



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