



**COUNCIL OF
THE EUROPEAN UNION**

Brussels, 6 May 2011

**Interinstitutional File:
2010/0306 (NLE)**

**17717/10/10
REV 10**

**ATO 77
ENV 853**

NOTE

from: General Secretariat of the Council
to: Delegations
No. Cion prop. : 15770/10 ATO 63 ENV 742

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

Based on the suggestions received, the Presidency prepared the attached text to be discussed at the WPAQ meeting on 11 May 2011.

The changes compared to REV 9 (only for Preamble part) and REV 8 (for the rest of the text, except for the changes referred below) are in **bold underline**; deletions are marked with ~~strikethrough~~.

The changes made in Art. 2(4), 2(6), Art 4(3) and 7(3) (compared to REV 9) are in ***bold, italic underline***.

Additional clarification comments of the Presidency and relevant alternative proposals/comments by the delegations are given in the footnotes.

Proposal for a

COUNCIL DIRECTIVE

**establishing a Community framework for the responsible and safe management of spent 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 European Commission, 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, and after having consulted the European Economic and Social Committee¹,

Having regard to the opinion of the European Parliament²,

Whereas:

- (1) Article 2(b) of the Treaty provides for the establishment of uniform safety standards to protect the health of workers and of the general public.
- (2) Article 30 of the Treaty provides for the establishment of basic standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiations.
- (3) 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.

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- (4) Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation¹ establishes the basic safety standards. The provisions of that Directive have been supplemented by more specific legislation.
- (5) As recognised by the Court of Justice of the European Union (hereinafter referred to as 'the Court of Justice') in its case-law, the provisions of Chapter 3 of the Treaty, on health and safety, form a coherent whole conferring upon the Commission powers of some considerable scope in order to protect the population and the environment against the risks of nuclear contamination².
- (6) Council Decision 87/600/Euratom of 14 December 1987 on Community arrangements for the early exchange of information in the event of a radiological emergency³ established a framework for notification and provision of information to be used by the Member States in order to protect the general public in case of a radiological emergency. 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 emergency⁴ imposed obligations on the Member States to inform the general public in the event of a radiological emergency.
- (7) Council Directive 2003/122/Euratom of 22 December 2003 provides for the control of high-activity sealed radioactive sources and orphan sources⁵, including disused sources.
- (8) Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC⁶ covers the management of waste from extractive industries which may be radioactive, excluding such aspects as are specific to radioactivity, which are matter dealt with under Euratom Treaty.

¹ OJ L 159, 29.6.1996, p.1.

² C-187/87 (1988 ECR p.5013) and C-29/99 (2002 ECR p. I-11221)

³ OJ L 371, 30.12.1987, p.76.

⁴ OJ L 357, 7.12.1989, p. 31.

⁵ OJ L 346, 31.12.2003, p. 57.

⁶ **OJ 41, 14.2.2003, p. 26**

- (9) Council Directive 2006/117/Euratom of 20 November 2006¹ lays down a Community system of supervision and control of transboundary shipments of radioactive waste and spent fuel. This Directive was supplemented by Commission Recommendation 2008/956/Euratom of 4 December 2008 on criteria for the export of radioactive waste and spent fuel to third countries².
- (10) Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations³, defines obligations on the Member States to establish and maintain a national framework for nuclear safety. While that Directive concerns principally the nuclear safety of nuclear installation, it states that it is also important to ensure the safe management of spent fuel and radioactive waste, including at storage and disposal facilities. [However, Directive 2009/71/Euratom does not cover all facilities and aspects of spent fuel and radioactive waste management.]⁴
- (14) Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment⁵ amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC applies to certain plans and programmes contemplated by Directive 2001/42.
- (15) Commission Recommendation of 24 October 2006 on the management of the financial resources for the decommissioning of nuclear installations, spent fuel and radioactive waste⁶ focuses on the adequacy of funding, its financial security and its transparency in order to ensure that the funds are only used for the intended purposes.
- (15a)** Under the specific circumstances of the accession of Lithuania, Slovakia and Bulgaria to the EU, where certain nuclear power plants were subject to early shutdown, the Community ~~has taken part in the raising~~ of financial resources and provides economic support subject to certain conditions **to various decommissioning projects including management and disposal of radioactive waste and spent fuel project.**

¹ OJ L 337, 5.12.2006, p. 21.

