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Accompanying the document

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

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

{COM(2023) 77 final}

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LIST OF ABBREVIATIONS AND ACRONYMS

ARN	Authorisation registration number
EC	European Commission
EU	European Union
EURATOM	European Atomic Energy Community
IAEA	International Atomic Energy Agency
IM	Import/s from outside EU
JC	Joint Convention
ME	Export/s to non EU countries
MS	Member States
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 a country external to EU to a country external EU
UK	United Kingdom
USA	United States of America

1. INTRODUCTION

This Staff Working Document (SWD) supports the Commission's fourth report to the European Parliament, the Council and the European Economic and Social Committee (COM(2023) 77 final) 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[2] (the Directive) in the 2018-2020[3] period. It is based on the latest national reports from Member States to the Commission on the implementation of the Directive due by December 2020.

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

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

As of 2020, nuclear energy accounts for 24.6% of the production[4] of electricity in the 27 European Union (EU) Member States. 13 Member States[5] operate 104[6] nuclear power reactors in the Community and 2 Member States (France and Slovakia) have construction projects for new-built nuclear power plants ongoing. Furthermore, 7 other Member States are in the pre-project phase for building new nuclear power plants (Hungary, Poland, etc.) or planning to build new units.

Looking at the 27 EU Member States, 69 nuclear power plants are shut down permanently, located in 10 countries[7].

19 Member States have research reactors at different stages of their lifecycle – operational, shutdown or decommissioning. Subject to the research reactor design Member States are often depending on supply of nuclear fuel from third countries such as the United States of America or the Russian Federation. In most cases there is also an arrangement for the return of spent fuel to

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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 Although the UK formally withdrew from the EU on 31 January 2020, the Union law, including the Euratom legislation, continued to be applicable during the transitional period from 1 February to 31 December 2021. The assessment provided in this working document addresses the information submitted by the UK authorities in their national report on the implementation of the Directive, and their authorisations have been considered as if the UK was a Member State.

3 From 26 December 2017 to 25 December 2020.

4 Nuclear Energy Statistics. Eurostat. February, 2021. ISSN 2443-8219.

5 The 13 Member States that have nuclear power reactors in operation are Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, the Netherlands, Romania, Slovakia, Slovenia, Spain, and Sweden (Croatia does not have a nuclear power plant within its own national borders, but co-owns with Slovenia the Krško power plant).

6 2019 situation.

7 IAEA „Power Reactor Information System“, https://pris.iaea.org/Home/Pris.asp.

the supplier, which is covered both by the provision of this Directive and by the Directive 2011/70/Euratom[8].

In addition, some of the fuel cycle facilities, such as uranium mines, fuel fabrication plants and reprocessing plants came to the end of their lifecycle or were closed and are under decommissioning and/or remediation.

Member States that do not operate nuclear power plants or research reactors also generate radioactive waste, from applications of ionising radiation e.g. in medical care. Therefore, all EU Member States produce radioactive waste from numerous activities including energy production, research, industrial, medical and other applications. In addition, those Member States that operate nuclear power plants or research reactors also generate spent fuel (which can be either regarded as radioactive waste to be disposed of directly, or a valuable resource that may be reprocessed).

The purposes of the shipments of radioactive waste and spent fuel are mainly the treatment of radioactive waste or reprocessing of spent fuel; the return of the treated radioactive waste or radioactive waste originated in the reprocessing of spent fuel back to the country of origin; and the return of spent fuel from research reactors to the supplier.

The management of radioactive waste and spent fuel is subject to legal requirements with the aim to ensure 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, to avoid imposing undue burden on future generations, and ensuring that Member States provide for appropriate national arrangements for a high level of safety in the management of spent fuel and radioactive waste to protect the workers and the public against the dangers of ionising radiation. The Basic Safety Standards Directive 2013/59/Euratom[9] has an overall objective to enhance the protection against the dangers arising from exposure to ionizing radiation. It repeals and consolidates in a single piece of legislation the provisions of five Euratom Directives, including the High-Activity Sealed Sources Directive[10]. In compliance with the latter Directive, EU Member States have established restricted national electronic registries for radioactive sources and source holders. Building on that Directive 2013/59/Euratom, also includes 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

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8 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.

9 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.

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

country of origin, the country of destination or any country of transit is an EU Member State. It requires that Member States involved in the shipment (State of origin, State of destination and transit States) are informed about any planned shipments on their territories, and either give their consent or a reasoned refusal to these shipments.

Under Directive 2006/117/Euratom, 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. Furthermore, 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 on the basis of the criteria set out in the Directive. The refusal should not be arbitrary and should be founded on relevant national, Community 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 (further the Joint Convention), 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[11]) plans to carry out a shipment, it has to submit a duly completed application to the competent authorities of the Member State of origin[12]. 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[13].

Imports from third countries into the Community also require the consignee[14] to submit an application to the competent authorities of the Member State of destination[15]. Concerning exports outside the EU borders, the holder submits an application 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[16].

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 submits an application for authorisation to the competent authorities of that Member State[17]. The competent authorities of this Member State must ask the consent of the competent authorities of the Member States of transit, if any.

The Directive 2006/117/Euratom sets 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

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11 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.

