Statement by

Dr. Jim Tegnelia

Director
Defense Threat Reduction Agency

Submitted to the

Subcommittee on Terrorism, Unconventional Threats and Capabilities
House Armed Services Committee
United States House of Representatives

March 10, 2005
Mr. Chairman and Members of the Subcommittee, it is an honor for me to be here this afternoon to present the Defense Threat Reduction Agency (DTRA) Science and Technology (S&T) program.

The mission of DTRA is to combat weapons of mass destruction or “WMD.” Countering chemical, biological, radiological, and nuclear (CBRN) weapons is the reason for the agency’s existence. We focus full-time on countering these catastrophic threats and, within DTRA, no other mission competes for attention and resources. Our mission is guided by the National Strategy to Combat Weapons of Mass Destruction and direction provided by the Secretary of Defense and the Chairman of the Joint Chiefs of Staff. Our programs support the three components of the national strategy: counterproliferation, nonproliferation, and consequence management. These components are synergistic in that they provide for a defense-in-depth against WMD attacks that may also deter WMD acquisition or use.

DTRA counterproliferation programs provide offensive and defensive means for combating WMD. Our nonproliferation programs support diplomatic and cooperative efforts to halt the spread of WMD. Our consequence management programs provide capabilities for responding to the actual use of CBRN weapons. To succeed in our mission, DTRA employs a wide-range of capabilities. First, we provide technical and operational support for arms control treaties which limit the proliferation of WMD. This year and in Fiscal Year 2006, we will perform an increasing number of escort missions in support of the Chemical Weapons Convention. We also anticipate increased requests from the Combatant Commanders for DTRA assistance with Enhanced End Use Monitoring to ensure that arms and equipment provided by the US to friends overseas are accounted for, safe, and secure. DTRA also participates in activities to strengthen border security across the former Soviet Union to prevent WMD-related smuggling. This year, we will conduct 56 individual training events and recently completed an exercise in Uzbekistan in which we trained national border guards, customs inspectors, policy makers, investigators, and emergency responders to more effectively deal with the smuggling of WMD components.

Second, through our execution of the Cooperative Threat Reduction program, we work cooperatively with the successor states of the former Soviet Union in reducing or safeguarding
WMD capabilities. As of early this year, the CTR program has destroyed 573 ICBMs, 477 ICBM silos, 144 strategic bombers, 778 strategic air-to-surface missiles, and 28 ballistic missile-armed submarines and 543 submarine-launched ballistic missiles. These eliminated delivery systems were capable of delivering over 6,500 nuclear weapons. Using the authority granted by Congress, we are now implementing the first CTR program outside the borders of the former Soviet Union. This effort will eliminate chemical weapons stocks in Albania.

Third, we work directly with the warfighters in developing technologies that provide offensive and defensive options for countering chemical, biological, radiological, and nuclear threats. For example, radiation hardening technology developed by DTRA will increase the survivability of our critical command and control systems in nuclear environments. We are making such technology affordable so that it may be incorporated in a wider range of military systems. DTRA also rapidly developed new weapons for use against Al Qaeda and the Taliban in the caves of Afghanistan. In addition, we are studying the important technical and operational question of “how clean is safe” when it comes to chemical decontamination of equipment, particularly aircraft.

Fourth, we provide expertise that underpins the ability of our Combatant Commands to operate successfully in WMD environments. We refer to this tool as “combat support” and it includes assistance to Combatant Commanders’ operational and theater security cooperation plans, training and exercises, hard and deeply buried target defeat capabilities, vulnerability assessments and force protection, and consequence management. DTRA also manages and operates a worldwide program that supports Combatant Commanders’ ability to respond to the emerging threat of nuclear terrorism in the form of a nuclear weapon, an Improvised Nuclear Device, or a Radiological Dispersal Device. Under our Terrorist Device Defeat Program, DTRA fielded a standardized, multi-platform (air, land, and sea vehicles) nuclear detection system for large area radiation searches.

Because we provide full-scope WMD expertise, the Commander of US Strategic Command has turned to DTRA to assist him in his new responsibility as the Lead Combatant Commander for planning, integrating, and synchronizing Department of Defense-wide Combating WMD
capabilities. We are standing-up a dedicated element within DTRA to directly support Strategic
Command, drawing on and integrating specialized WMD expertise across the agency.