² OJ L 338, 17.12.2008, p. 69.

³ OJ L 172, 2.7.2009, p. 18.

⁴ **FR will make a new text proposal.**

⁵ OJ L 156, 25.6.2003, p. 17

⁶ OJ L 330, 28.11.2006, p.31

- (17) The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (hereafter referred to as 'the Joint Convention')¹, concluded under the auspices of the IAEA, represents an incentive instrument and 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.²
- (18) In 2006 the IAEA updated the structure of standards and published the Fundamental Safety Principles³, ~~developed in cooperation with~~ **which were jointly sponsored by** Euratom, OECD/NEA and other international organisations. Applying the Fundamental Safety Principles will facilitate the application of international safety standards and will make for greater consistency between the arrangements of different States.
- (20) Following the Council's invitation to set up a High Level Group at EU level, as recorded in its Conclusions of 8 May 2007 on nuclear safety and safe management of spent fuel and radioactive waste, the European Nuclear Safety Regulators Group (ENSREG) was set up by Commission Decision 2007/530/Euratom of 17 July 2007 on establishing the European High Level Group on Nuclear Safety and Waste Management⁴ to contribute to the achievement of the Community objectives in the field of spent fuel and radioactive waste management. The first conclusions and recommendations of ENSREG were reflected in the Council Resolution of 16 December 2008 on Spent Fuel and Radioactive Waste Management. **The Council in its Conclusions of 10 November 2009⁵, further invites the Commission to make full use of ENSREG expertise in the case of proposals for legally binding instruments in the field of safe management of spent fuel and radioactive waste being considered.**
- (22) The European Parliament called for harmonised standards for radioactive waste management⁶ and invited the Commission to review the relevant drafts of its legislative proposal and submit a new proposal for a directive on radioactive waste management.⁷

¹ INFCIRC/546 of 24 December 1997.

² **FR will make a new text proposal (17(a)) dealing with Code of Conduct of sealed sources**

³ Fundamental Safety Principles, Safety Fundamentals No. SF-1, IAEA, Vienna, 2006

⁴ OJ L 195, 17.7.2007,p.44.

⁵ Council conclusions on the report by the Europeans Nuclear Regulators Group, 10 November 2009

⁶ European Parliament resolution on Assessing Euratom – 50 Years of European nuclear energy policy of 10 May 2007

⁷ Report on Assessing Euratom – 50 Years of European nuclear energy policy, A6-0129/2007

- (24) While it is up to the Member States to define their energy mix, all Member States generate radioactive waste from power generation or in the course of industrial, **agricultural**, medical and research activities, or through decommissioning of nuclear facilities and in situations of remediation and interventions.
- (25) The operation of nuclear reactors generates spent fuel. Each Member State may define its fuel cycle policy. The spent fuel may be either considered as a valuable resource that may be reprocessed or, if regarded as radioactive waste, destined for direct disposal. Whatever option is chosen, the disposal of high level waste, separated at reprocessing, or of spent fuel regarded as waste should be considered.
- (27) Radioactive waste, including spent fuel considered as waste, requires containment and isolation from humans and the living environment over the long term. Its specific nature (content of radionuclides) requires arrangements to protect human health and the environment against dangers arising from ionizing radiation, including disposal in appropriate facilities as the end **location** point of its management. ~~The storage of radioactive waste, including long-term storage, is an interim solution but not an alternative to disposal.~~
- (28) A national radioactive waste classification scheme should ~~be based on the guidance of the IAEA guidelines[†]~~ and support these arrangements taking fully into account the specific types and properties of radioactive waste.
- (29) It is broadly accepted at the technical level that ~~deep~~ geological disposal represents the safest and most sustainable option as the end point of the management of high level waste and spent fuel considered as waste. Therefore Member States, while retaining their responsibility for their respective policies in respect of the management of their spent fuel and radioactive waste, **should** ~~are encouraged to~~ consider disposal options. Because repository implementation and development will take place over many decades, many programmes recognize the necessity of remaining flexible and adaptable, e.g., in order to incorporate new knowledge about site conditions or the possible evolution of the disposal system. Reversibility and retrievability can be argued to be helpful to that effect as possibilities without contemplating their implementation. **However, these operating and design criteria should not be a substitute for a well designed repository that has a defensible basis for closure. A compromise is needed as the management of radioactive waste and spent fuel is based on the current level of development of technology.**