12 See Article 6 of Directive 2006/117/Euratom.

13 See Article 7 of Directive 2006/117/Euratom

14 Any natural or legal person to whom radioactive waste or spent fuel is shipped.

15 See Article 13 of Directive 2006/117/Euratom.

16 See Article 15 of Directive 2006/117/Euratom.

17 See Article 14 of Directive 2006/117/Euratom.

Community. The standard document was adopted with a Commission decision in 2008[18]. It acknowledges different 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 shipments and respective "Type Code" according to the standards document of Directive 2006/117/Euratom

Type of Shipment[19]	Different possibilities for movements within, into and out of Community	Type Code used
Extra Community	*Import*, from a country external to EU (third country) to an EU Member State	IM
	Export, from an EU Member State to a country external to EU (third country)	ME
	Transit, from a country external to EU to a country external to EU (third countries of origin and destination), through one or more EU Member State(s).	TT
Intra Community	• *Import*, (for the Member State that gives consent as destination) can be associated with the shipment from an EU Member State to another EU Member State, i.e. internal EU shipment. • *Export,* (for the Member State that authorizes as origin) can be associated with the shipment from an EU Member State to another EU Member State, i.e. internal EU shipment • *Transit,* (for the Member State that consents to the transit) can be associated with internal EU movement, from an EU Member State to another EU Member State.	MM

[18] 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.

[19] In the context of this report authorisations for shipment to, from, or across the UK are considered as intra community shipments, as for the majority of the period covered by the report the UK was still a Member State of the Community.

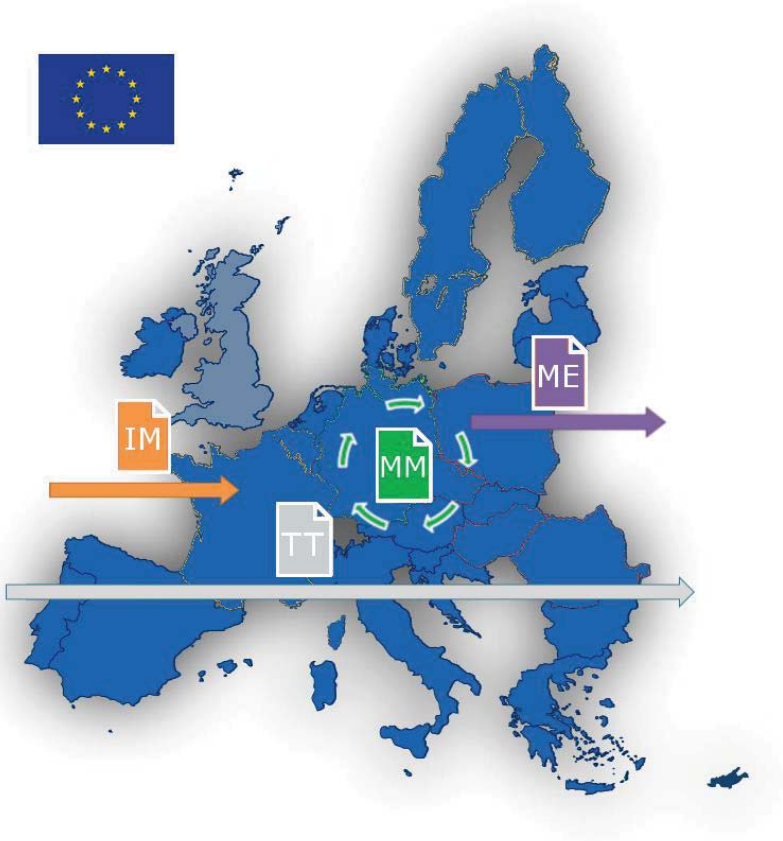

Figure 1. Types of shipments and respective "Type Code"

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 shall send the duly completed application to the competent authorities of the Member State of destination and of the Member States of transit, if any (see Article 7 of the Directive). In case of ME shipments, the competent authorities of the Member State of origin shall 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 (see Article 15 of the Directive). The Directive stipulates a period of two months after receipt of the application for notification of consent or refusal. In the absence of a reply upon expiry of those two months the competent authorities of the Member State of destination or of the Member State of transit are considered to have given a tacit consent to the requested shipment (see Article 9, paragraph 2 of the Directive).

The authorization 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 of the shipment's entry in the EU territory.

The competent authorities in the Member States of transit or destination 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 the conditions applying to the shipment are not complied with or the 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 shall be liable for costs arising in cases where the shipment cannot or may not be completed[20].

3. STATUS OF IMPLEMENTATION OF THE GENERAL PROVISIONS

3.1. Transposition of the Directive

All EU Member States completed the transposition of the Directive by 2013 and notified their transposition measures. Transposition details for each Member State are provided in the Staff Working Documents corresponding to the previous three reporting periods[21, 22, 23].

3.2. Standard document for the supervision and control of shipments

The standard document includes forms for the following purposes:

- Application for authorization 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

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20 Article 12 of the Directive.

21 Commission Staff Working Document SWD(2013)150 accompanying the document Report from the Commission to the Council, the European Parliament and the European Economic and Social Committee on the implementation by the Member States of Council Directive 2006/117/Euratom on the supervision and control of shipments of radioactive waste and spent fuels{COM(2013) 240 final}.

22 Commission Staff Working Document SWD(2018)4 accompanying the document Report from the Commission to the Council, the European Parliament and the European Economic and Social Committee on the implementation by the Member States of Council Directive 2006/117/Euratom on the supervision and control of shipments of radioactive waste and spent fuels{COM(2018) 6 final}.

23 Commission Staff Working Document SWD(2019)437 accompanying the document Report from the Commission to the Council, the European Parliament and the European Economic and Social Committeeon the implementation by the Member States of Council Directive 2006/117/Euratom on the supervision and control of shipments of radioactive waste and spent fuels {COM(2019)633final}.

