

Communication received from Belgium concerning its policies regarding the management of Plutonium

1. The Secretariat has received a note verbale dated 6 August 2010 from the Permanent Mission of Belgium to the IAEA in the enclosures of which the Government, in keeping with Belgium's commitment under the Guidelines for the Management of Plutonium (contained in INFCIRC/549¹ of 16 March 1998 and hereinafter referred to as the "Guidelines") and in accordance with Annexes B and C of the Guidelines, has made available annual figures for holdings of civil unirradiated plutonium and the estimated amounts of plutonium contained in spent civil reactor fuel as of 31 December 2008 and as of 31 December 2009, as well as a correction of estimated amounts of plutonium contained in spent civil reactor fuel as of 31 December 2007. In addition, a declaration according to Article 14 of the Guidelines for the Management of Plutonium is enclosed to the note verbale.
2. In light of the request expressed by Belgium in its note verbale of 1 December 1997 concerning its policies regarding the management of plutonium (INFCIRC/549 of 16 March 1998), the note verbale of 6 August 2010 and the enclosures thereto are attached for the information of all Member States.

¹ A modification to this document was issued on 17 August 2009 (INFCIRC/549/Mod.1)

Embassy and Permanent Mission of Belgium

Our Ref.: 10/01782

Attachments: 6

Subject: Informal group on plutonium — guidelines for management of plutonium — communication from Belgium for the years 2007, 2008 and 2009

The Permanent Mission of Belgium to the IAEA presents its compliments to the Director General of the International Atomic Energy Agency and has the honour to refer to his Note Verbale No. 2818 of 1 December 1997, to which were attached the guidelines concerning the measures which the Belgian Government has decided to apply to the management of plutonium.

In accordance with Belgium's commitments pursuant to those guidelines, the Permanent Mission attaches hereto the following information on the amounts of plutonium on Belgian territory:

- A correction to Annex C for the situation at the end of 2007;
- Annex B of the guidelines for management of plutonium covering holdings of civil unirradiated plutonium in Belgium, and Annex C of the guidelines relating to estimated amounts of plutonium contained in spent civil reactor fuel in 2008;
- Annex B of the guidelines for management of plutonium covering holdings of civil unirradiated plutonium in Belgium, and Annex C of the guidelines relating to estimated amounts of plutonium contained in spent civil reactor fuel in 2009;
- A short declaration concerning the figures according to Article 14 of the guidelines.

The Permanent Mission of Belgium to the IAEA takes this opportunity of reiterating to the Director General of the International Atomic Energy Agency the assurances of its highest esteem.

Vienna, 6 August 2010

[stamp of the Embassy of Belgium, Vienna]

Mr Yukiya Amano
Director General
International Atomic Energy Agency
Vienna

CORRECTION

2007

ANNEX C

Estimated Amounts of Plutonium Contained in Spent civil Reactor Fuel

National totals

	As of 31 Dec. 2007 (Previous year's figures in Brackets) Rounded to 1000 kg plutonium	
1) Plutonium contained in spent fuel at civil reactor sites	29.000 kg	(28.000 kg)
2) Plutonium contained in spent fuel at reprocessing plants	0 kg	(0 kg)
3) Plutonium contained in spent fuel held elsewhere	0 kg	(0 kg)

Note:

- i) The treatment of material sent for direct disposal will need further consideration when specific plans for direct disposal have taken concrete form.
- ii) Definitions:
 - Line 1: covers plutonium contained in fuel discharged from civil reactors.
 - Line 2: covers estimated amounts of plutonium contained in fuel received at reprocessing plants but not yet reprocessed.

2008

ANNEX B

Guidelines for management of plutonium

Annual figures for holdings of civil unirradiated plutonium

BELGIUM

	As of 31 Dec. 2008 (Previous year's figures in Brackets) Rounded to 100 kg plutonium	
1. Unirradiated separated plutonium in product stores at reprocessing plants.	0 kg	(0kg)
2. Unirradiated separated plutonium in the course of manufacture or fabrication and plutonium contained in unirradiated semi-fabricated or unfinished products at fuel or other fabricating plants or elsewhere.	p.m.	(p.m.)
3. Plutonium contained in unirradiated MOX fuel or other fabricated products at reactor sites or elsewhere.	300 kg	(1.400 kg)
4. Unirradiated separated plutonium held elsewhere.	p.m.	(p.m.)

<p>Note :</p> <p>(i) Plutonium included in lines 1-4 above belonging to foreign bodies.</p>	<p>300 kg</p>	<p>(1.400 kg)</p>
<p>(ii) Plutonium in any of the forms in lines 1-4 above held in locations in other countries and therefore not included above.</p>	<p>0 kg</p>	<p>(0 kg)</p>
<p>(iii) Plutonium in international shipment for which the Government of Belgium still retains Safeguards responsibility is included in the appropriate lines above. The Government with jurisdiction over the owner of the plutonium is responsible for resolving any residual difficulties.</p>	<p>0 kg</p>	<p>(0 kg)</p>
<p>(iv) It is open to Governments to add any further information or explanation which they believe helpful</p>	<p>p.m. means less than 50 kg</p>	<p>p.m. means less than 50 kg</p>

2008

ANNEX C

**Estimated Amounts of Plutonium Contained in Spent civil
Reactor Fuel**

National totals

	As of 31 Dec. 2008 (Previous year's figures in Brackets) Rounded to 1000 kg plutonium	
1) Plutonium contained in spent fuel at civil reactor sites	31.000 kg	(29.000 kg)
2) Plutonium contained in spent fuel at reprocessing plants	0 kg	(0 kg)
3) Plutonium contained in spent fuel held elsewhere	p.m.	(p.m.)

