



**COUNCIL OF  
THE EUROPEAN UNION**

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from : General Secretariat  
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Subject : Proposal for a Council Directive (Euratom) on the management of spent nuclear fuel and radioactive waste

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Delegations will find attached the text of the proposal as revised following the meetings of the Working Party on Atomic Questions on 9 and 21 January 2004, taking into account delegations' comments.

Amendments introduced following the meeting on 21 January are in **bold underlined**.

Proposal for a

**COUNCIL DIRECTIVE (Euratom)**  
**on the safe management of spent nuclear fuel and radioactive waste**

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Articles 31 and 32 thereof,

Having regard to the proposal from the Commission<sup>1</sup>, drawn up after obtaining the opinion of a group of persons appointed by the Scientific and Technical Committee from among scientific experts in the Member States, in accordance with Article 31 of the Treaty, and after obtaining the opinion of the European Economic and Social Committee<sup>2</sup>,

Having regard to the opinion of the European Parliament<sup>3</sup>,

Whereas:

- (1) Article 30 of the Treaty requires basic standards to be laid down within the Community for the protection of the health of workers and the general public against the dangers arising from ionising radiation.
- (2) Council Directive 96/29/Euratom<sup>4</sup> lays down basic safety standards for the protection of health of the general public and workers against the dangers of ionising radiation.
- (3) Council Directive 92/3/Euratom<sup>5</sup> already sets up a supervision and control system of shipments of radioactive waste between Member States and into and out of Community, including a compulsory and common notification procedure for shipments of such waste, and very strict limitations and criteria regarding the third countries to which radioactive waste may be exported.

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<sup>1</sup> OJ C [...], [...], p. [...]

<sup>2</sup> OJ C [...], [...], p. [...]

<sup>3</sup> OJ C [...], [...], p. [...]

<sup>4</sup> OJ L 159, 29/06/1996, p. 1

<sup>5</sup> OJ L 035, 12/02/1992, p. 24

- (4) Council Directive 85/337/EEC<sup>6</sup> on the assessment of the effects of certain public and private projects on the environment, including those involving disposal and long-term storage of radioactive waste, requests Member States to adopt all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment, by virtue, inter alia, of their nature, size or location are made subject to a requirement for assessment with regard to their effects.
- (5) Existing Community legislation does not provide for specific rules ensuring that at all time spent nuclear fuel and radioactive waste is safely managed in an effective and consistent manner throughout the European Union, and existing Community rules should therefore be supplemented.
- (6) The Commission Green Paper “Towards a European Strategy for the security of energy supply”<sup>7</sup> stresses that a satisfactory solution has to be found for the radioactive waste issue with maximum transparency.
- (7) [.]<sup>8</sup>
- (8) The International Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, which entered into force on 18 June 2001, aims at achieving and maintaining a high level of safety world-wide in spent fuel and radioactive waste management through the enhancement of national measures and international co-operation.
- (9) The production of nuclear energy generates radioactive wastes.
- (10) Radioactive waste is generated also in the use of radionuclides in medicine, research and industry.
- (11) Releases of radionuclides from spent fuel and radioactive waste may have consequences beyond national borders.

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<sup>6</sup> OJ L 175, 05/07/1985, p. 40, as amended by Council Directive 97/11/EC, OJ L 073, 14/03/1997, p. 5

<sup>7</sup> COM(2000)769

<sup>8</sup> Keeping this recital would be inconsistent with the now indicative nature of the timetable.

- (12) Each Member State remains fully responsible for the management of all spent nuclear fuel and radioactive waste under its jurisdiction.
- (13) The safe management of spent nuclear fuel and radioactive waste would be enhanced by greater co-operation and co-ordination between Member States.
- (14) The Council Resolution of 15 June 1992<sup>9</sup> invited the Commission to develop a common approach and to work with Member States towards harmonisation at Community level of radioactive waste management strategies and practices wherever possible.
- (15) **It is accepted among experts** that, on the basis of present knowledge, **geological disposal represents an appropriate solution** for long-term management of **long-lived** radioactive waste [.]<sup>10</sup>
- (16) The definition of a timetable for the implementation of appropriate solutions for the management of radioactive waste will ensure that undue burdens are not imposed on future generations while at the same time respecting, both now and in the future, the basic principles of radiation protection laid down in Chapter 1 of Directive 96/29/Euratom. **In this respect, regarding the financial schemes concerned, it is advisable that the waste producer or the current waste owner should pay for the management of the waste.**
- (17) The progress made by Member States towards the [.] **solutions for the management of** the different forms of radioactive waste is relevant for the Commission when it exercises its responsibilities under the Treaty and in particular those defined under Chapter 4 of Title II.
- (18) It is important to base the programmes for the management of radioactive waste on relevant knowledge arising from research and technological development in the various fields related to radioactive waste, including minimisation. In this respect, there are common issues facing many Members States that can be beneficially addressed at Community level through the Community Framework Programmes and, where appropriate, through other initiatives, such as the European Research Area, aimed at complementing and supporting Member States' activities.

