

BLM – Keeping the Genie in the Bottle: Nuclear Non-Proliferation

Roles and Duties

Nuclear Technology Exporting Nation #1:

Your nation is a nuclear technology-exporting nation with strict controls on the use of its nuclear technology. A technology-transfer treaty prohibiting use of nuclear technology for weapons development will have to be signed, and regular on-site inspections by national and/or IAEA inspectors will be required. Canada is an example of a nation with strict nuclear technology-transfer requirements.

Duties:

- Negotiate and sign copies of the nuclear technology-transfer treaty with interested nation. Negotiations must be successfully completed with two nations and treaties signed (use **Nuclear Technology Transfer Treaty (On-Site Inspections) BLM** – each signing nation keeps a copy).
- Provide nuclear reactors to the nations which sign the treaties (hand over **Nuclear Reactor and Spare Fissionable Material and Spent Fuel Storage BLMs**).
- Provide fissionable material to the nations to which nuclear facilities have been supplied (hand over 25 face-up chips).
- Accept spent nuclear fuel from the customer nations if they so desire.
- Conduct regular on-site inspections of nuclear facilities, to include an accounting for any nuclear fuels, both fissionable and spent, used in nuclear facilities, as well as a search for nuclear weapons facilities.
- File reports to IAEA on inspections and fissionable materials supplied to nations.

Roles:

- **Director/Timekeeper** – handles the stopwatch, ensures that all reports and inspections are occurring on time.
- **Contract Negotiator/Product Support Specialist** – approaches potential customer nations to negotiate technology-transfer treaties, then delivers reactor and fissionable materials to customer nations.
- **Fissionable Material Inventory Control Specialist** – manages fissionable materials, including creating inventory control reports every 10 minutes and delivering those reports to the IAEA.
- **On-Site Inspector** – go to each purchasing nation's nuclear facilities to ensure that all fissionable material is accounted for and no nuclear weapons development is being conducted; each nation should be inspected once every fifteen minutes.

As a group, you should decide whether to observe neighbouring nations and report any suspicious activities to the IAEA.

Roles and Duties

Nuclear Technology Exporting Nation #2:

Your nation is a nuclear technology-exporting nation with no restrictions on the use of its nuclear technology. A technology-transfer treaty will have to be signed.

Duties:

- Negotiate and sign copies of the nuclear technology-transfer treaty with interested nations. Negotiations must be successfully completed with two nations and treaties signed (use **Nuclear Technology Transfer Treaty (No Inspections) BLM** – each signing nation keeps a copy).
- Provide nuclear reactors and spent fuel reprocessing facilities to the nations which sign the treaties (hand over **Nuclear Reactor, Spare Fissionable Material and Spent Fuel Storage and Spent Fuel Reprocessing Facility BLMs**).
- Provide fissionable material to the nations to which nuclear facilities have been supplied (hand over 25 face-up chips).
- Accept spent nuclear fuel from the customer nations if they so desire.
- Provide any support desired to nations which have had nuclear facilities supplied.
- File reports to IAEA on fissionable materials supplied to nations.

Roles:

- **Director/Timekeeper** – handles the stopwatch, ensures that all reports and deliveries are occurring on time.
- **Contract Negotiator/Product Support Specialist** – approaches potential customer nations to negotiate technology-transfer treaties, then delivers nuclear facilities to customer nations and conducts periodic support visits to support their nuclear programs.
- **Fissionable Material Inventory Control Specialist** – manages fissionable materials, including creating inventory control reports every 10 minutes and delivering those reports to the IAEA.
- **Fissionable Material Delivery Specialist** – delivers fissionable materials to customer nations when required.

As a group, you should decide whether to provide support for any nations you suspect are developing nuclear weapons.

Roles and Duties

Nuclear Technology Importing Nation Class 1:

Your nation is interested in acquiring nuclear power technology. Your nation has signed the Nuclear Non-Proliferation Treaty and is willing to accept all international safeguards, including on-site inspections by the IAEA of nuclear facilities.

Duties:

- Negotiate and sign copies of the nuclear technology-transfer treaty with a supplier nation.
- Accept delivery of nuclear reactors from the supplier nation.
- Operate the nuclear reactors, including fuelling and removal of spent fuel.
- Regularly return spent nuclear fuel to the supplier nation.
- Allow regular on-site inspections of nuclear facilities, to include an accounting for both fissionable material and spent nuclear fuel used in nuclear facilities, as well as searches for nuclear weapons facilities.
- File reports to IAEA on inspections and fissionable materials received from supplier nation.

