



**IAEA/ANL
Interregional Training Course**



**Technical and Administrative Preparations
Required for Shipment of Research Reactor
Spent Fuel to Its Country of Origin**

Argonne National Laboratory
Argonne, IL
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Lecture L.2.1a

IAEA Safeguards

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Division of Nuclear Power and the Fuel Cycle**

IAEA

Vienna, Austria

SAFEGUARDS



- ◆ RESPONSIBILITIES OF EXPORTING STATE
- ◆ RESPONSIBILITIES OF RECIPIENT STATE
- ◆ RESPONSIBILITIES OF THE IAEA

EXPORTING STATE



- ◆ MOST STATES HAVE CLEAR OBLIGATIONS UNDER THE AGREEMENT WITH THE IAEA IN CONNECTION WITH THE TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS

EXPORTING STATE

- ◆ Has the responsibility for the SF until the recipient State (US) assumes responsibility
- ◆ No third State is deemed to have responsibility for SF which is in transit on or over its territory or territorial waters, or that is being transported under its flag or in its aircraft

EXPORTING STATE



- ◆ *Shall* report the shipment of the SF as soon as possible after the event but *no later than 30 days* after the end of the month in which the shipment took place

EXPORTING STATE

- ◆ Must notify the IAEA after the conclusion of contractual arrangements leading to transfer and at least *two weeks* before it is prepared for shipping. Notification of:
- ◆ ID, quantity, composition and MBA from which it will come
- ◆ destination (SRS, INEL)

EXPORTING STATE (cont.)

- ◆ dates and locations at which it will be prepared for shipping
- ◆ dates of dispatch and arrival (approx.)
- ◆ point of transfer of responsibility

EXPORTING STATE

- ◆ *Shall* make arrangements for the IAEA to receive, within **3 months** of the time when the recipient State accepts responsibility, confirmation by the *recipient State* of the transfer
- ◆ Special reports are required if any unusual incident or circumstances (including significant delay) occur during the transfer

IAEA

- ◆ Notification by the exporting State is to enable the IAEA to verify the quantity and composition of SF before it is transferred out of the State and, *if the IAEA wishes or the State requests*, to affix seals on the SF when it has been prepared for shipping.
- ◆ The IAEA will *not delay* the shipment by such actions.

IAEA

- ◆ Shall count, verify and seal, if necessary, or applicable SF for transport
- ◆ In practice, if an inspector happens to be there at the time of shipment, he/she will verify (count) the shipment, if not, verification will be by *Transfer Matching* and inspection and verification of the remaining fuel during the next inspection

IAEA

- ◆ Partially filled casks in one State going on to be filled in another *may* cause complications
- ◆ The IAEA *may* seal such casks or require an inspector to verify the contents at the intermediate stop.

RECIPIENT STATE

- ◆ Should provide, for each import of nuclear material >1 eff. kg which immediately prior to shipment was subject to safeguards under an agreement with the IAEA, the following:
 - the State and organization or company from which the SF is received;
 - description, composition and quantity.
- ◆ As soon as possible after receipt of the material.