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". In order to facilitate communication between Member States regarding supervision and control of shipments of spent fuel and radioactive waste, by February 2020 all Member States provided the Commission with the updated contact details of their competent authority or authorities (see Annex I). The Commission asked for a further update of the contact details in July 2022.

3.4. Transmission

In compliance with the requirement set out in Article 19(1) of the Directive, the Commission issued a Recommendation[24] 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 has also established a dedicated webpage (https://energy.ec.europa.eu/topics/nuclear-energy/radiation-protection/transport-radioactive-materials_en) containing relevant information related to the Directive. The data has been updated, where appropriate, following 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 Commission on the implementation of the Directive. This is done by means of regular reports submitted by the competent authorities every three years. In order to support Member States in their reporting obligations and ensure a certain degree of harmonisation of the information received, the Commission provided Member States with a reporting template that they can – but are not obliged to – use for submitting their national reports to the Commission. On the basis of national reports, the Commission issues 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 aforementioded report.

The deadline for submission of the fourth national reports was 25 December 2020. All Member States submitted their reports within the deadline, except Italy and the UK, who submitted theirs with a delay of less than six months.

This fourth reporting period covered shipments authorised between 26 December 2017 until 25 December 2020.

National reports have been thoroughly assessed by the Commission. Iteration with some Member States was necessary in order to clarify or complete the information. In order to provide an overview of the authorisations given Community-wide and to inform about any trends or practical difficulties, the Commission has prepared the fourth Report to the European Parliament, the Council and the European Economic and Social Committee on the implementation of the Directive by the Member States during the considered reporting period, supported by the present Staff Working Document.

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[24] 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).

Chapter 5 of the last Staff Working Document included some suggestions for the improvement of the reporting template (from Member States and Commission sevices). During the Advisory Committee Meeting, some of them have been agreed and incorporated into the template. Fifteen Member States have used the updated reporting template in their latest national reports.

4. SHIPMENTS OF RADIOACTIVE WASTE AND SPENT FUEL IN 2018-2020

4.1. Overview of authorised shipments

The Directive requires shipments of radioactive waste and spent fuel to take place only with prior informed consent of the competent authorities of all Member States involved, including transit Member States (Article 9). For the current reporting period, 21 Member States out of 28 reported on authorisations or consents for shipments of radioactive waste or spent fuel on their territory.

The following 7 Member States did not report any authorisations for shipment on their territory: Croatia, Cyprus, Ireland, Latvia, Lithuania, Malta and Poland. Among them, 3 Member States did not report any authorisations for shipments of radioactive waste on their territory since the beginning of reporting obligations under the present Directive (2009): Croatia, Cyprus, and Malta.

Overall, 195 authorisations covering 1770 shipments[25] and 345 consents have been reported by EU Member States for the period 2018-2020.

In comparison with the three previous reporting periods under the present Directive, the number of reported authorisations is the highest since the beginning of the reporting obligations in 2009 (Figure 2). This is only the second reporting period when number of authorised shipments is available to the Commission. Compared to the previous reporting period, the number of authorised shipments decreased from 1834 to 1770.

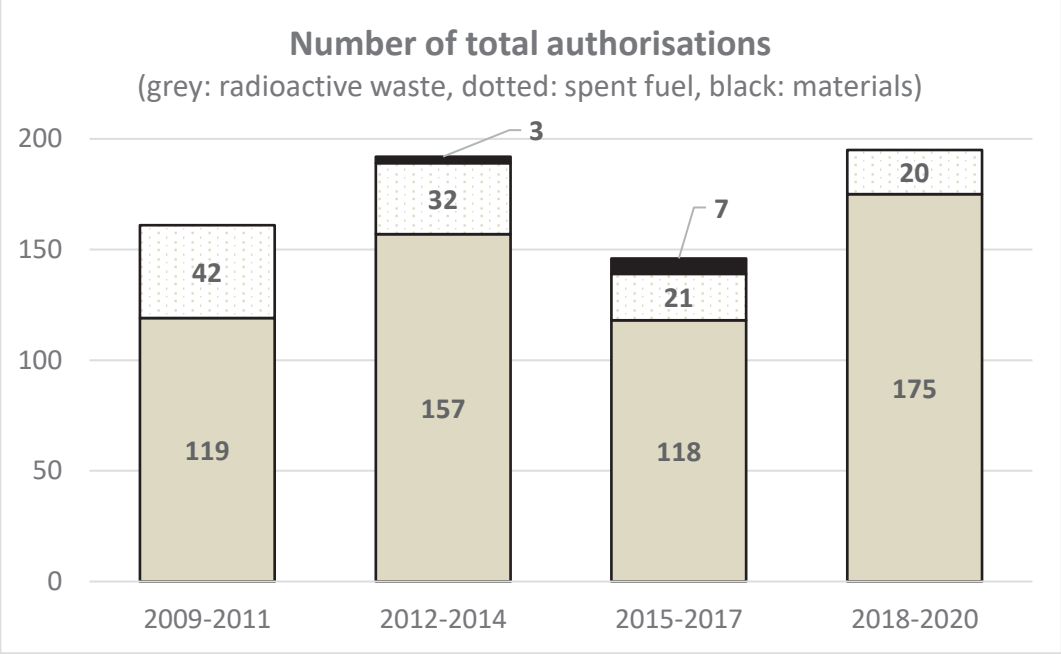

Figure 2. Number of total authorisations for shipments of radioactive waste (grey) and spent fuel (dotted) issued during the past and current reporting period. In the 2012-2014 period, Member States have also reported authorisations for shipments of materials.

[25] A single authorisation may cover more than one shipment, and it can be related to multiple consents.

