



**COUNCIL OF
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NOTE

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

Delegations will find attached the text of the proposal as revised following the meeting of the Working Party on Atomic Questions on 5 February 2004, taking into account delegations' comments.

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 Commission¹, 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 Committee²,

Having regard to the opinion of the European Parliament³,

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) *Article 37 of the Treaty requires Member States to provide the Commission with general data relating to any plan for the disposal of radioactive waste.*
- (3) Council Directive 96/29/Euratom⁴ lays down basic safety standards for the protection of health of the general public and workers against the dangers of ionising radiation.
- (4) Council Directive 92/3/Euratom⁵ 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.

¹ OJ C [...], [...], p. [...]

² OJ C [...], [...], p. [...]

³ OJ C [...], [...], p. [...]

⁴ OJ L 159, 29/06/1996, p. 1

⁵ OJ L 035, 12/02/1992, p. 24

- (5) Council Directive 85/337/EEC⁶ 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.
- (6) Council Decision 87/600/Euratom⁷ established arrangements for the early exchange of information in the event of a radiological emergency while Council Directive 89/618/Euratom⁸ imposed obligations on the Member States on informing the general public in the event of a radiological emergency.
- (7) Directive 2003/122/Euratom⁹ on the control of high activity sealed radioactive sources and orphan sources sets out specific requirements to ensure that such sources are kept under control including when they become disused sources.
- (8) 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.
- (9) The Commission Green Paper “Towards a European Strategy for the security of energy supply”¹⁰ stresses that a satisfactory solution has to be found for the radioactive waste issue with maximum transparency.
- (10) 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.
- (11) The production of nuclear energy generates radioactive wastes.
- (12) Radioactive waste is generated also in the use of radionuclides in medicine, research and industry.
- (13) Releases of radionuclides from spent fuel and radioactive waste may have consequences beyond national borders.

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

⁷ OJ L 371, 30.12.1987, p. 76.

⁸ OJ L 357, 7.12.1989, p. 31.

⁹ OJ L 346, 31.12.2003, p.57.

- (14) Waste from extractive operations, that contains only naturally occurring radioactive materials represents a waste management issue which should be addressed by Member States but which is of a different nature than the management of radioactive waste and spent nuclear fuel covered by this Directive.
- (15) Each Member State remains fully responsible for the management of all spent nuclear fuel and radioactive waste under its jurisdiction.
- (16) The safe management of spent nuclear fuel and radioactive waste would be enhanced by greater co-operation and co-ordination between Member States.
- (17) The Council Resolution of 15 June 1992¹¹ 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.
- (18) 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.¹²
- (19) 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.
- (20) 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.
- (21) 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.

¹⁰ COM(2000)769.

¹¹ OJ C 158, 25/06/1992, p. 3

¹² 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"

- (22) 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.
- (23) 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.
- (24) 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 *supplements the basic standards laid down under Article 30 of the EAEC Treaty as regards* 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 [...] 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 [] 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.

2. This Directive shall apply to all stages of the management of spent nuclear fuel and radioactive waste originated from civilian applications [].
- [.]

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 *for which no further use is foreseen*, in an appropriate facility without the intention of retrieval;
- (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 3×10^{15} Hertz or more capable of producing ions directly or indirectly;
- (5) “*radioactive material*” means any material that emits ionising radiation;
- (6) “*nuclear installation*” means a any civilian facility and its associated land, buildings and equipment *where* radioactive materials are produced, processed, used, handled, stored or disposed of *temporarily or permanently. This definition applies until the moment the facility is released from any radiological restrictions imposed upon it. This definition does not cover mineral extraction facilities and facilities only holding minor amounts of radioactive materials such as sealed radioactive sources for medical, research and industrial purposes*;¹³
- (7) “*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;

¹³ Mutually aligned with the definition in the draft “Safety” Directive.

- (8) “*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. *This definition does not cover waste from extractive operations that contains only naturally occurring radioactive materials and does not cover minor amounts of radioactive materials such as sealed radioactive sources unless declared as radioactive waste by a Member State;*
- [.]
- (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 *grant licences and* regulate any aspect of the safety of spent fuel or radioactive waste management [.] ;
- (11) *“licence” means any authorisation, permission or certification granted by a regulatory body to carry out any activity related to management of spent fuel or of radioactive waste;*
- (12) “*reprocessing*” means a process or operation, the purpose of which is to extract nuclear material from spent fuel for further use;
- (13) “*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;
- (14) “*spent (nuclear) fuel*” means nuclear fuel that has been irradiated in and permanently removed from a reactor core;
- (15) “*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 *take the appropriate steps to* ensure that the *generation* of radioactive waste is kept to the minimum practicable.¹⁴

¹⁴ Reproduces Art. 11(ii) of the Joint Convention.

3. Member States shall establish or designate a regulatory body entrusted with the implementation of the *national* 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 functions of* the regulatory body shall be effectively separated from *those of* 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 *when needed* to support the safe management of spent nuclear fuel and radioactive waste, including that from decommissioning activities.¹⁵
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, *insofar as they are likely to be affected in the event of a radiological emergency at such 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.¹⁶
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 *destined for* reprocessing [...] or, in the case of research reactor fuel, not *destined for* reprocessing [...] or *subject to* take-back agreements with the manufacturing country.

¹⁵ See recital 16.

¹⁶ It is noted that, for reporting purposes, the various waste categories are described in Commission Recommendation of 15 September 1999 on a classification system for solid radioactive waste (OJ L 265, 13/10/1999, p. 37).

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 *multilateral* 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:
 - *licence* for development of one (or more) disposal site(s)
 - *licence* for operation of the disposal facility(ies).

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

[.]

3. Member States may subsequently supplement the timetable in order to, inter alia, cover further disposal sites and facilities.

Article 6

Committee of Regulatory Authorities

1. A Committee of Regulatory Authorities (hereinafter "the Committee") is hereby established to carry out the tasks assigned to it under Article 7.
2. The Committee shall be composed of representatives of the regulatory bodies designated by each Member State.
3. The Committee shall adopt its rules of procedure and designate a chairman from among its members.

Article 7¹⁷

National reports and summary reports

1. Each Member State shall submit detailed *national* reports to the Commission on the activities carried out pursuant to Article 3 and on the programme referred to in Articles 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 the Committee, 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 *legitimate* confidentiality requirements, including information regarding expected duration and dates of completion.
4. The reports referred to in paragraph 1 shall be subject to review by [...] the Committee. The Committee shall give an opinion on each report, which may contain recommendations to the Member State concerned. The Commission shall organise the review process during which Member States may be requested to provide additional information. The Commission shall forward the opinion of the Committee 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 Committee.

¹⁷ 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, *following consultation of the Committee*, 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 *as well as the findings of the review process referred to in paragraph 4*.

*Article 8*¹⁸

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 9

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

Article 10

This Directive is addressed to the Member States.

Done at Brussels,

For the Council
The President

(Annex deleted)

¹⁸ 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).