Task Applications

—making task training easier

Generic Nuclear Tasks

In preparing for training with nuclear conditions, it's important to remember the new tempo of fighting that must occur. The initial weapons' effects are dazzling, but exploitation of the advantage is necessary.

Planning nuclear strikes may involve 20 to 50 weapons being employed in a divisional area. This translates down to 3 to 5 weapons within a company-sized area. The appropriate number of training devices, therefore, is required to support this scenario.

Knowing this, the commander plans for the conduct of operations (Task 1) for his unit by using the NBC-CAS as the casualty threat and the T-1 LARTS as the radiation threat. The best way for controlling when and where the nuclear devices are employed is to use the STRIKWARN message (2). As the unit prepares for a strike in accordance with the SOP, NCOs evaluate their soldiers for the proper reactions to the attack (3). Employing the NWES replicates the actual nuclear device as either an airburst or ground burst.

The flow of information about

	T1 LARTS	NWES	NBC-CAS
Nuclear Tasks			
1. Conduct operations in a nuclear environment.	X		X
2. Prepare for a friendly nuclear strike.		X	
3. React to initial effects of nuclear weapons.		X	X
React to a nuclear hazard (SMCT).		X	X
4. Use the NBC warning and reporting system (NBCWRS).	X	X	X
5. Predict fallout hazard areas.	X	X	X
6. Respond to residual nuclear effects.			
a. Fallout areas.	X		X
b. Induced neutron areas.	X		X
7. Cross a radiological hazard area.	X		X
8. Perform radiological decontamination operations.	X		X
9. Collect and report total radiation dose.	X		X
10. Supervise radiation monitoring.	X		X
11. Conduct radiological survey or reconnaissance operations.	X		X
12. a. Use the IM-174A radiacmeter.	X		
b. Use the AN/VDR-2 radiacmeter.	*		
c. Use the pocket radiacmeter.	**		

*AN/VDR2 probe available FY 90
**Device and trainer not yet available.

Figure 1.

"Training in chemical conditions puts the greatest physical stress on the individual soldier."

the strikes is transmitted through the NBCWRS (4). This leads to a prediction of the hazard areas (5). The T–1 LARTS transmitter's directional antenna coincides with the hazard prediction for effective realism.

The tasks associated with locating, marking, and responding to radiation hazards (6-7-8-9-10-11) are enhanced with the NBC–CAS and the T–1 LARTS. The T–1 LARTS directly trains the use of the radiacmeters during operations. In addition, it augments partial task training on the operation of the equipment. However, some trade–offs for training may eliminate exact replication of the radiacs' control features (for example, the AN/VDR2 training probe does not differentiate a signal for Beta–type radiation). Figure 1 shows devices used for training nuclear tasks.

Generic Biological Tasks

The biological tasks are directly comparable to the tasks for chemical agents, plus one additional task. The use of the M34 soil sampling kit (4) relies on a simulant for biological agents or compounds. The simulant of choice is the BAS, but this is not due for fielding until FY 94.

To overcome this shortfall and add to the scenario realism, the detection and identification methods for chemical agents are first employed. All these methods must give confusing results, no detection of agents, but the NBC–CAS transmitter creates casualties of unmasked personnel. The casualty cards have soldiers elicit symptoms not associated with chemical agents. When in doubt, this may allow creation of a possible biological attack. Figure 2 shows devices used in training biological tasks.

Generic Chemical Tasks

Training in chemical conditions places the greatest physical stress factors on individual soldiers. The MOPP ensemble is cumbersome and difficult to work in. The mask creates vision complexities, especially for gunners with optical sights. Gloves decrease the tactile dexterity of the fingers. And finally, the overgarment traps heat, leading to heat casualties.

Aware of these factors, the commander employs the NBC–CAS as the basis for assessing

	NBC–CAS	BAS	BADS	SPAL/CBADS	
Biological Tasks					
1. Conduct operations in an NBC environment.	X				
2. Prepare for a biological agent attack.		X		X	
Recognize and react to a biological agent attack (SMCT).		X		X	
3. Cross a contaminated area.	X	X		X	
4. Use the M34 soil sampling kit.	X	X			
5. Implement MOPP.	X				
6. Exchange MOPP gear.	X	X	X		
7. Wear the M17/M24/M25/M40 series protective mask.	X				
8. Decontaminate self and equipment.	X	X	X	X	
9. Perform hasty decontamination.	X	X	X		
10. Perform deliberate decontamination.	X	X	X		
11. Use the NBC warning and reporting system (NBCWRS).	X	X	X	X	
12. Conduct biological reconnaissance operations.	X	X	X		

Figure 2.

individual soldier casualties. The unit conducts operations while in a potential chemical agent environment (1). The SPAL or CBADS provides the delivery methods for simulant attacks (2). While PEG–200 currently is available as the training simulant, PCAS provides an integrated training system with surrogate M8 and M9 papers (4, 5a, and 5b). A nonpersistent agent attack is also possible, NPCAS provides the cues.

Depending upon the type of unit in training, the M8A1 alarms are emplaced per SOP, each equipped with the M81 simulator receiver (6). The unit also has the M256 TRAINS kit for identification purposes. Many NCOs replace the TRAINS detector tickets in their squad M256 box and rely on the package marking when selecting the desired results—either positive identification or all clear (5c).

Training progresses, as soldiers don full MOPP gear in response to an attack (7, 8). They attempt to decrease their contaminated state by employing decon efforts (10 through 14) and by MOPP gear exchange (9). The M58A1 decon training kit directly substitutes for the M258A1 decon kit. Normally, only water is used in the M11 or M13 decon apparatus for training. DS2 is much too corrosive for a training exercise.

The squad leader submits appropriate reports using the information gathered (15). When faced with contaminated areas to cross, the squad first attempts to mark and bypass the area (16) which may lead to the conduct of a chemical reconnaissance mission (17). Figure 3 shows devices used to train chemical tasks.

	M81	M58A1	NBC-CAS	SPAL/CBADS	M256 TRAINS	PCAS-CADS	NPCAS	
Chemical Tasks								
1. Conduct operations in NBC environment.			X					
2. Prepare for chemical agent attack. —Recognize and react to chemical hazard (SMCT).	X		X	X		X	X	
3. Respond to a non-persistent agent attack.	X		X	X	X		X	
4. Respond to a persistent agent attack.	X		X	X	X	X		
5. Identify and detect chemical agents.								
a. Use M8 paper.				X		X		
b. Use M9 paper.				X		X		
c. Use M256 kit.				X	X	X		
d. Use M34 soil sampling kit.				X		X		
6. Employ chemical agent alarms.	X		X			X	X	
7. Wear the protective mask (M17, M24/25, M40 series).			X					
8. Implement mission-oriented protective posture (MOPP).			X					
9. Exchange MOPP.		X	X			X		
10. Decontaminate self and equipment.		X	X			X		
11. Perform hasty decon.		X	X			X		
12. Perform deliberate decon.		X	X			X		
13. Use the M11 decon apparatus.			X			X		
14. Use the M13 decon apparatus.			X			X		
15. Use the NBC warning and reporting system.	X	X	X	X	X	X	X	
16. Cross contaminated areas.		X	X	X	X	X		
17. Conduct chemical reconnaissance survey.	X	X	X	X	X	X	X	

Figure 3.