As Figure 2 and 3 shows, for the 195 reported authorisations in 2018-2020, 345 consents have been issued by the receiving or transit Member States. Approximately 90% (175) of the authorisations relate to shipments of radioactive waste and 10% (20) to the shipments of spent fuel.

In total 1770 shipments of radioactive waste or spent fuel on the Community's territory have been authorised (Figure 3). Concerning specifically radioactive waste (and to a lesser extent also for spent fuel), some countries tend to issue one authorisation for multiple shipments. Approximately two thirds of the authorisations (116 authorisations) were covering multiple shipments and 40 of them were covering 10 or more shipments per authorisation. As a result, more than 9 times more shipments have actually been authorised than authorisations issued. Two largest authorisations related to the treatment of radioactive waste were for planned shipments from UK to Germany (covering 400 shipments) and from UK to Sweden (200 shipments). When it comes to the content of planned shipments, 98% (1732) of the authorised shipments were for shipments of radioactive waste, and 2% (38) were for shipments of spent fuel.

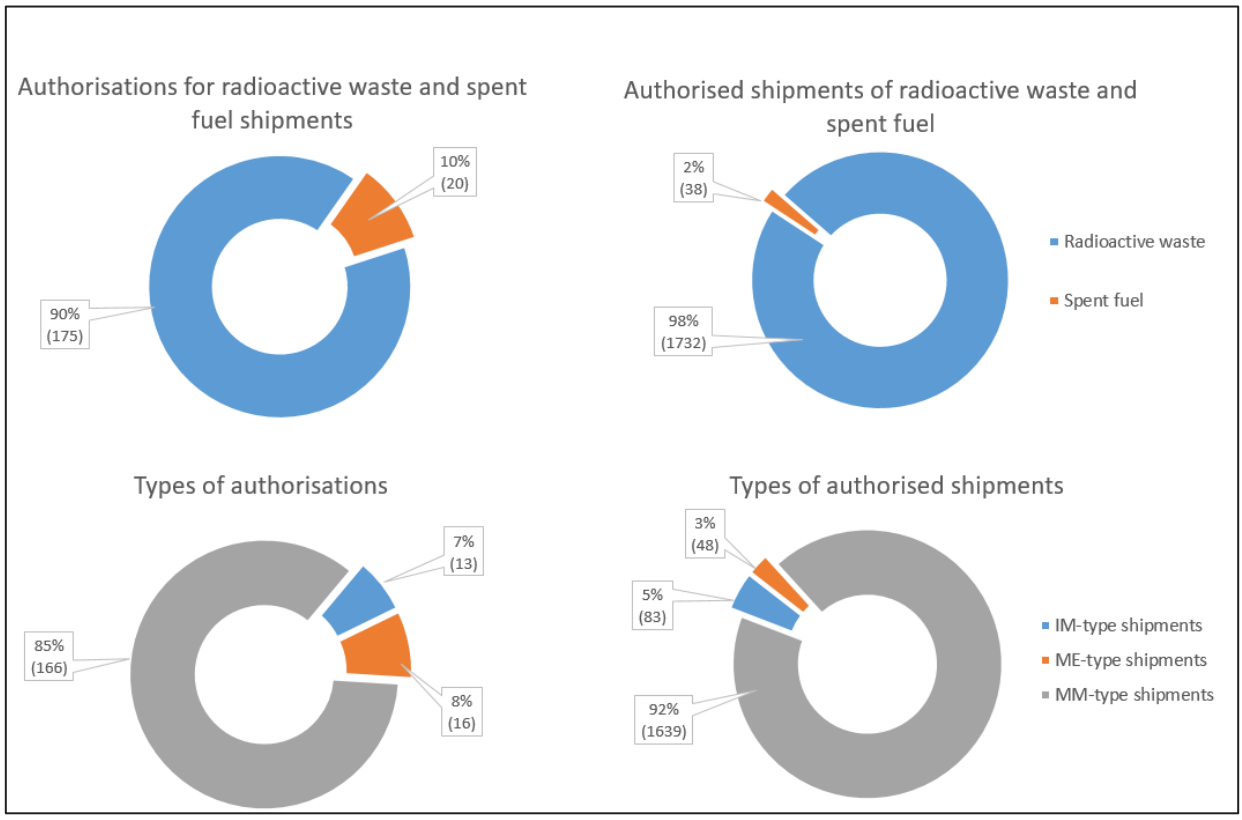

Figure 3. Top left: Number of authorisations for intra- or extra-Community shipments of radioactive waste and spent fuel; top right: number of total authorised shipments intra- or extra-Community shipment of radioactive waste and spent fuel; bottom left: number of authorisations for different types of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

As regards the different types of shipments, 85% of authorisations (166 in total) and 92% of authorised shipments (1639 in total) relate to shipments between EU Member States (MM type

shipments). About 8% of authorisations (16 in total) and 3% of authorised shipments (48 in total) relate to exports to 3rd countries (ME type shipments), and about 7% of authorisations (13 in total) and 5% of authorised shipments (83 in total) to imports (IM type shipments). No transits originating from outside the EU and having a third country as final destination (TT) were authorised during the 2018-2020 reporting period.

4.2. Intra-community (MM type) shipments

Concerning planned shipments of **radioactive waste**, there were a total of 153 authorisations related to intra-community (MM-type) shipments - out of the 175 radioactive waste authorisations reported for 2018-2020 (see Figures 3 and 4).

