

***Nuclear Safety Council Instruction IS-34, of 18 January 2012, on criteria in relation to radiation protection measures, the notification of nonconformities, the availability of people and means during emergencies, and load surveillance during the transport of radioactive material***

Article 2.a) of the Law 15/1980, of 22 April, creating the Nuclear Safety Council, confers on this Public Body the faculty to “prepare and approve Instructions, Circulars and Guides of a technical nature relating to nuclear and radioactive facilities and nuclear safety- and radiological protection-related activities.”

Article 4.2 of the Regulation on Health Protection against Ionising Radiations, approved by the Royal Decree 783/2001, of 6 July, states that individual doses, the number of exposed people and the likelihood of potential exposures occurring must be kept at the lowest value that is reasonably possible, all economic and social factors being considered. Likewise, its Fourth Additional Provision stipulates that the transport of radioactive material shall be governed, regarding all that is not expressly regulated by its specific legislation, by the precepts of this Regulation as soon as they apply to it.

Article 78.1 of the Regulation Governing Nuclear and Radioactive Facilities, approved by the Royal Decree 1836/1999, of 3 December, states that the carriers of radioactive materials in non-accepted packages must declare this activity by registering in a register, which shall be created for such purpose at the Directorate-General for Energy Policy and Mines, called “Register of Radioactive Material Carriers”. The performance of the radioactive material transport activity must observe both the regulations on the carriage of dangerous goods and the Regulation on Health Protection against Ionising Radiations and other applicable nuclear legislation.

In Spain, the transport of radioactive materials by road is regulated by the Royal Decree 551/2006, of 5 May, regulating the operations relating to the carriage of dangerous goods by road within Spanish territory, which relates to the compliance with the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Section 1.7.6 of this Agreement lays down the measures to be adopted by all participants that take part in the transport of radioactive material in the event of nonconformities, but only those that affect any of the limits in the ADR that are applicable to the intensity of the radiation or the contamination.

Article 4 of the Royal Decree 387/1996, of 1 March, approving the Basic Directive for Civil Protection Planning when faced with the risk of accidents during the carriage of dangerous goods by road and by rail, requires consignors and carriers to collaborate with the authorities competent in each case in the event of an emergency due to an accident during the transport of dangerous goods.

The Nuclear Safety Council (CSN) deems that certain regulatory requirements related to the transport of radioactive materials are not sufficiently developed in said regulations or may give rise to different interpretations, so it considers it necessary to lay down a series of provisions that include the criteria on the actions that must be carried out in relation to the radiological monitoring of transport vehicles, the optimisation of the doses that workers and the public might receive in operations derived from the transport of radiological materials, the actions to be carried out in the event of emergencies, the definition of those nonconformities that are detected during transport operations and must be reported, and their handling, and the surveillance of vehicles and their load.

By virtue of the above and in accordance with the legal authorisation envisaged in Article 2.a) of the Law 15/1980, of 22 April, creating the Nuclear Safety Council, prior consultation of the affected sectors and after the appropriate technical reports, this Council, in its meeting of the 18<sup>th</sup> of January of 2012, has agreed the following:

### ***First. Purpose and Scope of application***

The purpose of this Instruction is to set the CSN's criteria on the actions to be taken during the activities related to the transport of radioactive material which are listed below:

- Measuring contamination levels in vehicles that transport radioactive material by road.
- Unloading, hauling and moving radioactive material packages when upon delivery to the receiving radioactive facilities.
- Acting when the existence of nonconformities affecting the safety of the transport is verified and informing the CSN of them.
- Ensuring there are people and means available to help in emergencies during the transport of radioactive material.
- Guarding vehicles and their load during radioactive package loading, unloading and delivery operations.

This Instruction applies to all participants that take part in each of these activities, which shall be specified in the corresponding Articles of this Instruction.

