



Department of Defense:

**Assistant to the Secretary of Defense
Nuclear and Chemical and Biological
Defense Programs (ATSD(NCB))**

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**Briefing for Precision Strike Community
October 20, 2005**

Global War on Terror

“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***



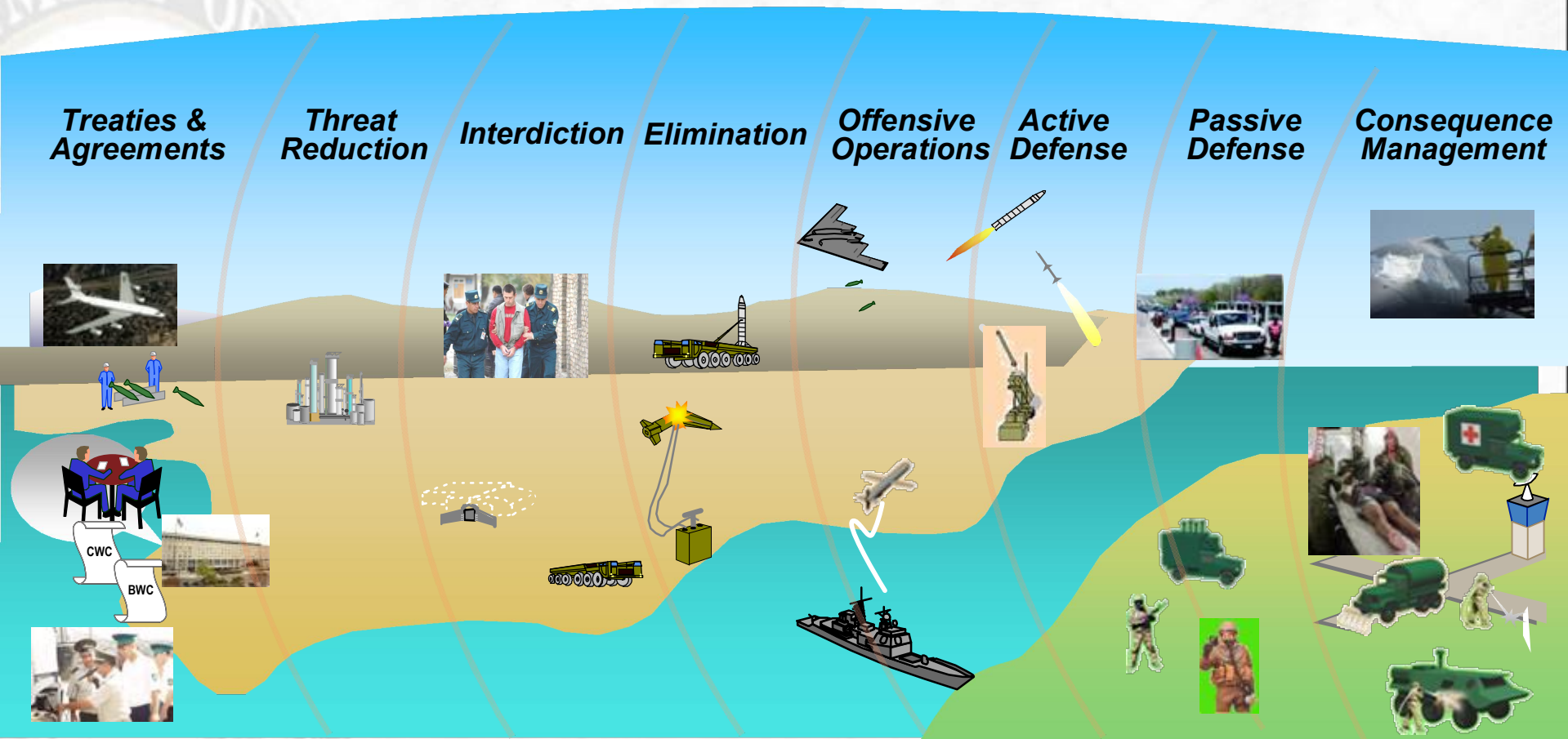
Combating WMD Strategy Guidance

