



Material Control and Accounting?

Fuel cycle facilities licensed by the NRC are required to verify (quantities, locations, etc.) their special nuclear material (SNM).

The Material Control and Accounting (MC&A) Objective is to verify that SNM has not been stolen or diverted to unauthorized users. This goal is achieved through **Material Control** and **Material Accounting**.

Material Control

The use of control and monitoring measures to control facility personnel's access to, use of, and transfer of SNM, and to prevent or detect loss when it occurs or soon afterward.

Material Accounting

The use of statistical and accounting measures to maintain knowledge of the quantities and locations of SNM present in each area of a facility.

How material control and material accounting will be implemented at a facility is described by a **Fundamental Nuclear Material Control (FNMC) plan**. The FNMC plan is a mandatory component of a license application.

The MC&A regulations are described in **10 CFR 74**.

Material Control

- Nuclear control measures are used to maintain continuity of knowledge of nuclear material. Control measures are established to deter and detect actions that could lead to unauthorized removal or misuse of material.
- Facilities should establish a system of controls on nuclear material commensurate with the category of material and type of facility.
- Some controls (access controls, use of containment and surveillance, key control, radiation portal monitors) may be the shared responsibility of the MC&A and physical protection organizations.
- Procedures should document control measures, and records of MC&A control activities should be kept.



Material Accounting

Material Accounting includes:

- Establish **MBAs**
- Establish **measurement systems** and measurement control systems
- Establish quantities and locations of nuclear material and changes to quantities
- **Record keeping**
- **Reporting**
- Periodic **Physical Inventory Taking**

