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**Report from the Commission to the Council, the European Parliament and the
European Economic and Social Committee**

**on the Member States' implementation of Council Directive 2006/117/EURATOM on
the supervision and control of shipments of radioactive waste and spent fuel
Fifth Report**

{COM(2026) 513 final}

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List of abbreviations and acronyms

ARN	Authorisation registration number
EU	European Union
EURATOM	European Atomic Energy Community
IAEA	International Atomic Energy Agency
IM	Import/s from non-EU countries
ME	Export/s to non-EU countries
MM	Transit internal EU, passing from one Member State to another Member State; Import/s intra EU; Export/s intra EU
NORM	Naturally Occurring Radioactive Material
RW	Radioactive Waste
SF	Spent Fuel
SWD	Staff Working Document
TT	Transit/s from/to a non-EU country
UK	United Kingdom
USA	United States of America

1. INTRODUCTION

This Staff Working Document (SWD) supports the European Commission's fifth report to the European Parliament, the Council and the European Economic and Social Committee (COM(2025)XX) on the implementation of Council Directive 2006/117/Euratom ⁽¹⁾ on supervision and control of shipments of spent fuel and radioactive waste by the European Union Member States (the Directive) in the period 2021-2023 ⁽²⁾. It is based on the latest national reports from Member States to the European Commission on the implementation of the Directive, which were due by 25 December 2023.

Pursuant to Article 20, Member States have to report every three years to the European Commission on the implementation of the Directive. Based on national reports, the European Commission has to establish a summary report for the European Parliament, the Council and the European Economic and Social Committee, in accordance with the procedure laid down in Article 21 (Advisory Committee). In its report the European Commission has to pay particular attention to the implementation of Article 4 on reshipment related to non-authorised shipments and undeclared radioactive waste.

This Staff Working Document provides an overview and analysis of the authorisations for import, export and transit of radioactive waste and spent fuel issued by Member States. It also summarises the feedback received from Member States in implementing the Directive.

In 2023 (end of the reporting period), nuclear energy provided 22.8% of the EU's electricity generation ⁽³⁾. There were 101 nuclear power reactors operating across 12 Member States ⁽⁴⁾. The gross electricity generation from nuclear power plants in the EU in 2023 amounted to 619.6 TWh which represented an increase of 1.7% compared to 2022.

Looking at the EU Member States, 65 nuclear power plants have been shut down permanently since 1956 ⁽⁵⁾, located in 10 Member States ⁽⁶⁾.

19 Member States have research reactors at various stages of their lifecycle – operational, shutdown or decommissioning. Subject to the research reactor design Member States often depend on supply of nuclear fuel from third countries such as the United States of America and the Russian Federation. In most cases there is also an arrangement for the return of spent fuel to the supplier, which is covered both by the provision of this Directive and by Directive 2011/70/Euratom ⁽⁷⁾.

⁽¹⁾ Council Directive 2006/117/Euratom of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel, OJ 337, 5.12.2006, p 21-32.

⁽²⁾ From 26 December 2020 to 25 December 2023.

⁽³⁾ Slight increase in nuclear power production in 2023 - News articles - Eurostat

⁽⁴⁾ Belgium, Bulgaria, Czech Republic, Spain, France, Hungary, Netherlands, Romania, Slovenia (Croatia), Slovakia, Finland, and Sweden.

⁽⁵⁾ Start of commercial operation of the first nuclear power plants in Europe.

⁽⁶⁾ IAEA „Power Reactor Information System“, <https://pris.iaea.org/Home/Pris.asp>

⁽⁷⁾ Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste. OJ L 199, 2.8.2011, p. 48–56

Member States that do not operate nuclear power plants or research reactors, also generate radioactive waste from applications of ionising radiation. As a result, all EU Member States generate radioactive waste from numerous activities, such as energy production, research, industrial, medical, and other applications. Moreover, Member States operating nuclear power plants and research reactors also generate spent fuel, which can be either considered as radioactive waste for direct disposal or a valuable resource for reprocessing.

The purposes of shipments of radioactive waste and spent fuel were mainly: (i) treatment of radioactive waste or reprocessing of spent fuel; (ii) return of treated radioactive waste or radioactive waste originated in the reprocessing of spent fuel back to the country of origin; and (iii) return of spent fuel from research reactors to the supplier.

The management of radioactive waste and spent fuel is subject to legal requirements ensuring the highest standards of safety and protection of workers, the general public and the environment. These requirements stem from both international and Euratom law. At European Atomic Energy Community (Euratom) level, Directive 2011/70/Euratom establishes a Community framework for the responsible and safe management of spent fuel and radioactive waste. This framework aims to avoid imposing undue burdens on future generations and ensures that Member States provide for national arrangements that prioritize a high level of safety in managing spent fuel and radioactive waste, thereby protecting workers and the public from the dangers of ionising radiation. Besides, the Basic Safety Standards Directive 2013/59/Euratom ⁽⁸⁾ aims to enhance protection against the dangers of ionizing radiation exposure. It repeals and consolidates in a single piece of legislation the provisions of five Euratom Directives, including the High-Activity Sealed Sources Directive ⁽⁹⁾. In compliance with the latter Directive, EU Member States have established restricted national electronic registries for radioactive sources and source holders. In addition to other provisions, Directive 2013/59/Euratom also sets out requirements for the management of orphan sources and contaminated scrap metal, as well as on management of material containing naturally occurring radionuclides (NORM).

Within the scope of this comprehensive EU framework, Directive 2006/117/Euratom specifically addresses transboundary shipments of radioactive waste and spent fuel, laying down a system of supervision and control for import to, transit through and export from the Community aiming at adequate protection of EU population.

2. GENERAL PRINCIPLES FOR SHIPMENT OF SPENT FUEL AND RADIOACTIVE WASTE

Directive 2006/117/Euratom applies to shipment of spent fuel and radioactive waste whenever the country of origin, the country of destination, or any country of transit is an EU Member State. The Directive requires that Member States involved in the shipment (State of origin, State

⁽⁸⁾ Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom, OJ L 13, 17.1.2014, p.1.

⁽⁹⁾ Council Directive 2003/122/Euratom of 22 December 2003 on the control of high-activity sealed radioactive sources and orphan sources.

of destination, and transit States) be informed about any planned shipments on their territories. These Member States have to either give their consent or provide a reasoned refusal to these shipments.

Under the Directives, each Member State should remain fully responsible for the choice of its own policy on the management of radioactive waste and spent fuel within its jurisdiction. The Directive should therefore be without prejudice to the right of Member States to export their spent fuel for reprocessing or radioactive waste for processing. Besides, nothing in its provisions implies that a Member State of destination has to accept shipments of radioactive waste and/or spent fuel for final treatment or disposal, except in the case of reshipment (return to the country of origin). However, any refusal needs to be justified based on the criteria set out in the Directive. They should not be arbitrary and should be founded on relevant national, Euratom/EU or international law. Moreover, in line with the provisions set by the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the Directive prohibits the export of radioactive waste or spent fuel to a destination south of latitude 60° south, to African, Caribbean or Pacific countries or to a third country which does not have the administrative and technical capacity to manage it safely.

For intra-Community shipments, whenever an entity which, under the applicable national law, is responsible for the radioactive waste or spent fuel (i.e. holder ⁽¹⁰⁾) plans to carry out a shipment, it has to submit a duly completed application to the competent authorities of the Member State of origin ⁽¹¹⁾. The competent authority of the country of origin submits the duly completed application for consent to the competent authorities of the Member State of destination and of the Member States of transit, if any ⁽¹²⁾.

