

---

---

# Department of Defense Response Capabilities for CBRNE Consequence Management

*By Professor James Kievit and Mr. John Auger*

The Spring/Summer 2002 issue of *NBC Report* presented an excellent macro-level discussion of the Department of Defense (DOD) procedures for responding to weapons of mass destruction events.<sup>1</sup> This article surveys the available DOD chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) response capabilities and begins with a description of the joint Chemical Biological Rapid Response Team (CB-RRT). The team is a unique organization that can coordinate domestic consequence management for CBRNE situations and the organizations responding to them.

## **CB-RRT Organization**

Although the events of 11 September 2001 catapulted the awareness of potential domestic CBRNE events into the public eye, the U.S. Army has actually maintained some capability to respond to these incidents since 1943. That year, the U.S. Army Chemical Corps first established its Guard and Security Division, a special unit that handled chemical weapons transfers. Today's CB-RRT, a subordinate organization of the U.S. Army Soldier and Biological Chemical Command (SBCCOM), is a logical and more capable extension of that heritage considering today's more complex security environment. Organized by DOD in 1997, the CB-RRT was designed to provide chemical and biological defense support to civil authorities. The CB-RRT mission is to deploy to any CBRNE incident site or designated national security special event to coordinate and synchronize the DOD technical support for the lead federal agency.<sup>2</sup>

The CB-RRT is a joint organization that includes DOD civilian employees. In addition to command-and-control know-how, team members have the specialized chemical, biological, medical, and explosive ordnance disposal (EOD) expertise needed to provide technical assistance to first responders and federal, state, and local officials. The unit is

colocated with the SBCCOM 24-hour operations center at the Edgewood Area of Aberdeen Proving Ground, Maryland, and can deploy using organic SBCCOM Army air assets, U.S. Transportation Command assets, or commercial air transportation. Once deployed, the CB-RRT is self-sustaining for up to 72 hours.

The CB-RRT reports to the SBCCOM deputy commanding general for homeland security. The team can act in direct support of a lead federal agency, or it can be placed under the operational control of a combatant commander, a joint special-operations task force, or any other designated joint task force. The team possesses an integrated, self-contained, and deployable command, control, communications, computers, and intelligence (C4I) infrastructure that permits an integrated, structured, and controlled planning and incident response capability. The CB-RRT sends forward elements to provide technical expertise and contingency development options during times of crisis. The team has a sophisticated reach-back capability through the SBCCOM operations center to access some of the nation's leading chemical and biological technical experts without the need for those experts to be deployed to an incident site.

## **CB-RRT Communications**

The primary communications systems used by the CB-RRT are the Deployable Response and Graphics Operations Network (DRAGON) System and the Deployable Communications System (DCS).<sup>3</sup> The DRAGON, a suite of computers and supplementary hardware used to integrate all aspects of communication and emergency planning/response software, is a local-area/wide-area computer network. The DRAGON allows multiple users to gain access by hard wire, satellite, or Internet and provides situational awareness as the main information management tool for the CB-RRT staff. The DCS is a self-sustaining

---

mobile satellite communications system that provides forward-deployed elements with secure and nonsecure telephone interface, video teleconference interface, Secret Internet Protocol Routing Network (SIPRNET), and digital cellular telephone service that are separate from local networks. The organic capabilities of the CB-RRT can be reinforced by a number of DOD and non-DOD federal organizations.

### **DOD CBRNE-Related Organizations**

Some information about the most important of the DOD organizations follows:

#### **CBRN Installation Support Teams (CBRN-ISTs)**

The Army is fielding these new chemical, biological, radiological, and nuclear (CBRN) defense teams to provide commanders with additional capabilities for responding to weapons of mass destruction situations that might affect their installations or the local communities surrounding them.

CBRN-ISTs support installation antiterrorism/force protection planning and provide an organic CBRN response capability at each Army installation. Although the teams are matrixed organizations mainly comprised of additional-duty installation personnel, their planned design capabilities minimize casualties, reduce the spread of contamination, and include—

- Advising the commander.
- Performing chemical, biological, and radiological detection, warning, and reporting.
- Conducting triage and emergency medical procedures and limited decontamination operations.