- 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*



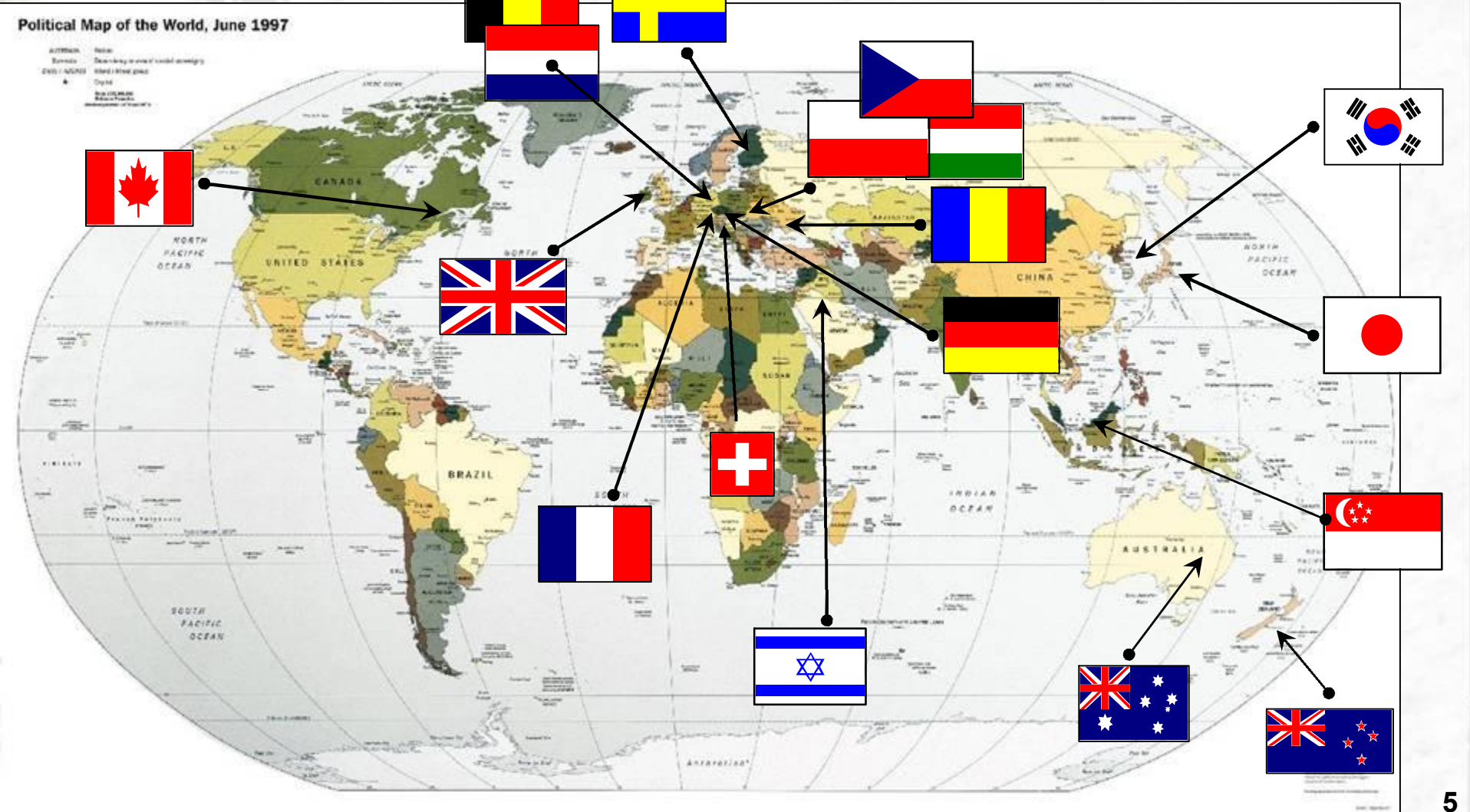
Combating WMD Strategy

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



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

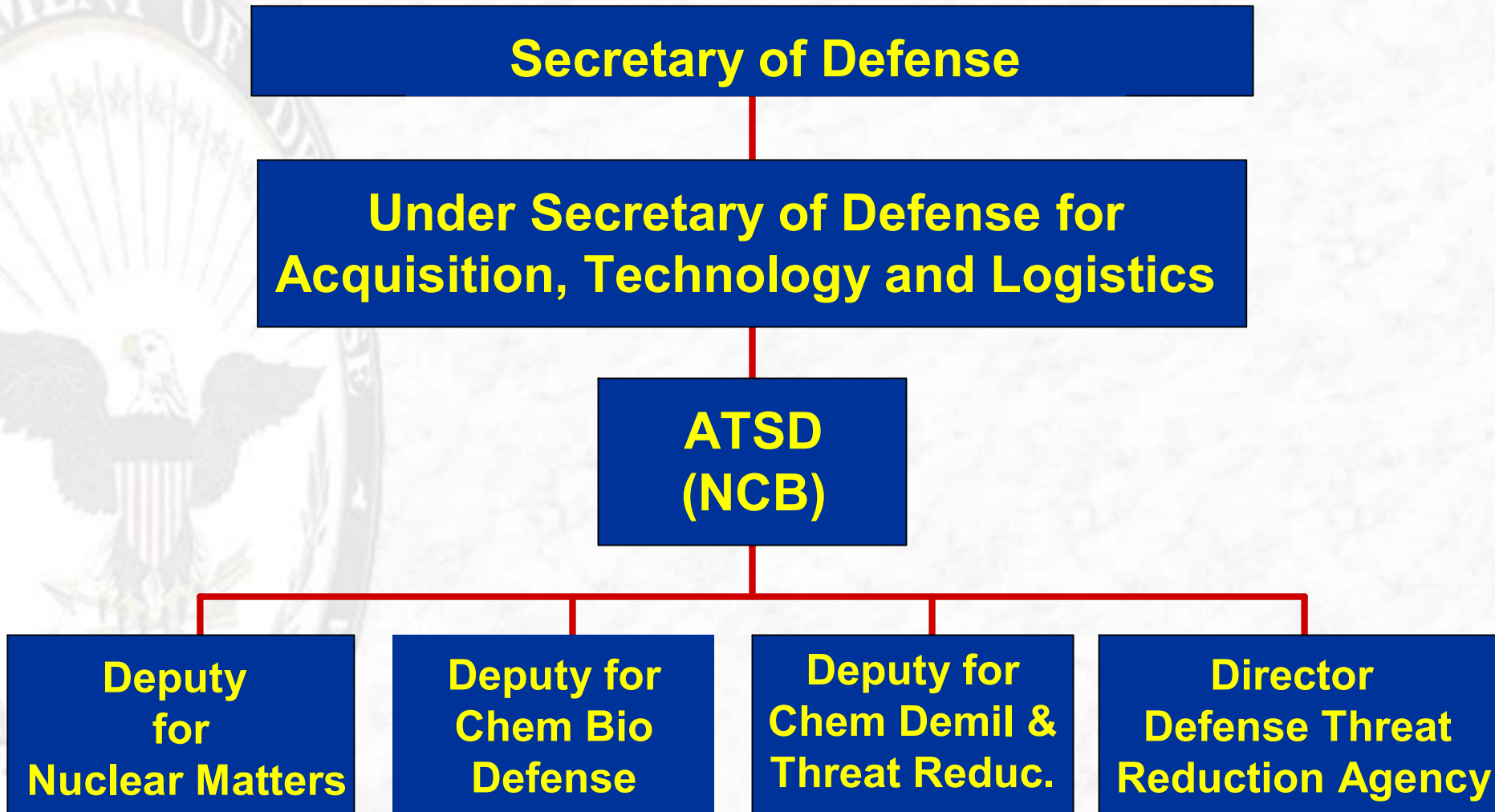


- BIONET
- DHS/EPA/DOD Building Decontamination

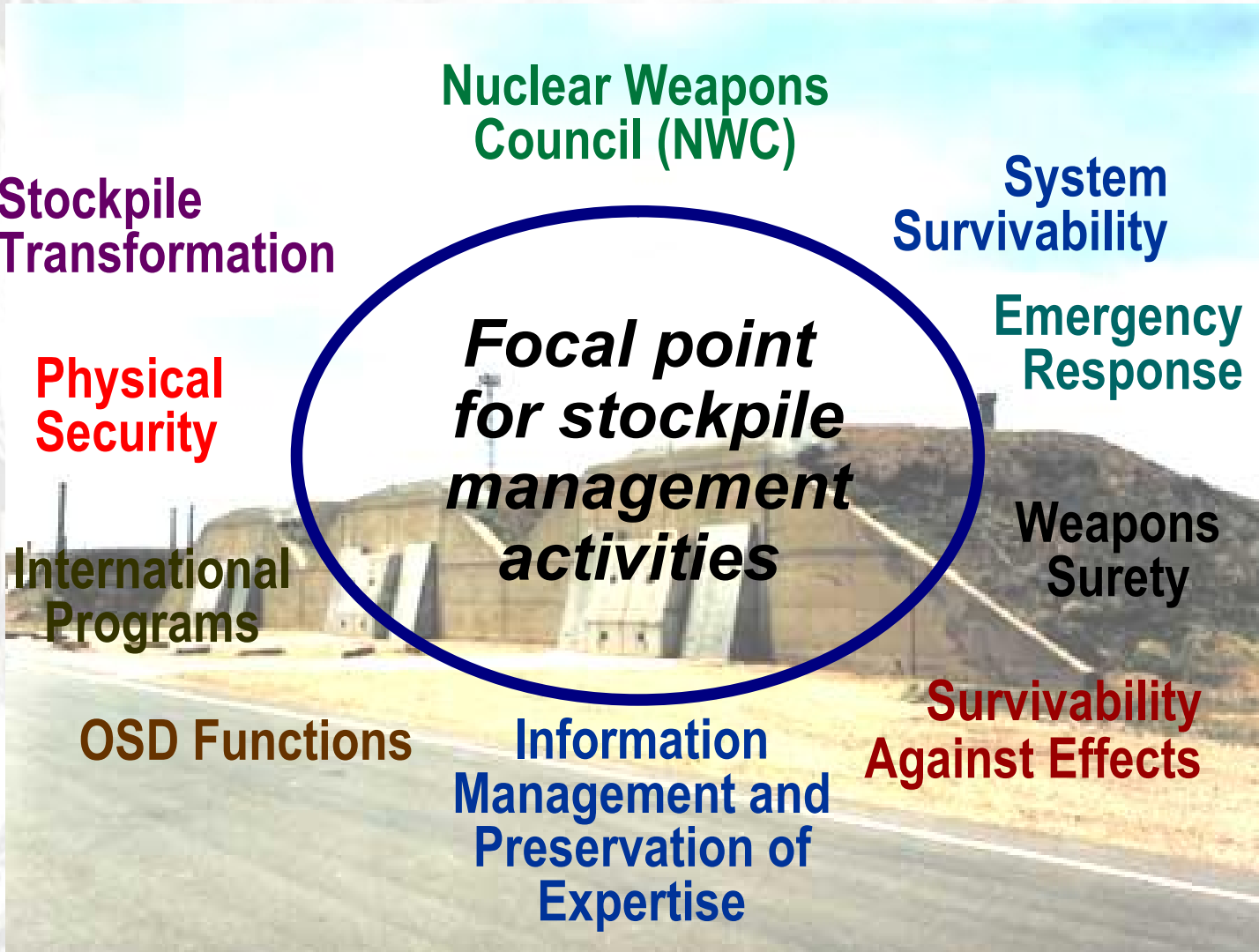
COMMERCIAL INVESTMENTS



ATSD (NCB) Organization



Office of Nuclear Matters (NM)



Chemical and Biological Defense Program

System of Systems Approach to Counter the Threat

Sustained Combat Power

CB Threats & Hazards

Symptoms

Doses Absorbed

Downwind Dispersal

Doses on Target

Agent Delivery



Medical Pretreatment



Contamination Avoidance and NBC Battle Management



Individual & Collective Protection



Installation Force Protection



Medical Treatment



Information Systems



Decontamination and Restoration

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)**

Defense Threat Reduction Agency (DTRA)



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.

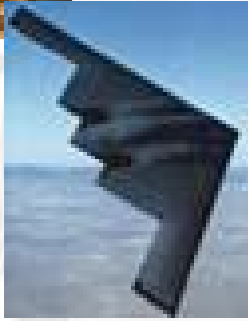
Combat Support Role

DTRA's role as a combat support agency is to provide combating WMD capabilities to support the Joint Staff and Combatant Commands.