Imports from third countries into the Community also require the consignee ⁽¹³⁾ to submit an application to the competent authorities of the Member State of destination ⁽¹⁴⁾. Concerning exports outside the EU borders, the holder must apply for authorisation to the competent authorities of the Member State of origin and then the competent authorities in the Member State of origin must ask the relevant authorities of the country of destination and countries of transit, if any, for their consents ⁽¹⁵⁾.

As regards transits of radioactive waste and spent fuel through the Community originating from and destined to a third country, the entity responsible for the safe management of the material in the first Member State of transit must apply for authorisation to the competent authorities of that Member State ⁽¹⁶⁾. The competent authorities of this Member State must ask the consent of the competent authorities of the Member States of transit, if any.

⁽¹⁰⁾ Any natural or legal person who, before carrying out a shipment of radioactive waste or spent fuel is responsible under the applicable national law for such materials and plans to carry out a shipment to a consignee.

⁽¹¹⁾ See Article 6 of Directive 2006/117/Euratom.

⁽¹²⁾ See Article 7 of Directive 2006/117/Euratom.

⁽¹³⁾ Any natural or legal person to whom radioactive waste or spent fuel is shipped.

⁽¹⁴⁾ See Article 13 of Directive 2006/117/Euratom.

⁽¹⁵⁾ See Article 15 of Directive 2006/117/Euratom.

⁽¹⁶⁾ See Article 14 of Directive 2006/117/Euratom.

The Directive sets out requirements for the use of a Standard Document for the Supervision and Control of Shipments of Radioactive Waste and Spent Fuel (further referred to as “*Standard Document*”), and the establishment of criteria for intra-Community shipments, imports from outside the EU, exports from Member States to third countries and transits within the Community. The Standard Document was adopted by a European Commission decision in 2008 ⁽¹⁷⁾. It acknowledges distinct types of shipments reflected in the “*Type Code*”. The types of shipments and the respective Type Codes are graphically presented in Figure 1 and summarised in Table 1.

Table 1. Types of shipment and respective “Type Code” according to the Standard Document of Directive 2006/117/Euratom.

Type	Different possibilities for movements within, into and out of Community	Type Code
Extra Community	<i>Import</i> , from a non-EU country (third country) to an EU Member State.	IM
	<i>Export</i> , from an EU Member State to a non-EU country (third country).	ME
	<i>Transit</i> , from a non-EU country to a non-EU country (third countries of origin and destination), through one or more EU Member State(s).	TT
Intra Community	• <i>Import</i>, (for the Member State that consents as destination) can be associated with shipment from an EU Member State to another EU Member State, i.e. internal EU shipment. • <i>Export</i>, (for the Member State that authorises as origin) can be associated with movement from an EU Member State to another EU Member State, i.e. internal EU shipment. • <i>Transit</i>, (for the Member State that consent the transit) can be associated with internal EU movement, from an EU Member State to another EU Member State.	MM

⁽¹⁷⁾ Commission Decision of 5 March 2008 establishing the standard document for the supervision and control of shipments of radioactive waste and spent fuel referred to in Council Directive 2006/117/Euratom (notified under document number C(2008) 793) (2008/312/Euratom). The Decision was corrected in 2011.

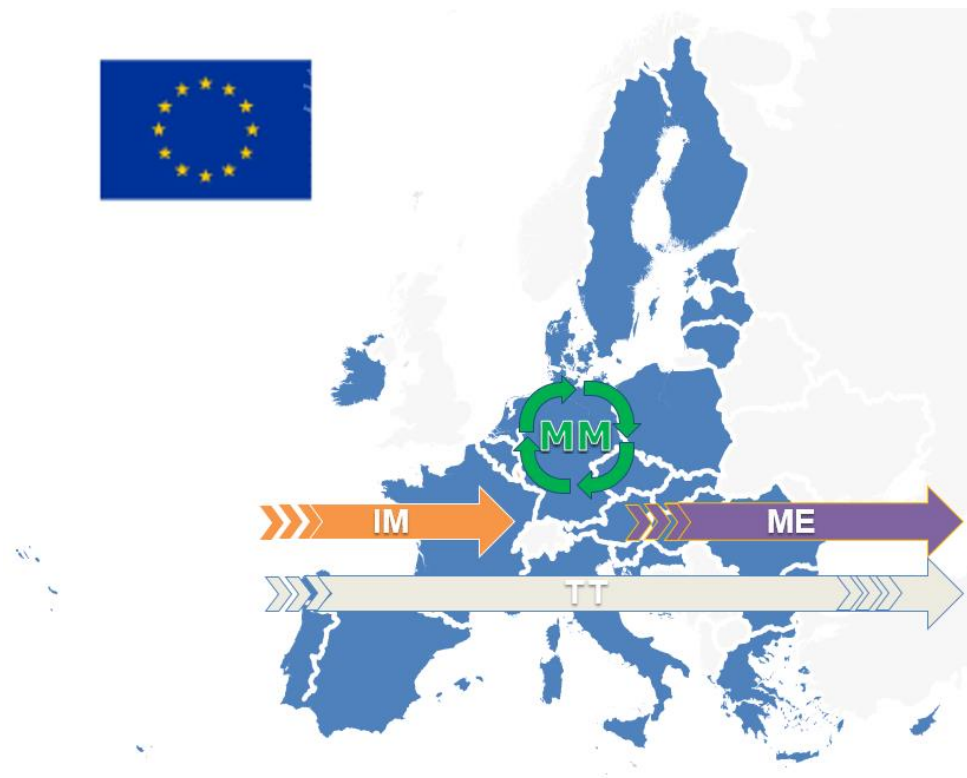


Figure 1. Types of shipments and respective “Type Code”.

The shipments of spent fuel and/or radioactive waste cannot take place until the competent authorities of the country of destination and of all countries of transit have notified the competent authorities of the country of origin their consent. In case of MM shipments, the competent authorities of the Member State of origin have to send the duly completed application to the competent authorities of the Member State of destination and of the Member States of transit, if any ⁽¹⁸⁾. In case of ME shipments, the competent authorities of the Member State of origin have to notify the competent authorities of the country of destination of the planned shipment and ask their consent, and send the application referred to in paragraph 1 for consent to the competent authorities of the Member States of transit, if any ⁽¹⁹⁾. The Directive stipulates a period of two months after receipt of the application for notification of consent or refusal. No reply upon expiry of this period is deemed tacit consent to the shipment ⁽²⁰⁾.

The authorisation is issued to the holder by the competent authority of:

- in case of ME and MM, Member State of **origin** of the shipment,
- in case of IM, Member State of **destination** of the shipment,
- in case of TT, the **first Member State** through which the shipment enters the Community.

⁽¹⁸⁾ See Article 7 of Directive 2006/117/Euratom.

⁽¹⁹⁾ See Article 15 of Directive 2006/117/Euratom.

⁽²⁰⁾ See Article 9(2) of Directive 2006/117/Euratom.

The competent authorities may add conditions to the shipments of spent fuel and/or radioactive waste. Nevertheless, for shipments within the Community, it is not possible to lay down conditions which are more stringent than those laid down by the national law of a Member State on the shipment of radioactive waste on its own territory.

The authorisation may cover more than one shipment and can be valid up to three years.

Finally, if conditions applying to a shipment are not complied with or a shipment cannot be completed, the competent authorities of the Member State of origin must ensure that the radioactive waste and/or spent fuel in question are taken back by the holder, unless an alternative safe arrangement can be made. The holder is liable for costs arising in cases where the shipment cannot or may not be completed ⁽²¹⁾.

3. STATUS OF IMPLEMENTATION OF THE GENERAL PROVISIONS

3.1. Transposition of the Directive

All Member States transposed the Directive by 2013 and notified transposition measures to the European Commission.

