“Today, the gravest danger in the war on terror, the gravest danger facing America and the world, is outlaw regimes that seek and possess **nuclear, chemical, and biological weapons**. These regimes could use such weapons for blackmail, terror, and mass murder. They could also give or sell those weapons to terrorist allies, who would use them without the least hesitation.”

- President George W. Bush,
  2003 State of the Union
Combating WMD Strategy Guidance

- Under the overall umbrella of the National Security Strategy
- Consider in relation to other National Strategies, especially:
  - Homeland Security
  - Combating Terrorism
  - Intersecting strategies:
    - Critical Infrastructure Protection
    - Secure Cyberspace
    - Counterintelligence
    - Biodefense for the 21st Century
Combating WMD Strategy

These 3 pillars provide for a layered defense across 8 mission areas:

- Treaties & Agreements
- Threat Reduction
- Interdiction
- Elimination
- Offensive Operations
- Active Defense
- Passive Defense
- Consequence Management

Nonproliferation ——— Counterproliferation ———— Consequence Management
Worldwide Cooperation in Combating WMD
Leveraging Other WMD Developmental Efforts

- Semiconductor Ultra Violet Optical Sources (SUVOS) Program
- Immune Building
- Pentagon Shield

- BIONET
- DHS/EPA/DOD Building Decontamination

COMMERCIAL INVESTMENTS
ATSD (NCB) Organization

Secretary of Defense

Under Secretary of Defense for Acquisition, Technology and Logistics

ATSD (NCB)

Deputy for Nuclear Matters

Deputy for Chem Bio Defense

Deputy for Chem Demil & Threat Reduc.

Director Defense Threat Reduction Agency
Office of Nuclear Matters (NM)

Focal point for stockpile management activities

- Nuclear Weapons Council (NWC)
- System Survivability
- Emergency Response
- Weapons Surety
- Survivability Against Effects
Chemical and Biological Defense Program
System of Systems Approach to Counter the Threat

CB Threats & Hazards
Agent Delivery → Doses on Target → Downwind Dispersal → Doses Absorbed → Symptoms

Medical Pretreatment

Individual & Collective Protection

Installation Force Protection

Information Systems

Decontamination and Restoration

Contamination Avoidance and NBC Battle Management

Medical Treatment
Chemical Demilitarization & Threat Reduction (CDTR) Mission

- Oversight of Chem-Demil, Cooperative Threat Reduction, and CB Weapons Treaties
- DoD Treaty Manager for NBC Weapons Treaties
  - NTBT, NPT/IAEA Strengthened Safeguards Protocol, FMCT, CWC, BWC
- Program Coordination

Tooele Chemical Agent Disposal Facility (TOCDF)
Mission
Safeguard America and its allies from Weapons of Mass Destruction by providing capabilities to reduce, eliminate and counter the threat and mitigate its effects.

Combat Support Role
DTRA’s role as a combat support agency is to provide combating WMD capabilities to support the Joint Staff and Combatant Commands.
ATSD (NCB) Mission Areas

Chemical Demilitarization

Nuclear Matters

Defense Threat Reduction Agency

Chemical & Biological Defense
Countering the Risks Posed by WMD

- Detect
- Prevent
- Deter
- Destroy
Detect

**Gamma Imaging System**

- Non-Intrusive System to Image Inside Shipping Containers (Ships, Trucks)
- Capability to Examine Large Vehicles for Explosive Devices

“The Army, Navy and Air Force each employed Unmanned Aerial Vehicle systems in theater to conduct important reconnaissance operations, reducing the need to send manned aircraft into hostile airspace.”

- Secretary of Defense, 14 October 1999
Prevent

Nuclear Arms Control
- Monitoring activities and inspections
- Dismantling stockpiled weapons

Chemical Weapons Arms Control
- Monitoring activities and inspections
- Dismantling stockpiled weapons
Stockpile Stewardship Program
- Non-nuclear component testing
- Mathematical models
- Nuclear material tests

Deter

W76-1 Blast Test at Sandia – Part of the W76-1 Lifetime Extension Program

Dual Axis Radiographic Hydrodynamic Test Facility for Hydrotesting at Los Alamos

Integrated subcritical experiments at LANL’s NTS U1a facility get key Plutonium data
Cooperative Threat Reduction

- Assisting in securing nuclear material
- Preventing the use of nuclear material in weapons
- Redirecting weapons material for use in electric power generation

Secretary of Defense Perry at an SS-24 ICBM Silo, Ukraine

CTR in Ukraine
Chemical Weapons Convention requirements

- Safely destroying all chemical weapons stockpiles
**Destroy**

(Uncooperative)

**Thermobaric Weapons**

- Provide Enhanced Effects in Closed Structures: Sustained Pressure and Increased Heat
- Weapons currently fielded
Issues of Interest brought to the Precision Strike Community

- Reliable Replacement Warhead (RRW)
- Robust Nuclear Earth Penetrator (RNEP)
- Thermobaric Weapons
- Agent Defeat Weapons
The Reliable Replacement Warhead (RRW)

**What is it?**

The RRW is the next generation of nuclear warheads to meet the defense needs of the United States.

**Why is it needed?**

The RRW will reduce costs of producing and maintaining nuclear warheads, broaden performance designs, utilize modern production techniques, and enhance surety.

**When can this happen?**

A warhead can be designed and deployed without testing in 8-10 years.
The Robust Nuclear Earth Penetrator (RNEP)

What is it?
The RNEP would be designed to destroy hard and deeply buried targets (HDBTs) such as chemical weapon storage, command and control nodes, or leadership centers.

Why is it needed?
There has been a major proliferation of HDBTs and current weaponry cannot defeat them all.

What is the status?
Funding responsibility for RNEP is spread over six Congressional committees. All have different proposals for RNEP study:
Complete funding to cancellation
Thermobaric Skip Bomb Demonstration
Agent Defeat Weapon - Incendiary

Existing MK84 Bomb body
High Explosive (PBX-109) ~ 145 lb
Agent Defeat (WP) ~ 420 lb
Summary

- S&T investment to counter diverse threats & prevent technological surprise
- Capabilities to protect the warfighter
- Improve the precision of new and stockpiled weapons for future engagements
“We all lust for the day when the lion and the lamb will lie down together, but when that day happens, I want to be the lion.”
Questions?

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