

*of statements regarding the amounts, presence and use of nuclear material or other items subject to safeguards as recorded by facility operators and as reported by the state to the IAEA. Accountancy, taken together with containment and surveillance, is the fundamental basis on which verification rests."*²

The main political objectives of safeguards are to:

- gain assurance that countries are complying with their non-proliferation and other peaceful use undertakings; and
- deter the diversion of safeguarded nuclear materials to the production of nuclear explosives and the misuse of safeguarded facilities to produce unsafeguarded nuclear material.

To achieve these political objectives, the IAEA has set itself the technical objective of the "timely detection of diversion of significant quantities of nuclear material from peaceful nuclear activities to the manufacture of nuclear weapons or other nuclear explosive devices or for purposes unknown and deterrence of such diversion by risk of early detection."³

The "significant quantity" of nuclear material used by the IAEA as their detection target is 8 kg of plutonium or 25 kg

of highly enriched uranium. These are the amounts required to manufacture a nuclear explosive device. "Timely detection" derives from the time required to convert diverted material into components for an explosive device.

To meet this technical objective, the IAEA has established a process for verifying the continued presence of nuclear material placed under safeguards. This process consists of comparing the accuracy of reports and other information provided by a country against independent, objective information collected by IAEA inspectors and from containment and surveillance equipment such as cameras and seals installed by the IAEA at the country's nuclear facilities.

Safeguards agreements between a country and the IAEA concluded as a result of the NPT require the country to establish and maintain a State System of Accounting for and Control of Nuclear Material within its territory. IAEA verification is based on reports submitted by the country, as well as on records kept at facilities, such

continued on page 33

2. IAEA *Safeguards: An Introduction*, Vienna: International Atomic Energy Agency, 1981, p. 19.

3. *INFCIRC/153*, June 1972, paragraph 28.