Department for Business, Energy & Industrial Strategy

Euratom Exit Factsheet
Key Terms

June 2018

Key term	Meaning
Commission Regulation (Euratom) No 302/2005 on the application of Euratom safeguards	Regulation 302/2005 provides the current legal framework for the application of safeguards under the EURATOM Treaty.
Containment	The IAEA Safeguards Glossary defines Containment as: "Structural features of a facility, containers or equipment which are used to establish the physical integrity of an area or items (including safeguards equipment or data) and to maintain the continuity of knowledge of the area or items by preventing undetected access to, or movement of, nuclear or other material, or interference with the items."[1]
International Atomic Energy Agency (IAEA)	The IAEA is the international centre for cooperation in the nuclear field. The Agency works with Member States and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies. The objective of IAEA Safeguards is to deter the spread of nuclear weapons by the early detection of the misuse of nuclear material or technology. This provides credible assurances that States are honouring their legal obligations that nuclear material is being used only for peaceful purposes.[2]
Fission	Fission is the nuclear reaction that occurs when large atoms are split into smaller parts. If a large number of atoms undergo fission in a chain reaction, a huge amount of energy is released. Commercial nuclear power stations utilise this energy to power the national grid with stable, low carbon electricity.
Fissionable	Material which when bombarded with neutrons of suitable energy can undergo fission.
Fissile	Fissile materials are capable of undergoing nuclear fission (splitting of atoms) by slow neutrons. Hence, are capable of sustaining a chain reaction. Within legal texts fissile materials are often categorised as "special fissionable materials".
Fusion	Nuclear fusion is a high potential future energy source that aims to replicate the process that takes place in the Sun. Where small atoms collide together and form larger atoms, and release energy.

[1] IAEA Safeguards Glossary, © IAEA, 2001 Edition page 66.
[2] Source: www.iaea.org

Key term	Meaning
Ionising Radiation	Energy emitted from a source is generally referred to as radiation and can take the form of sub-atomic particles or high-energy electromagnetic waves. Radiation is described as ionizing if it has enough energy to remove tightly bound electrons from the orbit of an atom, causing it to become charged or ionized. To assess biological effects, we estimate how much energy is deposited per unit mass of the part (or whole) of the human body (or other organism). Radiation is always present throughout air, water, food, soil and in all living organisms and a large proportion of the average annual radiation dose received by people results from natural environmental sources.[3]
Nuclear Fuel Cycle	A system of nuclear facilities interconnected by flows of nuclear material. For example, the UK nuclear fuel cycle includes conversion plants, enrichment plants, fuel fabrication plants, reactors and reprocessing plants.
Nuclear Materials Accountancy	Nuclear material accountancy is a system to register material quantities and locations, track items and quantities through transfers and processes, record measurement data, and provide information for reporting and analysis.
Protocol Additional to Safeguards Agreements (Additional Protocol)	Additional Protocols constitute agreements between the IAEA and states that specifies additional authority for the IAEA to implement its oversight of nuclear safeguards, including measures to improve the efficiency and strengthen the effectiveness of the IAEA safeguards system. The main features of the additional protocol are the requirements that States provide: information beyond that required for nuclear materials accountancy, e.g. on nuclear fuel cycle-related research and development, specified manufacturing activities (e.g. centrifuge manufacture) and exports and imports of certain non-nuclear material and equipment; and access to the IAEA to check this reporting. The UK/Euratom/IAEA Additional Protocol came into force in 2004.

[3] Source: www.who.int

Key term	Meaning
Nuclear safeguards	Nuclear safeguards primarily involve reporting and verification processes by which the UK demonstrates to the international community that civil nuclear material is not diverted into military or weapons programmes. Nuclear safeguard procedures can include accountancy and reporting on civil nuclear material holdings and development plans, verification (including inspections of nuclear facilities by international inspectors), containment measures and surveillance (including cameras in selected facilities). **Note**: Nuclear safeguards are distinct from nuclear safety (the prevention of nuclear accidents) and nuclear security (physical protection measures), which are the subject of independent regulatory provisions.
Surveillance	The IAEA Safeguards Glossary defines Surveillance as: "The collection of information through inspector and/or instrumental observation aimed at detecting movements of nuclear material or other items, and any interference with containment or tampering with IAEA equipment, samples and data."[4]
Treaty establishing the European Atomic Energy Community (EURATOM Treaty)	The EURATOM Treaty entered into force on 1 January 1958. The UK entered into the Treaty at the same time as joining the European Community in 1973. The safeguards Chapter of the Treaty (Chapter VII) requires the European Commission to satisfy itself that: ores, source materials and special fissile materials are not diverted from their intended uses as declared by the users; and the provisions relating to supply, and any particular safeguarding obligations assumed by the Community under an agreement concluded with a third state or an international organisation are complied with.
Treaty on the Non-Proliferation of Nuclear Weapons (NPT)	The NPT entered force in 1970. Under the NPT, the nuclear weapon states (NWS), as defined in the NPT (China, France, Russia, UK and US), undertake not to transfer to any recipient whatsoever nuclear weapons or any other nuclear explosive devices or control over them, and not to support manufacture or acquisition of such weapons or devices by any non-nuclear weapons. The NPT does not require the NWS to conclude safeguards agreements.

[4] IAEA Safeguards Glossary, © IAEA, 2001 Edition page 66.

Key term	Meaning
Voluntary Offer Safeguards Agreements (VOA)	Safeguards agreements made with the IAEA by the nuclear weapon States (NWS), as defined in the NPT (China, France, Russia, UK and US). The NPT does not require the NWS to conclude safeguards agreements, but they have all voluntarily accepted the application of IAEA safeguards on all or part of their civilian nuclear fuel cycle, in order to allay concerns expressed by non-nuclear weapons States that their nuclear industry could otherwise be at a commercial disadvantage. The UK/Euratom/IAEA voluntary offer safeguards agreement came into force in 1978.