

Symposium on International Safeguards: Linking Strategy, Implementation and People - IAEA CN-220



Contribution ID: 128

Type: oral

Safeguards by Design - Finnish Experiences and Views

Thursday, 23 October 2014 14:50 (20 minutes)

Safeguards by design (SbD) promotes consideration of safeguards requirements and obligations as an integral part of planning and construction of a new nuclear facility or planning and modification of an existing facility.

One important step in introducing safeguards into facility design requirements was to include safeguards into the IAEA safety standards on "Safety of Nuclear Power Plants: Design". Safety standards stipulate that safety and security measures and arrangements for nuclear material control shall be designed and implemented in an integrated manner, so that they do not compromise one another. In practise, necessary safeguards measures shall be incorporated into the facility design and the implementation of these measures must be fulfilled so that safety and security are not jeopardised.

In Finland, SbD is a part of the national 3 S approach which aims at fulfilling inter-national and national requirements. In Finland, new nuclear facilities are under planning and one nuclear power plant unit is under construction at the Olkiluoto NPP. Experiences gained from TVO's Olkiluoto 3 plant unit project have been influential in developing a concept for managing and combining safeguards, security and safety in an optimal manner. The main objective of SbD is that the facility is planned, designed, constructed and operated so that safeguards, security and safety are supporting each others. TVO has incorporated the lessons learned during the construction of Olkiluoto 3 plant unit into the requirements for the bidding process for the new Olkiluoto 4 plant unit. This paper describes both national regulatory authorities and plant operator's experiences and views on facilitating the SbD approach in Finland.

Country or International Organization

Finland

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Session Classification: Safeguards by Design