[†] *Classification of Radioactive Waste, General Safety Guide No. GSG-1, IAEA, Vienna, 2009.*

- (30) It should be an ethical obligation of each Member State to avoid any undue burden on future generations in respect of spent fuel and radioactive waste, as well as those expected from decommissioning of existing nuclear installations. Through the implementation of the provisions of this Directive Member States will have demonstrated that they have taken reasonable steps to ensure that this objective is met.
- (32) The ultimate responsibility of Member States for the safety of spent fuel and radioactive waste management is a fundamental principle reaffirmed by the Joint Convention. This principle of national responsibility, as well as the principle of prime responsibility of the licence holder for the safety of spent fuel and radioactive waste management under the supervision of its national competent regulatory authority, should be enhanced and the role and independence of the competent regulatory authority should be reinforced by this Directive.
- (32a) It is understood that the utilization of radioactive applications by a competent regulatory authority for the purpose of carrying out its regulatory tasks does not affect its independence.
- (33) A national programme should be established to ensure the transposition of the political decisions into clear provisions for the timely implementation of all steps of spent fuel and radioactive waste management from production to disposal. This should include all activities that relate to handling, pre-treatment, treatment, conditioning, storage, and disposal of radioactive waste. The programme should include description of controls over a repository after closure or a facility undergoing decommissioning and of controls placed on a site that has been released from regulatory control under the condition of observing specified restrictions on its future use to ensure that these restrictions are complied with.
The national programme may be a reference document or a set of documents.
- (33a) It is understood that national arrangements for the safety of spent fuel and radioactive waste management will be applied through some form of legal, **regulatory or organisational** instrument the choice of which rests with the competence of the Member States.
- (34) The different steps in spent fuel and radioactive waste management are closely interrelated. Decisions taken in one individual step may affect a subsequent step. Therefore such interdependencies should be taken into account when developing national programmes.

- (35) Transparency is important in the management of spent fuel and radioactive waste. It should be provided by ensuring effective public information and opportunities for all concerned stakeholders to participate in the decision-making processes **in accordance with national and international obligations.**
- (36) Cooperation between Member States and at an international level could facilitate and accelerate decision-making through access to expertise and technology.
- (37) Some Member States consider that the sharing of facilities for spent fuel and radioactive waste management, including disposal facilities, is a potentially beneficial option when based on an agreement between Member States concerned.
- ~~(38) When implementing this Directive, Member States should adopt an approach towards a particular radioactive waste or spent fuel management facility or activity that is proportional to the potential hazard presented by that particular facility or activity (graded approach), and make appropriate demonstrations regarding the safety (safety case).~~
- (39) **The documentation of the decision making process as it relates to safety should be demonstrated in a graded approach providing commensurate with the levels of risk and should provide a basis for decisions related to the management of spent fuel and radioactive waste. This should** and to allow the identification of areas of uncertainty on which attention needs to be focused to further improve the **in an assessment of** safety. ~~In the particular case of a disposal facility, that should improve the understanding of those aspects influencing the safety of the disposal system, including natural (geological) and engineered barriers, and its expected development over the time. The demonstration of safety~~ **The safety decisions should be based on** the findings of an assessment of safety and information on the robustness and reliability of the that assessment and the assumptions made therein. **The decision making process** will therefore be based on a comprehensive collection of arguments and evidence in support of the safety of **that seek to demonstrate that the required standard of safety is achieved for a facility or activity related to the management of spent fuel and radioactive waste. In the particular case of a disposal facility, the documentation should improve the understanding of those aspects influencing the safety of the disposal system, including natural (geological) and engineered barriers, and its expected development over the time.**

