

Information Circular

INFCIRC/549/Add.1/17

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General Distribution

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Communication received from Japan Concerning its Policies Regarding the Management of Plutonium

1. The Secretariat has received a note verbale dated 22 September 2014 from the Permanent Mission of Japan to the IAEA in the enclosures of which the Government of Japan, in keeping with its 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 amount of plutonium contained in spent civil reactor fuel as of 31 December 2013.
2. The Government of Japan has also made available a statement explaining its national strategy for the nuclear fuel cycle.
3. In light of the request expressed by the Government of Japan 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 22 September 2014 and its enclosures 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).

PERMANENT MISSION OF JAPAN
V I E N N A

Andromeda Tower
Donau-City-Strasse 6
A-1220 Vienna
Austria

Telephone: (+43) (1) 260 63-0
Facsimile: (+43) (1) 263 6750

NOTE VERBALE

The Permanent Mission of Japan to the International Organizations in Vienna presents its compliments to the Director General of the International Atomic Energy Agency and has the honour, on behalf of the Government of Japan, to refer to its Note Verbale of 1 December 1997 (Ref. No.: JPM/NV-185-97), enclosing Guidelines specifying the policies that the Government of Japan has decided to apply to the management of plutonium.

In keeping with Japan's commitment under these Guidelines, the Government of Japan encloses with this Note an annual statement of its national holdings of civil unirradiated plutonium and of plutonium contained in spent civil reactor fuel. The figures in this statement show Japan's holdings as of 31 December 2013 and are set out in accordance with Annexes B and C of the Guidelines. The Government of Japan also encloses with this Note a statement explaining its national strategy for the nuclear fuel cycle (excerpts from "the Strategic Energy Plan").

The Permanent Mission of Japan to the International Organizations in Vienna avails itself of this opportunity to renew to the Director General of the International Atomic Energy Agency the assurances of its highest consideration.

The Government of Japan requests the Director General of the International Atomic Energy Agency to circulate this note and its attachments, to all Member States for their information.

22 September 2014

Vienna

To the Director General of the
International Atomic Energy Agency



ANNEX B

ANNUAL FIGURES FOR HOLDINGS OF CIVIL UNIRRADIATED PLUTONIUM

<u>National Totals</u>	as of 31 Dec. 2013. (Previous year's figures in brackets) Rounded to 100kg plutonium with quantities less than 50kg reported as such
	[tonnes Pu]
1. Unirradiated separated plutonium in product stores at reprocessing plants.	<u>4.4</u> (<u>4.4</u>)
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.	<u>2.9</u> (<u>2.9</u>)
3. Plutonium contained in unirradiated MOX fuel or other fabricated products at reactor sites or elsewhere.	<u>3.1</u> (<u>1.6</u>)
4. Unirradiated separated plutonium held elsewhere	<u>0.4</u> (<u>0.4</u>)

Note:

(i) Plutonium included in lines 1-4 above belonging to foreign bodies.	<u>0</u> (<u>0</u>)
(ii) Plutonium in any of the forms in lines 1-4 above held in locations in other countries and therefore not included above.	<u>36.3</u> (<u>34.9</u>)
(iii) Plutonium not included in lines 1-4 above which is in international shipment prior to its arrival in the recipient State.	<u>0</u> (<u>0</u>)

ANNEX C

**ESTIMATED AMOUNT OF PLUTONIUM CONTAINED IN SPENT CIVIL
REACTOR FUEL**

<u>National Totals</u>	as of 31 Dec. 2013. (Previous year's figures in brackets) Rounded to 1000kg plutonium with quantities less than 500kg reported as such	
	[tonnes Pu]	
1. Plutonium contained in spent fuel at civil reactor sites.	134	(133)
2. Plutonium contained in spent fuel at reprocessing plants.	27	(26)
3. Plutonium contained in spent fuel held elsewhere.	<u>less than 500kgPu</u>	(<u>less than 500kgPu</u>)

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 estimated amounts of 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.

Strategic Energy Plan

April, 2014

Corresponding part

Section 4. Re-establishment of the nuclear energy policy

4. Steady approach without putting off implementing measures into the future

(2) Promotion of the nuclear fuel cycle policy

(i) Promotion of reprocessing and plutonium use in LWRs

The basic policy of Japan is to promote a nuclear fuel cycle that reprocesses spent fuels and effectively utilizes the plutonium retrieved, from the viewpoint of effective utilization of resources and reduction of the volume and harmfulness of high-level radioactive waste.

Regarding the nuclear fuel cycle, many problems have arisen, including delays in completion of the Rokkasho reprocessing plant and troubles at the Monju prototype fast breeder reactor. It is important to take this situation seriously and solve the problems, including technical challenges that we face, one by one. In order to solve problems related to disposal of spent fuels and mitigate the risks for and the burden on future generations, GOJ will make efforts to reduce the volume and harmfulness of radioactive waste and create a nuclear fuel cycle that contributes to effective utilization of resources while adequately taking the past history into consideration and continuing to seek the understanding of relevant municipalities and the international community and will promote reprocessing and plutonium use in LWRs.

Specifically, GOJ will promote plutonium use in LWRs, and proceed with such measures as completion of the Rokkasho reprocessing plant, construction of a MOX fuel processing plant, and completion of the Mutsu interim storage facility on the underlying premise of ensuring safety. GOJ remains committed to the policy of not possessing reserves of plutonium of which use is undetermined on the premise of peaceful use of plutonium. In order to achieve this policy effectively, GOJ will conduct an appropriate management and utilization of plutonium while paying due consideration to an appropriate balance between separation and utilization of plutonium. Also GOJ will promote R&D of fast reactors, etc., through international cooperation with the U.S. and France etc.

GOJ will reform any aspects of Monju research thoroughly taking into account lessons learnt from previous efforts and aim to compile the research results expected in the Monju research plan. Also GOJ will position Monju as an international research center for technological development, such as reducing the amount and toxic level of radioactive waste and technologies related to nuclear nonproliferation. GOJ will take necessary measures for issues to be overcome, such as the re-establishment of systems to implement the above mentioned actions and response to the new regulatory requirements etc. on its own responsibility.

(ii) Flexibility of mid- to long-term approaches

Problems related to the nuclear fuel cycle cannot be solved in a short period but require a mid- to long-term approach. Moreover, it is important to adopt a flexible approach, since it is necessary to respond to various uncertainties, including the technological trend, energy supply-demand balance and the international situation. Since these activities are closely related to the estimation of the future operating volume of nuclear power plants, the amount of nuclear fuel, and quantity of spent fuels produced, they will be conducted while taking into consideration all of these factors and ensuring strategic flexibility in accordance with changes in the situation.