Definition of Safeguards

Safeguards are a set of activities by which it is possible to verify that a State is living up to its international undertakings not to use nuclear programmes for nuclear weapons purposes. The safeguards system is based on assessment of the correctness and completeness of the State's declarations concerning nuclear material and nuclear-related activities.

“Inspections by an impartial, credible third party have been a cornerstone of international nuclear arms control agreements for decades. Where the intent exists to develop a clandestine nuclear weapons programme, inspections serve effectively as a means of both detection and deterrence.”

IAEA Director General, Mohamed ElBaradei

Washington Post, October 2002
History of the International Safeguards and their implementation in France

1950
Rome Treaty establishing EAEC (1957)

1959
Creation of the IAEA (1957)

1961
1st Safeguards System of the IAEA

1970
NTP Entry into Force (1970)

1976
Euratom Regulation # 3227

1981
Entry into Force of the French Safeguards agreement

1990
1st Golfe War - Discovery of the Iraq Nuc Program

1993
Beginning of the Program '93+2' for strengthening Safeguard system

1995
Extension indefinitely of the NPT

1997
Adoption of the Model Protocol Additional to the Agreements

2003
France ratifies the Additional Protocol (2003) [EIF 2004]

2005
Euratom Regulation # 302

1953
President Eisenhower speech ‘Atoms for peace’

1957
Euratom Regulation # 8

1957
Rome Treaty establishing EAEC

1957
President Eisenhower speech ‘Atoms for peace’
The International Safeguards

1. I.A.E.A. Safeguards

2. EURATOM Safeguards

3. Role of IRSN in the field of International Safeguards
The Non-Proliferation Treaty

Objective

“The proliferation of nuclear weapons would seriously enhance the danger of nuclear war”

Limit the number of Nuclear Weapon States

- State Commitment
  - NWS
    - not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices
    - not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons
    - not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices
    - not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices
  - NNWS

- Allow a control on the State’s commitment
  - NWS
    - by accepting Safeguards on nuclear material
  - NNWS

NWS : Nuclear Weapon State [US,RUS,UK,FRA,CHN]
NNWS : Non Nuclear Weapon State
IAEA Safeguards

**Objective**

Allow the IAEA to timely detect the diversion of significant quantities of **nuclear material** from peaceful nuclear activities to the manufacture of nuclear weapons or of other nuclear explosive devices or for purposes unknown, and deter of such diversion by the risk of early detection.

**Mechanism:**

State
(comprehensive Safeguard agreement + Additional protocol)

informations

informations

National Authority

informations

Verification of the informations
Finality control
IAEA Safeguards

Information to be provided by the State

**SAFEGUARDS AGREEMENT**
- List of nuclear facilities
- Inventories of the nuclear materials inside the facilities
- Movements of nuclear materials inside and between facilities
- Design information of the facilities
- System of accounting for and control of nuclear material implemented in the facilities
- Notification of the international transfers of nuclear material

**ADDITIONAL PROTOCOL**
- General description of the nuclear fuel cycle related R&D
- Description of site (included closed-down and location outside facility)
- Export and Manufacturing of some special equipment and non nuclear material
- Location and production of mines
- Import and export of source material
- Location of high-level wastes
- 10 years nuclear fuel cycle related R&D plans

The verification of these informations is mainly carried out through routine inspection of the nuclear material in the facilities (SA) and complementary access (AP)
The European Atomic Energy Community (Euratom)

General objective

Initially created to coordinate the Member States’ research programmes for the peaceful use of nuclear energy, the Euratom Treaty today helps to pool knowledge, infrastructure and the funding of nuclear energy. It ensures the security of atomic energy supply within the framework of a centralised monitoring system.

The Treaty sets Euratom the following specific tasks:

- to promote research and ensure the dissemination of technical information.
- to establish uniform safety standards to protect the health of workers and of the general public and to ensure that they are applied.
- to facilitate investment and ensure the establishment of the basic installations necessary for the development of nuclear energy in the EU.
- to ensure that all users in the EU receive a regular and equitable supply of ores and nuclear fuels.
- to make certain that civil nuclear materials are not diverted to other purposes.
- to exercise the right of ownership conferred upon it with respect to special fissile materials.
- to foster progress in the peaceful uses of nuclear energy by working with other countries and international organisations (such as the International Atomic Energy Agency (IAEA)).
EURATOM Safeguards

Objectives (chap.7, art.77)

The Commission shall satisfy itself that:

a) In the territories of Member States nuclear materials are not diverted from their intended uses as declared by the users,

b) 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.

Mechanism:

- EU Member State
- (National Authority?)
- EURATOM

Verification of the informations
Conformity control
EURATOM Safeguards

Information to be provided by the user (reg # 302/2005)

- Inventories of the nuclear materials (including waste) inside the facilities
- Inventory change report on nuclear materials (including waste) inside and between facilities
- Physical inventory listing and mass balance report inside the facilities
- Basic technical characteristics of the facilities
- Production and export of ore
- Transfer of high-level waste
- Notification of the international transfers of nuclear material

The verification of these informations is mainly carried out through routine inspection of the nuclear material in the facilities

Evolution: Auditing the Nuclear Material Accounting and Control (NMAC) of the operator
Role of IRSN in the International Safeguards

Convention between IRSN and the French authorities
(CTE / Governor)

TECHNICAL SUPPORT OF THE FRENCH AUTHORITIES
(Expert or State representative)

4 Activities:
- Manage declaration
- Escort inspection
- Analyse documentation
- Inform & Council
Managing declarations (general process)

1. Collect datas (from facilities)
2. Analyse datas (provided by operators)
3. Centralise & process datas
4. Prepare declarations (under agreed formats)
5. Transmit declarations (to French or international authorities)
6. Elaborate statistics
Escorting inspection (general process)

1. Prepare inspections (with operators)
2. Escort intl. inspections (as french authorities representative)
3. Manage inspections reports (follow up)
4. Inform french authorities
5. Elaborate statistics
Analysing documentation (general process)

Any ministry [??]

Project of regulation (law, decree…)

IAEA EC

IRSN [DEND]

Project of regulation
Non paper …

Point of vue / Advice

Point of vue Advice

Facility

BTC DI

Analyse (+ opinion)

Interministerial Committee [CTE]

EUROSAFE
Inform & Council

- In preparing inspections
- In the course of declaration preparing

During training courses

Operators

By participating to meetings (national - internationals)

Authorities

By providing analyses - reports - statistics
Get contacts for International Safeguards

IRSN / DEND / SACI
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92262 FONTENAY-AUX-ROSES cedex France

Tel. : 00.33.158.35.86.57
       00.33.158.35.85.24
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