3.2. Standard Document for the supervision and control of shipments

The Standard Document includes forms for the following purposes:

- application for authorisation of shipment(s) of spent fuel or radioactive waste;
- acknowledgement of receipt of application – request for missing information for spent fuel and radioactive waste;
- refusal or consent of radioactive waste or spent fuel shipment by the competent authorities concerned;
- description of radioactive waste consignment and list of packages;
- acknowledgement of receipt of radioactive waste and spent fuel;
- authorisation of shipment(s) of spent fuel and radioactive waste.

3.3. Competent authorities

Article 5(13) of the Directive defines “competent authorities” as “any authority which, under the law or regulations of the countries of origin, transit or destination, are empowered to implement the system of supervision and control of shipments of radioactive waste or spent fuel”. To facilitate communication between Member States regarding supervision and control of shipments of spent fuel and radioactive waste, all Member States provided the European Commission with updated contact details of their competent authority or authorities (see Annex

⁽²¹⁾ See Article 12 of Directive 2006/117/Euratom.

I). According to Article 18(2) of the Directive, Member States have to regularly forward any changes of such data to the European Commission.

3.4. Transmission

In compliance with the requirement set out in Article 19(1) of the Directive, the European Commission issued a Recommendation ⁽²²⁾ for a secure and effective system of transmission of the documents and information relating to the provisions of the Directive.

In compliance with the requirement set out in Article 19(2) of the Directive, the Commission services have also established a dedicated webpage (Radioactive waste and spent fuel - European Commission) containing information on the Directive. The data has been updated, where appropriate, based on information transmitted to the Commission by each Member State as foreseen under Article 19 of the Directive, including the contact details of the competent authorities in the Member States, the languages acceptable to the competent authorities of each Member State, and all general conditions and additional requirements, if any, necessary for the competent authorities of each Member State to authorise a shipment.

3.5. Regular reports

As stated in Article 20, all Member States have to inform the European Commission on the implementation of the Directive. This is done by means of regular reports submitted by the competent authorities every three years. To support Member States in their reporting obligations and ensure a certain degree of harmonisation of the information received, the Commission services provided Member States with a reporting template which they may use for submitting their national reports to the European Commission. Based on these national reports, the European Commission has to issue a summary report aimed at informing the European Parliament, the Council and the European Economic and Social Committee on the implementation of the Directive. This Staff Working Document supports and accompanies the aforementioned report.

The deadline for submission of the last national reports was 25 December 2023. The majority of Member States submitted their reports within the deadline.

This fifth reporting period covered shipments authorised between 26 December 2020 and 25 December 2023.

The Commission services thoroughly assessed the national reports and interacted with some Member States when necessary to clarify or complete the information. Based on the information contained therein, the European Commission prepared the fifth report to the European Parliament, the Council and the European Economic and Social Committee on the

⁽²²⁾ Commission Recommendation 2009/527/Euratom, of 7 July 2009, for a secure and effective system of transmission of documents and information relating to the provisions of Council Directive 2006/117/Euratom (OJ L 177, 8.7.2009, p. 5).

implementation of the Directive by the Member States during the considered reporting period. This report provides an overview of authorisations given Community-wide and informs about any trends or practical difficulties. The present Staff Working Document supports this report.

4. SHIPMENTS OF RADIOACTIVE WASTE AND SPENT FUEL IN 2021-2023

4.1. Overview of authorised shipments

The Directive requires that shipments of radioactive waste and spent fuel take place only with prior informed consent of competent authorities of all involved Member States, including transit Member States ⁽²³⁾. During the reporting period, 17 Member States reported on authorisations or consents for shipments of radioactive waste or spent fuel on their territory.

The following 10 Member States did not report any authorisations for shipment on their territory: Croatia, Cyprus, Estonia, Greece, Ireland, Latvia, Lithuania, Malta, Poland, and Portugal. Three of these Member States – Croatia, Cyprus, and Malta – have not reported any authorisations for shipments of radioactive waste on their territory since the reporting obligations under the Directive began in 2009.

Overall, 148 authorisations covering 1220 shipments ⁽²⁴⁾ and 279 consents have been reported by EU Member States for the period 2021-2023.

In comparison with the previous reporting periods under the present Directive, the number of reported authorisations is one of the lowest since the beginning of the reporting obligations in 2009 (Figure 2). One of the reasons for this decrease is the reduction of reporting Member States from 28 to 27. However, most authorisations related to shipments from/to/through the United Kingdom were still covered as most of the authorisations/consents reported by the United Kingdom in the past reporting periods were related to future shipments to the Community.

The total number of authorisations for shipments during the reporting periods is presented in Figure 2.

⁽²³⁾ See Article 9 of Directive 2006/117/Euratom.

⁽²⁴⁾ A single authorisation may cover more than one shipment and can be related to multiple consents.

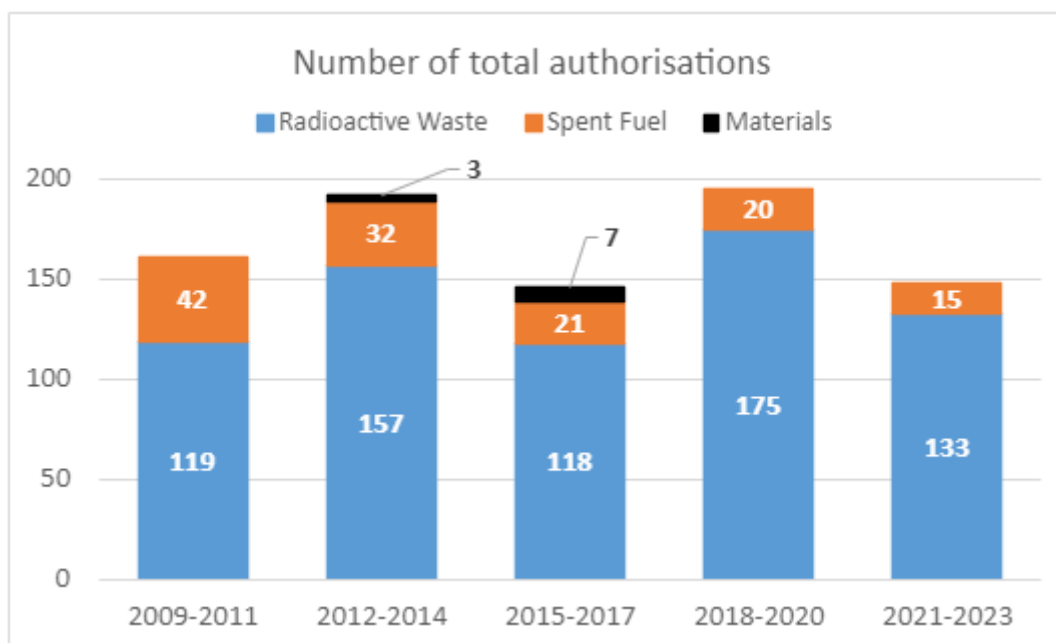


Figure 2. Number of total authorisations for shipments of radioactive waste (blue) and spent fuel (orange) issued during the past reporting periods and the current reporting period. In the 2012-2014 period, MSs have also reported authorisations for shipments of materials.

As Figure 2 and 3 show, from 2021 until 2023 competent authorities issued 148 authorisations corresponding to 1220 shipments of radioactive waste or spent fuel on the Community's territory. The receiving or transit Member States issued 279 consents. Approximately 90% (133) of the authorisations were for shipping radioactive waste, and 10% (15) for shipping spent fuel.

