

she was also a captive, he knew that she was safe in England and he was therefore able to resist the pressure. (Ambassador Jackson's book *People's Prison* makes interesting reading.)

Every single officer and soldier from the task force commander to the chaplain's assistant has a right to be told what to expect if he is taken pris-

oner and what he can do to resist the many and varied interrogation techniques that will be used against him. With the advent of advanced collective training facilities such as the National Training Center and the Joint Readiness Training Center, maybe we should come to terms with this fact and make room in this training to practice (in a controlled environment) this most

important part of our soldiers' training.

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Chemical Warfare

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The prospect of fighting on a chemical battlefield is still viewed with horror by many soldiers and commanders alike. But this perception may be based upon a general misunderstanding of the *why* of chemical warfare. It has been established that chemical weapons are a major threat only to those who are unprepared for their introduction on the battlefield, as has been the case, for example, in Southeast Asia, South Yemen, Iran, and Afghanistan.

In order to prepare himself and his unit to meet this eventuality, an infantry commander needs to understand certain basics in regard to infantry operations in a chemical environment -- how to avoid contamination, how to protect his men and equipment against chemical agents, and how to decontaminate them.

Contamination Avoidance

Avoiding contamination, whenever it is tactically feasible, is the most important principle for a unit to follow when it operates in a chemical environment, because this allows for

continued operations at a reduced level of mission-oriented protective posture (MOPP). The longer soldiers can avoid using their protective masks, the more functional they will be and the less physiologically stressed. Avoidance will also, obviously, preclude time-consuming decontamination.

The first step in avoiding contamination is to present the least attractive target to the enemy. This requires stringent communication security and full attention to the passive defensive measures of dispersion, cover, and concealment. Anything a unit can do to avoid detection is important to its survival.

The basics of avoiding contamination are detecting it through advance warning and reporting, identifying it through chemical reconnaissance, and then marking it so that other units can also avoid it.

Advance contamination warnings can be obtained through various nuclear, biological, and chemical (NBC) reports, starting with the basic NBC-1 (Chemical) Report and progressing to the more detailed NBC-5 (Chemical) Report. These reports identify when and where a unit

was attacked and the limits of any subsequent chemical contamination. A simple and workable NBC warning and reporting system can be used to inform all subordinate, neighboring, and higher units of a chemical attack or the results of a chemical survey (Figure 1).

The proper use of such a warning and reporting system can do much to save a unit valuable resources and time, because it gives advanced predictions of chemical hazards and enables a commander and his staff to make intelligent decisions on tactical movements and logistical support.

As for chemical reconnaissance, any unit that has an M256A1 chemical detection kit can do it. This kit is dispatched with a unit's advance party or lead elements in tactical situations, since chemical reconnaissance should be considered an ongoing operation along with tactical maneuvering and day-to-day unit employments.

Additionally, all reconnaissance efforts should consider chemical as well as nuclear and biological contamination as part of the overall mission. This will give a unit an incentive to identify the potential threat and will

allow it to adjust to specific mission requirements as they develop.

Before conducting a chemical reconnaissance, however, a commander should find out from local inhabitants and friendly units (including allies and higher headquarters) about any actual or suspected enemy use of chemical munitions. Once a commander has gathered all the necessary information on his intended area of operations, he should apply his unit standing operating procedures and reports for conducting a reconnaissance.

If the presence of chemical weapons only is indicated, MOPP-2 is sufficient protection for soldiers conducting a chemical reconnaissance (Figure 2). The current MOPP-3 requires that soldiers wear protective masks, and there is no need to diminish their performance with masks before the presence of chemical agents is actually confirmed. In other words, soldiers should not be required to mask until it is really necessary, but masking should be ordered at the slightest suspicion. Soldiers should not be made to feel that chemical reconnaissance is a suicide mission. The U.S. Army has the best NBC defense equipment and the most comprehensive doctrine on the subject, and both should be used.

Chemical Protection

If chemical agents are encountered, a commander should do the following:

- Take individual and unit protective measures (assume MOPP-4, sample the area with the M256 kit, and the like).
- Determine the type of chemical agent present and the extent of the contamination, if possible. This will help him assess the probable duration of the chemical hazard.
- Try to find a path through or around the contamination to the objective.
- Locate "clean" areas upwind of the chemical attack to use for rest and relief sites.

