

Case Study: Evaluation of a mock-up State

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Procedure

- Presentation of the case
- Split into groups
 - Review material (Timeline of events)
 - Discuss and answer questions
- Assemble and present groups answers
- Consensus conclusion (?)

The State



Timeline of events (1)

Bludonia ratified the NPT (1969)



Signed CSA 1972



2 MW Research Reactor into Safeguards

10970 g HEU, 80% E

93 tubular assemblies

Timeline of events (2)

Signed cooperation Agreement with Gaul

Upgraded Research Reactor to 5 MW

Provided Updated DI to IAEA

Bought set of Hot Cells from Latina

Provided DI to IAEA

Timeline (3)

Bought two research reactors from Gaul (1979)

Tommy-1

• 500 KW (Th) Pool type

Tommy-2

• 40 MW (Th) MTR type

Provided Design Information to the IAEA

Inspectors verified DI in September 1979

Gaul and Bludonia reported shipment of NM to Tommy-1 & 2

In June 1980, Inspectors verified nuclear material at Tommy-1:
93 MTR assemblies 12.3 Kg HEU 93% E

Tommy-2



Bludonia-Maledonia war erupted in 1980



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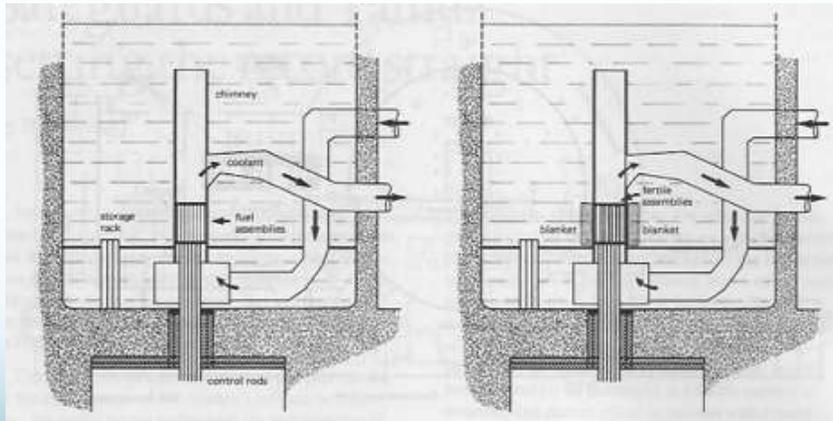
Maledonia attacks Tommy-1 reactor

- (September 1980)
 - Little damage
 - Nuclear Material not affected

Medinata Attacks Tommy-2 reactor, June 1981



Medinata's justification



Reactions at the BoG of the IAEA, June 1981



Reactions at the UNSC, June 1981



Inspectors Reaction

Diversion strategies were covered:

- Diversion of HEU
 - Identification and Gross and Partial defects by NDA
 - If fuel was irradiated verification of Cherenkov glow
- Unreported Plutonium production
 - Direct observation plus Use of surveillance over core
 - High throughput of fuel to irradiate fertile materials



Next step

Groups assemble for analysis and discussion