- (39a) A Member State which has no spent fuel, no immediate prospect of having spent fuel and no present or planned activities related to spent fuel, would be under a disproportionate and unnecessary obligation if it had to transpose and implement the provisions of the present Directive with regard to spent fuel. Therefore, such Member States should be exempted, for as long as they have not taken the decision to develop any activity related to nuclear fuel, from the obligation to transpose and implement the provisions related to spent fuel of the present Directive.
- (40) While recognizing that **radiological and non-radiological** hazards associated with spent fuel and radioactive waste should be taken into account in the national framework, this Directive does not cover non radiological hazards, which fall under the Treaty on the Functioning of the European Union.
- (41) Maintaining and further developing competences and skills in the management of spent fuel and radioactive waste, as an essential element to ensure high levels of safety, should be based on a combination of learning through operational experience.
- (41a) Scientific research and technological development, ~~and~~ **supported by** technical cooperation between ~~all~~ actors may open horizons to improve the safe management of spent fuel and radioactive waste, ~~as well as contribute to reducing the radiotoxicity of high level waste.~~
- (42) Peer reviews could serve as an excellent means of building confidence and trust in the management of radioactive waste and spent fuel in the European Union, with the aim to develop and exchange experience and ensure high standards.

HAS ADOPTED THIS DIRECTIVE:

(CHAPTER 1
OBJECTIVES, DEFINITIONS AND SCOPE OF APPLICATION)¹

Article 1²

Subject-matter and objectives

- (1) This Directive establishes a Community framework for ensuring responsible and safe management of spent fuel and radioactive waste **to avoid imposing** ~~as not to leave~~ undue burdens on future generations.

¹ *The final drafting of the headings will be decided at the end of examination*

² *If the Chapter title is accepted, Art 1 shall be reformulated according to BE proposal*

- (2) It ensures that Member States provide for appropriate national arrangements for a high level of safety in spent fuel and radioactive waste management to protect workers and the general public against the dangers arising from ionizing radiation.
- (3) It ensures the provision of necessary public information and participation in relation to spent fuel and radioactive waste management while having due regard to security and proprietary information issues.
- (4) This Directive supplements the basic standards referred to in Article 30 of the Treaty as regards the safety of spent fuel and radioactive waste and is without prejudice to Directive 96/29/Euratom.

Article 2

Scope

- (1) This Directive shall apply to:
 - (a) all stages of spent fuel management when the spent fuel results from civilian activities;
 - (b) all stages of radioactive waste management, from **production** ~~generation~~ up to disposal, when the radioactive waste results from civilian activities;
- (2) Waste from extractive industries which may be radioactive and falls within the scope of Directive 2006/21/EC shall not be subject to this Directive.
- (3) This Directive shall not apply to authorised releases.
- (5) Art. 4 (3) of this Directive shall not apply to repatriation of disused sealed sources to a supplier or manufacturer **and**; to repatriation of spent fuel of research reactors ~~and to exports of radioactive waste and spent fuel based on agreements or contracts signed before this Directive enters into force~~¹.
- (6) This Directive shall not affect the right of a Member State or an undertaking in the Member State **to return the radioactive waste after treatment, to its country of origin, when** ~~to which~~:
 - (a) radioactive waste is to be **shipped** ~~exported~~ **to this Member State or undertaking** for processing; or
 - (b) other material is to be **shipped** ~~exported~~ **to this Member State or undertaking** with the purpose of recovering the radioactive waste; to return the radioactive waste after treatment, to its country of origin.