During an actual CBRNE incident, it is likely that the joint CB-RRT would have significant interaction with the Army CBRN-ISTs; therefore, it should be expected to have such interactions during training and planning preparations.<sup>4</sup>



**The DRAGON System**

### **U.S. Army Technical Escort Unit**

It provides chemical and biological advice, verification, sampling, detection, mitigation, render-safe, decontamination, packaging, escort, and remediation of chemical and biological devices or hazards worldwide in support of crisis or consequence management. The unit also supports the development of chemical and biological defense equipment, technical intelligence, and doctrine. Headquartered at Aberdeen Proving Ground it has two companies collocated there and other companies at Dugway Proving Ground, Utah; Fort Belvoir, Virginia; and Pine Bluff Arsenal, Arkansas. The companies can be deployed worldwide.

### **Edgewood Chemical Biological Center**

It is the principal research and development center for chemical and biological defense technology, engineering, and service for the Army, and its personnel can be deployed to a site to collect samples and bring them back for analysis. In addition, the center has developed a mobile laboratory to support the verification and enforcement of international chemical weapons treaties. Equally important, the center has trained more than 28,000 first responders in 105 communities across the country.

### **U.S. Army Medical Department (AMEDD)**

It provides the Army with cohesive, synchronized medical capability, leveraging institutional knowledge and capabilities to support operational requirements. This includes providing reachback support, telemedicine, trained personnel, and Special Medical Augmentation Response Teams (SMARTs). AMEDD, with which the joint CB-RRT has an existing memorandum of agreement, has a number of other specialized organizations that can support consequence management during a CBRNE event:

- *U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID)*—Serves as

the lead laboratory for the medical aspects of biological warfare defense, conducting research to develop vaccines, drugs, and diagnostics for laboratory and field use. USAMRIID also develops strategies, information, procedures, and training programs for medical defense against biological threats.

- *U.S. Army Medical Research and Materiel Command (USAMRMC)*—Operates six medical research laboratories and institutes in the United States and is responsible for the Army Medical, Chemical, and Biological Defense Research Program. This command is the medical materiel developer and logistician for the Army.
- *U.S. Army Center for Health Promotion and Preventive Medicine*—Provides health promotion and preventive medicine leadership and services to counter environmental, occupational, and disease threats to health, fitness, and readiness.
- *SMARTs*—Responds to disasters, including CBRNE incidents. Each of the four U.S. Army Regional Medical Commands has a chemical-biological SMART (identified as a SMART-CB) designed to provide critical medical support activities at CBRNE events.
- *520th Theater Army Medical Laboratory*—Deploys worldwide, conducting theater-level health threat surveillance to protect and sustain the health of the force.

#### U.S. Navy Bureau of Medicine and Surgery

It also has a memorandum of agreement to support the CB-RRT and its assets:

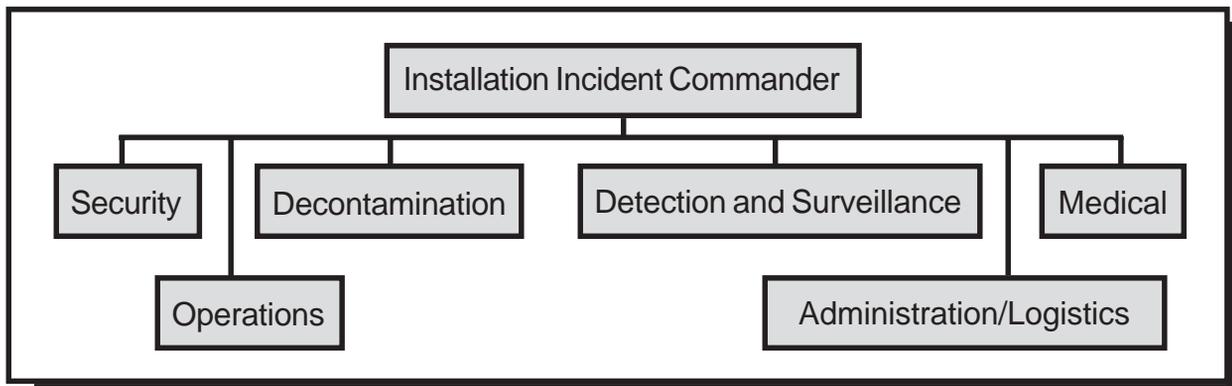
- *U.S. Navy Medical Research Center*—Conducts research and development and tests and evaluations that enhance the health, safety, and readiness of Navy and U.S. Marine Corps personnel.
- *U.S. Navy Environmental Health Center*—Manages disease prevention and health promotion within the Navy.
- *U.S. Navy Environmental and Preventive Medicine Units*—Provides specialized