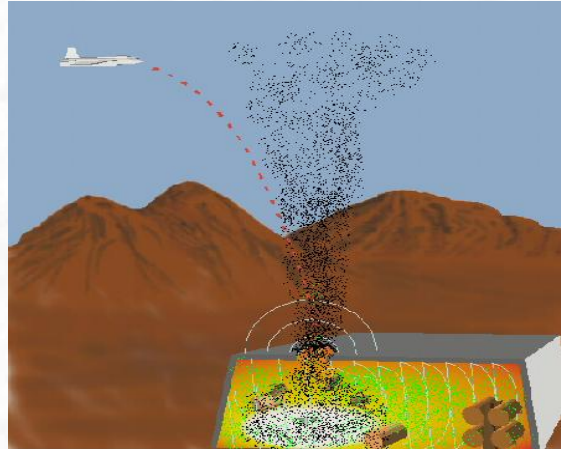
ATSD (NCB) Mission Areas



Nuclear Matters



**Chemical
Demilitarization**



**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

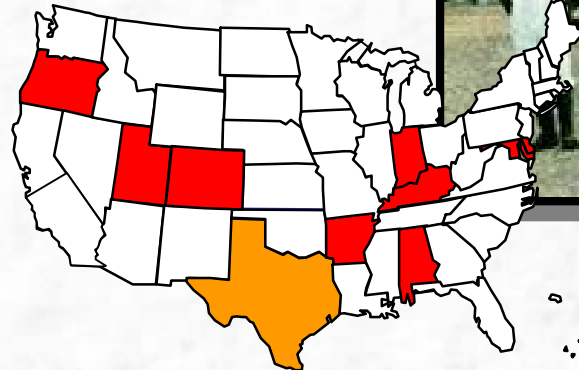
Nuclear Arms Control

- Monitoring activities and inspections
- Dismantling stockpiled weapons



Chemical Weapons Arms Control

- Monitoring activities and inspections
- Dismantling stockpiled weapons



Deter

Stockpile Stewardship Program

- Non-nuclear component testing
- Mathematical models
- Nuclear material tests



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



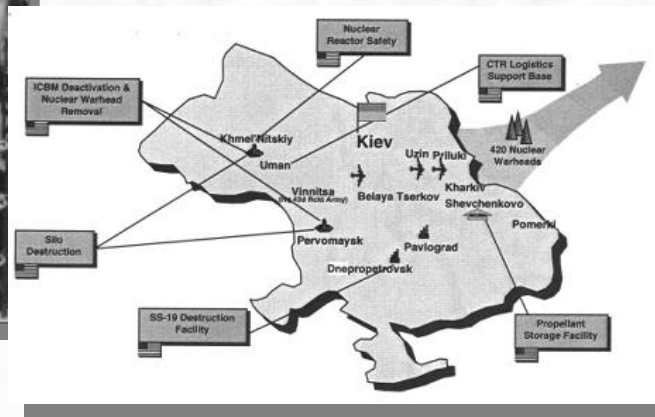
Destroy (Cooperative)

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

Destroy (Cooperative)



Chemical Weapons Convention requirements

- Safely destroying all chemical weapons stockpiles



**Tooele Chemical Agent Disposal Facility
(TOCDF)**

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:

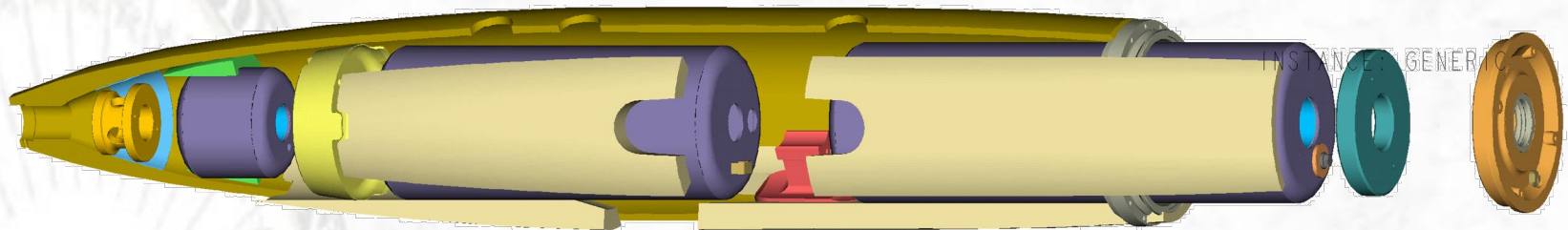
Complete funding to cancellation



Thermobaric Skip Bomb Demonstration



Agent Defeat Weapon - Incendiary



BLU-119/B (CrashPAD)

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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<http://www.acq.osd.mil/cp/index.html>