Comprehensive Nuclear Test-Ban Treaty (CTBT)
USA’S ARMY: THE STRENGTH OF THE NATION

Army G-3/5/7

Agenda

- Objectives
- Area of Application
- Signatories
- Background
- Major Provisions
- Current Issues

AS OF: August 2010

HQDA G-35 (DAMO-SSD)

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Curtail nuclear warhead modernization by prohibiting countries from conducting nuclear tests where the primary nuclear core goes critical creating a nuclear explosion
  - Testing of nuclear subcomponents where there is not an explosion caused by the primary would be allowed

Contribute to nuclear nonproliferation

Enhance international stability
Area of Application
- United States signed CTBT on 24 September 1996
  - Senate refused to consent to ratification on 13 October 1999
  - 16 votes short of the required two-thirds

- Entry Into Force (EIF)
  - CTBT Annex II Requires ratification by 44 known nuclear-capable countries before entering into force

- As of March 2010:
  - 182 countries have signed or acceded
  - 153 countries have ratified
  - 9 of the 44 Annex II countries have not ratified
    - China, Egypt, Indonesia, India, Pakistan, North Korea, Iran, Israel, the United States
The Soviet Union first proposed banning nuclear testing in the 1950s.

Numerous Cold War-era treaties limited nuclear testing:
- Limited Test-Ban Treaty (EIF 10 October 1963)
- Threshold Test-Ban Treaty (EIF 11 December 1990)
- Peaceful Nuclear Explosions Treaty (EIF 11 December 1990)

End of Cold War and need to enhance the Nuclear Non-proliferation regime reinvigorated CTBT initiative.

For the U.S., enhanced conventional strategic capabilities has decreased reliance on nuclear weapons for deterrence and holding a potential adversary’s strategic assets at risk.
- United Nations (UN) Conference on Disarmament (CD) negotiations began in 1994

- Negotiations broke down in June 1996
  - EIF
  - Verification
  - Composition of Executive Council

- Compromise text by CD Chairman

- Approved by the UN General Assembly in 1996

- Implementation oversight by Comprehensive Nuclear Test-Ban Treaty Organization (CTBTO)
Prohibits all nuclear explosive testing
- Testing of nuclear subcomponents is allowed

Verification
- International Monitoring System (IMS)
  - Currently, a system of 321 primary and secondary stations located in 89 countries
  - IMS stations will use either seismic, hydroacoustic, infrasound, or radionuclide technology
- On-Site Inspection regime
  - An ambiguous event identified by the IMS could trigger a potential on-site inspection
  - 31 of the 51 members of the CTBT Organizations Executive Council must approve
  - Inspection area can cover 1000 square kilometers
- Confidence-Building Measures (CBMs) to monitor verification

Treaty is of unlimited duration
Although the United States has not ratified the CTBT, U.S. Army supports the IMS

Commander, USASMDC/ARSTRAT serves as OSD executive agent for technological aspects of U.S. monitoring activities

- USASMDC/ARSTRAT responsible for integrated life cycle management program for all U.S. IMS stations
  - The U.S. currently host 37 stations
  - 10 additional station planned
- Obama Administration announced support for CTBT ratification
  - Intent to resubmit CTBT to Senate for reconsideration

- The United States is a major contributor to CTBTO Preparatory Commission for IMS Stations
  - U.S. funded 100-ton conventional explosion to facilitate calibration of systems Infrasound monitoring facilities in August 2009
- Tsunami warning agreements between CTBTO and certain countries using the IMS

- U.S. Reliable Replacement Warhead (RRW) Program cancelled
  - DOE 2010 budget requires cessation of the RRW program

- U.S. has shifted focus to the Stockpile Stewardship Program
  - Monitoring and testing of warhead subcomponents to maintain confidence in existing weapons
  - Maintain personnel and infrastructure to resume nuclear explosive testing if required
  - 10% budget increase expected in FY11
  - 80% budget increase to ~$11 billion over the next five years