consultation, technical support, recommendations, and advice in matters of environmental health, preventive medicine, and occupational safety to Navy and Marine Corps shore activities and units of the operational forces.

#### Defense Threat Reduction Agency (DTRA)

It runs a 24-hour operations center that provides both civilian first responders and warfighters with a single point of contact for online assistance and the dispatch of other agency resources to deal with CBRNE incidents. DTRA also has a—

- *Consequence Management Advisory Team*—Provides joint technical support with expertise in CBRNE response procedures, requirements, resources, command and control, health physics, public affairs, legal affairs, and specialized technical information.
- *Weapons of Mass Destruction Assessment and Analysis Center*—Provides network support to perform online collaborative computing and access to computer modules for CBRNE analysis and consequence prediction, high-resolution weather data, data files on CBRNE materials, teleconferencing capabilities, and national experts.
- *Joint Nuclear Accident Coordination Center*—Operates with the Department of Energy (DOE) to provide a centralized center for maintaining and exchanging information with agencies possessing radiological-assistance capabilities. The center coordinates assistance from those agencies in response to an accident or incident involving radioactive materials.
- *U.S. Marine Corps Chemical Biological Incident Response Force*—Enters a CBRNE environment and provides agent identification, monitoring, sampling, and “hot-zone” triage and



**CBRN Installation Support Teams**

---

---

emergency medical treatment. The force's 350 to 375 Marine Corps and Navy personnel also extract victims, decontaminate them, and turn them over to local emergency services personnel for follow-on care.

- *U.S. Army 52d Ordnance Group (EOD)*—Provides bomb squad units to defeat or mitigate hazards from conventional, nuclear, or chemical military munitions and CBRNE throughout the continental United States. Select EOD companies receive specific training on CBRNE and operate specialized equipment to diagnose and render safe/mitigate a CBRNE device.

### **National Guard Bureau**

It possesses a number of Weapons of Mass Destruction Civil Support Teams (WMD-CSTs) whose mission is domestic consequence management support.<sup>5</sup> The teams support local, state, and federal government agencies during a CBRNE incident in the United States with emphasis on preparing for, responding to, and recovering from the potentially catastrophic effects of a terrorist-employed weapon of mass destruction. The unit is jointly staffed with 22 full-time Army and Air National Guard members trained in 14 different military occupational skills. The WMD-CSTs are equipped with high-end detection, analytical, and protective equipment.

### **Non-DOD CBRNE-Related Organizations**

Other agencies of the federal government possess some CBRNE response capabilities:

#### **U.S. Coast Guard (USCG) Federal On-Scene Coordinators (FOSCs)**

They can coordinate all federal containment, removal, and disposal efforts and resources during an incident in a coastal zone. The USCG also has a National Strike Force that provides around-the-clock access to special decontamination equipment for chemical releases and advises the FOSCs about hazard evaluation, risk assessment, multimedia sampling and analysis, on-site safety, and cleanup techniques.

#### **Federal Emergency Management Agency (FEMA)**

It can provide Urban Search and Rescue Teams and the Rapid Response Information System—a database containing information on federal nuclear, biological, and chemical (NBC) response capabilities, NBC agents and munitions characteristics, and safety precautions.

