

**EXPLANATORY MEMORANDUM TO
THE TRANSFRONTIER SHIPMENT OF RADIOACTIVE WASTE AND SPENT FUEL
REGULATIONS 2008**

2008 No. 3087

1. This explanatory memorandum has been prepared by the Department of Energy and Climate Change and is laid before Parliament by Command of Her Majesty.

This memorandum contains information for the Joint Committee on Statutory Instruments.

2. **Purpose of the instrument**

- 2.1 These Regulations amend the current regulatory regime for the authorisation of movements of radioactive waste and spent nuclear fuel between EU Member States and into and out of the Euratom Community.

- 2.2 They extend the scope of regulation, which currently applies to radioactive waste, to cover shipments of spent nuclear fuel that are sent for reprocessing (the recovery of reusable uranium and plutonium). They provide a clearer and more certain timetable for the authorisation procedure, by setting time limits for consent from other Member States and a “deemed consent” procedure in cases where no response is forthcoming.

- 2.3 The Regulations make it an offence to ship radioactive waste or spent fuel into or out of the UK unless in accordance with the provisions of an authorisation granted by the appropriate competent authority. They will be administered in the UK by the relevant competent authorities – the Environment Agency in England and Wales, the Scottish Environment Protection Agency in Scotland and the Chief Inspector in Northern Ireland.

3. **Matters of special interest to the Joint Committee on Statutory Instruments**

- 3.1 None.

4. **Legislative Context**

- 4.1 The new Regulations transpose Council Directive 2006/117/Euratom on the supervision and control of shipments of radioactive waste and spent fuel. They replace and revoke an existing UK regulatory regime (The Transfrontier Shipment of Radioactive Waste Regulations 1993) that currently covers radioactive waste shipments only.

- 4.2 A Transposition Note is attached at Annex 1.

5. **Territorial Extent and Application**

- 5.1 This instrument applies to all of the United Kingdom. It also applies to Gibraltar, which will make similar Regulations.

6. **European Convention on Human Rights**

The Minister of State for Energy and Climate Change has made the following statement regarding Human Rights:

In my view the provisions of the Transfrontier Shipment of Radioactive Waste and Spent Fuel Regulations 2008 are compatible with the Convention rights.

7. Policy background

- *What is being done and why*

7.1 Council Directive 2006/117/Euratom, which these Regulations transpose, replaces an earlier Directive (92/3/Euratom) which applied to radioactive waste only. The main objectives of the new Directive are:

- To bring shipments of spent nuclear fuel for reprocessing within the scope of the Euratom control regime. This ensures consistency with the ‘Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management’, to which the Euratom Community acceded on 2 January 2006.
- To incorporate technical aspects of other legislation, in particular the Basic Safety Standards Directive Council Directive 96/29/Euratom, which lays down basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation.
- To ensure that exports of radioactive waste and spent fuel from the Euratom Community are only made with the consent of the relevant authorities in the country of destination (the previous Directive only required such countries to be notified, but the 1993 UK Regulations went beyond this to require their consent).

7.2 The activities addressed by these Regulations, namely the import and export of radioactive waste and spent fuel, are limited in extent. Only a small number of businesses undertake these activities and only a few applications for such shipments are received each year. However, there are indications that, as more nuclear installations are decommissioned and dismantled, a greater quantity of radioactive waste is likely to be sent overseas for specialist treatment that is unavailable in the UK (including smelting of contaminated metals and return of radioactive waste in the slag).

7.3 There are currently no plans to send UK spent fuel abroad for reprocessing; the Sellafield (Cumbria) plant reprocesses spent fuel from UK reactors and for overseas customers. All of the spent fuel covered by current overseas contracts is already at Sellafield and no new contracts are in prospect at the present time. Consequently, the UK competent authorities do not expect to receive any application for the shipment of spent fuel in the near future.

- *Consolidation*

7.4 Not applicable.

8. Consultation outcome

8.1 Public consultation on the draft Regulations was carried out between February and May 2008. A wide range of key stakeholders was consulted, including other Government Departments, UK regulators and those UK companies directly affected by the revised Directive. Nine consultation responses were received, a detailed analysis of which is available on the Defra website at <http://www.defra.gov.uk/corporate/consult/radwaste-shipments/summary-responses.pdf>.