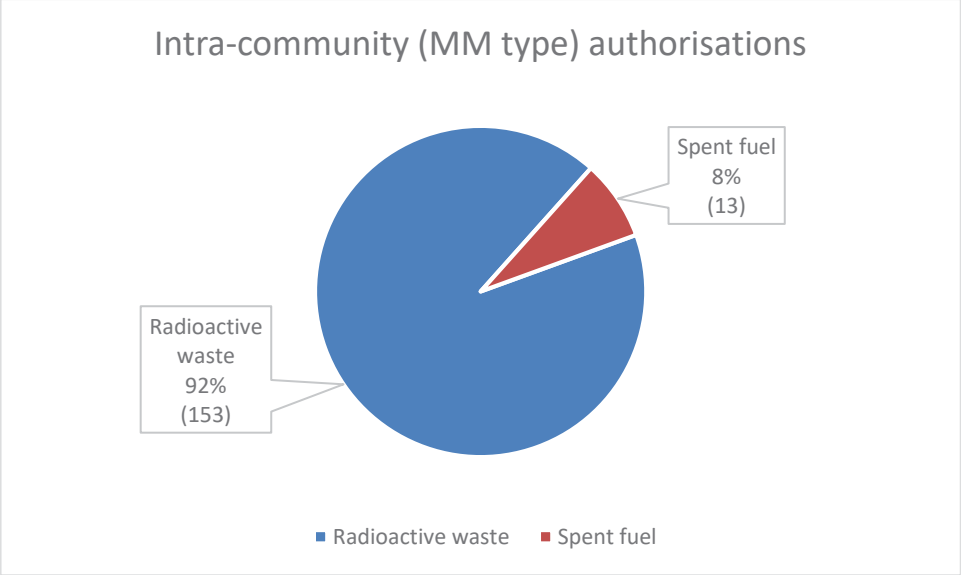

Figure 4. Distribution of intra-community authorisations during the reporting period (2018-2020).

Some authorisations are given for multiple shipments to be carried out over a time period that may exceed the one covered by the present report (2018-2020). The MM-type authorisations account for 1618 shipments of radioactive waste authorised by 15 Member States of origin during the current reporting period (see Figure 5).

Two Member States (Germany and Sweden) issued 61% of the reported authorisations for shipping radioactive waste to another Member State (93 authorisations for 589 shipments), the majority for the purpose of return of treated waste to the country of origin (Figure 5). However, in terms of authorised shipments of radioactive waste the United Kingdom has issued authorisations covering the highest number of planned radioactive waste shipments (636 planned shipments covered by 9 authorisations). Two of these authorisations are for shipments of radioactive waste from the UK to Sweden and Germany for the purpose of treatment and cover 400 and 200 shipments, respectively.

Germany and Sweden also issued 59% of consents (90 in total) as destination country; they are frequently the destination country since they have facilities for repacking, conditioning, and treatment of radioactive wastes (Figure 5).

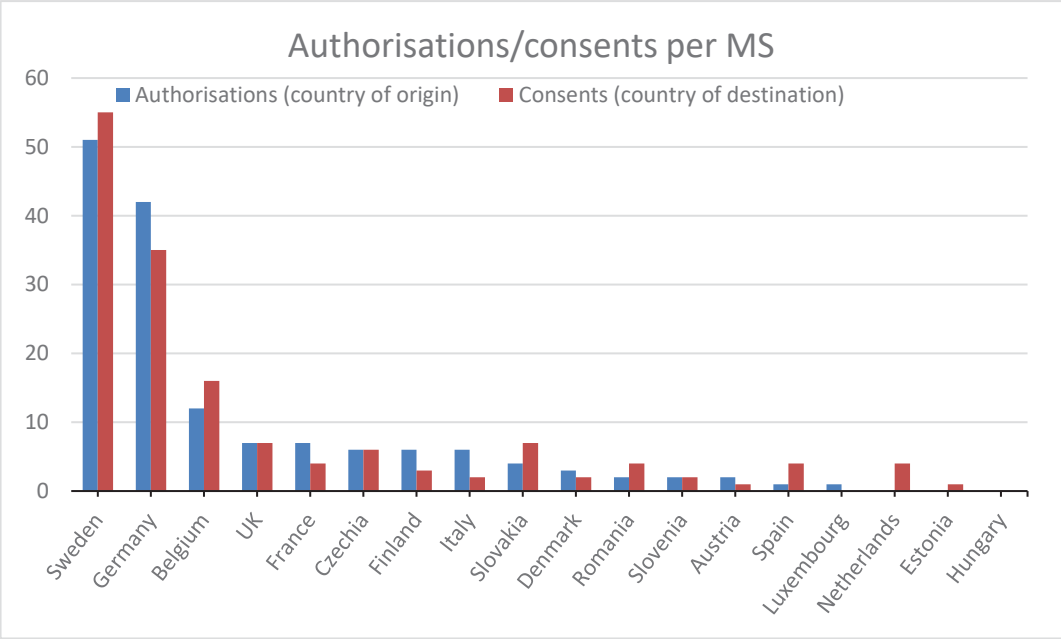

Figure 5. Number of MM authorisations issued for radioactive waste shipments (country of origin) and of the respective consents (country of destination) during the reporting period (2018-2020).

About 67% of the issued authorisations for intra-community shipments of **radioactive waste** (102 authorisations) implied a transit through the territory of a Member State different from both the country of origin and the country of destination.

As regards the purpose of all authorised intra-community shipments of radioactive waste, 88% relate to the treatment of waste in another Member State and its return to the country of origin[26]. Only one authorised shipment concerns the return of radioactive waste to the country of origin after (re)treatment or reprocessing of spent fuel in the United Kingdom. Seventeen authorised shipments are for the purpose of analysis/research.