Compared to previous reporting periods, the number of authorised shipments decreased to 1220 from 1834 (period 2018-2020) and 1770 (period 2015-2017). Approximately half of the authorisations (80) covered multiple shipments; in 10 cases one authorisation covered 10 or more shipments (compared to 40 in the previous reporting cycle). Almost half of the total shipments were covered by only two authorisations: one for 400 shipments from UK to Germany (IM), the other for 200 shipments from UK to Sweden (IM). While 1204 shipments (99%) were shipments of radioactive waste, only 16 shipments (1%) were shipments of spent fuel.

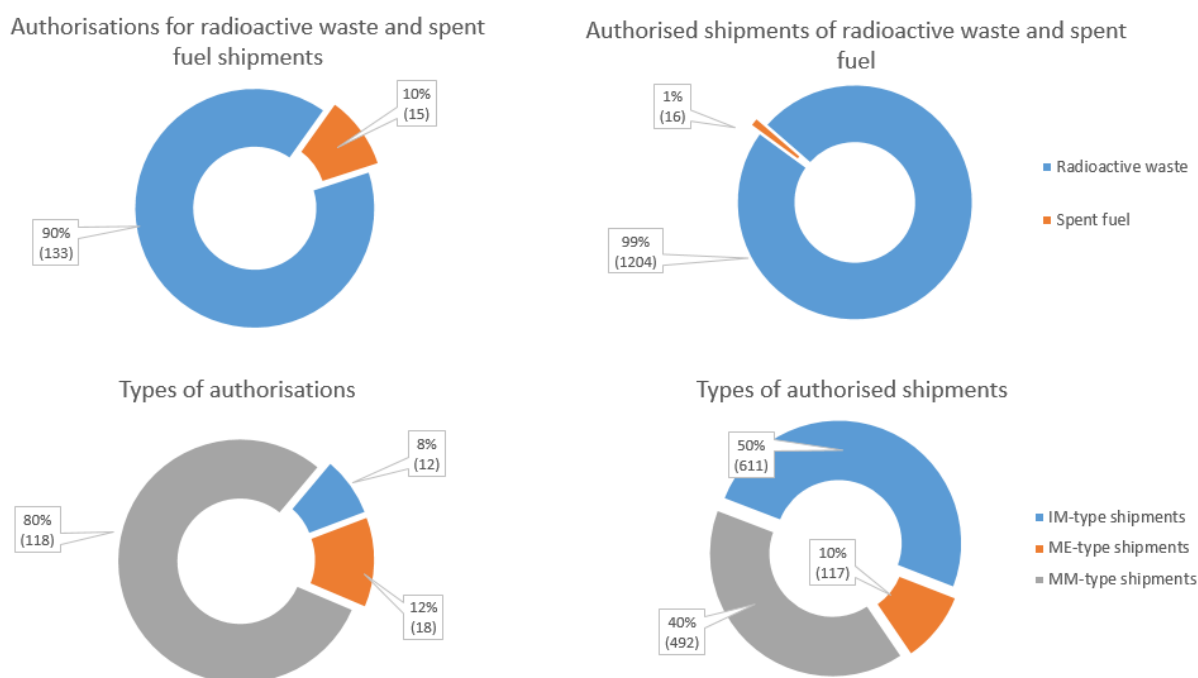


Figure 3. Top left: Number of authorisations for intra- or extra-Community shipments of radioactive waste and spent fuel; top right: number of total authorised shipments intra- or extra-Community shipment of radioactive waste and spent fuel; bottom left: number of authorisations for distinct types of shipments; bottom right: number of total authorised shipments for distinct types.

Types of shipments

MM type shipments, i.e. shipments between Member States, were 492 under 118 authorisations (about 80%). ME type shipments, i.e. exports to third countries, were 117 under 18 authorisations (about 12%). IM type shipments, i.e. imports from third countries, were 611 under 12 authorisations (about 8%).

Due to the United Kingdom becoming a third country, there was a notable change in the structure of the types of shipments. As shown in Figure 4, the percentage of authorised shipments to and from third countries increased significantly, with the United Kingdom being a major partner for the Member States in relation to shipments of radioactive waste.

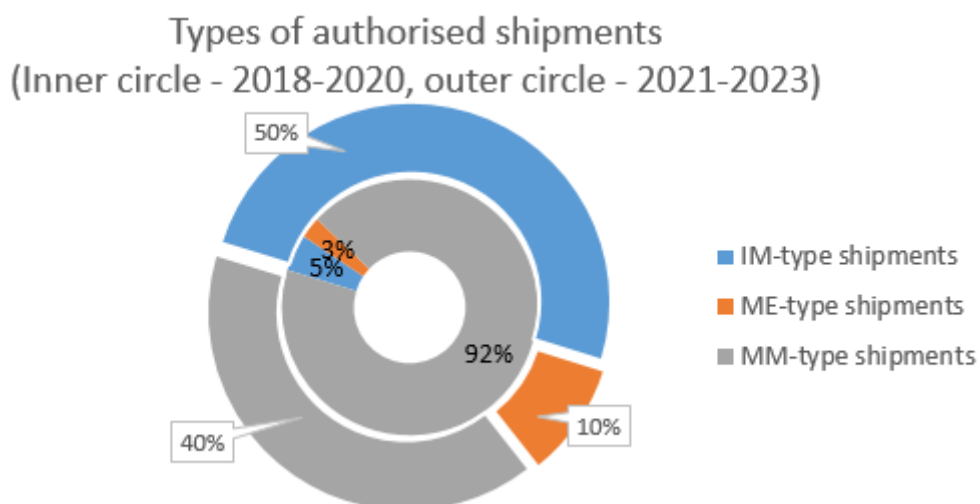


Figure 4. Comparison of number of total authorised shipments for distinct types between the 2018-2020 and 2021-2023 reporting cycles.

No transits originating from outside the EU and having a third country as final destination (TT) were authorised during the reporting period 2021-2023.

4.2. Intra-community (MM type) authorisations

Radioactive waste

Out of 148 authorisations for radioactive waste shipments, 110 pertained to intra-community (MM-type) shipments (Figure 5).

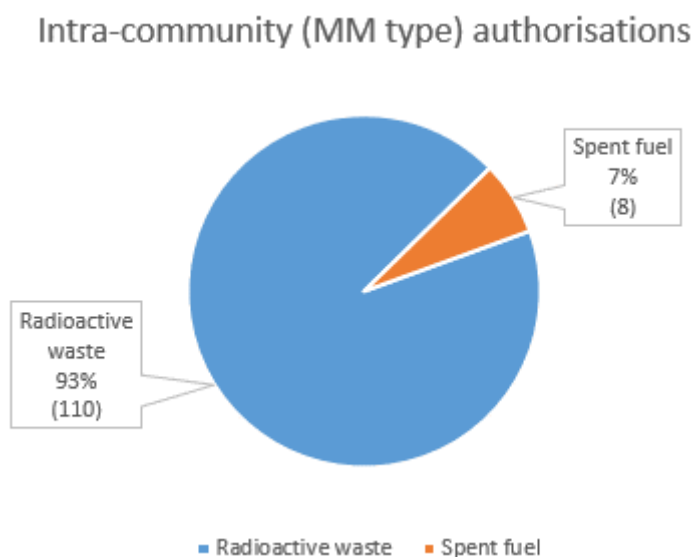


Figure 5. Distribution of intra-community authorisations during the reporting period (2021-2023).

Some authorisations were given for multiple shipments to be carried out over a time period that may exceed the one covered by the present report (2021-2023). The MM-type authorisations account for 484 shipments of radioactive waste authorised by 13 Member States of origin.