8.2 Some of the responses raised important issues, which have been addressed in the drafting of the Regulations. Other comments related to matters that were outside the scope of the

transposition but were still recognised as being of importance to the industry and/or regulators. These issues will be covered in guidance to the competent authorities (see below).

9. Guidance

9.1 Non-statutory guidance to the Environment Agency in England and Wales is in preparation and will be issued before the commencement of the new regulatory regime. This will cover issues such as minimising administrative burdens, the approach to be taken in cases of non-compliance and interpretation of the Regulations with regard to ships passing through territorial waters and calling at ports *en route*. The devolved administrations also intend to issue guidance to their relevant regulators. In addition, the competent authorities will issue their own procedural guidance to applicants under the Regulations.

10. Impact

10.1 An Impact Assessment is attached at Annex 2. As these Regulations put in place a regulatory regime that is broadly similar to the current one, it is not expected to place significant additional burdens on industry. The impact on the public sector is considered to be negligible.

11. Regulating small business

11.1 The legislation does not apply to small business.

12. Monitoring & review

12.1 Directive 2006/117/Euratom requires Member States to submit reports on its implementation to the Commission by 25 December 2011 and every three years thereafter.

In addition, DECC will continue to liaise closely with the Environment Agency regarding the implementation of the Regulations in England and Wales.

13. Contact

Dr Martin Hum at the Department of Energy and Climate Change. Tel: 020 7238 1739 or martin.hum@decc.gsi.gov.uk can answer any queries regarding the instrument.

Summary: Intervention & Options

Department /Agency: Defra	Title: Impact Assessment of regulations on the supervision and control of shipments of radioactive waste and spent fuel	
Stage: Final	Version: 1	Date: 30 September 2008
Related Publications: COUNCIL DIRECTIVE on the supervision and control of shipments of radioactive waste and spent fuel		

Available to view or download at:

<http://www.defra.gov.uk>

Contact for enquiries: Martin Hum

Telephone: 0207-238-1726

What is the problem under consideration? Why is government intervention necessary?

Council Directive 2006/117/EURATOM on the supervision and control of shipments of radioactive waste and spent fuel was adopted on 25 December 2006. It updates, improves and expands upon current arrangements which are part of the UK legislative framework under Statutory Instrument (SI) 1993 no. 3031 – The Transfrontier Shipment of Radioactive Waste Regulations. The Directive must be transposed into UK legislation on or before 25th December 2008.

What are the policy objectives and the intended effects?

The new Directive updates and expands existing arrangements for the control and supervision of shipments of radioactive waste and spent fuel. It removes from regulation shipments of NORM waste. This will provide consistency and clarity of regulatory requirements across the EU. The Directive text has been developed during negotiations at which the UK position was fully represented.

The changes introduced by the new Directive are detailed in the Evidence Base.

What policy options have been considered? Please justify any preferred option.

Option 1: Do nothing. That is, continue to use existing arrangements as set out in SI 1993, no.3031.

Option 2: Repeal and re-enact the Transfrontier Shipment of Radioactive Waste Regulations 1993 (*preferred option*)

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?

After one year of experience (December 2009)

Ministerial Sign-off For consultation stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:

Mike O'Brien

.....Date: 30th November 2008

Summary: Analysis & Evidence

Policy Option: 2

Description: Repeal and re-enact the TFS Regulations

COSTS	ANNUAL COSTS		Description and scale of key monetised costs by 'main affected groups' Additional admin costs for stakeholders shipping spent fuel which was not part of the previous regime, maybe £10,000 per application. Introduction of charging for all operators by the environment agencies. In total c12 shipments per year in the UK would be covered by the TFS.
	One-off (Transition)	Yrs	
	£ None		
	Average Annual Cost (excluding one-off)		
	£ 115,000		Total Cost (PV) £
Other key non-monetised costs by 'main affected groups' Sellafield Ltd has indicated that a review of current reprocessing contracts with overseas customers may be required so as to confirm that these contracts are in compliance with the proposed new Regulations. The cost of such a review would be low ('several thousands of pounds').			

BENEFITS	ANNUAL BENEFITS		Description and scale of key monetised benefits by 'main affected groups' Some minor, benefits (see below). These will be quantified at the yearly review.
	One-off	Yrs	
	£		
	Average Annual Benefit (excluding one-off)		
	£		Total Benefit (PV) £ Not yet quantified
Other key non-monetised benefits by 'main affected groups' Transfers of NORM radioactive waste across international boundaries, which are currently regulated, will be exempted. This will affect not more than one shipment per year out of a total of c12 applications/year in the United Kingdom. Savings may accrue from deemed consent.			