In case of 79% of all MM-type shipments the radioactive waste stems from the nuclear industry. The remaining 21% are related to non-nuclear activities (e.g. medicine, reasearch). About 49% of shipments are executed by using road transport and 19% by means of rail. Approx. 28% of shipments involve sea ways (road/sea, road/rail/sea, or rail/sea).

Concerning authorised **spent fuel** shipments, 13 authorisations for 21 shipments refer to intra-community shipments. Member States of origin are Belgium, Finland, France, Germany, the Netherlands and Sweden. Member States of destination are Belgium, France, Germany, Sweden and the United Kingdom. France and United Kingdom have specilized facilities (they receive spent fuel for reprocesing).

Only two of all the MM-type authorisations of spent fuel are related to the (re)treatment or reprocessing of spent fuel in France. The remaining 11 authorisations are for the purpose of analysis/research or its return after examination (as for example the shipments between Sweden and Belgium). About 84% of shipments are carried out by road. The remaining 15% involve the sea or rail (road/rail or road/rail/sea).

[26] E.g. (re)packaging, conditioning, volume reduction.

In contrast to authorisations for radioactive waste shipments, for spent fuel there were only few authorisations for multiple shipments.

4.3. Extra-Community shipments (exports and imports)

Concerning **exports[27] of radioactive waste** from the Community to third countries, 12 authorisations (out of 16 total) - representing 44 shipments (ME) - were issued by five Member States (Slovenia, Italy, Germany, Sweden, the United Kingdom) during the considered reporting period (Table 2). About 77% of the authorisations of those exports were carried out by three Member States (Germany, Sweden and the United Kingdom).

With reference to **imports[28] of radioactive waste** from outside the EU, four Member States (France, Germany, Sweden and the United Kingdom) issued authorisations for receipt of radioactive waste from third countries. In total, ten authorisations for 70 shipments (IM) were issued during 2018-2020.

Three authorisations were related to the final disposal of a third country's radioactive waste within the Community's territory - three single shipments from Monaco to France for final disposal in France. France states that a significant condition for authorizing the transfer of spent fuel or foreign radioactive waste to the French territory is the preliminary signing of a bilateral agreement with the country of origin of the radioactive waste /spent fuel. French regulation also prohibits the disposal of foreign radioactive waste on French territory, except for those originating from the Principality of Monaco.

As regards **spent fuel**, a total of four authorisations for just as many shipments (ME) were issued by four Member States (Bulgaria, Finland, Portugal and Greece) to export spent fuel to a third country.

Bulgaria reports a single shipment of spent fuel for reprocessing in Russia, and states that it was compliant with the Commission Recommendation of 4 December 2008 on the criteria for the export of radioactive waste and spent fuel to third countries[29].

Finland, Portugal and Greece reported authorisations to repatriate spent fuel from their research reactors to the country of origin (the United States of America).

One Member State (France) authorised shipment of the research reactor's spent fuel for (re)treatment or reprocessing from Australia (Extra-Community import) and another two authorisations for 12 shipments (IM) were issued during 2018-2020, for research purposes (both from Norway to Sweden).

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27 Pursuant to the Directive, exports are shipments from the authorising Member State to a third country; consents by transit Member States are required.

28 Pursuant to the Directive, imports are shipments from a third country to the authorising Member State; consents by transit Member States are required.

29 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. Exports from Member States 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	Russia	1 (1)	SF	Reprocessing
Finland	USA	1 (1)	SF	Returning spent fuel back to the country of origin
Greece	USA	1 (1)	SF	Returning spent fuel back to the country of origin
Portugal	USA	1 (1)	SF	Returning spent fuel back to the country of origin
Slovenia	USA	1 (3)	RW	Final disposal
Italy	USA	1 (5)	RW	Treatment, e.g. (re)packing, conditioning, Volume reduction
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	USA	1 (3)	RW	Treatment, e.g. (re)packing, conditioning, Volume reduction
Germany	USA	1 (3)	RW	Treatment, e.g. (re)packing, conditioning, Volume reduction
Germany	USA	1 (3)	RW	Treatment, e.g. (re)packing, conditioning, Volume reduction
Sweden	USA	1 (1)	RW	For research purposes (non-nuclear industry)
United Kingdom	USA	1 (10)	RW	Treatment, e.g. (re)packing, conditioning, Volume reduction
Sweden	Norway	1 (1)	RW	Research
Sweden	USA	1 (1)	RW	For research purposes (nuclear industry)
United	USA	1 (10)	RW	Treatment, e.g. (re)packing,

Kingdom				conditioning, Volume reduction

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
Germany	USA	1 (3)	RW	Return of RW after treatment of RW
Germany	USA	1 (2)	RW	Return of RW after treatment of RW
France	Monaco	1 (1)	RW	Final disposal
France	Monaco	1 (1)	RW	Final disposal
France	Monaco	1 (1)	RW	Final disposal
France	Monaco	1 (1)	RW	Treatment, e.g. (re)packing, conditioning, Volume reduction
France	Australia	1 (1)	SF	(Re)treatment or reprocessing
Sweden	Switzerland	1 (40)	RW	Treatment, e.g. (re)packing, conditioning, Volume reduction
Sweden	Norway	1 (6)	SF	In return after research reactor testing and/or neutron radiography or for research at Studsvik Hot Cell Laboratory (UO2 or MOX fuel). Research on non-oxide fuel (ATF, metallic uranium)
Sweden	Norway	1 (6)	SF	In return after research reactor testing and/or neutron radiography or for research at Studsvik HotCell Laboratory (UO2 or MOX fuel). Research on non-oxide fuel (ATF, metallic uranium)
United Kingdom	Norway	1 (1)	RW	Treatment
United Kingdom	USA	1 (10)	RW	Return of RW after treatment (for disposal)
United Kingdom	USA	1 (10)	RW	Return of RW after treatment (for disposal)

