Appendix C: Abbreviations and Glossary

C

ABACC Argentine-Brazilian Agency for Accounting and Control of Nuclear Materials

ALMR Advanced Liquid Metal Reactor, a relatively recent concept for a self-contained breeder reactor, designed so that reprocessing and fuel fabrication facilities are collocated with the reactor, and there is minimal access to the fuel at all stages of the cycle

CANDU Canadian Deuterium-Uranium reactor, a type of nuclear reactor fueled by natural uranium and moderated by heavy water

C/S Containment and Surveillance

DA Destructive Assay

Detection probability levels, as defined by the IAEA The IAEA's safeguards criteria specify the detection probability with which various types of measurements on various types of materials are to be made. For these purposes, low detection probability is defined as 10 percent, medium detection probability is defined as 50 percent, and high detection probability is defined as 90 percent.

Direct-use material Nuclear material that can be used for the manufacture of nuclear explosives components without transmutation (i.e., changing isotopes to different isotopes) or further enrichment (i.e., increasing the concentration of some isotopes at the expense of others). Examples are highly enriched uranium, plutonium with less than 80 percent plutonium-238, and uranium-233. Note that chemical compounds or mixtures of direct-use materials (e.g., MOX, see below) are also direct-use materials, as is the plutonium contained in spent fuel. *Unirradiated* direct-use material (e.g., fresh highly enriched uranium or separated plutonium) would require less processing time and effort to make into a weapon than *irradiated* direct-use material such as spent fuel, which would need to be reprocessed before it could be used in a weapon.

EURATOM European Atomic Energy Community

FBR Fast Breeder Reactor (most common type is the liquid-metal fast breeder reactor, or LMFBR)

HEU	Highly Enriched Uranium (20 percent or more in uranium-235)
IAEA	International Atomic Energy Agency
IIV	Interim Inventory Verification (e.g., monthly for facilities holding substantial quantities of separated plutonium).
Indirect-use material	All nuclear material except direct-use material. Natural uranium or low-enriched uranium, an indirect-use material, must be enriched (into highly enriched uranium) or transmuted (into plutonium) before it can be used in nuclear weapons. See *direct-use material.*
INFCIRC	Information Circular; type of official document published by the IAEA
LASCAR	Large-Scale Reprocessing (a forum advisory to the IAEA)
LEU	Low-Enriched Uranium (< 20 percent in U-235)
LWR	Light-Water Reactor
MBA	Material Balance Area
MC&A	Material Control and Accountancy
MOX	Mixed Oxide Fuel (usually contains natural or depleted uranium and plutonium oxides)
MUF	Material Unaccounted For
NDA	Non-destructive Assay
NRTA	Near-Real-Time Accountancy
PIV	Physical Inventory Verification (e.g., yearly)
PUREX	Plutonium-Uranium Redox Extraction, the most common chemical process by which spent fuel is reprocessed
RSD	Relative Standard Deviation
SAGSI	Standing Advisory Group on Safeguards Implementation
SIR	Safeguards Implementation Report (the annual report by the IAEA to its Board of Governors on its safeguard activities for the past year)
SQ	Significant Quantity (8 kg of plutonium or uranium-233 or 25 kg of uranium-235 contained in a uranium product enriched to 20 percent or more in uranium-235)
SRD	Shipper-Receiver Difference
SSAC	State's System of Accountancy and Control
Strata	Subsets of measured items or batches that are chosen to be statistically homogeneous, for instance, having similar nuclear material content and measured using the same procedures