Key Assumptions/Sensitivities/Risks

The proposed new regulations will incorporate, for the first time, spent nuclear fuel. The cost estimate is based on an assumption that the regulations will not necessitate substantial renegotiation of reprocessing contracts between BNG Sellafield and overseas customers.

Price Base Year	Time Period Years	Net Benefit Range (NPV) £	NET BENEFIT (NPV Best estimate) £
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What is the geographic coverage of the policy/option?	UK			
On what date will the policy be implemented?	25 December 2008			
Which organisation(s) will enforce the policy?	EA/SEPA/EHSNI			
What is the total annual cost of enforcement for these organisations?	£ 105,000			
Does enforcement comply with Hampton principles?	Yes			
Will implementation go beyond minimum EU requirements?	No			
What is the value of the proposed offsetting measure per year?	£ None			
What is the value of changes in greenhouse gas emissions?	£ None			
Will the proposal have a significant impact on competition?	No			
Annual cost (£-£) per organisation (excluding one-off)	Micro N/A	Small N/A	Medium N/A	Large N/A
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)	
Increase of	£ 10,000	Decrease of	£ 5,000
		Net Impact	£ 5,000

Key: Annual costs and benefits: Constant Prices (Net) Present Value

1. Background

Current legislation is in place which imposes controls on the movement of radioactive wastes across international boundaries. Measures similar to those proposed in the Directive have been in force since 1993; the 1993 Regulations, in turn, superseded earlier Regulations and other (non-statutory) arrangements.

A gap analysis has been performed to determine the main differences between current legislation and the requirements of the new Directive. These differences are summarised below.

- Expansion of the scope to include spent fuel intended for reprocessing (in addition to radioactive waste).

(The reasoning behind this inclusion is that from a radiological point of view, spent fuel intended for reprocessing is no different from spent fuel intended for final disposal, and therefore equivalent supervision and control procedures should be applied in each case).

- Limiting of the basis for refusal of consent for shipments by Member States to the following reasons:
 - for Member States of transit, on the relevant national, Community or international legislation applicable to the transport of radioactive material;
 - for the Member State of destination, on relevant legislation applicable to the management of radioactive waste or spent fuel or on relevant national, Community or international legislation applicable to the transport of radioactive material.
- Additional liability for reshipment to an extra-community country in cases where the shipment cannot or may not be completed rests with the consignee in the Member State.

(This removes current uncertainty resulting from a failed shipment).

- Reshipment between Member States in cases where the shipment cannot or may not be completed can be substituted by an 'alternative safe arrangement'.

(This increases the options available for dealing with a failed shipment).

- Extension of the exclusion from the Directive of disused sources, to allow shipments to a manufacturer or recognised installation (rather than just the supplier, as in the existing regulations).

(This will increase the disposal options available for sealed sources, facilitating more disposals. It has been introduced, in part, to encompass the requirements of the HASS Directive and associated UK Regulations).

- Use of Directive 96/29/Euratom¹ to determine the de minimis activity levels', below which the new Directive does not apply.

(This sets out nuclide specific limits for the exempted specific activity levels of waste, taking into account the fact that some radionuclides are more radiotoxic than others).

- Changes to the authorisation process to improve clarity, including an automatic consent procedure if the competent authority acknowledges but fails to respond to a request for consent within three months.

2. Consultation

To get an early indication of potential costs and benefits from the revised Directive a number of organisations were contacted prior to the formal consultation. Only five responses were received but the

¹ Council Directive 96/29/Euratom 'laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation'; 13 May 1996

limited information received from respondents was incorporated into the initial impact assessment. A full consultation on the regulations and the impact assessments was run from 27 February to 19 May. Nine responses were received in total and two of these were nil returns. Those responses that referred to additional costs have been followed up with a more detailed dialogue with the organisations concerned, Sellafield and INS.

3. Options

The new Directive was discussed during negotiations in the European Council working group between UK representatives and European colleagues. The Directive as adopted therefore represents a compromise on which Member States reached consensus, with substantial input from the UK. The following options should be assessed with this in mind.

Option 1: Do nothing. That is, continue to use existing arrangements as set out in SI 1993, no.3031 (The Transfrontier Shipment of Radioactive Waste Regulations 1993).

