

Live Agent Chemical Defense Training

—We need more

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What's it like to go through a live-agent facility? Let's join Marine NBC Class 2-96 as they stand in formation, ready for the final phase of their training.

The Marines are unusually quiet. In the preceding month, these Marine NBC basic students were a spirited lot. This morning, however, a certain apprehension moves through the group. Countless hours of training and testing with the same NBC protective equipment used by all Marines was behind them. Much of that training had been in the classroom. However, lately they found themselves involved in numerous practical exercises.

Most recently, they had conducted mask confidence training at the CS chamber and MOPP gear exchange. Their cumulative training had been thorough and professional, but today was different. Today's threat wasn't an instructor's grade or exposure to CS. Today the stakes were much higher. If anyone made a mistake this time, they risked exposure to live nerve agents.

Conversations resumed as the Marines cleared the maze of security outside the US Army Chemical Defense Training Facility (CDTF). Viewed from outside, the facility gave little indication of the live agents therein, and some of the Marines wondered about the potential lethality of their impending training. Even the skeptics in the class were double- and triple-checking the fit and function of their equipment.

In spite of the quantity and quality of the previous training, the prospect of a real threat caused a change in the Marines. In the past, most had taken their protective equipment for granted. Now, however, all of them inspected and re-inspected the equipment that would mean their survival this day.

Those who lacked confidence in their equipment or themselves appeared stressed. Others asked numerous questions—questions which had never plagued them before. Minute amounts of ambient light visible through or around the voicemitter of the M40 protective mask raised questions of mask serviceability.

The CDTF staff informed the class that they had never had a casualty at the facility, but after a long and complex briefing on safety and casualty evacuation procedures, no one doubted that such casualties were possible. A blood sample was taken from each student. It would be compared with a sample taken after training to determine whether a student was exposed or a casualty.

While waiting for training to begin, many students reviewed the directions for using the M256 chemical detector kit, the M8 detector paper, and last minute considerations regarding the M40 mask fit. It was evident that most students wanted to stay busy or, at least, distracted.

The class took a quick tour of the entire facility and became familiar with the equipment and processes involving

toxic agent contamination inside the live agent building.

Their apprehension was reinforced by the large bays of filters and monitoring equipment cleaning and checking the air released from the CDTF. They were warned that everything that went into the live agent building either stayed or was decontaminated for limited reuse (chemical protective overgarments and masks) and ultimately incinerated at extremely high temperatures (chemical protective overgarments and clothing). Students who accidentally wore wedding bands or other jewelry inside forfeited it for incineration.

The class was divided into ten-person groups with two instructors each. These small group instructors would accompany each group into the live agent training area consisting of seven bays inside a negative pressure training building. Before this, however, the Marines underwent safety briefings and training rehearsals on the "cold pads" outside the facility. These cold pads contained identical mockups of everything inside.

The class was issued uniforms, undergarments, footwear, and complete sets of protective equipment. Dressing became a careful and attentive process. The fact that the two instructors checked each other thoroughly was not lost on the class. The group used the buddy system for safety and equipment checks. From underwear to masks and hoods, the Marines relied upon each

other to ensure readiness.

Once the class was dressed and equipped, the instructors monitored behavior more closely. They focused on the Marine's eyes since the first symptoms of nerve agent exposure are reflected in the pupils of the eyes. Though overall behavior and response are also monitored, the eyes provide a fairly accurate indicator of physical condition. Experience has shown that even a vapor threat can produce simple meiosis of the pupils more quickly than other serious symptoms, casualties, or lethality.

Cold pad training covered tasks identical to those to be performed inside. The first lesson learned was that, even on a cool day, body temperatures climb quickly when dressed in MOPP4. The students became extremely conscious of how range and speed of movement related to the mask seal. Students checked their masks seals frequently on the cold pads. Instructors reminded them that under no circumstances could they touch their protective masks inside the live agent area. If they did, they would be treated as a possible casualty and evacuated. Immediately, all rehearsal activity slowed down and became very purposeful.

The last phase of rehearsal was a structured and tedious decon and exit process. The mockup of this area resembled that which the students would encounter inside. Such an area is necessary to organize and contain various levels of contamination as the group undresses. The process was practiced as a group since it would be conducted that way inside. At this point, most of the students simply wanted to get inside and get started.

The last preparatory stop before entering the live agent area was the mask fit check chamber. While masked, the students were exposed to concentrated odors under a hood. This was done for an extended period and involved side to

side and up and down head movements. Additionally, students were required to speak for several minutes to ensure their mask seals were retained. The absence of odor indicated the seal was good. Once complete, the students checked each other's equipment, gave the instructor a thumbs up, and the large steel door was opened.

As they stepped through the hatch, the force of the air pressure was immediately noticeable. They found themselves in a decontaminant foot bath. A glance around revealed that the live agent area was compartmentalized. Each bay or corridor was sealed off from the others. Passage from one area to another required water and bleach decon of gloves and overboots.

The first bay they entered housed a

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tactical light vehicle. Here the two-man teams positioned themselves symmetrically around the vehicle. Additional instructors entered the bay with live agents and contaminated various places on the vehicle. During the exercise the principal instructor talked the group through the process, instructing and questioning the Marines. They learned the characteristics of the different types of nerve agents through comparative use of M8 paper and the M256 kits. The real differences between persistent and nonpersistent agents became painfully obvious—the M8 reacted to both agents, but the M256 kit did not.

Additionally, the students saw the characteristic signatures that each agent made on the M9 tape, and the difficulty of reading such results in low visibility. Each two-man team worked with multiple agents, then used the M11 to de-

contaminate their area of the vehicle, then verified its completeness with M8 paper and the M256 kit. At the conclusion of each phase of instruction, the students carefully discarded all contaminated products in designated waste receptacles, ultimately decontaminating the waste they created.