### ***Second. Definitions***

The definitions of the terms and concepts used in this Instruction match those contained in the following regulations:

- Law 25/1964, of 29 April, on Nuclear Energy.
- Law 15/1980, of 22 April, creating the Nuclear Safety Council.
- Royal Decree 1838/1999, of 3 December, approving the Regulation Governing Nuclear and Radioactive Facilities.
- Royal Decree 783/2001, of 6 June, approving the Regulation on Health Protection against Ionising Radiations.
- The European Agreement on the International Carriage of Dangerous Goods by Road (ADR) currently in force.

In addition, the following definitions apply within the exclusive context of this Instruction:

*Nonconformity:* The failure to comply with a requirement included in the regulations on carriage of dangerous goods or a deviation with regard to the design of a package that might threaten its safety.

*Package category:* The classification of a package according to the maximum radiation level on any place of its outside surface and to the radiation dose one metre therefrom, from which three package categories result: I-White, II-Yellow, and III-Yellow, in accordance with the regulations applicable to the transport of radioactive material.

*Radiation Protection Programme:* The set of systematic provisions aimed at allowing radiation protection measures to be properly considered. It refers to the radiation protection programme required by the regulations on the carriage of dangerous goods for all those activities related to the transport of radioactive material.

*Registered carrier:* A carrier registered in the "Register of Radioactive Material Carriers", set up according to regulations.

*Type of packaging/type of package:* The packaging used to make each of the types of package defined in the regulations applicable to the transport of radioactive material, which are:

- a) Excepted package;
- b) Industrial package Type 1;
- c) Industrial package Type 2;
- d) Industrial package Type 3;
- e) Type A package;
- f) Type B(U) package;
- g) Type B (M) package;
- h) Type C package.

*Vehicle:* Any road vehicle (own or hired) that carries radioactive material packages.

**Third. CSN criteria with regard to the measuring of contamination levels in vehicles**

1. Carriers of radioactive material by road, registered and with registered office in Spain, shall be responsible for ensuring that the surveillance of both their own and hired vehicles and of vehicles belonging to unregistered, subcontracted carriers, and the checking of the materials that are usually employed for the transport of said radioactive material are carried out in order to determine the level of contamination.
2. In its Radiation Protection Programme, the carrier shall include or make reference to a procedure which at least sets forth how contamination is to be measured, the recommended measuring points, who will be the person responsible for taking the measurements, and the frequency of measurement, according to the likelihood of contamination and the volume of radioactive materials that is carried. The procedure must define the recording of the results of the measurements, which shall placed at the disposal of the CSN should it request them.

**Fourth. CSN criteria with regard to the unloading, hauling and moving of radioactive material packages upon delivery to the receiving radioactive facilities**

1. Carriers of radioactive material by road, registered and with registered office in Spain, shall have a procedure in place containing measures intended to reduce the dose of the personnel that handle the radioactive material packages and of the public when the latter are unloaded and delivered to the receiving radioactive facilities.

This procedure shall be included or referenced in the carrier's Radiation Protection Programme and shall at least consider aspects such as:

- a) The stowage of the packages into the vehicle, both the order of delivery and the dose rates emitted thereby being taken into account.
- b) The communication with the receiving facility, prior to the delivery of the packages, confirming the time of arrival, such that a place for unloading may be set up and, when appropriate, the availability of people from the facility to pick them up may be ascertained.
- c) The possibility of using a system for hauling the packages and the measures to attach them to the system such that the packages are prevented from overturning or falling while they are being moved to the place of delivery and the possible doses of the personnel that move the packages are reduced.

2. The receiving radioactive facilities shall have a procedure in place which includes the measures needed to facilitate the access of radioactive packages to their premises, such as:

- a) Ensuring there are authorised persons available to receive the radioactive material packages.
- b) Defining access areas suitable for parking the vehicles.
- c) Defining access routes as close as possible to the premises to which the material is addressed, the presence of members of the public being prevented whenever possible.
- d) Considering the possibility of using a system for hauling the packages and the measures to attach them to the system such that the packages are prevented from overturning or falling while they are being moved to the place of delivery and the possible doses of the personnel that move the packages are reduced, should personnel from the facility move the packages.

The procedure shall be included or referenced in the radioactive facility's Operating Organisation Manual.