Option 2: Repeal and re-enact the Transfrontier Shipment of Radioactive Waste Regulations 1993 to incorporate the requirements of the new Directive. (These regulations were enacted under the European Communities Act 1972).

4. Costs and benefits

(i) Sectors and groups affected

In order to gather information on the costs and benefits associated with implementation of the Directive, a number of stakeholders were identified as being directly affected by the changes that the directive would introduce:

- Those involved in the manufacture, transport or disposal of sealed radioactive sources.
- Those involved in the shipment of spent nuclear fuel.
- Those who may wish to dispose of radioactive waste.
- Regulatory bodies.

These stakeholders were asked to provide details of the social, economic and environmental costs and benefits to their business of implementing the directive. The views of the limited number of respondents have been taken into account in the following analysis.

(ii) Analysis of costs and benefits

Comment on potential costs was received from the Environment Agency (EA), the Scottish Environment Protection Agency (SEPA), International Nuclear Services Ltd (INS), and Sellafield Ltd.

Option 1 - Do Nothing

Economic costs and benefits

The EA and SEPA currently spend approximately £50k-£70k a year on administrative aspects of the current legislation. If the UK does not transpose the Shipments Directive then it risks incurring costs associated with infraction by the EC.

Environmental costs and benefits

There are no apparent environmental costs or benefits.

Social costs and benefits

There are no apparent social costs or benefits.

Option 2 - Repeal and re-enact the Transfrontier Shipment of Radioactive Waste Regulations 1993 to incorporate the requirements of the new Directive.

Economic costs and benefits

Regulators anticipate that the overall burdens to them from the new Directive will be similar to those associated with the existing Directive for radioactive waste, but there will be an additional burden on them from shipments of spent fuel.

Costs for business will rise as the environment agencies do not currently recover their regulatory costs for authorisations under this regime. The new regulations will introduce charges for authorisations for the first time. It is the broad aim of Government that the full accounting costs of regulatory services should be recovered. There are currently about 12 shipments per year which require authorisations under the Directive. The Environment Agency anticipates that the cost of making a simple determination for an authorisation for a shipment of radioactive waste is of the order of £5,000-£7,000. There will be about 8 of these. More complex cases might cost up to £15,000. On average there will be 3-4 of these cases. Shipments of spent fuel will be covered by the Directive for the first time. The Environment Agency estimates that regulatory costs could amount to £20,000 for each authorisation of spent fuel. However, a single authorisation can cover multiple shipments for a period of up to three years. On average there is one shipment of spent fuel every year. SEPA will also introduce charges. The Environment Agency is currently consulting on its charging scheme.

No new administrative burdens over those currently in existence are anticipated for shipments of radioactive waste. Operators shipping spent fuel will have to complete the paperwork required for an EA authorisation for the first time. The new Directive will take NORM waste (Naturally Occurring Radioactive Materials) out of regulatory control and operators will no longer need an authorisation from the Environment Agency or SEPA.

According to one respondent there are areas in which the new Directive may complicate the shipment of spent fuel for reprocessing. On further discussion with operators it seems that most of these complications would not be as a direct result of the Directive, rather from the interaction with other regulatory requirements. Defra will be setting out in guidance how it expects regulators to deal with this.

Shipping of spent fuel or any other highly radioactive material involves large costs associated with ensuring the safety and security of the cargo. If a shipment of such material were to be delayed or returned to its consigner as a result of the new Directive, there is the potential for an estimated cost of between £100K and £1M. However, the new system introduces more rather than less regulatory certainty at an early stage and the risks of such costs being incurred should be reduced.

There may be a cost to Sellafield Ltd associated with reviewing and, if necessary, renegotiating contractual arrangements for the shipment of spent fuel. This review would be to determine whether the liability requirements of the Directive are satisfied. This is estimated to be in the order of 'tens of thousands of pounds'. No substantial case has been made that contract renegotiation is likely to be required.

The automatic consent provision will mean that operators will have to wait for no longer than three months to know if their application has been successful, following acknowledgement of their application by the regulator, increasing regulatory certainty and minimising costly delays.

Some transfers of radioactive waste across international boundaries which are currently regulated may be exempted. The numbers of such transfers, and hence the costs, can not be estimated at this time. However, any potential cost savings as a consequence of this will not be substantial. This situation will be reviewed, and cost-benefit analysis carried out, following consultation and again following one year of implementation. Compliance with the Directive will remove the risk of infraction.