This Directive ~~Not~~ shall **not** ~~it~~ affect the right of a Member State or an undertaking in that Member State to which spent fuel is to be **shipped** ~~exported~~ for reprocessing to return to its country of origin radioactive waste recovered from the reprocessing operation.

¹ **It is understood that agreements or contracts signed before this Directive enters into force and foreseeing export of radioactive waste and spent fuel remain valid.**

Article 3
Definitions

For the purpose of this Directive the following definitions shall apply:

- (1) 'closure' means the completion of all operations at some time after the emplacement of spent fuel or radioactive waste in a disposal facility, including the final engineering or other work required to bring the facility to a condition that will be safe in the long term;
- (2) 'competent regulatory authority' means an authority or a system of authorities designated in a Member State in the field of regulation of the safety of spent fuel or radioactive waste management as referred to in Article 6;
- (3) 'disposal' means the emplacement of spent fuel or radioactive waste in an facility without the intention of retrieval;
- (3a) 'disposal facility' means any facility or installation the primary purpose of which is radioactive waste disposal;
- (4) 'licence' means any legal document granted under the jurisdiction of a Member state to carry out any activity related to the management of spent fuel or of radioactive waste, or to confer responsibility for siting, design, construction, commissioning, operation, decommissioning or closure of a spent fuel management facility or of a radioactive waste management facility;
- (5) 'licence holder' means a legal or natural person having overall responsibility for any activity or facility related to the management of spent fuel or radioactive waste as specified in a licence;
- (6) 'radioactive waste' means radioactive material in gaseous, liquid or solid form for which no further use is foreseen or considered by the Member State or by a legal or natural person whose decision is accepted by the Member State, and which is regulated as radioactive waste by a competent regulatory authority under the legislative and regulatory framework of the Member State;
- (7) 'radioactive waste management' means all activities, that relate to handling, pretreatment, treatment, conditioning, storage, or disposal of radioactive waste, excluding off-site transportation;
- (8) 'radioactive waste management facility' means any facility or installation the primary purpose of which is radioactive waste management;
- (9) 'reprocessing' means a process or operation, the purpose of which is to extract fissile and fertile materials from spent fuel for further use;

- (10) 'spent fuel' means nuclear fuel that has been irradiated in and permanently removed from a reactor core; spent fuel may either be considered as a usable resource that can be reprocessed or be destined for disposal if regarded as radioactive waste;
- (11) 'spent fuel management' means all activities that relates to the handling, storage, reprocessing, or disposal of spent fuel, excluding off-site transportation;
- (12) 'spent fuel management facility' means any facility or installation the primary purpose of which is spent fuel management;
- (13) 'storage' means the holding of spent fuel or of radioactive waste in a facility ~~that provides for its containment and~~ with the intention of retrieval;

Article 4

General principles

- (1) Member States shall establish and maintain national policies on spent fuel and radioactive waste management. Each Member State has ultimate responsibility for management of the spent fuel and radioactive waste **under its jurisdiction**.
- (2) National policies shall be based on the following principles:
- (a) the **production** of radioactive waste is kept to the reasonable practicable minimum, in terms of both activity and volume, by means of appropriate design measures and of operating and decommissioning practices, including recycle and reuse materials;
 - (b) the interdependencies between all steps in spent fuel and radioactive waste **production generation** and management are taken into account;
 - (d) spent fuel and radioactive waste are safely managed, including in the long term with passive safety features to the extent possible;
 - (e) implementation of measures follows a graded approach;
 - (f) the costs for the management of spent fuel and radioactive waste shall be borne by those who have **produced** these materials;
 - (g) an evidence based and documented decision-making process with regard to all stages of the management of spent fuel and radioactive waste.**

