The Challenges of Verifiable Warhead Dismantlement

Guy Earle
Nuclear Strategic Deterrent Office
British Defence Staff - United States
British Embassy
Washington, DC
The Challenges of Verifiable Warhead Dismantlement

- Background
- Past dismantlement verification studies
- Four challenges
- UK-Norway Initiative
- Further technical work
- Future steps
- Conclusion
Background

- Long term goal: world without nuclear weapons
- Via smaller nuclear stockpiles
- Limited by multi-lateral treaty
- Verification measures
- Article VI of NPT
Previous Studies

- Field Test-FT34
  - Effects of degree of inspector access

- Black Sea Experiments
  - Security needs change over time

- Department of Energy Study
  - Confidence possible without classified exchange

- Trilateral Initiative
  - Information barrier
The Four Challenges

- Warhead authentication
- Confidence in chain of custody
- Monitoring of facilities
- Confidence vs. proliferation risk
The UK-Norway Initiative

- First collaboration of NWS and NNWS
- Two research areas
  - Information barrier
  - Managed access
- Simulated exercises
- Positive results
  - NWS and NNWS can manage proliferation risks
  - Confidence in chain of custody
- Further technical work
  - Develop chain of custody technologies
  - Warhead authentication
  - Targeted exercises
Future Steps

- Continue UK-Norway Initiative
- More NNWS & IAEA involvement
  - In developing process
  - As independent observers
- Practical Exercises
The Challenges of Verifiable Warhead Dismantlement

- Unresolved challenges
- International cooperation
- Technical issues can be overcome
- Political will
- Disarmament diplomacy