Note:

- i) The treatment of material sent for direct disposal will need further consideration when specific plans for direct disposal have taken concrete form.

- ii) **Definitions:**
 - **Line 1:** covers plutonium contained in fuel discharged from civil reactors.
 - **Line 2:** covers estimated amounts of plutonium contained in fuel received at reprocessing plants but not yet reprocessed.

2009

ANNEX B

Guidelines for management of plutonium

Annual figures for holdings of civil unirradiated plutonium

BELGIUM

	As of 31 Dec. 2009 (Previous year's figures in Brackets) Rounded to 100 kg plutonium	
1. Unirradiated separated plutonium in product stores at reprocessing plants.	0 kg	(0kg)
2. Unirradiated separated plutonium in the course of manufacture or fabrication and plutonium contained in unirradiated semi-fabricated or unfinished products at fuel or other fabricating plants or elsewhere.	p.m.	(p.m.)
3. Plutonium contained in unirradiated MOX fuel or other fabricated products at reactor sites or elsewhere.	p.m.	(300 kg)
4. Unirradiated separated plutonium held elsewhere.	p.m.	(p.m.)

<p>Note :</p> <p>(i) Plutonium included in lines 1-4 above belonging to foreign bodies.</p>	<p>p.m.</p>	<p>(300 kg)</p>
<p>(ii) Plutonium in any of the forms in lines 1-4 above held in locations in other countries and therefore not included above.</p>	<p>0 kg</p>	<p>(0 kg)</p>
<p>(iii) Plutonium in international shipment for which the Government of Belgium still retains Safeguards responsibility is included in the appropriate lines above. The Government with jurisdiction over the owner of the plutonium is responsible for resolving any residual difficulties.</p>	<p>0 kg</p>	<p>(0 kg)</p>
<p>(iv) It is open to Governments to add any further information or explanation which they believe helpful</p>	<p>p.m. means less than 50 kg</p>	<p>p.m. means less than 50 kg</p>

2009

ANNEX C

**Estimated Amounts of Plutonium Contained in Spent civil
Reactor Fuel**

National totals

	As of 31 Dec. 2009 (Previous year's figures in Brackets) Rounded to 1000 kg plutonium	
1) Plutonium contained in spent fuel at civil reactor sites	33.000 kg	(31.000 kg)
2) Plutonium contained in spent fuel at reprocessing plants	0 kg	(0 kg)
3) Plutonium contained in spent fuel held elsewhere	p.m.	(p.m.)

Note:

- i) The treatment of material sent for direct disposal will need further consideration when specific plans for direct disposal have taken concrete form.
- ii) Definitions:
 - Line 1: covers plutonium contained in fuel discharged from civil reactors.
 - Line 2: covers estimated amounts of plutonium contained in fuel received at reprocessing plants but not yet reprocessed.

DECLARATION ACCORDING TO ARTICLE 14 OF THE GUIDELINES FOR THE MANAGEMENT OF PLUTONIUM

In October 2009, the Belgian Government has decided to prolong the lifetime of the three oldest reactors (Doel 1, Doel 2 and Tihange 1) with 10 years. This has still to be confirmed by an appropriate change in the legislation.

With respect to the figures in the annexes B and C, the following supplementary explanation can be given:

a) Annexe B, point 3:

It has to be remembered that, after the closure of the MOX fuel fabrication plant, the assembling of MOX fuel elements from MOX fuel pins fabricated abroad, is still continuing. According to the operation and supply schedule to the nuclear power plants, the quantity of the MOX fuel pins and MOX fuel elements present at the plant of FBFC International (Areva) at the end of each year, can fluctuate considerably. This declares the big difference in the figures from year to year under this heading.

b) Annexe B, points 2 and 3, note i:

The table shows no difference between the plutonium quantity on Belgian territory and its part belonging to foreign bodies. This gives the impression that there is no Belgian plutonium any more. This is not completely true. There are still small quantities resulting from research activities and small quantities contained in unconditioned waste, which is still under safeguards control. These quantities disappear however in the rounding off.

c) Annexe C, point 1):

The plutonium quantities in the spent fuel are not increasing each year with the same amount, although there is almost constant nuclear energy production from nuclear energy and hence almost constant plutonium production. This is due to the following reasons:

- the rounding off of the real quantities gives rise to some fluctuations;
 - some reactors work in cycles of 18 months. Not always the same quantities of spent fuel are discharged each year from the reactors. The plutonium quantities in spent fuel mentioned under this heading don't include the plutonium present in the fuel still in the reactor.
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