- ~~(2a)~~ Member States shall ensure that the national policies referred to in paragraph 1 are implemented through an evidence based and documented decision making process with regard to all stages of the management of spent fuel and radioactive waste.
- (3)¹ (a) Radioactive waste under jurisdiction of the Member State shall be disposed of in the Member State concerned, unless at the time of shipment an agreement, **taking into account the criteria established by the Commission in accordance with Article 16(2) of Council Directive 2006/117/Euratom**, has entered into force between the Member State concerned and another Member State or a third country **to use a disposal facility in one of them**, ~~taking into account the criteria established by the Commission in accordance with Article 16(2) of Council Directive 2006/117/Euratom~~. **Prior to the shipment, the exporting Member State shall inform the Commission on the content of such an agreement.**
- (b) ~~In addition, in case of an agreement with a third country which implies or could imply the disposal of radioactive waste in that country~~ **Prior to the shipment**, the exporting Member State shall take reasonable measures ~~prior to shipment~~ to be assured that:
- the country **of destination** concerned has radioactive waste management and disposal programmes with objectives equivalent to those **established by** ~~of~~ this Directive;
 - ~~a shipment shall only take place to a~~ **the** disposal facility in the country of destination, ~~which~~ is authorised for the radioactive waste **to be shipped**, ~~in question, and~~ is operating prior to the shipment, **and is** managed **in accordance with** ~~and meeting~~ the requirements set under **the radioactive waste management and disposal** programmes.
- ~~— prior to shipment the exporting Member State shall inform the Commission accordingly on the content of the agreement.~~

¹ **While retaining all the substance of text in REV 9, this paragraph is revised based on suggestions made by the LS of the Council.**

(CHAPTER 2
OBLIGATIONS)

Article 5

National framework

- (1) Member States shall establish and maintain a national legislative, regulatory and organisational framework (referred to as the 'national framework') for spent fuel and radioactive waste management that allocates responsibilities and provides for coordination between relevant competent bodies. The national framework shall provide for:
- (a) a national programme for implementation of the policy on spent fuel and radioactive waste management;
 - (b) national arrangements for the safety of spent fuel and radioactive waste management. The determination on how they are adopted and through which instrument they are applied rests with the competence of the Member States;
 - (c) a system of licensing of spent fuel and radioactive waste management activities or facilities or both, including prohibition of a spent fuel or radioactive waste management activities or of the operation of a spent fuel or radioactive waste management facility without a licence or both and, if appropriate, prescribing conditions for further management of the facility;
 - (d) a system of appropriate control, management system, regulatory inspections, documentation and reporting for radioactive waste and spent fuel management activities or facilities or both, including appropriate measures for the post-closure periods of disposal facilities;
 - (e) enforcement actions, including suspension of activities and modification or revocation of a licence together with requirements for alternative solutions that lead to safer situation;
 - (f) the allocation of responsibilities for the bodies involved in the different steps of spent fuel and of radioactive waste management. **In particular, the national framework shall give primary responsibility for the spent fuel and radioactive waste management to their producers or, if appropriate, to a licence holder to whom this responsibility has been entrusted by competent authorities;**

- (g) national requirements for public information and participation;
 - (h) the financing scheme(s) for spent fuel and radioactive waste management in accordance with Article 10.
- (2) Member States shall ensure that the national framework is maintained and improved **where** ~~when~~ appropriate, taking into account operating experience, insights gained from the **decision making process** ~~safety demonstrations~~ referred to in **Article 7(2)**, **and** the development of **relevant** technology and ~~the results of research, when available and relevant.~~

Article 6

Competent regulatory authority

- (1) Member States shall establish and maintain a competent regulatory authority in the field of safety of spent fuel and radioactive waste management.
- (2) Member States shall ensure that the competent regulatory authority is functionally separate, from any other body or organisation concerned with the promotion or **utilization** of nuclear energy or radioactive material, including electricity production and radioisotope applications, or with the management of spent fuel and radioactive waste, in order to ensure effective independence from undue influence in its regulatory function.
- (3) Member States shall ensure that the competent regulatory authority is given the legal powers and human and financial resources necessary to fulfil its obligations in connection with the national framework described in Article 5(1) (b), (c), (d) and (e).