Three Member States (Belgium, Germany, and Sweden) issued 70% of the authorisations for shipping radioactive waste to another Member State (93 authorisations for 638 shipments) (Figure 6), mostly for returning treated waste to the country of origin. Sweden issued authorisations covering the highest number of planned radioactive waste shipments (370 planned MM shipments covered by 30 authorisations).

Collectively Belgium, France, Germany, and Sweden also issued 68% of consents (78 in total) as destination country (Figure 6); they were frequently the destination country because they have facilities for repackaging, conditioning, and treatment of radioactive wastes.

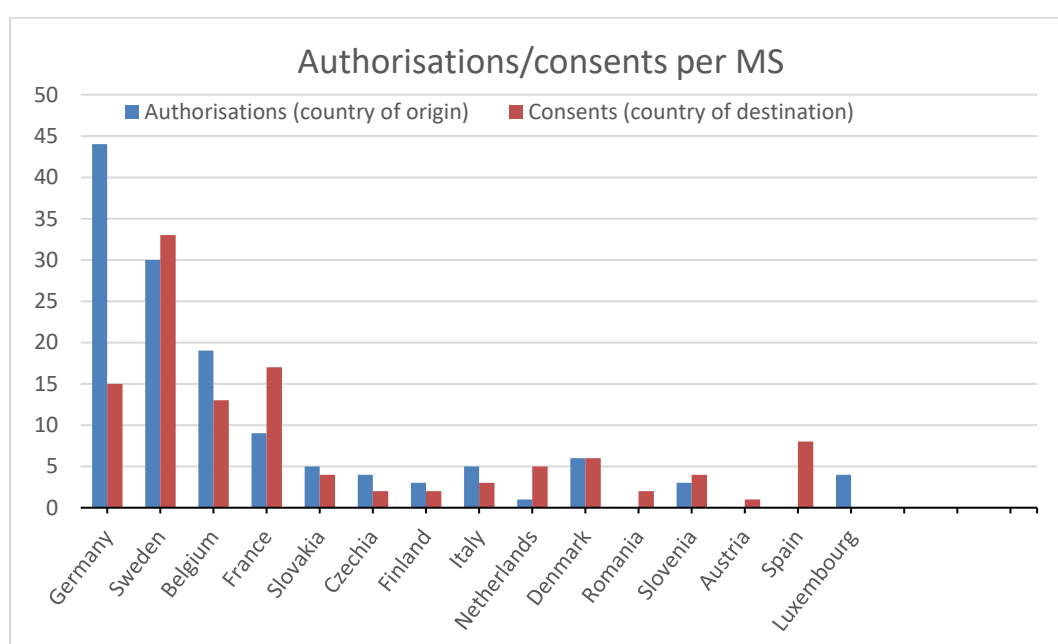


Figure 6. Number of MM authorisations issued for radioactive waste shipments (country of origin) and of the respective consents (country of destination) during the reporting period (2021-2023).

About 55% of the issued authorisations for intra-community shipments of radioactive waste (60 authorisations) implied a transit through the territory of a third Member State.

The purposes of intra-community shipments of radioactive waste were: (i) treatment of waste ⁽²⁵⁾ in another Member State and its return to the country of origin (96 shipments, 87%); (ii) return of radioactive waste to the country of origin after (re)treatment or reprocessing of spent fuel in France (one shipment); (iii) analysis/research (13 shipments).

⁽²⁵⁾ E.g., (re)packaging, conditioning, volume reduction.

Nuclear industry was the originator of 80% of MM-type shipments of radioactive waste. The remaining 20% pertained to non-nuclear activities (e.g. medicine, research).

Around 73% of shipments were transported by road, and 19% by railway. In addition to road and rail transport, sea transport also played a significant role with about 15% of shipments involving sea ways (road/sea, road/rail/sea, or rail/sea).

Spent fuel

Out of 15 authorisations for spent fuel shipments, 8 pertained to intra-community (MM-type) shipments.

These shipments originated from Belgium, France, Germany, and the Netherlands. Member States of destination were Belgium, France, and Sweden. Currently, only in France there are operating specialized facilities for spent fuel reprocessing.

Only one of all the MM-type authorisations of spent fuel was related to the (re)treatment or reprocessing of spent fuel in France. The remaining seven authorisations were for the purpose of analysis/research or return after examination (as for example the shipments between Belgium and France).

All but one authorisation were for shipments carried out by road. The only authorisation involving rail transport (road/rail) was for spent fuel transfer from the Netherlands to France for reprocessing.

Unlike radioactive waste authorisations, all intra-community authorisations for spent fuel were issued for a single shipment.

4.3. Extra-Community shipments (exports and imports)

Radioactive waste

Concerning **exports** ⁽²⁶⁾ of radioactive waste from the Community to third countries, 15 authorisations for 113 shipments (ME) were issued by five Member States (Slovenia, Italy, Germany, Sweden, and Belgium) during the considered reporting period (Table 2).

With reference to **imports** ⁽²⁷⁾ of radioactive waste from outside the Community, three Member States (France, Germany, and Sweden) issued authorisations for receipt of radioactive waste from third countries. In total, eight authorisations for 607 shipments (IM) were issued during the 2021-2023 period (Table 3).

There were three authorisations for shipments of radioactive waste from Monaco to France with the purpose of final disposal in France based on a bilateral agreement. Notably, while disposal

⁽²⁶⁾ Pursuant to the Directive, exports are shipments from the authorising MS to a third country; consents by transit MSs are required.

⁽²⁷⁾ Pursuant to the Directive, imports are shipments from a third country to the authorising MS; consents by transit MSs are required.

of foreign radioactive waste on French territory is prohibited under the French regulatory framework, an exception is granted to the radioactive waste originating from the Principality of Monaco.

Spent fuel

A total of three export authorisations for four shipments of spent fuel to a third country (ME) were issued by two Member States (Bulgaria and Sweden).

Bulgaria reported to have granted a single authorisation for a shipment of spent fuel for reprocessing in Russia, in compliance with the European Commission Recommendation of 4 December 2008 on the criteria for the export of radioactive waste and spent fuel to third countries ⁽²⁸⁾.

Sweden issued two export authorisations for shipments of spent fuel – one for return to the original owner after reconditioning and the second one for research activity (examination and destroying testing with final disposal of residue in the United Kingdom).

As regards import authorisations (IM), two Member States (France and Sweden) issued four authorisations. France issued an authorisation for a single shipment from Switzerland related to a research project. Sweden issued three authorisations for research activities (post-irradiation examinations) – one authorisation for a single shipment from South Korea and two authorisations for shipments from Switzerland. Concerning authorisations from Switzerland, it is noted that the remains of the material will be disposed of in Sweden, and nothing will be returned to Switzerland.

⁽²⁸⁾ Commission Recommendation 2008/956/Euratom, of 4 December 2008, on the criteria for the export of radioactive waste and spent fuel to third countries (OJ L 338, 17.12.2008, p. 69).