4.4. Quality of the reporting

During the XI. meeting of the Advisory Committee[30], several changes to the reporting template were proposed and were later introduced. It was decided that these changes would be implemented for the current 2018-2020 reporting period – though the core content of the Member States' reporting did not change. The updated template is provided in Annex II of this document. The main objectives of these changes were to:

- provide clear instructions when filling in the different sections;
- align the terminology with the one used in the Standard Document;
- be more useful and suitable for systematic analysis and data comparison;
- leave less room for misinterpretation for the Competent Authorities.

The general quality of the national reports submitted by the Member States to the Commission has improved over the subsequent reporting periods. All except two (from the UK and Italy) have been submitted within the deadline, and these two were submitted within 6 months. The Member States promptly responded to requests for additional information.

More specifically, the following aspects have been significantly improved:

- The overall reporting quality (comprehensiveness and level of detail) has notably improved over the four reporting periods, which has facilitated the cross checks.
- The increase in the use of the new reporting template – which contains clearer instructions concerning the content of the reporting – ensured that the correct technical data has been reported in most cases.
- All Member States have reported on the implementation of Part A.
- All except one Member State the template despite the usage being voluntary. 15 Member States used the updated version.
- The Number of Member States that were using authorisation reference numbers (ARN) for identification of the authorisations has increased to 17. The use of ARN has facilitated the cross checking of reported authorisations.

Aspects that still lead to inconsistencies in the reporting:

- Although more than a half of the Member States (17) used the ARN, several reports did not contain ARN information. As stated during the previous reporting period, the use of an authorisation registration number facilitates the analysis. For example, the wider use of ARN allows to correctly address the authorisations of shipments reported in the previous reporting period whose consents by destination or transit countries are reported in the subsequent reporting cycles.
- There were fewer inconsistencies concerning the mode of transports, purpose of the shipments, final destination of the shipment, technical details and nature of the waste, in comparison with the previous reporting period. However, some still persist related to the tables in Part B.
- In some cases Member States did not include themselves in the list of countries involved in the shipment (last column of the template) in their report, making the analysis more difficult.

[30] XI. meeting of the Advisory Committee held on 8th October 2019.

- In a few cases, reporting of multiple shipments in a single authorisation did not include the number of authorised shipments.

Finally, there are unintended inconsistencies that had not appeared or that had not been detected yet during the previous reporting analysis. Refused or cancelled authorisations are not consistently reported in the national reports, because there is no formal procedure in place for exchange of information on cancelled or refused authorisations, so there were cases when the Member State authorising the shipment has reported the authorisation as cancelled, but other involved Member States were still reporting their consents to this authorisation.

4.5. Issues reported by Member States when using the standard document

In light of the reported improvement in thequality of the reports, the Commission services note that all the Members States are familiar with the Directive. All Members States have fulfilled its requirements and properly implemented it. No major issues with the use of the Standard Document were reported by the Member States during the present reporting period 2018-2020.

However, some minor issues or suggestions were raised by some of the Member States.

- One Member State reported that the destination country was not familiar with the Standard Document. (3rd country). This shows a need to increase dissemination of information on the obligations covered by Directive 2006/117/EURATOM, particularly in non-EU destination countries.
- Two Member States have suggested to digitalize the Standard Document. One of them has already prepared and is using an editable digital version of the document. In order to streamline the work, the introduction of a digital version was already considered during the last Advisory Committee meeting.
- Two Member States have reported issues related to the transboundary shipment of contaminated scrap metal. There are different views between Member States whether or not transboundary shipments of contaminated scrap metal, that is treated and recycled, is within the scope of the Directive. Member States that do not consider contaminated scrap metal that will be recycled to be waste, do not grant consent to the corresponding shipment authorisation (refusal). Clarification was requested whether contaminated scrap metal, destined for processing and recycling shall be considered as radioactive waste or not. In this context, the Commission would like to highlight the fact that according to the definition of radioactive waste in the Directive (Article 5.1), if the regulatory bodies under the legislative and regulatory framework of the countries of origin and destination control the radioactive material for which no further use is foreseen by either the countries of origin or destination, or a natural or legal person whose decision is accepted by these countries as radioactive waste, it already qualifies as radioactive waste under the Directive.
- One Member State has proposed, in case of return shipments, to include in the Standard Document information on the initial shipments (e.g. addition to box 11 of section A1). This would facilitate tracking of shipments by the involved Member States. The Commission supports this initiative.
- One Member State indicated their preference to have NORM waste shipments always within the scope of Council Directive 2006/117/Euratom. This would close the legal gap between conventional sludges (controlled through 259/93/EEC), similar sludges contaminated with NORM (no control), and other radioactive waste (within the scope of Council Directive 2006/117/Euratom). According to the Transport Study[31], after the implementation of the Council Directive 2013/59/Euratom (European Basic Safety

[31] Ref. ENER/2017/NUCL/SI2.751899.

Standards), from a legal point of view, transboundary shipments of NORM which requires regulatory control and is categorised as radioactive waste falls under the scope of the Directive 2006/117/Euratom. However, the text of the Directive 2006/117/Euratom has not been updated regarding NORM waste, and one Member State urges to do that, in order to avoid confusion and to keep consistency between all Council Directives, in particular with 2013/59/Euratom. The Commission does not support the amendment of the Directive at this point.