Once an area of chemical contamination has been identified, it should be

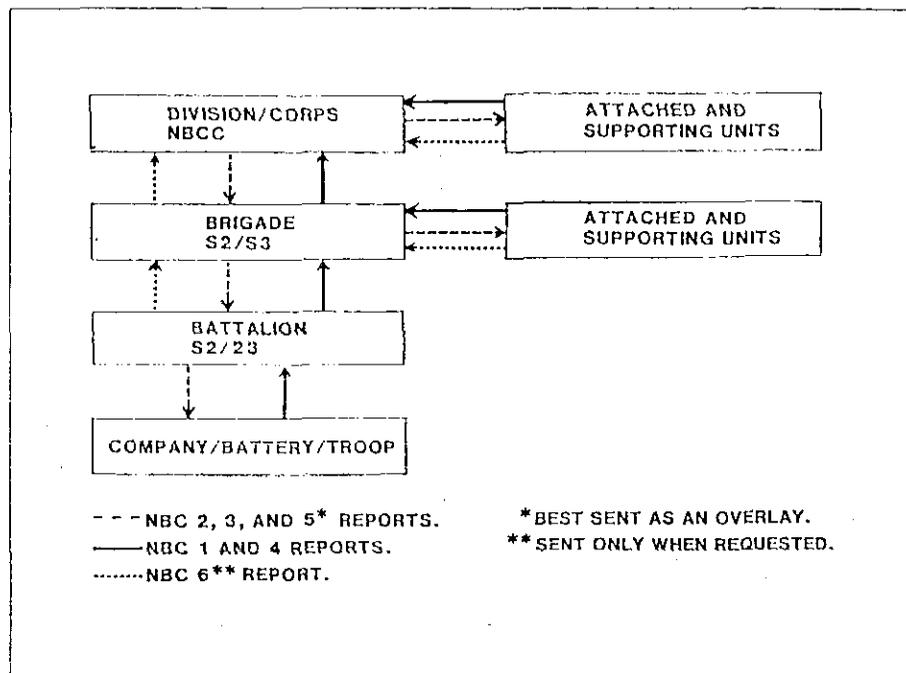


Figure 1. NBC Reporting System.

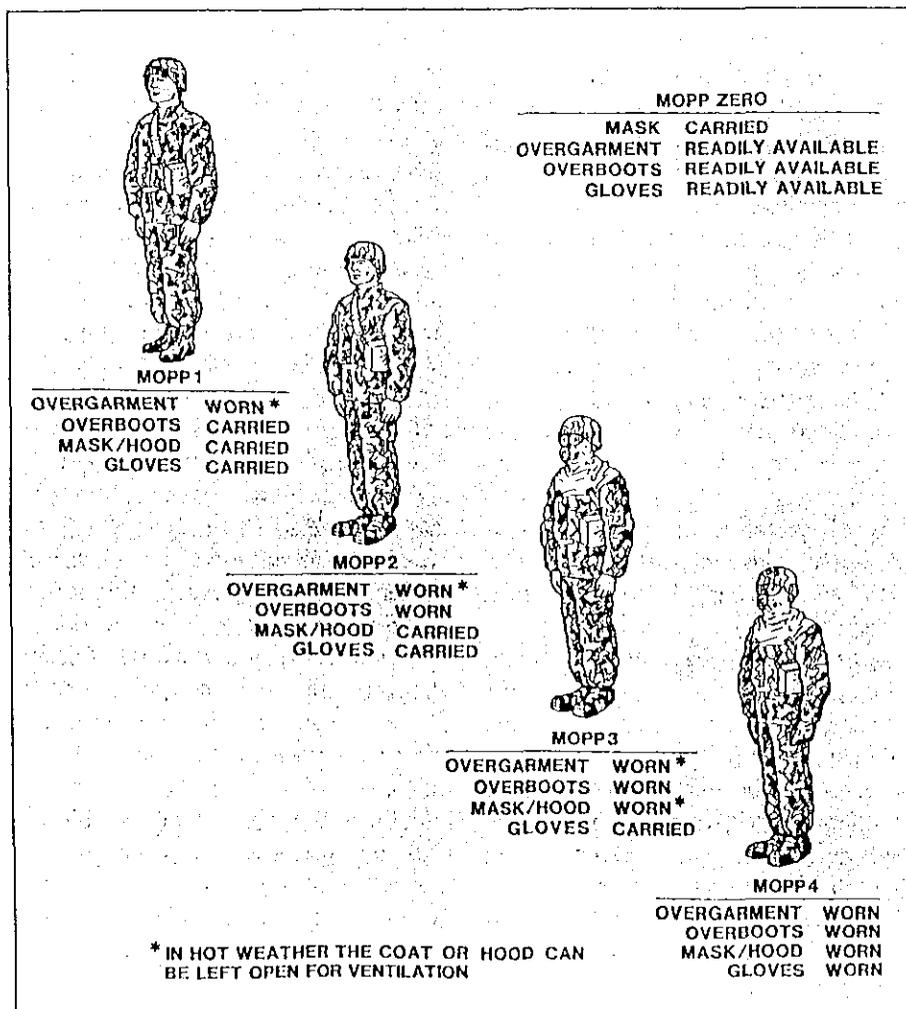
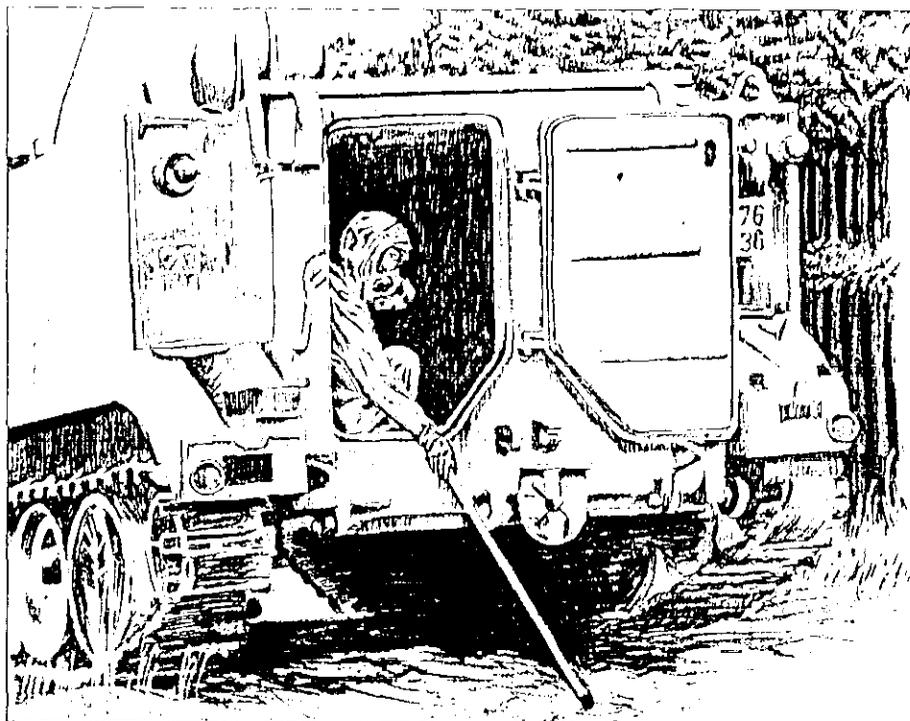


