CBOSS

by Alan Longshore and John Lowry

As action officers, we face the reality that resource constraints often limit the extent of our work. As a matter of routine, we set priorities and carefully budget our most precious resource—time. In answering taskers, the limits placed on our time often cause us to forego the detailed research of additional references and sources of data.

Consequently, the Chemical School has established a support system to help respond to research and information needs. Specifically, the school has developed the Chemical Biological Operational Support System (CBOSS) to consolidate and make available NBC and smoke operational information. In this article, we would like to show how CBOSS can support you in answering your operationally related NBC and smoke questions.

Before *Operation Desert Shield/Operation Desert Storm*, NBC readiness focused on the traditional Warsaw Pact threat in Central Europe. The uniqueness of desert operations and the reorientation to a different theater and threat required us to revise the many basic assumptions under which we had operated. Suddenly, planners at all levels needed to find new information for immediate use to support NBC readiness.

As a result, many requests were sent from the field and Department of Defense agencies to the Chemical School asking such questions as, "Is there detailed information on the time and logistics requirements for conducting deliberate decontamination operations?" "How much more difficult will it be for maintenance teams to perform their tasks in MOPP4?"

Commanders and staffs needed the answers to these questions and more as they faced the prospect of having to fight in a chemical-biological environment. They wanted performance-based data so they would know how to best plan and train for the tasks on their mission-essential task lists.

The experience of *Operation Desert Shield/Operation Desert Storm* yielded the need for a database to provide operational NBC and smoke performance and technical data. Two key lessons from *Operation Desert Shield/Operation Desert Storm* were used to guide the development of CBOSS. First, the data had to be easily retrievable, and second, there had to be an action officer or an "analyst-in-the-loop," to help the user frame his questions and to provide operationally useful data, not just a data dump. The CBOSS system satisfies these two requirements while supporting the user's operational NBC/smoke information needs.

CBOSS is the Army's one-stop focal point for answers to NBC operational questions. Established as a source of human and system performance information, it provides actual numbers—the data needed to address specific questions or study needs. For users, it taps the testing and modeling communities to find solutions to the challenges of operating under the threat of NBC conditions. CBOSS locates and provides users the types of information necessary to survive, perform the mission, and win.

Information contained in CBOSS includes data on individual, crew, or unit performance that relates to operating in an NBC environment; the effects of NBC warfare on personnel and equipment; and technical biological and chemical agent data. An additional component of the CBOSS concept of operation is an analyst who serves as our school focal point. He works with us to answer our questions and ensures we receive a response consistent with other chemical school products.

To do this, he searches through multiple sources of NBC and smoke operational information to find all of the data required to answer our needs with evaluated and approved answers. Summed up, the analyst provides our interface with CBOSS to ensure we get the support we need to accomplish our task.

Let's look at a question a typical CBOSS customer might ask. A brigade chemical officer from an Army Reserve Armor unit (M60 equipped) is asked by his commander, "How will the performance of tank crews be affected if we are forced to fight in a chemical environment?" The brigade chemical officer is not able to find an answer to his commander's question in any of the training or doctrine references he has available. Having heard about the CBOSS through his commander's attendance at the Joint Senior Leaders/Chemical Officer Course at the Chemical School, he contacts the CBOSS analyst and makes his request. Together, the brigade chemical officer and analyst coordinate on how the

CBOSS meets the need for a resource that encompasses a wide variety of information sources and gives access to hard-to-find NBC and smoke information.

response should be framed in order to best answer the commander's question.

After a search of available data from field tests, the analyst responds to the brigade chemical officer: "Crews operating M60 Main Battle Tanks and dressed in MOPP4 will experience the following: The time to engage targets increases by a factor of approximately two, and the time to fire the second round at a target increases by 25 percent. However, there will be a negligible difference in accuracy. Accuracy remains high because the crews take more time to properly aim and engage their targets. The response also indicates that tank crews will have more targets to acquire and engage because the supporting Infantry, also in MOPP4, will engage fewer targets."

With this detailed answer in hand, the brigade chemical officer responds to his commander's question, with information that also helps to support the process of determining future training and resource requirements.

Another example: During a class on decontamination operations a student asks the instructor about decontaminating aircraft that have landed at a site contaminated with a persistent chemical agent. He knows that decontamination operations will be time-consuming and that current decontaminants cannot be used because they will damage the aircraft. He asks the division chemical officer if it is possible to fly the contamination off the aircraft.

The instructor contacts the CBOSS analyst and receives the following information based on field test results: "An aircraft contaminated with chemical agents VX or HD cannot be decontaminated to a safe level during flight. In tests with high performance aircraft, no more than 90 percent of the agent was removed from bare metal surfaces, and no more than 80 percent of the agent was removed from painted surfaces. Air flow caused the agent to accumulate in cracks and crevices of the aircraft where it is hard to remove even during normal decontamination operations. Finally, the temperature, not the speed of the aircraft, proved to be the most important factor in reducing agent contamination."

The Army has made a large investment in programs that identify and quantify the effects of NBC and smoke on soldier, unit, and equipment performance. CBOSS is the means by which this information is organized, and translated into operational terms. CBOSS contains current information and will be updated as new data become available, adding to the existing data base in a way that permits all data on a particular topic to be made available.

With CBOSS, the Chemical School has met the need for a resource which encompasses a wide variety of information sources and gives access to hard-to-find NBC and smoke information. It puts this incredible resource at our disposal, providing fast and easy access to the most comprehensive source of information on individual, crew, and unit performance data related to operations in an NBC environment; technical data on chemical and biological agents; and the effects of NBC on personnel and equipment.

Access to CBOSS is open to all DOD agencies and units. So, when you have a question and are ready to become a CBOSS user, here's what to do:

First, begin thinking about your question or issue. Decide what it is that you really want to know and what types of data you need. Then write, call, or visit the CBOSS analyst. He will work closely with you to help frame your question. He is there to help you review your question, and identify the sources and types of data available to answer that question. He becomes a valuable asset as your analyst-in-the-loop and works with the data available to prepare a meaningful answer to your question. When he is finished, he will furnish you an approved response to your question.

Here are some other things you need to know. If the CBOSS analyst cannot answer your question immediately, he will stay in touch to let you know how he is progressing, what information he has identified, and what additional information he needs from you to continue. If your question is short and easy to answer, then you can expect to receive an immediate reply; however, complex questions can take from days to weeks to properly answer.

Remember, the next time you have a question on operations in an NBC environment and need performance-oriented data, give CBOSS a try.

Send your requests to Commandant, U.S. Army Chemical School, ATTN: ATZN-CM-CC (CBOSS), Fort McClellan, Alabama 36205-5020, or contact us by PROFS or E-Mail to longshoa@mcclellan-emh1.army.mil or by telephone: DSN 865-6455/6573, commercial (205) 848-6455 or FAX to DSN 865-5339/6607, commercial (205) 848-5339/6607.