Environmental costs and benefits

The potential costs to the environment are believed to be low, and include the impact to the UK of the need to provide treatment and storage arrangements for failed shipments as 'safe alternative arrangements'.

Environmental benefits include:

- Greater supervision and control over shipments of spent fuel.
- The facilitation of the recovery of failed shipments due to the clear liability arrangements (including spent nuclear fuel).
- Reduced unnecessary transport in the event of failed shipments.
- The facilitation of recycling and disposal of sealed sources.

Social costs and benefits

Social costs and benefits are qualitative due to the unquantifiable nature of social impacts of this legislation. For the purpose of this Impact Assessment, a social cost / benefit has been defined as an impact that has a negative / positive effect upon a section of the community in the UK other than those involved with the nuclear sector, or which worsens / improves relations with European and wider international parties.

The social costs identified relate to the possibility of adverse public reaction to the new Regulations, which would highlight the fact that radioactive imports may be made, that there would be a limited basis on which a country could object to the shipment, and that in the event of a failure, safe arrangements may have to be made in any country of transit.

Social benefits are mainly concerned with the improvement of international relations due to the clarification of many aspects of the Regulations as a result of the Directive. Adoption of this Directive will remove the possibility for spurious rejections of transport applications, reduce misunderstandings and improve consistency across the EU.

(iii) Summary of costs and benefits

The benefits of option 2 have been listed above, summarised as improved clarity of transfrontier shipments of radioactive waste arrangements and consistency of such arrangements across the European Community. There should be some cost savings associated with the removal of certain shipments of closed sources across national frontiers, and the automatic consent provision. Some costs may be associated with an anticipated need, by Sellafield Ltd, to review and renegotiate their contractual arrangements for reprocessing overseas fuel. These will become clearer by the time the initial review of the regulations takes place in December 2009.

For this reason, Option 2 is recommended.

5. The Small Firms' Impact Test

The majority of financial impacts of the proposed Directive are on the nuclear sector, and none of the relevant organisations in this sector come within the 'small firms' definition.

A number of small firms import and export radioactive waste, mainly in the form of spent sealed sources. The proposed regulations do not affect any such business either commercially or financially.

6. Competition Assessment

Transposition of the Directive through Option 2 introduces no issues of competition.

Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.

Type of testing undertaken	<i>Results in Evidence Base?</i>	<i>Results annexed?</i>
Competition Assessment	Yes	No
Small Firms Impact Test	Yes	No
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	No	No
Other Environment	Yes	No
Health Impact Assessment	No	No
Race Equality	No	No
Disability Equality	No	No
Gender Equality	No	No
Human Rights	No	No
Rural Proofing	No	No

Annexes

None.

UK Transposition of Council Directive 2006/117/Euratom

Article in Directive 2006/117/Euratom	Article in UK Regulations
1(1)	*
1(2)(a)	*
1(2)(b)	3(1)
1(3)	3(2)(a)
1(4)	3(2)(b)
1(5)	3(2)(c)
1(6)	*
2	7(b), 12(3)(d), 12(4)(d), 12(7)
3	*
4	14
5(1)	2
5(2)	2
5(3)	2
5(4)	2
5(5)	*
5(6)	*
5(7)	*
5(8)	8
5(9)	2
5(10)	2
5(11)	Not used in UK regulations
5(12)	*
5(13)	2
5(14)	*
5(15)	3(3)
5(16)	3(3)
5(17)	*
6(1)	4, 11(1)
6(2)(a)	6(1)(a)
6(2)(b)	6(1)(b)
6(2)(c)	6(1)(c)
7	Schedule 1:2(1)
8(1)	Schedule 1:3
8(2), (3), (4)	Schedule 1:3
9	Schedule 1:3
10	12, Schedule 1:2(3)
11(1)	8
11(2) & (3)	Schedule 1:4(1) & (2)
12	14
13	4(1)(b), Schedule 1:6(1)
14	5, Schedule 1:6(2)
15	4(1)(a), 12, Schedule 1:6(3)
17(1)	10, 11(1)
17(3)	11(1), 11(3)
17(4)	*
17(5)	10(1)
18	*
19	*
20	*
21	*

Article in Directive 2006/117/Euratom	Article in UK Regulations
22(1)	Preamble, 10, Schedule 1
23	*
24	20
25	*
26	*

*Equivalent reference not required or definition not used in UK regulations