Article 7

Licence holders

- ~~(1a) Member States shall ensure that the prime responsibility for spent fuel or radioactive waste rests with those licence holders to whom the overall responsibility for the spent fuel or radioactive waste has been entrusted by competent authorities in accordance with Art 5(1)(f).¹~~
- (1) Member States shall ensure that the prime responsibility for the safety of spent fuel and radioactive waste management facilities and/or activities rests with the licence holder. This responsibility can not be delegated.

¹ moved to Art. 5(1)(f)

- (2) Member States shall ensure that the national framework **in place** requires licence holders to regularly ~~demonstrate to the competent regulatory authority~~ **assess, verify** and continuously improve, as far as **is** reasonably achievable, the safety of ~~their~~ **the radioactive waste and spent fuel management facility** or activity in a systematic and verifiable manner. **This shall be achieved through an appropriate safety assessment and other arguments and evidence. This safety assessment shall ~~will~~ be made available to the national competent regulatory authority for verification upon request.** ~~The extent of the safety demonstration shall be commensurate with the complexity of the operations and the magnitude of the hazards associated with the facility or activity. The safety demonstration shall cover the development and operation of an activity and the development, operation, and decommissioning of a facility or closure of a disposal facility as well as the post-closure phase of a disposal facility.~~
- (3) **As part of the licensing of a facility or activity the licensing process shall cover the development and operation of an activity and the development, operation and decommissioning of a facility or closure of a disposal facility as well as the post-closure phase of a disposal facility. It should** provides the required assurance of safety in the facility or activity, ~~and include verification that measures are.~~ **The measures** in place to prevent accidents ~~and mitigate the consequences of accidents, including~~ **shall include the** verification of the physical barriers and the licence holder's administrative procedures for protection that would have to fail before workers and the general public would be significantly affected by ionising radiation. **This approach shall identify and reduce uncertainties.**
- (4) Member States shall ensure that the national framework requires licence holders to establish and implement integrated management systems, including quality assurance, which give due priority for overall management of spent fuel and radioactive waste to safety and are regularly verified by the competent regulatory authority.
- (5) Member States shall ensure that the national framework requires licence holders to provide for and maintain adequate financial and human resources to fulfil their obligations with respect to the safety of spent fuel and radioactive waste management, laid down in paragraphs 1 to 4.

- (6) Member States shall ensure that revocation of a licence or ~~expiration~~ **expiry of a licence** ~~of its validity~~ shall not exempt the licensee, ~~or one who has had a licence~~, from compliance with the **licence conditions and with the** national requirements for the safety of spent fuel and radioactive waste management, ~~or the licence conditions~~, unless the competent regulatory authority has taken a specific **decision to release the licensee from regulatory control or has accepted** ~~on the transfer or expiry~~ of responsibilities **to another licensee**.

Article 9

Expertise and skills

Member States shall ensure that the national framework **in place requires** ~~includes~~ arrangements for education and training **to be made by all parties for their staff, as well as** research and development activities to cover the needs of **the national programme** ~~all parties with responsibilities~~ for spent fuel and radioactive waste management in order to obtain, maintain and to further develop necessary expertise and skills.

Article 10

Financial resources

Member States shall ensure that the national framework ~~provide mechanism to~~ **requires** that adequate financial resources are available when needed for the implementation of national programmes, **especially for** management of spent fuel and radioactive waste, taking due account of the responsibility of spent fuel and radioactive waste producers.

Article 12

Transparency

- (1) Member States shall ensure that necessary information on the management of spent fuel and radioactive waste is made available to workers and the general public. This obligation includes ensuring that the competent regulatory authority informs the public in the fields of its competence. Information shall be made available to the public in accordance with national legislation and international obligations, provided that this does not jeopardise other interests such as, inter alia, security, recognised in national legislation or international obligations.
- (2) Member States shall ensure that the public is given necessary opportunities to participate effectively in the process of decision making on spent fuel and radioactive waste management in accordance with the national legislation and international obligations.