Table 2. Authorisations for exports to third countries

Member State (authorising and sending the shipment)	Third country (country of destination)	Number of authorisations (shipments per authorisation)	Radioactive waste/ Spent fuel	Purpose of the shipment as reported by Member States
Bulgaria	Russian Federation	1 (1)	SF	Reprocessing
Sweden	UK	1 (2)	SF	Return to original owner after reconditioning
Sweden	UK	1 (1)	SF	Examination and destroying testing with final disposal of residue in United Kingdom
Belgium	UK	1 (3)	RW	Return of solid burnable waste and metallic waste from primary pump of EDF Energy Sizewell B
Germany	USA	1 (1)	RW	Medicine, research, nonnuclear industry
Germany	USA	1 (2)	RW	Treatment
Germany	USA	1 (1)	RW	Treatment
Germany	UK	1 (30)	RW	Return transport of smelting waste (slag, dust, wipes)
Germany	USA	1 (3)	RW	Treatment, e.g.(re)packing, conditioning, volume reduction
Germany	USA	1 (1)	RW	Treatment, e.g.(re)packing, conditioning, volume reduction
Germany	UK	1 (1)	RW	return of resin waste samples after resin treatment trial in D
Germany	USA	1 (3)	RW	Treatment, e.g.(re)packing, conditioning, volume reduction
Italy	USA	1 (5)	RW	Treatment
Slovenia ²⁹	USA	1 (1)	RW	Treatment
Slovenia	USA	1 (1)	RW	Treatment
Sweden	Switzerland	1 (2)	RW	Other purposes (to be specified): Treatment not possible. From (SSM2020-456 Rev. 1)
Sweden	Switzerland	1(9)	RW	Return of radioactive waste after treatment of radioactive waste from (SSM2020-456 Rev.1)
Sweden	UK	1(50)	RW	Return of radioactive waste after treatment of radioactive waste from TFSRW 2017 001 (SSM2017-3057) & TFSRW 2019 002 (SSM2019-1898)

⁽²⁹⁾ Slovenia reported two authorisations for the same shipment with different routes. However, the shipment concerned was only carried out once (based on the second authorisation). Even though the first authorisation was issued it was never used or cancelled.

Table 3. Imports from third countries

Member State (authorising and receiving the shipment)	Third country (country of origin)	Number of authorisations (shipments per authorisation)	Type of shipment	Purpose of the shipment as reported by Member States
Sweden	South Korea	1 (1)	SF	Post-irradiation examinations
Sweden	Switzerland	1 (1)	SF	Final disposal, other: post irradiation examinations, After the examinations, the remains of the material will be disposed in Sweden. Nothing will be returned to Switzerland.
Sweden	Switzerland	1 (1)	SF	Final disposal, other: post irradiation examinations, After the examinations, the remains of the material will be disposed in Sweden. Nothing will be returned to Switzerland.
France	Switzerland	1 (1)	SF	Research project
Germany	United States	1 (2)	RW	Return of radioactive waste after treatment of radioactive waste
Germany	UK	1 (400)	RW	Treatment, e.g. (re)packaging
Sweden	UK	1 (200)	RW	Treatment, e.g. (re)packaging, conditioning, volume reduction
Sweden	UK	1 (1)	RW	Treatment, e.g. (re)packaging, conditioning, volume reduction
France	Monaco	1 (1)	RW	Final disposal
France	Monaco	1 (1)	RW	Definitive elimination
France	Monaco	1 (1)	RW	Final disposal
France	Switzerland	1 (1)	RW	Temporary storage

4.4. Quality of the reporting

During the 12th meeting of the Advisory Committee ⁽³⁰⁾, no changes to the reporting template were introduced.

The overall quality of national reports submitted by the Member States has improved over the subsequent reporting periods. Most of the Member States submitted their reports within the deadline. During the analysis of the reports, the Commission services identified a few inconsistencies and requested clarifications to seven Member States. All concerned Member States promptly replied to the requests for additional information.

The most significant improvement in reporting was the inclusion of authorisation reference numbers (ARN), which uniquely identify each authorisation in the reports. All but one Member State provided ARN in their reports. The use of ARN facilitated the cross-checking of reported authorisations. The widespread use of ARN allowed for the correct identification of authorisations for shipments reported in the previous reporting period, whose consents by destination or transit countries were reported in subsequent reporting cycles.

Reporting inconsistencies were primarily due to Member States reporting consents to authorisations that were not issued eventually by the Member State of origin. In the previous reports, it was already pointed out that refused or cancelled authorisations were not consistently reported in the national reports. Therefore, the root cause for such inconsistencies appears to be communication gaps between the Member State issuing the authorisation and involved Member States issuing consents (e.g. when authorisation was ultimately not issued).

The analysis of the Commission services showed that during the period 2021-2023 there were other kind of inconsistencies that had not appeared or that had not been detected during previous reporting cycles. Several Member States reported consents to authorisations that were still in the approval process and were not yet issued. This raises questions whether the information exchange between concerned Member States functioned properly.

4.5. Issues reported by Member States when using the Standard Document

The European Commission acknowledged that all the Members States are familiar with the Directive and that the quality of the reports improved. All Members States fulfilled its requirements and properly implemented it. As regards the use of the Standard Document, no major issues were reported by the Member States during the reporting period 2021-2023.

However, several Member States raised some minor issues or suggestions.

- One Member State reported that a destination non-EU country was not familiar with the Standard Document and suggested to disseminate more information on Directive 2006/117/Euratom in non-EU countries.

⁽³⁰⁾ 12th meeting of the Advisory Committee held on 7 November 2022.

- One Member State reported that the formal administration of Standard Documents varied very much (e.g. some requests were sent by post, others by e-mail). A harmonised approach to administer these documents would be beneficial. There was a high rate of non-submission of Sections A-5 and A-6 of the Standard Document. The Member State proposed developing an electronic tool to address this issue. Similar electronic systems were already in use in areas like the transport of animals or are being developed (e.g. for the transport of dangerous goods).
- One Member State reported that the lack of a formal information exchange procedure led to inconsistencies in reporting. When a transit country had given its consent to the transboundary shipment, but the Member State of origin – for any reason – refused the authorization, the reports of those Member States unintentionally were inconsistent because such refusal was not communicated to the competent authorities of the transit country. An electronic tool for the submission and exchange of the Standard Document could help to resolve communication issues between Member States issuing authorisations and Member States issuing consents. However, pending the availability of such instrument, all involved Member States should be timely informed about a status change of the authorisation request and the authorisation date or cancellation of an existing authorisation (see 4.8 below).
- Two Member States reported that, in general, they would reject the processing of applications, if the application's subject was not defined as radioactive waste under their national framework; for example, in the case of contaminated scrap metal shipped for recycling via melting. However, by rejecting such applications, the Member States would not object to these shipments provided that concentration thresholds were not exceeded based on their national regulations. The concerned Member States did not report any such refusals during the period 2021-2023. In this context, the Commission services addressed this issue already in the previous report: pursuant to the definition of radioactive waste in Article 5(1) of the Directive, to establish whether any materials are radioactive waste under the scope of the Directive, only the qualifications of the regulatory body of the countries of origin and destination are relevant.
- One Member State highlighted that in case of return shipments the transit countries have no clear information regarding the previous shipment(s) based on the application form. Although this information is not necessary to give consent, it would greatly contribute to traceability purposes. Row 11 of section A-1 of the Standard Document could be supplemented by a required data on previous shipments (e.g. Authorisation Registration Number of the previous shipment) in case of return shipments. A minor amendment of the Standard Document can address this issue.

4.6. Information on significant conditions required by the Member States for shipment – and export criteria implementation

Exports of radioactive waste and spent nuclear fuel to third countries fall under Articles 15 and 16 of the Directive. When submitting their national reports, Member States are required to

indicate any significant conditions they may have established regarding the shipment. For the period 2021-2023, no new significant conditions were reported by the Member States.

4.7. Information on significant cases of refusal to give authorisation/consent

According to Article 9 of the Directive, any refusal of authorisation for shipment of radioactive waste and spent fuel:

- needs to be justified based on the criteria set out in the Directive;
- should not be arbitrary;
- should be founded on relevant national, Community or international law.

Two cases of refusals were reported by Member States.

1. Italy reported a refused authorisation for disposal of radioactive waste (contaminated soil) in the United Kingdom.
2. Sweden reported a refusal of an application for authorisation due to the consignee's concerns about the radioactivity levels in a previous application by the same holder. The levels in that case were declared lower than afterwards discovered by the consignee. The consignee had to, in this case, investigate the cause of inconsistency before importing more radioactive waste from the holder.

