

Briefing on Oct. 31- Nov. 4, 2006 Visit to DPRK  
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Briefing for Amb. Linton Brooks  
Administrator, NNSA/DOE  
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# Technical update - DPRK nuclear program

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- **5 MWe reactor**
  - Operating since June 2005 with some restrictions
  - Reduced output temperature and some fuel replacements
- **Reprocessing**
  - Finished reprocessing of second campaign by Oct. 2005
  - Doing waste treatment now (high radiation levels)
  - Improved throughput by  $\times 1.3$ : pulsed columns for co-extraction
- **Reactor construction**
  - Slowdown in 50 MWe reactor construction. Problem in the industrial sector getting components refurbished
  - No action on 200 MWe still under study. Cost more to complete than to start over.

**Some indications that technical problems have slowed down program**

# Current status - DPRK nuclear program

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## • Plutonium

- |  |                     |                 |
|--|---------------------|-----------------|
| • < 1994 (IRT & 5 MWe)   | ~ 8.6 kg            | (1 + weapons)   |
| • 2003 (5 MWe)   | ~ 25 kg             | (4-6 weapons)   |
| • 2005 (5 MWe)   | ~10-14 kg           | (~ 2 weapons)   |
| • 2006 (5 MWe)   | ~ 4-8 kg in reactor |                 |
| • > 2005 MWe capacity  | ~ 4-6 kg/yr         | 1 weapon/yr     |
| • Future 5 + 50 MWe<br>(but slowed down for technical reasons) | ~ 60 kg/yr          | ~ 10 weapons/yr |

## • Nuclear test

- Chinese were given advance notice of ~ 4 kt yield
- Seismic signals suggest 0.2 to 1 kt
- DPRK officials say and act like - "fully successful test"
- Either small size and weight - partial success
- More likely, simple design scaled back to ensure containment
- China view: Tried for 4 kt, got 1 kt, not bad for first try.

## • Nuclear weapons

- No indication of nuclear strategy nor responsibilities for safety and security that come with possession of nuclear weapons