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 to the Commission, Member States are required to indicate any significant conditions they may have established regarding the shipment. The significant conditions reported by Member States for the period 2018-2020 are presented in this section, and complement Member States information on significant conditions for the three previous reporting periods (see Staff Working Documents SWD (2013)150 final, SWD(2018) 4 final and SWD (2019)437 final).

Only Portugal has reported new information on significant conditions required by the Member State for shipment and export criteria implementation. Portugal added to the authorisation or consents issued during the period covered by the present report that from 26 August 2018, every shipment must abide by the conditions set in Decree-Law nº 198/2009. Besides, the competent authority should be informed a minimum of 3 days prior to the date of shipment and shall be informed of the acknowledgment of receipt of spent fuel in the 15 days after arrival by using the Section B-6.

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

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

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

Two cases of refusals were reported by Sweden. Due to a temporary inaccessibility of the Smelter facilities at the receiving company in Sweden, two applications from Czech Republic passing through Germany and Denmark for final treatment (e.g. (re)packing conditioning, volume reduction) were refused. One application concerned metal and solid combustible waste. The other consisted of only metallic waste.

The Netherlands has reported two refusals for transit of contaminated scrap metal. The Dutch Government considered these transits out of scope of the Directive, because contaminated scrap metal that will be recycled is not considered radioactive waste in the Netherlands. Although the approvals were refused, the transits were carried out according to the applicable Dutch regulations.

4.8. Highlights from the Commission services

As mentioned in Chapter 3.5, during the last (XI.) meeting of the Advisory Committe held on 8 October 2019, a new version of the reporting template was presented and discussed. The Commission acknowledged that a majority of the countries used the proposed modified version of the template.

Thanks to the extended use of the updated reporting template and to the good communication with the Member States to clarify any inconsistencies found in the reports, the analysis covering the current reporting period has been smoother. The validation of the authorisations by cross checking the information provided by the different Member States did not uncover contradictions. Another positive point is the wider use of the ARN, since it facilitates the tracking of return shipments.

The Commission identified a misunderstanding regarding the authorisations that are part of previous reporting periods. The position of the Commission services is that an authorisation already reported during one reporting cycle will be considered only in one analysis.

According to Article 20 and the procedures laid down in Article 21 of the Directive, the XII. Advisory Committee views as of 7 November 2022 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	Bundesministerium für Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie Radetzkystraße 2 A-1030 Vienna strahlenregister@bmk.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 prokhod 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 Lefkosia (Nicosia)
Czech Republic	State Office for Nuclear Safety Division of Radioactive Waste and Spent Fuel Management Senovážné namesti 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 Safegards Jokiniemenkuja 1 F-01370 Vantaa
France	Bureau Réglementation et Affaires techniques Sous-direction de l'Industrie nucléaire Direction de l'Énergie Direction générale de l'Énergie et du Climat Ministère de la Transition énergétique (MTE) Tour Sequoia F-92055 LA DÉFENSE 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 Chairman office P.O. Box 60092 GR-153 10 Aghia Paraskevi-Attiki Attiki, Greece chairman@eeae.gr
Hungary	Hungarian Atomic Energy Authority P.O. Box 676 Fényes Adolf str. 4 HU-1036 Budapest

Ireland	Environmental Protection Agency Office of Environmental Enforcement Radiation Protection Regulation 3 Clonskeagh Square, Clonskeagh Road IE-Dublin D14 H424 regulatory_w@epa.ie
Italy	Ministry of the Environment and Energy Security Department of Energy Directorate General for Competitiveness and Energy Efficiency Division V – Monitoring and control decomissioning of nuclear installations Via Molise, 2 I-00187 Roma cordone.marianogiuseppe@mite.gov.it ISIN - National Inspectorate for Nuclear Safety and Radiation Protection Via Capitan Bavastro, 116 00154 Rome isin-udg@isinucleare.it
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 Bonifraterska 17, 00-203 Warsaw – Northgate
Portugal	Department of Emergencies and Radiation Protection Portuguese Environment Agency Agência Portugesa do Ambiente Rua da Murgueira 9/9A – Zambujal Ap.7585 2610-124 Amadora radiacao@apambiente.pt
Romania	Commission for Nuclear Activities Control (CNCAN) 14 Blvd. Libertatii, District 5, Postal Code 050706, Bucharest, Romania
Slovakia	Nuclear Regulatory Authority of the Slovak Republic (nuclear safety) Bajkalska 27 P. O. Box 24 SK-820 07 Bratislava Ministry of Transport and Construction of the Slovak Republic Radiation Protection Department Namestie slobody 6 SK-810 05 Bratislava alena.bujnova@mindop.sk
Slovenia	Slovenian Nuclear Safety Administration Litostrojska cesta 54 SI-1000 Ljubljana

Spain	Subdirección General de Energía Nuclear Dirección General de Política Energética y Minas 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 n 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 IMPLEMETATION 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/yyyy to dd/mm/yyyy

PART A[32]

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

[32] 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**[33] 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.

33 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**	**Main radionuclides[8]**	**Maximum activity per package[9] (GBq) a) maximum alpha activity b) maximum**	**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]**

Form 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]**

Explanatory notes for Tables B1 and B2 (including the location of the required information on the Standard Document forms)

[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)*;* **T**ype **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 = 103 Bq; megabequerel, MBq = 106 Bq; gigabequerel, GBq = 109 Bq; terabequerel, TBq = 1012 Bq; petabequerel, PBq = 1015Bq.

[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.

[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.