Figure 2. Current MOPP levels.



You don't have to dismount to check for chemical contamination.

marked with the triangular yellow gas markers so that another unit will not inadvertently wander into it. The front of each chemical marker should be marked with the type of agent, the date and time it was discovered, and how far from the marker the contamination begins. Additionally, the unit's chemical detection team should mark only the logical avenues into the contamination and advise the commander of the type of agent. If it is a persistent agent, for example, the unit will probably have to avoid the area entirely.

If chemical protection becomes necessary, a commander is concerned with two types—individual and collective.

Individual protection includes everything that can be done to prevent chemical agents from incapacitating or killing a soldier. A commander's first concern is the individual soldier's chemical protective mask, protective clothing, boots, and gloves. The chemical protective equipment in MOPP-4 conditions will protect soldiers from the effects of known chemical agents. Six hours in MOPP-4, however, which is a minimum requirement, will place extreme stress on

individual soldiers, particularly when there is heat build-up.

Collective chemical protection involves vehicles or shelters that can give groups of soldiers long-term protection from the effects of chemical weapons. This protection can be anything from an overpressure system (which only the M1A1 Abrams tank has) to collective protection equipment for use inside a bunker or basement-type structure.

Current protection by way of a ventilated facepiece is the standard in U.S. fighting vehicles other than the Abrams. This method of protection forces the crew to wear a mask and protective clothing even inside a buttoned up armored vehicle. Although this reduces breathing resistance, there is still the problem of trying to operate a vehicle weapon system while wearing a protective mask.

Another form of collective protection involves a fixed structure equipped with an overpressure system, which can be used as a rest station or as a command and control center. The advantage of using this system is that it is not susceptible to the effects of shrapnel as the current M51 inflatable shelter is.

Decontamination

Chemical contamination should be removed from an individual or equipment (or neutralized) as soon and as far forward as possible. The three types of decontamination are basic soldier survival, hasty, and deliberate.

Basic soldier decontamination consists of skin decontamination using the M258A1 kit for immediate survival; personal wipedown to remove or neutralize contamination on a soldier's chemical protective ensemble and personal weapons; and operator's spraydown to remove or neutralize chemical agents that are on surfaces soldiers must touch frequently to carry out their missions.

Hasty decontamination limits the contamination transfer hazard by removing gross contamination from vehicles using power-driven equipment to conduct a vehicle washdown. Personnel contamination is reduced by an exchange of MOPP gear after the vehicle washdown. Through these measures, soldiers are able to fight longer and sustain their mission although contamination is still present.

Deliberate decontamination consists of detailed troop and equipment decontamination to reduce the contamination to negligible levels. These operations, for logistical reasons, are normally conducted at brigade, division, and corps support areas.

A commander should decontaminate only to the extent necessary to return his soldiers, equipment, or vehicles to combat. Chemical contamination should never adversely affect a mission. Unless a commander understands the proper procedures now, however, his first brush with chemical weapons in a future conflict may be his last.

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