DTRA is a unique organization within the Department. Three traits distinguish us from other
DoD components. The first is our full-time focus on the entire WMD challenge – chemical,
biological, radiological, and nuclear. The second is our integration of science and technology
with practical solutions and existing capabilities to meet the needs of the Combatant
Commanders and the national leadership. The third trait that makes DTRA unique is our concept
of operation. While we have considerable in-house expertise in some WMD disciplines, we are
not the leading experts in all WMD disciplines. Nor do we need to be. Instead, we capitalize on
existing expertise, regardless of where it resides, integrating it into focused programs tailored to
the needs of the Combatant Commanders. This expertise comes from across Department of
Defense, the US Government, the DOE national laboratories, academia, the private sector, and
our allies and overseas friends. In a practical sense, we “buy”, integrate, nurture and advance all-
source WMD expertise; focus it upon the needs of the warfighters; and deliver products and
capabilities that work in the real world. While other RDT&E organizations may take a similar
approach, none do it to the extent that DTRA does, and none is focused solely on WMD.

The performance of our mission requires a mix of appropriated funds. Of the approximately
$2.7 billion in programs that DTRA would execute in Fiscal Year 2006, about $860 million is for
research and development. This includes about $450 million under the Chemical and Biological
Defense Program and $409 million in the DTRA budget request. DTRA also serves as the funds
manager for another $1 billion in Chemical and Biological Defense acquisition programs. The
Cooperative Threat Reduction program accounts for another $416 million. About $320 million
is Operations and Maintenance funding, largely for our combat support and arms control
activities. In addition, DTRA procures limited numbers of counterproliferation weapons and
other specialized items as deliverables for Advanced Concept and Technology Demonstrations
and Advanced Technology Demonstrations.

Although DTRA is working a wide-range of challenges, I would like to highlight several whose
solutions would be transformational in terms of their military significance.
Denial of hard and deeply buried facilities as a sanctuary  Many of our potential adversaries have decided that the best way to escape US military power is to protect their most valued national and military assets in deep bunkers or tunnels. Today, we lack sufficient means to destroy many of these targets by traditional means. Moreover, should these targets produce or store WMD, an attack upon them with the means available today could disperse chemical, biological, or radiological agents over a great area. In short, we may have no attractive offensive options that would deny an enemy his WMD capabilities. DTRA is working hard to provide a wider range of options for our national leadership and Combatant Commanders. Progress is being made. For example, we are developing weapons that produce high temperatures for destroying stored agents, or provide a long duration pressure pulse for destroying hard targets. In addition, we are providing improved means for identifying the vulnerabilities of hard and deeply buried targets; developing penetrating weapons whose delivery is simple and effective; and looking for ways of making more rapid and accurate battle damage assessments. Under the Agent Defeat, Deny, and Disrupt Program, we are developing new payloads to render ineffective chemical and biological weapons and facilities, while limiting the collateral effects of their employment. We are making progress but have a long way to go in providing truly effective hard target defeat capabilities.

Eliminating chemical weapons as an attractive military option  We have a strategy, focused S&T program, and an acquisition program for chemical defense. Our abilities to detect, assess, protect against, and decontaminate chemical agents are impressive and getting better. We are making great strides in supporting modeling and simulation capabilities, battlespace awareness, and operational responses. Biological defense remains far more challenging and we have re-focused our efforts in this area to early warning based on detection, medical surveillance, and information dissemination, as well as broad spectrum pretreatments and therapeutics.

Effective WMD interdiction – detecting, tracking, and defeating WMD  We also must be far more effective in interdicting WMD. This requires better means for detecting and tracking WMD agents and weapons, particularly at longer ranges that permit time for effective responses. We also need better technology and operational concepts for seizing and rendering safe such
weapons. The relationship here between S&T and operational concepts is particularly critical. DTRA’s close ties to national (and international) S&T capabilities and the Combatant Commanders ideally places us to tackle this daunting challenge. Do we have a solution in hand? Not yet. But the strategy and underpinning S&T needs are becoming clearer, and the state of technology continues to advance.

DTRA is the bridge between technology and the warfighter. We are integral to the WMD-related readiness, planning, and operations of the Combatant Commands. As a Combat Support Agency, we are a catalyst for new ideas and technologies, an integrator of all-source WMD expertise, and strong program performer in our own right. Mr. Chairman, this concludes my remarks. I would be pleased to address the subcommittee’s questions.