4.8. Highlights

A majority of the Member States used the latest version of the reporting template facilitating the analysis of authorisations. Consequently, there were only a few cases requiring additional clarification. Wide use of the ARN facilitated linking of authorisations to consents reported by different Member States, as well as tracking of return shipments.

Due to the effective communication with the Member States, all inconsistencies found in the reports were quickly resolved. The validation of the authorisations by cross checking information provided by different Member States did not uncover contradictions.

The Commission services identified a potential lack of communication between Member States during the authorisation issuance process. Member States granting consent are not always informed about the status changes of the authorisation. The services of the Commission deem that all involved Member States should be timely informed about a status change of the authorisation request or cancellation of an existing authorisation.

This is specifically the case when authorisation requests are processed close to the end of the reporting period. The reporting template clearly states that *‘Only those shipments are to be reported for which either an authorisation or a refusal has been issued during the reporting period.’* Member States issuing consents should preferably report them during the same reporting period when the authorisation is officially issued. To achieve that, better exchange of information between the Member State issuing an authorisation and the involved Member States granting consents should be ensured.

There are no changes proposed to the reporting template.

According to Article 20 and the procedures laid down in Article 21 of the Directive, the Advisory Committee member's views of 29 September 2025 on this Staff Working Document have been taken into account.

ANNEX I. LIST OF COMPETENT NATIONAL AUTHORITIES

List of Competent National Authorities
under Article 18 of Council Directive 2006/117/Euratom

Austria	Federal Ministry for Agriculture and Forestry, Climate and Environmental Protection, Regions and Water Management Department Radiation Protection Stubenring 1 A-1010 Vienna v8@bmluk.gv.at
Belgium	Federal Agency for Nuclear Control Security and transport department Import and transport office Markiesstraat 1 bus 6A B-1000 Brussels
Bulgaria	Bulgarian Nuclear Regulatory Agency 69 Shipchenski prokhoz Blvd. BG-1574 Sofia
Croatia	Ministry of the Interior Civil Protection Directorate Nehajska 5 HR-10000 Zagreb
Cyprus	Ministry of Labour and Social Insurance Radiation Inspection and Control Service Department of Labor Inspection 12 Apellis Street CY-1080 Nicosia
Czech Republic	State Office for Nuclear Safety of the Czech Republic (SÚJB) Division of Radioactive Waste and Spent Fuel Management Senovážné náměstí 9 CZ-110 00 Prague 1

Denmark	Danish Health Authority Radiation Protection Knapholm 7 DK-2730 Herlev
Estonia	Ministry of the Environment of Estonia Paldiski rd 96 EE-Tallinn 13522
Finland	Radiation and Nuclear Safety Authority (STUK) Nuclear Waste Regulation and Safeguards Jokiniemenkuja 1 FI-01370 Vantaa
France	Bureau de la Réglementation et des Affaires techniques Sous-direction de l'industrie nucléaire - SD4/4C Direction de l'énergie Direction Générale de l'Énergie et du Climat Ministère chargé de l'industrie et de l'énergie Tour Sequoia F-92055 LA DEFENSE Cédex
Germany	Bundesamt für Wirtschaft und Ausfuhrkontrolle (BAFA) Referat 323 – Nukleartechnik (NSG), Radioaktive Stoffe Frankfurter Straße 29-35 D-65760 Eschborn radionuklide@bafa.bund.de
Greece	Greek Atomic Energy Commission (EEAE) Chairman Office P.O. Box 60092 GR-153 10 Aghia Paraskevi-Attiki chairman@eeae.gr
Hungary	Hungarian Atomic Energy Authority P.O. Box 676 H-1539 Budapest Fényes Adolf str. 4 H-1036 Budapest haea@haea.hu

Ireland	Environmental Protection Agency Office of Environmental Enforcement Radiation Protection Regulation 3 Clonskeagh Square, Clonskeagh Road IE-Dublin D14 H424
Italy	Ministry of the Environment and Energy Security Nuclear Division Directorate General for Energy Demand and Efficiency Via Sallustiana, 53, I-00187 Rome DEE@pec.mase.gov.it ISIN - National Inspectorate for Nuclear Safety and Radiation Protection Via Capitan Bavastro, 116 00154 Rome
Latvia	Radiation Safety Centre State Environmental Service Rupniecibas iela 23 LV-Riga 1045
Lithuania	Radiation Protection Centre (RPC) Kalvariju st. 153 LT-08352 Vilnius rsc@rsc.lt
Luxembourg	Ministère de la Santé Division de la Radioprotection 6b, Rue Nicolas-Ernest Barblé L-1210 Luxembourg
Malta	Environment & Resources Authority Hexagon House Spencer Hill MT-Marsa MRS 1441

Poland	National Atomic Energy Agency of the Republic of Poland Radiation Protection Department Nowy Świat 6/12 PL-00-400 Warsaw sekretariat.DOR@paa.gov.pl
Portugal	Department of Emergencies and Radiation Protection Portuguese Environment Agency Agência Portuguesa do Ambiente Rua da Murgueira 9/9A – Zambujal Ap.7585 2610-124 Amadora
Romania	National Commission for Nuclear Activities Control (CNCAN) 14 B-dul. Libertatii Street, Sector 5 RO-050706, Bucharest
Slovakia	Nuclear Regulatory Authority of the Slovak Republic (nuclear safety) Bajkalska 27 P. O. Box 24 SK-820 07 Bratislava Ministry of Transport of the Slovak Republic Radiation Protection Department Namestie slobody 6 SK-810 05 Bratislava
Slovenia	Slovenian Nuclear Safety Administration Litostrojska cesta 54 SI-1000 Ljubljana

Spain

Subdirección General de Energía Nuclear
Dirección General de Planificación y Coordinación Energética
Ministerio para la Transición Ecológica y el Reto Demográfico
Paseo de la Castellana 160, 6ª Planta Despacho 23
E-28046 – Madrid

Consejo de Seguridad Nuclear
C/Pedro Justo Dorado Dellmans, 11
E-28040 – Madrid

Sweden

Swedish Radiation Safety Authority (SSM)
Solna strandväg 96
SE-171 16 Stockholm

The Netherlands

Authority for Nuclear Safety and Radiation Protection (ANVS)
Postbus 16001
NL-2500 BA Den Haag

ANNEX II. REPORTING TEMPLATE

REPORT ON THE IMPLEMENTATION IN THE MEMBER STATES OF DIRECTIVE 2006/117 EURATOM ON THE SUPERVISION AND CONTROL OF SHIPMENTS OF RADIOACTIVE WASTE AND SPENT FUEL BETWEEN MEMBER STATES AND INTO AND OUT OF THE COMMUNITY

Member State:

Reporting Period: from dd/mm/yy to dd/mm/yy

PART A ⁽³¹⁾

INFORMATION ON THE IMPLEMENTATION OF DIRECTIVE 2006/117/Euratom

1) INFORMATION ON THE IMPLEMENTATION OF DIRECTIVE

E.g.

- overall number of authorisations, consents and refusals for spent fuel and radioactive waste import, export and transit through the Community;
- changes to the legal, regulatory and organisational basis and structure;
- requirements for shipment of spent fuel and radioactive waste;
- changes of the national competent authority(ies) or requirements for the electronic platform

2) INFORMATION ON SIGNIFICANT CONDITIONS REQUIRED BY THE MEMBER STATES – EXPORT CRITERIA IMPLEMENTATION

E.g. how does the Member State ensure compliance with the requirements for shipments to third countries.

