

## SPAIN'S NUCLEAR SAFETY & SECURITY COUNCIL (CSN)

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*Nuclear Safety & Security Council Instruction IS-13, dated 21 March 2007, on the Radiological Criteria for the Release of Nuclear Installation Sites.*

Article 2 a) of the Act 15/1980, dated 22 April, on the Creation of the Spanish Nuclear Safety & Security Council, grants this public body the authority 'to develop and approve all required Instructions, Circular Letters, and Technical Guides with regard to nuclear and radioactive installations and to any activities relating to nuclear safety and radiation protection'.

The Regulations on Nuclear and Radioactive Installations, as approved by Royal Decree 1836/1999, dated 3 December (BOE No. 313, dated 31 December 1999), sets forth the criteria required by nuclear installations to obtain an authorisation for dismantling and the subsequent statement of decommissioning.

The dismantling process of a nuclear installation ends up with a statement of decommissioning freeing the owner of the installation from their responsibilities as an operator and establishing –where a restricted site release applies– the required use restrictions and the person in charge of safeguarding such restrictions and ensuring due compliance.

As far as the installation site is concerned, the Regulations require that a Site Restoration Plan be submitted along with the request for dismantling. This Plan shall specify, when necessary, the planned monitoring schedules for radiation and contamination levels at the site to be released.

Releasing a site implies eliminating all radiological monitoring. The Regulations, however, do not specify neither the radiological conditions to be met by the site in order to be released, nor the possibility of a partial release –with or without restrictions–, nor the criteria required for a release with restrictions.

By virtue of the foregoing, in accordance with the legal authorisation provided by Article 2, Part a) of the Act 15/1980, dated 22 April, on the Creation of the Spanish Nuclear Safety & Security Council, in consultation with all affected sectors, and after receiving all appropriate technical reports,

This Nuclear Safety & Security Council, in its meeting on 21 March 2007, has agreed upon the following provisions:

**One. Purpose and Scope of Application.** This Instruction shall apply to nuclear installation sites having obtained an authorisation for dismantling.

The purpose of this Instruction is establishing the requirements regarding the following conditions associated with the release of nuclear installation sites:

- Radiological criteria on the effective dose to the public
- Partial release of nuclear installation sites
- Restricted release of nuclear installation sites

**Two. Definitions.** The definitions of the terms and concepts used in this Instruction correspond to those set forth by the legislation below:

Act 25/1964, dated 29 April, on Nuclear Energy (Spanish Official Gazette No. 107, dated 4 May), as amended by Act 54/1997, dated 27 November, on the Power Sector (Spanish Official Gazette No. 285, dated 28 November).

Act 15/1980, dated 22 April, on the Creation of the Spanish Nuclear Safety & Security Council (Spanish Official Gazette No. 100, dated 25 April), as amended by Act 14/1999, dated 4 May, on the Prices and Fees for Public Services Rendered by the Nuclear Safety & Security Council (Spanish Official Gazette No. 107, dated 5 May).

Royal Decree 1836/1999, dated 3 December, approving the Regulations on Nuclear and Radioactive Installations (Spanish Official Gazette No. 313, dated 31 December).

Royal Decree 783/2001, dated 6 July, approving the Regulation on Health Protection against the Dangers of Ionising Radiation (Spanish Official Gazette No. 178, dated 26 July).

Furthermore, the following definitions shall apply to the context of this Instruction:

'Site': any ground, structures, or installations described in the operating authorisation, as well as any area released prior to the statement of decommissioning.

'Release levels': surface contamination (Bq/cm<sup>2</sup>) or activity concentration (Bq/g) values, as derived from the authorised radiological criteria by means of a scenario modelling process representing the potential paths for radiological exposure to members of the public.

'Use restrictions': restrictions on the usage of a site, or a part of it, in order to ensure compliance with the established radiological criteria.

'Ground': an area covering from the surface soil, the ligneous plant species growing on it, and the surface water flows running over it to the unsaturated zone or subsoil and the saturation zone and groundwater courses.

**Three. Radiological criteria for the release of nuclear installation sites.** The effective dose to the representative individual of the critical group arising from residual activity on the site's ground after its release shall not exceed a value of 0.1 mSv/year.

These radiological criteria shall apply to the entire site released, regardless of any possible use restrictions.

Any buildings, facings, or structures that are to remain on the site at the time of release shall comply with the clearance criteria recommended by the European Union in its publication 'Radiation Protection 113: Recommended Radiological Protection Criteria for the Clearance of Buildings and Building Rubble from the Dismantling of Nuclear Installations'.

The new background radiation dose at the released site shall be equal to the addition of the dose arising from residual activity with the existing dose previous to the operation of the installation.

**Four. Partial release of nuclear installation sites.** As far as radiation protection is concerned, partial releases of nuclear installation sites previous to the statement of decommissioning shall be considered acceptable once the authorisation for dismantling has been granted.

Should such partial releases need to be carried out with restrictions, the criteria to be applied shall be those provided in sections Three and Five hereof, on site releases with use restrictions.

The operator shall keep the records with the radiological classification data of the released part of the site until the latest of all possible releases becomes effective and the statement of decommissioning of the installation is issued.

**Five. Restricted release of nuclear installation sites.** A total or partial release of a site with use restrictions shall be considered acceptable:

1. Provided that it can be proved that any additional reductions in the residual activity, required to release the site without restrictions, may result in actual harm to the public or the environment, taking into account all possible radiological damages in the process; or provided that the residual levels associated with the restricted conditions are as low as reasonably achievable, taking into account social and economic factors (ALARA).

2. Provided that the operator supplies sufficient means to establish and keep legal and institutional controls to reasonably guarantee that the effective dose from background residual activity received by the representative individual of the critical group does not exceed 0.1 mSv/year. This value shall apply to the entire ground of the site, regardless of the compliance with the clearance radiological criteria in force for buildings, facings, and structures.

3. Provided that it can be ensured that the dose received by the representative individual of the critical group as a consequence of any allowed uses under the restrictions in force does not exceed the maximum established value. Should the institutional control on the restrictions fail and render them ineffective, the dose received by the representative individual of the critical group shall not exceed a value of 1 mSv/year.

**Six. Evidence of compliance with radiological criteria.** The operator shall put forward and provide evidence for a set of release levels in accordance with the radiological criteria and with the site's planned end use.

The operator shall also put forward and provide evidence for the methodology used to perform the final radiological classification for the site, in order to demonstrate that all established radiological criteria are met.

**Seven. Infringements and Penalties.** This Instruction is binding in accordance with the provisions of Article 2 a) of the Act 15/1980, dated 22 April, of the Creation of the Spanish Nuclear Safety & Security Council. Failure to comply with it shall be penalised in accordance with the provisions of Articles 91 to 95 of the Act 25/1964, dated 29 April, on Nuclear Energy.

#### **Sole Final Provision**

This Instruction shall come into force on the subsequent day to its date of publication in the Spanish Official Gazette.

In Madrid, on this 21<sup>st</sup> March 2007

Signed by the President of the Nuclear Safety & Security Council, Ms. Carmen Martínez Ten.