Table-1 The Plutonium-Use Plan for Research and Development in Japan Atomic Energy Agency (Fiscal Year 2005 and 2006)

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After FY2007

Equivalent to about 6 years use

Purpose of Use^{*5} Amount of spent fuels Amount of Pu in possession to be reprocessed^{*2} Research and development of Fast Breeder Reactor, etc. Holder Amount of Pu^{*4} Amount of Pu to be recovered Weight of spent fuels Amount of Pu to be used Time to start use (tPuf)*3 (tÚ) held at the end (Rough estimate for a year)*6 Place of use and of FY2004 (tPuf/year)*3 prospects for the period required to consume (tPuf)^{*3} FY2005 FY2006 FY2005 FY2006 Experimental After FY2005 Fast Reactor 0 1 Equivalent to about 7 years use "JOYO" 3.4 42 31 0.2 0.2 JAEA^{*}

Prototype

Fast Breeder Reactor

"MONJU"

0.5

*1: Japan Atomic Energy Agency (JAEA) holds some plutonium recoverd from spent fuel of Electric Power Companies (EPC). Ownership of the plutonium will be transferred from EPC to JAEA when the plutonium is used to make fuel assemblies for "JOYO" and "MONJU".

- *2: The "Amount of spent fuel to be reprocessed" is based on the operation plan of Tokai Reprocessing Plant. The amount of 42 ton in FY2005 includes 28 ton already reprocessed from April to December, 2005.
- *3: The "Amount of Pu" represents an amount of fissile plutonium (Puf) contained in plutonium.

(0.6)

- *4: The amount "3.4 tPuf" excludes about 0.4 ton fissile plutonium used for experimental purposes such as fuel for the criticality test assembly FCA in Tokai site and DCA in Oarai site from 3.8 tPuf of the "Separated Pu" held by former JAERI (Japan Atomic Energy Research Institute) and former JNC (Japan Nuclear Cycle Development Institute) at the end of FY2004. The number in parenthesis (0.6) tPuf is amount of the "separated Pu" already fabricated into fuel assemblies for "JOYO" and "MONJU".
- *5: In addition to plutonium use for "JOYO" and "MONJU", small amount of plutonium will be used in JAEA's research and development facilities under license of limited quantity and specific research and development purposes.
- *6: The "Rough estimate for a year" represents an annual average amount of plutonium contained in MOX fuels to be loaded to "JOYO" and "MONJU" during standard reactor operations.
- *7: "JOYO" is in operation and will presumptively continue to use about 0.1 ton fissile plutonium every year. The annual amount and prospected period to consume plutonium will depend on progress of research and development and will be subject to change.
- *8: At "MONJU", JAEA is carring out renovation work and will presumptively use about 0.5 ton fissile plutonium every year after FY 2007. As with "JOYO", the annual amount and prospected period to consume plutonium will depend on progress of research and development and will be subject to change.