3) INFORMATION ON CASES OF REFUSAL TO GIVE AUTHORISATION /CONSENT, RESHIPMENTS AND SHIPMENT FAILURES

E.g. including shipments that were not completed (Article 12 – Shipment failure) and spent fuel/radioactive waste returned (Article 4)

4) PROBLEMS EXPERIENCED WHEN USING THE STANDARD DOCUMENT

5) OTHER ISSUES, PROPOSALS AND RECOMMENDATIONS ON THE IMPLEMENTATION OF THE DIRECTIVE

⁽³¹⁾ Part A of the form can be filled in by plain text whereas Part B also requires numerical data.

PART B

INFORMATION ON THE SITUATION WITH REGARD TO SHIPMENTS OF RADIOACTIVE WASTE AND SPENT FUEL OF INDIVIDUAL MEMBER STATES

The information provided in the section should support the overview in Section A above. It is proposed to use the attached tables B-1 and B-2 for both authorisations and consents (all columns to be filled out).

Specific information on the number and scope of (i) authorisations and (ii) consents issued for import, export and transit through the Community in the reporting period for:

a) Radioactive waste will be provided in Table B-1;

b) Spent fuel will be provided in Table B-2.

Only those shipments are to be reported for which either an authorisation or a refusal have been issued during the reporting period.

All information requested in table B-1 and B-2 of the present reporting template is based on the **Standard Document** ⁽³²⁾ and can be retrieved from it. Footnotes have been included in the reporting template referring to specific sections of the Standard Document, with the objective to facilitate correct reporting.

It is recommended to include in the first column of the B-1 and the B-2 tables the **Authorisation Registration Number**, indicated on each Section of the Standard Document, for the reporting of both authorisations and consents. Please, in column 2 of these tables, be clear on the type of shipments (through use of **shipment codes** – MM, ME, EM, TT – as appropriate).

In case of return shipments, for traceability purposes, reporting Member States may include in the column <Purpose of the shipment> a reference to the Authorisation Registration Number of the previous shipment, if available.

⁽³²⁾ Commission Decision of 5 March 2008 establishing the standard document for the supervision and control of shipments of radioactive waste and spent fuel referred to in Council Directive 2006/117/Euratom (notified under document number C(2008) 793) (2008/312/Euratom).

Table B-1: Information on shipments of radioactive waste within the scope of Directive 2006/117/Euratom

Reporting period: 26/12/20xx – 25/12/20yy

Member State authorising the shipment(s) ¹ (recommended Authorisation Registration Number ²)	Type of shipment(s) ³	Number of (planned) shipments per authorisation ⁴	Nature of the waste ⁵ and physico chemical characteristics of the waste ⁶	Total activity of the authorisation ⁷ (GBq) a) total alpha activity b) total beta/gamma activity	Main radionuclides ⁸	Maximum activity per package ⁹ (GBq) a) maximum alpha activity b) maximum beta/gamma activity	Type of activity giving raise to the waste ¹⁰	Purpose of the shipment ¹¹	Mode(s) of transport ¹²	Ordered list of countries involved ¹³
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Table B-2: Information on shipments of spent fuel within the scope of Directive 2006/117/Euratom

Reporting period: 26/12/20xx – 25/12/20yy

Member State authorising the shipment(s) ¹⁴ (recommended Authorisation Registration Number ²)	Type of shipment(s) ¹⁵	Number of (planned) shipments per authorization ¹⁶	Type of spent fuel ¹⁷	Maximum enrichment ¹⁸ : a) of U-235 (%) b) maximum plutonium content (%)	Fuel burn up (average or typical range) ¹⁹ (MWdays/ teHM)	Total net mass ²⁰ (kg)	Type of activity giving raise to the spent fuel ²¹	Purpose of the shipment ²²	Proposed mode(s) of transport ²³	Sequential list of countries concerned ²⁴
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Explanatory notes for Tables B1 and B2 (including the location of the required information on the Standard Document forms)

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- ¹ Section A-4a number 21 (in case the authorisation has been granted), or Section A-4b number 24 (in case the authorisation has been refused). The Member State authorising the shipment(s) is the country: - *of origin* in case of a shipment type MM or ME; - *of destination* in case of a shipment type IM; - *where the shipment first enters the Community* in case of a shipment type TT. In case the authorisation has been refused, state “refused”.
 - ² In column 1 of these tables, the Authorisation Registration Number should be included. It is the unique reference number for one single authorisation process (i.e. from application until the granting of the authorisation), issued by the authorising Member State and shown on the top right of every page of the Standard Document.
 - ³ Section A-1 number 1 (possible types: Type **MM**: Shipment between Member States (via one or more Member States or third countries); Type **IM**: Import into the Community (originating from a third country); Type **ME**: Export out of the Community (having a third country as final destination); Type **TT**: Transit through the Community (originating from a third country and having a third country as final destination, it goes through the territory of one or more Member States).
 - ⁴ Section A-1 number 2.
 - ⁵ Section A-1 number 8.
 - ⁶ Section A-1 number 8 (possible characteristics: solid; liquid; gaseous; other - e.g. fissile, low dispersible ...; to be specified).
 - ⁷ Section A-1 number 8. These values are estimates if the application relates to several shipments. Activities are expressed in gigabequerel, unless otherwise indicated. The multiples of the bequerel, their prefixes and symbols utilised in the table are the following: kilobequerel, kBq = 10^3 Bq; megabequerel, MBq = 10^6 Bq; gigabequerel, GBq = 10^9 Bq; terabequerel, TBq = 10^{12} Bq; petabequerel, PBq = 10^{15} Bq.
 - ⁸ Section A-1 number 8.
 - ⁹ Section A-1 number 8. A package consists of radioactive waste or spent fuel in a certain consignment (e.g. in plastic bags, metal drums, other). A shipment may involve the movement of one or more packages.
 - ¹⁰ Section A-1 number 10 (possible activities: medicine; research: (non-nuclear) industry, nuclear industry; other activity (to be specified)).
 - ¹¹ Section A-1 number 11 (possible purposes: return of radioactive waste after (re)treatment or reprocessing of spent fuel; return of radioactive waste after treatment of radioactive waste; treatment, e.g. (re)packaging, conditioning, volume reduction; interim storage; return after interim storage; final disposal; other purpose (to be specified)). When referring to a return, please if possible in this column also include the original Authorisation Registration Number.
 - ¹² Section A-1 number 14 (possible modes: road, rail, sea, air, inland waterway).
 - ¹³ Section A-1 number 13.

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- ¹⁴ Section B-4a number 21 (in case the authorisation has been granted), or Section B-4b number 24 (in case the authorisation has been refused). The Member State authorising the shipment(s) is the country: - *of origin* in case of a shipment type MM or ME; - *of destination* in case of a shipment type IM; - *where the shipment first enters the Community* in case of a shipment type TT. In case the authorisation has been refused, state “refused”.
- ¹⁵ Section B-1 number 1 (possible types: see footnote 3)
- ¹⁶ Section B-1 number 2
- ¹⁷ Section B-1 number 8 (possible types: uranium metal; uranium dioxide; mixed oxide (MOX); other (please specify))
- ¹⁸ Section B-1 number 8
- ¹⁹ Section B-1 number 8
- ²⁰ Section B-1 number 9.
- ²¹ Section B-1 number 10 (possible types: research; commercial nuclear power; other activity (to be specified))
- ²² Section B-1 number 11 (possible purposes: (re)treatment or reprocessing; interim storage; return after interim storage; final disposal; other purposes (to be specified)). When referring to a return, this column should also include the original Authorisation Registration Number.
- ²³ Section B-1 number 12 (possible modes: see footnote 14).
- ²⁴ Section B-1 number 13.