In between the instruction and application phases, the class had time to consider such matters as the difference between the pain of an overly tight mask and that of a headache which might indicate agent exposure. Frequent eye checks by the instructor served as small consolation for these thoughts.

Too, a sense of fatigue began to set in for some. The combination of MOPP4 temperature, stress, and concentration began to impact on the speed and quality of the activity level. At the completion of the first phase, a student discovered a torn glove and was immediately evacuated. Another complained that her eyelenses were fogging up. She, too, was evacuated. The group was less enthusiastic and exercised renewed caution as it moved on to phase two.

In the second bay, the group worked on a tank. Here focus was on the proper employment of the M13 decontaminating apparatus on a large piece of equipment. By the very nature of the task, the class had to increase their activity levels and individuals monitored their own movement and protective equipment under this increased activity. The heavy, cumbersome toxicological aprons added to rather than decreased the challenges. This was a seemingly simple lesson—but a very important one. Understanding how limited most activity levels become in a contaminated environment reinforces those same limitations one will face on the battlefield.

Phase three of the training involved working with small arms and the M258 decon kit. Exercises designed for identification and decon of live agents

served to reinforce all preceding training at the individual level. Endurance and attention span were tested. There was a tendency to lose focus and become careless after four continuous hours in MOPP4. Additionally, they felt that the "home stretch" created opportunities for exposure. The instructors, setting a small group leadership example, encouraged the students not to lose focus and increased their checks for possible exposure.

The most difficult part of the training was the decon and exit. This is the point in the training where most students simply want out, a point which could present comparable risk of exposure. Throughout this process, many of the Marine students were thankful for the many MOPP gear exchange exercises they had been through. Something as simple as carelessness in removing an overboot could result in the splashing of contaminations on the unprotected body of another Marine.

The realization that they must function as a team came through very strongly during this process. During actual conflict, a unit moving out of a chemical or biological hazard area for the purpose of MOPP gear exchange and decon would, in all probability, feel no differently.

Once completely decontaminated, undressed, twice showered, and passed through a maze of rooms and exit procedures, there was euphoria in the locker room. Much joking and kidding was the order of business. Underlying everything was the new realization and confidence that their equipment worked, their procedures worked, and they were capable of surviving and accomplishing their mission in a chemically contaminated environment. This was clearly the highlight of their training and added real meaning to all the other training they had conducted.

These Marine NBC Specialists from NBC Basic Class 2-96 will join units throughout the Corps after graduation. This small occupational field constitutes the corporate knowledge, confidence, and proof source for other Ma-

lines in their units. By virtue of their training experience and mission, these Marines are trainers in their units. They answer questions from fellow Marines based on their real experience, not a doctrinal or theoretical premise. These young Marines constitute a valuable asset in the defense of all Marines against a threat which has been referred to as invisible.

The prospect of facing an NBC threat concerns the toughest Marines. The type of training conducted at the US Army Chemical Defense Training Facility breeds understanding and confidence—in oneself and one's equipment. The Army objective for training at this facility seeks to increase force protection.

It is the only live agent training facility of this nature in the world. Opened in 1987 at a cost of \$14.7 million, this facility provided 17,000 graduates to *Operation Desert Storm*, and has grown into a joint and international training center. Since its inception, the CDTF has trained over 35,000 students from all services and from more than 20 countries, as well as the State Department, Central Intelligence Agency, Secret Service, and the United Nations. The facility provides unparalleled stress in training, results in real student equipment and self confidence, and provides credible trainers for the total force.

The US Marine Corps could and should take greater advantage of this invaluable opportunity. Monitor Survey Teams, Decontamination Teams, and possibly security elements for a deploying Marine Expeditionary Unit could conduct limited aspects of a low light TRAP mission around an aircraft fuselage in a CDTF contaminated environment.

The command element of a Marine Air-Ground Task force (MAGTF) might test certain C2 capabilities in the presence of live agents. The Commandants Warfighting Laboratory could gain insight on NBC-related issues by training, testing, and exercises at the CDTF.

Existing, current, or future Marine Corps contingency forces are prime candidates for tailored training packages at this facility. Currently, special weapons technical escort units and other advanced trainees conduct everything from actual casualty treatment to limited command and control functions in a live agent environment.

The Commandant of the Marine Corps' initiative to develop a Chemical Biological Incident Response Force could include training for medical, security, and NBC elements in this environment. Last, but not least, Marine Corps leaders at various levels should experience this training to develop an intimate understanding of the relative difficulty posed by operations in this environment. Marine leaders should possess the same confidence in themselves and their equipment as their NBC Specialists.

Finally, if all Marines cannot train at this facility due to cost and/or scheduling constraints, CDTF-trained Marine leaders can bring a heightened sense of urgency to all other local types of NBC training. CDTF-trained leaders can ensure that simulated NBC training is not forgotten in the midst of more pressing operational and training issues.

My article describes an example of world class training available to the Marine Corps. We currently benefit greatly from this training within our NBC community. The CDTF offers the Marine Corps an opportunity to train outside the traditional envelope. We just have to take advantage of it!

At the time this article was written, MAJ Emerson was the Commanding Officer of the Marine Corps Detachment at Fort McClellan. He has served with the 2d and 3d Marine Divisions and 3d and 4th Marine Aircraft Wings. He has commanded the Military Police Company, 2d Marine Division, II Marine Expeditionary Force; Military Police Company, Joint Task Force, Guantanamo; served as Assistant S3 Officer for the 4th Marine Infantry Regiment; Executive Officer, Recruiting Station, Baltimore; and S4 Officer, Headquarters Battalion, 2d Marine Division.