### **Department of Health and Human Services (DHHS)**

This organization has a goal of fielding 100 Metropolitan Medical Strike Teams with the capabilities for agent detection and identification, patient decontamination, triage and medical treatment, patient transportation to hospitals, and coordination with local law enforcement activities. The DHHS National Medical Response Teams are capable of agent identification, patient decontamination, triage, and medical treatment in support of local health systems. The DHHS Center for Disease Control and Prevention (CDC) provides epidemiological surveillance, biological agent identification, and public-health consultation and response.

### **Federal Bureau of Investigation (FBI)**

The FBI has a number of assets:

- *Hazardous Materials Response Unit*—Performs specialized sampling, detection, and identification for NBC agents.
- *Evidence Response Teams*—Conducts crime-scene documentation and evidence collection in support of criminal investigations.
- *Critical Incident Response Groups*—Assembles to conduct tactical and crisis-management efforts.

### **Environmental Protection Agency (EPA)**

Its capabilities are as follows:

- *Environmental Response Team*—Provides 24-hour access to special decontamination equipment for chemical releases and advice to the on-scene coordinator in hazard evaluation, risk assessment, multimedia sampling and analysis, on-site safety, and cleanup techniques.
- *Radiological Emergency Response Team*—Provides on-site monitoring and mobile laboratories for field analysis of samples and expertise in radiation health physics and risk assessment.
- *National Enforcement Investigations Center*—Provides expertise in environmental forensic evidence collection, sampling, and analysis; computer forensic and information management; and enforcement-related analysis.
- *Environmental Radiation Ambient Monitoring System*—Monitors radioactivity in samples of precipitation, air, surface water, drinking water, and milk. In the event of a radiological emergency, sampling at the approximately 260 monitoring sites can be increased to provide information on the spread of contamination.

- 
- *Radiation Environmental Laboratories (2)*—Provide advice on how best to protect public health in emergency situations. Twelve additional research laboratories provide analytical and other technical support to quality-assurance programs related to air, water, wastewater, and solid waste.

## DOE

It has a robust capability for dealing with CBRNE incidents that include the—

- *Radiological Assistance Program*—Provides the initial DOE radiological emergency response.
- *Radiation Emergency Assistance Center/ Training Site*—Provides 24-hour medical consultation about the health problems associated with radiation accidents.
- *Nuclear Emergency Search Team*—Provides technical responses to the resolution of incidents involving improvised nuclear and radiological dispersal devices.
- *Joint Technical Operations Team*—Provides technical advice and assistance to DOD. This is a combined DOD and DOE team.

## Conclusion

To be successful in today's complex and uncertain environment, any national military strategy must give the President and the Secretary of Defense a sufficient variety of options so they can take effective action at whatever time and location is required. While one should never be sanguine when dealing with

CBRNE, it would appear that the capabilities represented by the organizations, systems, and competencies described in this article should suffice to meet this requirement with respect to responding to a single CBRNE event. Responding to multiple events would be more challenging, but perhaps even that should not prove impossible so long as these capabilities continue to be properly executed by well-trained, high-quality people who are directed and aggregated by a knowledgeable and adaptive leadership—with a complete understanding of the capabilities that the government has available.<sup>6</sup>

## Endnotes

<sup>1</sup>Duncan McGill, "Department of Defense Support to Domestic Consequence Management," *NBC Report*, Spring/Summer 2002.

<sup>2</sup>The CB-RRT focus is domestic, but it can respond worldwide if directed.

<sup>3</sup>See Appendix D-1 of FM 3-11.21/MCRP 3-37.2C/NTTP 3-11.24/AFTTP (I) 3-2.37, *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Aspects of Consequence Management*, 12 December 2001, for a detailed description of these capabilities.

<sup>4</sup>See the U.S. Army Training and Doctrine Command CBRN Force Protection Operational and Organizational Plan, Version 4.0, for additional details about the CBRN-IST and CBRN-RRT concepts.

<sup>5</sup>Currently 32 are programmed, although not all have achieved operational status at the time of this article.

<sup>6</sup>Additional detailed information on these and some other CBRNE-related DOD organizations may be found in FM 3-11.21.