in the laboratory or associated areas where chemicals are handled or stored.

c. Place fire extinguishers and other firefighting equipment within easy reach but where it will be safe from a fire.

d. Ensure that personnel are familiar with the nature of petroleum fires, with procedures for fighting fires, and with the fire extinguishing equipment in the laboratory.

e. Prohibit the use of cellular phones during fueling operations or when flammable vapors are present.

f. Direct personnel to NOT use water for extinguishing oil fires because it will spread the fire. Water is a conductor of electricity and should not be used on electrical fires.

g. Do not use open flames, heating stoves, electrical tools, or other such apparatus in petroleum storage and work areas.

h. Direct personnel to NOT discard organic products (hot or cooled) in sinks or drains.

i. Discard organic products in approved and authorized containers.

j. Establish fire protection plans to ensure that they provide the level of protection necessary to address possible fires in the operation IAW applicable Army regulations.

k. Check seals, tags, pressure gages, and hoses of firefighting equipment periodically to make sure they are properly serviced and ready for use.

l. Inspect any apparatus you will be working with to ensure that it is fixed firmly in place.

m. Check burner tubing frequently to ensure that it is not faulty.

n. Check electrical wiring for damage.

o. Keep volatile liquids and flammable products away from direct (engine exhausts, open flames, and direct sunlight) and indirect (circuit breakers, switches, and electric motors) sources of heat.

p. Make certain there is no open flame or exposed heating element nearby when pouring highly volatile liquids.

q. Enforce the use of glass beads or porcelain fragments, to prevent boiling over or splattering of liquids when heating.

r. Enforce the use of flammable liquids near a source of ignition ONLY if the test procedures require it.

s. Ensure flammable debris is away from hazardous areas.

Table with 3 columns and 35 rows.

- f. Ensure petroleum equipment is properly bonded and grounded as directed by technical manual.
- g. Wear safety glasses or a face shield where sparks or arcing may occur.
- +* 11. Petroleum Leaders manage administrative functions as appropriate, directed, or required.
 - a. Conduct troop leading procedures as required IAW Army regulations.
 - b. Manage risk management assessments IAW Army regulations.
 - c. Provide logistics status reports to higher HQ IAW TSOP.
 - d. Maintain communications with higher HQ and other staff sections IAW TSOP.
 - e. Enforce safety regulations and established unit's internal and external TSOP's.
 - f. Ensure that all Army sites and operations attain and sustain 100 percent compliance with environmental laws and regulations in a climate of changing requirements to prevent a notice of violation or a fine for not complying with following host nation, local, state, federal, higher headquarters environmental directives and policies.
 - g. Direct destruction of unit equipment to prevent enemy use as situations dictate.
 - h. Ensure that Soldiers are trained to conduct mission operations in Offense, Defense, Stability, and Defense Support of Civil Authorities (DSCA) Operations as applicable or required.

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: Sometimes

MOPP 4 Statement: Some iterations of this task should be performed in MOPP4. At MOPP4, performance degradation factors increases planning completion times. Ensure to comply with commander's guidance and unit TSOP when conducting operations in MOPP gear.

Chemical protective clothing ensemble and field protective mask restrict movement and activities. Wear MOPP gear only when threat forces have used CBRN weapons or are likely to do so. MOPP gear should be worn during CBRN training exercises. 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 in accordance with chemical, biological, radiological, and nuclear (CBRN) regulations.

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): None

OPFOR Task(s): None

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
	101-FR8-9007	Manage Petroleum QS Program	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
ART 6.9.2	Develop and Implement Command Safety Program

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
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. Army personnel must take care of the environment; that is, practice environmental stewardship. All operations conducted on Army installations will comply with federal, state, local and host-nation environmental requirements and Army regulations. Army personnel will sustain compliance at all sites in the US and abroad, establishing good relationships with communities and regulators.

Environmental risk management consists of the following steps:

a. Identify Hazards. Identify potential sources for environmental degradation during analysis of METT-TC factors. This requires identification of environmental hazards. An environmental hazard is a condition with the potential for polluting air, soil, or water and or destroying cultural and historical artifacts.

b. Assess the Hazard. Analyze potential severity of environmental degradation using the Environmental Risk Assessment. Severity of environmental degradation is considered when determining the potential effect an operation will have on the environment. The risk impact value is defined as an

indicator of the severity of environmental degradation. Quantify the risk to the environment resulting from the operation as extremely high, medium, or low, using the environmental risk assessment matrixes.

c. Make Environmental Risk Decisions. Make decisions and develop measures to reduce high environmental risks.

d. Brief Chain of Command. Brief chain of command (to include installation environmental office, if applicable), on proposed plans and pertinent high-risk environmental matrixes. Risk decisions are made at a level of command that corresponds to the degree of risk.

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.