Article 13

National programmes

- (1) Each Member State shall ensure the implementation of its national programmes for the management of spent fuel and radioactive waste (hereafter referred to as 'national programme'), covering all types of spent fuel and radioactive waste under ~~its~~ their jurisdiction and all stages of spent fuel and radioactive waste management from **generation** to disposal.
- (2) Each Member States shall regularly review and update its national programmes, taking into account technical and scientific progress as appropriate as well as recommendations, lessons learned and good practices from peer reviews.

Article 14

Contents of national programmes

National programmes shall be based on the existing and projected national inventory of radioactive wastes and spent fuel and shall include:

- (1) an inventory of all spent fuel and radioactive waste and provisions of future quantities, including those from decommissioning. The inventory shall clearly indicate the location and amount of the radioactive waste and spent fuel in accordance with appropriate classification of the radioactive waste;
- (2) concepts, plans and technical solutions from **production** ~~generation~~ to disposal;
- (3) concepts and plans for the post-closure period of a disposal facility, including time over which appropriate controls are retained and the means to be employed to preserve knowledge of that facility in the longer term;
- (4) ~~description of~~ research, development and demonstration activities that are needed in order to implement solutions for the management of spent fuel and radioactive waste;
- (5) major milestones, clear timeframes and responsibilities for implementation; ~~description of the decision making process in relation to the supporting safety demonstrations indicating uncertainties;~~
- (6) key performance indicators to monitor progress towards implementation;
- (7) assessment of programme costs and the underlying basis and hypotheses for this assessment, which must include a profile over time;
- (8) ~~description of the~~ financing scheme(s) in force;
- (10) ~~description of the~~ transparency policy or process as referred in Art. 12.

Article 15

Notification

- (1) Member States shall notify the Commission of their national programmes and of subsequent significant changes.
- (2) Within six months of the date of notification, the Commission may request clarification and/or express its opinion on whether the content of the national programmes is in accordance with Article 14.
- (3) Within six months from receiving the Commission's reaction Member States shall provide the requested clarification and/or inform the Commission of any revision of the national programmes.
- (4) The Commission will take into account the Member States' clarifications and progress on the national waste management programs, when deciding on the provision of Euratom financial or technical assistance for spent fuel and radioactive waste management facilities or activities.

Article 16

Reporting

- (1) Member States shall submit a report to the Commission on the implementation of this Directive for the first time by, and every three years thereafter, taking advantage of the review and reporting under the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.
- (2) On the basis of the Member States' reports, the Commission shall submit a report to the Council and the European Parliament on progress made with the implementation of this Directive. On the same basis, the Commission shall also submit an inventory of radioactive waste and spent fuel present in the Community's territory and the future prospects.
- (3) Member States shall periodically, and at least every 10 years, arrange for self-assessments of their national framework, competent regulatory authority, national programme and its implementation, and invite international peer review of their national framework, authority and/or programme with the aim of ensuring that high safety standards are achieved in the safe management of spent fuel and radioactive waste. The outcomes of any peer review shall be reported to the Commission and the Member States, and may be made available to the public where there is no conflict with security and proprietary information.

(CHAPTER 3
FINAL PROVISIONS)

Article 17

Transposition

- (1) Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by **[2 years after the date referred to in Art. 18]**. They shall forthwith inform the Commission thereof. When Member States adopt these measures, 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 reference shall be laid down by Member States.
- (1a) The obligations for transposition and implementation of provisions related to spent fuel of this Directive shall not apply to Cyprus, Denmark, Estonia, Ireland, Latvia, Luxembourg and Malta for as long as they decide not to develop any activity related to nuclear fuel.
- (2) 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 and of any subsequent amendments to those provisions.
- (3) Member States shall first time notify the Commission their National Programme covering all the items provided for in Article 14 as soon as possible but not later than four years after the entry into force of this Directive.

Article 18

Entry into force

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

Article 19

Addressees

This Directive is addressed to the Member States.

– Done at Brussels,

For the Council
The President