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<sup>9</sup> OJ C 158, 25/06/1992, p. 3

<sup>10</sup> This text is based on NEA (1999) "Strategic Areas in radioactive Waste Management - The Viewpoint and Work Orientations of the NEA Radioactive Waste Management Committee"

- (19) It is furthermore recalled that co-operation in common areas of research and technological development can be undertaken in line with the provisions of Chapter 1 of Title II of the Treaty or may be entrusted to one or more Joint Undertakings to be established under Chapter 5 of Title II of the Treaty.
- (20) *While nothing in this Directive should imply that Member States have to accept shipments of radioactive waste it may be advantageous for Member States to cooperate with a view to establishing multinational waste management programmes. It is acknowledged in particular that there are Member States which have only small quantities of radioactive waste, or a territory or geological characteristics not suitable for a deep repository and that these Member States may wish to establish [...] agreements with other [...] States for finding common disposal solutions.*
- (21) The application of this Directive should be reviewed by means of regular reports from the Member States,

HAS ADOPTED THIS DIRECTIVE:

#### *Article 1*

#### **Purpose and Scope**

1. This Directive establishes requirements for the safe management of spent nuclear fuel and radioactive waste, so as:
  - (a) to ensure that all spent nuclear fuel and radioactive waste is safely managed in order to protect the health of workers and of the general public, in compliance with the basic standards laid down under Article 30 of the EAEC Treaty, from harmful effects of ionising radiation, both now and in the future;
  - (b) to achieve and maintain a high level of safety in the management of spent nuclear fuel and radioactive waste in order to protect the health of workers and of the general public by taking all necessary precautionary and preventive measures, and with a view to ensuring that adequate levels of protection are achieved throughout the Community in an [...] effective manner;

- (c) to enhance effective public information and, where appropriate, *consultation* in order to ensure the required transparency in the relevant decision-making processes.<sup>11</sup>
2. This Directive shall apply to all stages of the management of spent nuclear fuel and radioactive waste originated from civilian applications **carried out at** nuclear installations for which consideration of safety is required, *under the legislative and regulatory framework of the Member State concerned*, in order to meet the *objectives of paragraph 1*.
3. The Directive does not apply to waste from extractive operations that contains only naturally occurring radioactive materials and to radionuclides contained in sealed radioactive sources<sup>12</sup>, unless it is declared as radioactive waste by a Member State.

## Article 2

### Definitions

For the purpose of this Directive:

- (1) “*decommissioning*” means all steps leading to the release of a nuclear installation, other than a disposal facility, from regulatory control. These steps include the processes of decontamination and dismantling;
- (2) “*discharges*” means planned and controlled releases into the environment, as a legitimate practice, within limits authorised by the regulatory body, of liquid or gaseous radioactive material that originate from regulated nuclear facilities during normal operation;
- (3) “*disposal*” means the emplacement of [...] radioactive waste, including spent fuel, in an appropriate facility without the intention of retrieval;

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<sup>11</sup> A reference could be inserted to Council Directive 89/618/Euratom of 27 November 1989 on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency.

<sup>12</sup> A recital could refer to Directive 2003/122/Euratom on the control of high activity sealed radioactive sources and orphan sources (OJ L 346, 31.12.2003, p.57)