Roles:

- **Director/Timekeeper** – handles the stopwatch, ensures that all reports and inspections are occurring on time.
- **Contract Negotiator/Inspection Liaison Specialist** – leads negotiations with potential supplier nations to negotiate technology-transfer treaties, then works with on-site inspection teams to ensure that all safeguards are being met.
- **Fissionable Material Inventory Control Specialist** – manages fissionable materials, including operation of the fuel reprocessing facility (if applicable) and creating inventory control reports every 10 minutes and delivering those reports to the IAEA.
- **Nuclear Reactor Control Operator** – controls operation of the nuclear reactors, ensuring that spent fuel is removed from the reactors and new fissionable material refuels the reactors on schedule.

As a group, you should decide whether to observe neighbouring nations and report any suspicious activities to the IAEA.

Roles and Duties

Nuclear Technology Importing Nation Class 2:

Your nation is interested in acquiring nuclear power technology. Your nation does not wish to allow unlimited outside inspection of its nuclear facilities, believing that other nations have no right to interfere with your internal affairs.

Duties:

- Negotiate and sign copies of the nuclear technology-transfer treaty with a supplier nation
- Accept delivery of nuclear facilities from the supplier nation.
- Operate the nuclear reactors, including fuelling and removal of spent fuel.
- Operate the fuel reprocessing facility.
- Attempt to counter any IAEA attempts to conduct unscheduled on-site inspections of nuclear facilities.
- File reports to IAEA on inspections and fissionable materials received from supplier nation (these reports do not necessarily have to be accurate).

Roles:

- **Director/Timekeeper** – handles the stopwatch, ensures that all reports and inspections are occurring on time.
- **Contract Negotiator/Security Chief** – leads negotiations with potential supplier nations to negotiate technology-transfer treaties, then works to ensure that no unauthorized on-site inspections occur and that IAEA observers have difficulty observing operations of nuclear facilities.
- **Fissionable Material Inventory Control Specialist** – manages fissionable materials, operation of the fuel reprocessing facility and creating inventory control reports every 10 minutes and delivering those reports to the IAEA.
- **Nuclear Reactor Control Operator** – controls operation of the nuclear facilities, ensuring that spent fuel is removed from the reactors and new fissionable material refuels the reactors on schedule.

As a group, you should decide how to handle issues related to IAEA inspections and the accuracy of fissionable materials reports submitted to the IAEA and your supplier nation.

Roles and Duties

International Atomic Energy Agency:

The International Atomic Energy Agency is responsible for ensuring that nuclear technology is used for peaceful purposes. Your task is to monitor all nuclear activities amongst the six nations, watching for any signs of activities that indicate efforts to develop nuclear weapons.

Duties:

- Maintain records of which nations have supplied nuclear technology to which other nations.
- Receive reports on inventory levels of fissionable materials from all nations every ten minutes to ensure that all fissionable material is accounted for.
- Conduct regular on-site inspections (where inspectors are allowed) to ensure that fissionable material inventory reports are accurate and that no nuclear weapons development is being conducted.
- Observe nuclear activities in all nations from a distance (simulating intelligence-gathering activities such as satellite and aerial surveillance).
- If nuclear weapons development by a nation is observed, bring that activity to the attention of the international community.

Roles:

- **Director/Timekeeper** – handles the stopwatch, ensures that all reports and inspections are occurring on time.
- **Record-Keeper** – receives and analyzes fissionable material reports to check that no fissionable material has gone missing.
- **On-Site Inspectors** – go to each nation's nuclear facilities to ensure that all fissionable material is accounted for and no nuclear weapons development is being conducted; each nation should be inspected once every fifteen minutes.
- **Observers** – stand at one end of the room and watch each nation for suspicious activity (slipping fissionable material out of sight, watching for evidence of hidden nuclear facilities, etc.).

As a group, you should confer regularly and discuss which nations you believe are trying to develop nuclear weapons.

Roles and Duties

Nation Seeking a Nuclear Arsenal:

Your nation is interested in acquiring nuclear weapons. In addition to any other duties your nation has as a nuclear technology importing nation, your nation is attempting to secretly develop nuclear weapons. Your teacher will provide you with the **Nuclear Weapons BLM**.

Duties:

- Develop nuclear weapons without being discovered by other nations or the IAEA; this could include falsification of fissionable material inventory reports.
- Divert fissionable material to your nuclear weapons program without being caught (either your own nation's fissionable material or fissionable material stolen from another nation's nuclear program).
- Cover up any traces of your nuclear weapons program (keep your nuclear weapons development program hidden).
- Produce nuclear weapons once development is successfully completed.

Roles:

- **Nuclear Weapons Developer** – controls nuclear weapons development and production (should be combined with other roles).

As a group, you should decide how to confuse the IAEA as to your intentions and whether to announce successful development of nuclear weapons through a nuclear test.