

The United Kingdom – Norway Initiative on the Verification of Nuclear Warhead Dismantlement

*The first NWS-NNWS technical cooperation into
nuclear dismantlement verification*



Presented by the Norwegian Embassy

Canadian Network to Abolish Nuclear Weapons, 11-12 April 2011

Background and objectives

- Established in 2007 as the first NWS-NNWS technical cooperation into nuclear dismantlement verification
- Project partners:
 - Norway: FFI, IFE, NORSAR and NRPA
 - UK: MoD and AWE
 - Independent observer: VERTIC
- Objectives:
 - To develop tools and techniques for future international agreements on nuclear disarmament
 - In accordance with NPT Article VI ("a treaty on general and complete disarmament... under strict and effective international control")
 - While avoiding the risk of proliferation (Article I and II of the NPT)
 - To promote understanding between NWS and NNWS on the issues faced by the other partner
 - To promote discussion on how NNWS can participate in nuclear disarmament verification – and how NWS may facilitate such participation. UK pioneer work.

The role of verification (Norwegian views)

- Just as the IAEA today is essential in preventing and deterring proliferation, future disarmament efforts and (not least) a world free of nuclear weapons, will likely require comprehensive arrangements for providing confidence, including verification.
- NWS have a special responsibility to develop these arrangements, but NNWS must also take part.
 - The idea that disarmament should be left to NWS, while NNWS must ensure non-proliferation, must be discarded.
 - NPT recognizes both non-proliferation and disarmament as joint responsibilities for both NWS and NNWS.
- To some extent, this is already happening:
 - The Comprehensive Test Ban Treaty (CTBT) verification system was developed – and is maintained by experts from a range of countries.
 - Norway (and Canada) has for years promoted negotiation of a verifiable Fissile Material Cut-Off Treaty (FMCT) that is verifiable.
 - Norway (and Canada) is a partner in the international cooperation to clean up nuclear waste in North Western Russia.
 - Many (but not all) NNWS are strong supporters of the IAEA.
- More can be done.

Developing tool and techniques - the information barrier (IB)

- Opposite viewpoints: The inspector will seek maximum access to the nuclear warhead (visual, measurements). The host will seek to minimize risks of proliferation and to national security. But both parties will seek to ways around problems (given good will). And both parties will be concerned about their personal safety at the plant...
- IB allows the inspector to do measurements on the warhead (perhaps in a sealed container) to confirm authenticity. (Confirm that the item in the container contains plutonium of a certain size/quality)
- IB must be trusted by both parties. (As easy as possible to inspect)



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009 (slide below)

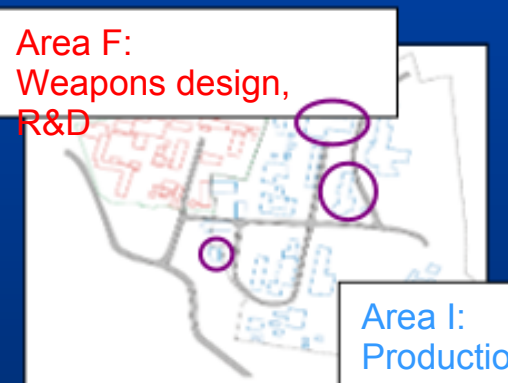
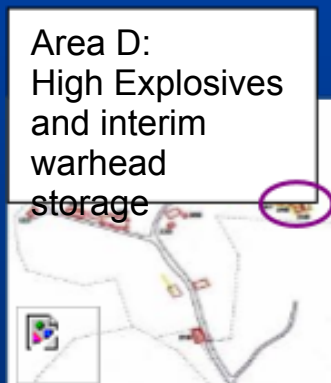
Developing tools and techniques (cont.) - managed access

- Host will want to limit access to the warhead and prevent any risks of proliferation, security or unnecessary hampering of other facility operations.
- The inspector team must be given sufficient access to do their job.
- UKNI have tested various techniques such as guarding, escorting of inspectors, and exclusion and shrouding of areas and objects – while accommodating inspectors' needs.
 - UKNI exercises in 2008-2009 and 2010.

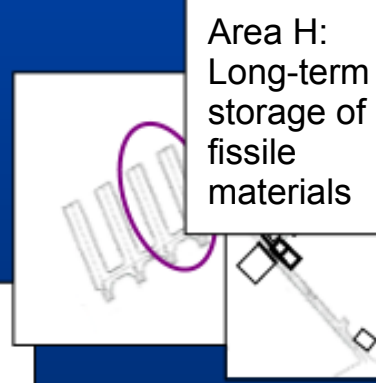


Promoting understanding between a NWS and a NNWS – First UKNI exercise, Norway 2008 and 2009

- Two-staged exercise: A familization visit (2008) to allow the inspector team to plan the actual inspection, the monitoring visit (2009)
- Reversed roles: UK playing a NNWS (“Luvania”) and NO playing the NWS (“Torland”). This allowed for an extensive exercise scenario.
- Exercise held at Norwegian FFI’s and IFE’s (civilian nuclear) facilities at Kjeller.
 - Mock-up nuclear weapons laboratory
 - Mock-up nuclear gravity bomb (Odin class)
 - Outcome (short version): Inspectors by large satisfied. Host satisfied that security at facility was not compromised. → Need to test managed access in a real security environment



Area I:
Production
and
handling



Promoting understanding (cont.)

Second exercise in UK 2010

- UK hosted this exercise to test the managed access arrangements in a real security environment; one of its nuclear weapons laboratories.
- No team invited (as "Luvania") to inspect.
- Results still being assessed.
- UKNI will present results of this exercise at NPT conference in 2012



Future work

- UKNI will continue to develop tools and techniques for nuclear disarmament verification, promote a common understanding between NWS and NNWS, a discussion on how NNWS can participate in disarmament verification, and how NWS may facilitate such participation.
 - Technical seminar with broad international participation currently under discussion
 - Forthcoming presentation at conferences and seminars in 2011: INMM (May), Wilton Park (June), IAEA (October).
 - NPT 2012

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