**Fifth. CSN criteria in relation to the detection and reporting of nonconformities**

1. Should the carrier of radioactive material during the transport, or the consignee of said material at the time of receipt, detect any of the nonconformities that are listed below, they

must report them to the consignor and notify the CSN of them once they have been verified, within the time periods specified:

- Any of the limits included in the regulations on the carriage of dangerous goods in relation to the intensity of the radiation or to contamination is exceeded (24 hours).
- The packages do not carry the compulsory labels informing of the radiological risks (24 hours).
- The labelling does not match the category of the package (24 hours).
- Any significant mark or damage is observed on the packages that might threaten their safety (immediately once the situation is known).
- The type of packaging used is not suitable for the contents transported (24 hours).

Notifications must be made to the CSN's Emergency Room (SALEM).

2. The consignor of the radioactive material, the carrier and the consignee must as appropriate:

- a) Take immediate action to lessen the consequences of the nonconformity.
- b) Investigate the nonconformity and its causes, circumstances and consequences.
- c) Adopt the appropriate measures to solve the causes and circumstances that gave rise to the nonconformity and to prevent the reoccurrence of circumstances similar to those which gave rise to the nonconformity.
- d) Send a report to the CSN's Technical Directorate for Nuclear Safety that includes the causes of the nonconformity and the corrective or preventive measures that have been taken or must be taken, within 30 days from the communication at the most.

3. The requirements laid down in this Article 5 are applicable to carriers of radioactive material for any mode of transport having their registered office in or outside Spain; in this latter case, only when the transport takes place through Spanish territory.

***Sixth. Ensuring there are people and means available to help in events that occur during the transport of radioactive material***

1. Carriers of radioactive material by road, registered and with registered office in Spain, must ensure the necessary personnel and means are available to help the competent authorities to face up to any event that might take place during the transport.

2. These capabilities must always be in place whenever radioactive material is being shipped to final consignees or users.

3. The people and means must be described and kept up to date in the carrier's emergency response procedure, which must be included or referenced in its Radiation Protection Programme.

4. The information of the people in charge and their contact telephone numbers must be provided to the Nuclear Safety Council's Emergency Room (SALEM) so that these people can be located quickly should any incident occur. This information must be kept permanently up to date, SALEM being notified of any changes that might take place.

***Seventh. CSN criteria on the surveillance of the load and vehicles during loading and unloading operations***

During the radioactive package loading, unloading and delivery operations, all carriers of radioactive material shall adopt the necessary measures to guard the transport vehicle and its load whenever possible. Should said surveillance not be possible, the vehicle shall always be locked whenever the driver leaves it to deliver or pick up radioactive packages or other goods such that unauthorised persons are not permitted to get to the load.

***Eighth. Criteria to be met by entities authorised to perform activities with radioactive material which they themselves transport***

Articles 3, 4, 5 and 7 of this Instruction are also applicable to entities authorised in Spain to perform activities with radioactive material which they themselves transport. These entities must

include or reference in the appropriate operation documents the procedures required in Articles 3 and 4.

***Ninth. Infractions and sanctions***

This Nuclear Safety Council Instruction is binding in accordance with that established in Article 2.a) of the Law 15/1980, of 22 April, creating the Nuclear Safety Council, such that the failure to comply with it shall be punished in accordance with the provisions of Chapter XIV (Articles 85 to 93) of the Law 25/1964, of 29 April, on Nuclear Energy.

***Sole Additional Provision***

The procedures required by this Instruction must be prepared within six months of the latter's entry into force.

The reporting to the CSN's SALEM Emergency Room alluded to in Point 4) of Article 6 regarding the availability of people and means to deal with events that occur during the transport of radioactive material shall not be required if it has already been done, at the CSN's request, prior to the issuance of this Instruction. All of it without detriment to the requirement to notify SALEM of any changes that take place in said information.

***Sole Repealing Provision***

Any rule of equal or lower level that opposes this Instruction is repealed.

***Sole Final Provision***

This Instruction shall come into force on the day following that of its publication in the "Official State Gazette".

In Madrid, on the 18<sup>th</sup> of January of 2012.- Carmen Martínez Ten, the President of the Nuclear Safety Council.