- (4) “*ionising radiation*” means the transfer of energy in the form of particles or electromagnetic waves of a wavelength of 100 nanometer or less or a frequency of  $3 \times 10^{15}$  Hertz or more capable of producing ions directly or indirectly;
- (5) “*nuclear installation*” means a civilian facility and its associated land, buildings and equipment in which radioactive materials are produced, processed, used, handled, stored or disposed of;
- (6) “*nuclear fuel cycle*” means all stages in the cycle of production, use and treatment of the fuel used in nuclear reactors, including such steps as mineral extraction, conversion, enrichment, fuel fabrication, energy production, storage of spent fuel and/or reprocessing followed by recycling of fissile and fertile material and storage of vitrified and other radioactive wastes, conditioning and encapsulation of spent fuel and/or other radioactive wastes and [...] disposal;
- (7) “*radioactive waste*” means radioactive material in gaseous, liquid or solid form for which no further use is foreseen by the Member State or by a natural or legal person whose decision is accepted by the Member State, and which is controlled as radioactive waste by a regulatory body under the legislative and regulatory framework of the Member State;
- (8) “*low and intermediate level radioactive waste*”, [...] “*high level radioactive waste*”, “*short-lived radioactive waste*” and “*long-lived radioactive waste*” are understood in the meaning ascribed to them in Commission Recommendation of 15 September 1999 on a classification system for solid radioactive waste [...];<sup>13</sup>
- (9) “*radioactive waste management*” means all activities, including decommissioning activities, that relate to the handling, pre-treatment, treatment, conditioning, storage, or disposal of radioactive waste excluding off-site transportation. *It may also involve discharges*;
- (10) “*regulatory body*” means any body or bodies given the legal authority by the Member State to regulate any aspect of the safety of spent fuel or radioactive waste management including the granting of licences;

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<sup>13</sup> OJ L 265, 13/10/1999, p. 37

- (11) “*reprocessing*” means a process or operation, the purpose of which is to extract nuclear material from spent fuel for further use;
- (12) “*shipment*” means all of the operations involved in moving spent fuel and radioactive waste from the place of origin to the place of destination, including transport for storage or disposal;
- (13) “*spent (nuclear) fuel*” means nuclear fuel that has been irradiated in and permanently removed from a reactor core;
- (14) “*storage*” means the holding of radioactive waste or spent nuclear fuel in a facility that provides for its containment, with the intention of retrieval.

### Article 3

#### **General requirements for the safe management of spent nuclear fuel and radioactive waste**

1. Member States shall take all necessary measures to ensure that spent nuclear fuel and radioactive waste are managed in such a way that workers and the general public are adequately protected against radiological hazards.  
[.]
2. Member States shall ensure that the production of radioactive waste is kept to the minimum practicable.
3. Member States shall establish or designate a regulatory body entrusted with the implementation of the legislative and regulatory framework *governing the safety of spent fuel and radioactive waste management* provided with adequate authority, competence and financial and human resources to fulfil its assigned responsibilities. In discharging its duties the regulatory body shall be *effectively separated* from any other body or organisation, whether private or public, involved in the management of spent fuel or radioactive waste.
4. Member States shall ensure that adequate financial resources are available to support the safe management of spent nuclear fuel and radioactive waste, including that from decommissioning activities [.]<sup>14</sup>

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<sup>14</sup> See recital 16.

5. Member States shall ensure a high level of transparency on issues related to the management of spent nuclear fuel and radioactive waste under their jurisdiction. This shall be achieved by effective information *to* and, where appropriate, *consultation of their population* as well as the [...] competent authorities of States in the vicinity of disposal or storage sites. Member States shall ensure public information on the measures to be taken and the state of progress of the decision-making process, notably as regards the *methodology* for the selection of storage sites, or disposal *sites if any*.

#### *Article 4*

### **National programmes for the management of radioactive waste**

1. Each Member State shall establish **and keep updated** a clearly defined national programme for the management of radioactive waste that includes all radioactive waste under its jurisdiction and covers all stages of management.
2. The national programme **shall** include an inventory of the amount of radioactive waste managed in the Member State. This inventory **shall be** established under the control of the Member State. The programme shall cover all aspects of the long-term management of radioactive waste and spent fuel that is not subject to reprocessing contracts or, in the case of research reactor fuel, not subject to reprocessing contracts or take-back agreements with the manufacturing country.

The steps retained in the programme shall reflect the level of activities and the amount of radioactive waste generated in the Member State. The programme shall take due account of the research and technological development in the field of radioactive waste.

3. The programme shall pay special attention to the general requirements listed in Article 3.
4. The programme may include shipments of radioactive waste to another Member State or third country *only* if the country of origin and the country of destination have agreed to the shipment prior to its taking place and such shipments:

- are fully in compliance with existing Community legislation, principally Directive 92/3/Euratom, and international commitments,
- are covered by [...] bilateral or regional agreements between States and
- only take place to States with appropriate facilities that meet accepted norms and standards of the Member State of origin and, in the case of material within the meaning of Article 197 of the Treaty, are under adequate safeguards.

*Article 5*

**Timetable for the management [...] of radioactive waste**

1. The national management programme shall **include** and comment **on** the timetable chosen for the long-term management of radioactive waste, **covering low and intermediate level waste as well as high level waste.**
2. Where **a Member State considers that** there is no suitable alternative to disposal, and where such a disposal option is not yet available, **this** Member State shall include, as a minimum, [...] the following decision points into **its** programmes:
  - [.] - authorisation for development of one (or more) disposal site(s)
  - [.] - authorisation for operation of the disposal facility(ies).

**Member States may decide to deposit more than one type of waste at the same site.**

3. Taking due account of the time necessary to carry out public consultations Member States should endeavour to grant the authorisations referred to under paragraph 2 in accordance with **an indicative** timetable **such as that** set out in the Annex.
4. **Member States may subsequently supplement the timetable in order inter alia to cover further disposal sites and facilities.**

*Article 6*<sup>15</sup>  
**Reporting**

1. Each Member States shall submit detailed reports to the Commission on the **activities carried out pursuant to Article 3 and on the** programme **referred to in** Article 4 **and 5**. **Member States may indicate which parts of the report shall be considered confidential.**
2. The first report shall be submitted within [three] years from the date provided for in Article 7 paragraph 1 and thereafter at the same intervals as the reports to be drawn up pursuant to Article 32 of the International Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management. **The Commission, in consultation with Member States, shall establish** Guidelines for the content and timing of these reports with a view to ensuring, to the extent possible, consistency with the reports to be drawn up pursuant to Article 32 of the Joint Convention.
3. The report referred to in paragraph 1 shall also **summarise** research and technological development in the field of radioactive waste management that is being carried out or is planned within the Member State, **taking into account confidentiality requirements,** including information regarding [...] expected duration and dates of completion.
4. The reports referred to in paragraph 1 shall be subject to [...] **r**review by a group of experts on radioactive waste management designated by the Member States. The Commission shall organise the [...] **r**review process [...] during which ~~time~~ Member States may be requested to provide additional information. The Commission shall forward the opinion of the group of experts to the Member State concerned which shall, within six months of receipt, present its observations, **if any, including** the measures which **it** may have taken **or intends to take in response to the opinion of the group of experts** [...].

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<sup>15</sup> If the Directive is adopted in 200X, Member States should establish their waste management programmes in 200X+2 and submit their first reports in 200X+5.

5. Every three years the Commission shall submit to the European Parliament and the Council a status report on the management of radioactive waste in the European Union. This report shall **be based on** the information contained in the national reports [.]

*Article 7*<sup>16</sup>

**Implementation**

1. Member States shall bring into force the laws, regulations, and administrative provisions necessary to comply with this Directive before [two years after the date referred to in Article 8].
2. **Where these measures are adopted by the** Member States, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. **The methods of making such references shall be laid down by Member States.**
3. Member States shall communicate to the Commission the text of the main provisions of **national** law which they adopt in the field **covered** by this Directive, **together with a table showing how the provisions of this Directive correspond to the national provisions adopted.**

*Article 8*

This Directive shall enter into force on the 20<sup>th</sup> day following its publication in the Official Journal of the European *Union*.

*Article 9*

This Directive is addressed to the Member States.

Done at Brussels,

*For the Council*

*The President*

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<sup>16</sup> Adapted from Directive 2003/122/Euratom on the control of high-activity sealed radioactive sources and orphan sources (OJ L 346, 31.12.2003, p. 57).

## Indicative timetable for the granting of authorisations pursuant to Article 5

Type of <b>authorisation</b>	<i>Type of waste</i>	
	<b><u>Low and intermediate level short-lived waste (LILW-SL)</u></b> <sup>17</sup>	<b><u>High level waste (HLW) and low and intermediate level long-lived waste (LILW-LL)</u></b>
Authorisation for the development of one (or more) disposal site(s)	[.] [2010]	
authorisation for operation of the disposal facility(ies).	[.] [2018]	[.] [10] years after the date on which authorisation was granted for the development of the site

<sup>17</sup> Applicable only if LILW-SL waste is disposed of separately from HLW and LILW-LL wastes.