Safeguards Activities in Japan in 2016

①Summary of Safeguards Activities under the State System of Accounting for and Control of Nuclear Material in Japan

Categories under legal system for nuclear regulation[1]	Number of facilities and LOFs[2]		Person-days of national inspection[4]			Number of actions taken based on the regulation for functioning SSAC							
						Licence granted for minor users of nuclear material[6]	Approval of accounting provisions[6,7]		Number of accounting reports submitted[8]				
		Recepients of national inspections[3]	Total	Conducted by JSGO inspectors	Conducted by NMCC[5] inspectors		Initial approval	Amendment approval	Total	ICR	MBR	PIL	Biannual reports from minor users
Uranium Concentration	0 (0)	N/A[9]	N/A[9]			N/A	N/A[9]		N/A[9]				N/A
Nuclear Fuel Fabrication	6 (6)	6 (6)	323 (256)	13 (16)	310 (240)		3 (2)	27 (47)	83 (72)	67 (62)	8 (5)	8 (5)	
Research Reactor	22 (22)	16 (16)	150 (312)	0 (1)	150 (311)				62 (67)	16 (19)	23 (24)	23 (24)	
Power Reactor	57 (57)	56 (56)	170 (134)	0 (6)	170 (128)				136 (135)	8 (21)	64 (57)	64 (57)	
Power reactor under R&D stage	2 (2)	2 (2)	20 (18)	0 (0)	20 (18)				4 (4)	0 (0)	2 (2)	2 (2)	
Storage	0 (0)	- (-)	- (-)	- (-)	- (-)				- (-)	- (-)	- (-)	- (-)	
Reprocessing	3 (3)	3 (3)	861 (824)	3 (0)	858 (824)				42 (42)	36 (36)	3 (3)	3 (3)	
Disposal	0 (0)	- (-)	- (-)	- (-)	- (-)				- (-)	- (-)	- (-)	- (-)	
Various users (R&D etc.)	209 (209)	29 (31)	334 (356)	1 (1)	333 (355)				794 (764)	350 (339)	223 (212)	221 (213)	
Minor Users (Nuclear Use)	10 (10)	1 (0)	2 (0)	0 (0)	2 (0)	0 (0)	0 (0)	1 (1)	32 (28)	9 (8)	11 (10)	12 (10)	
Minor Users (Non-Nuclear Use)	1,790 (1,764)	N/A[10]	N/A[10]			47 (79)	47 (86)	86 (199)	3,507 (3,527)	N/A			3,507 (3,527)
Total	2,099 (2,073)	113 (114)	1,860 (1,900)	17 (24)	1,843 (1,876)	47 (79)	50 (88)	114 (247)	4,660 (4,639)	486 (485)	334 (313)	333 (314)	3,507 (3,527)

* Records in 2015 are shown in parentheses for comparison.

* Under some categories, there is no facility subject to safeguards inspections. In such cases, "-" are inserted in respective cells.

1 Categorization is in accordance with the Law for the Regulations of Nuclear Source Material, Nuclear Fuel Material and Reactors (Nuclear Reactor Regulation Law).

2 When counting the number of facilities and LOFs, the categorization of IAEA safeguards implementation is followed. The categorization does not always correspond with the categorization of domestic regulation. Minor users are licenced to use natural and/or depleted uranium up to 300g and/or thorium up to 900g.

3 Number of facilities and LOFs where national inspections were conducted in 2015.

4 Domestic inspections are normally conducted in conjunction with the IAEA inspections.

5 Nuclear Material Control Center (NMCC) is designated to carry out domestic inspections under the Nuclear Reactor Regulation Law (Art.61-23-2).

6 Only the numbers of licence granted for minor users of nuclear material and accounting provisions approved are based on Japanese fiscal year 2016, i.e. April 2016-March 2017.

7 All licencees except the category of uranium concentration shall have approved accounting provisions to account for and control internationally controled material (incl. nuclear material) properly.

8 All licencees except the category of uranium concentration shall submit accounting reports.

9 Nuclear material accounting and control is not required, and this type of facilities are not subject to safeguards inspection.

10 Nuclear material is exempted from safeguards.

② Design Information Verification (DIV) and Complementary Access (CA)

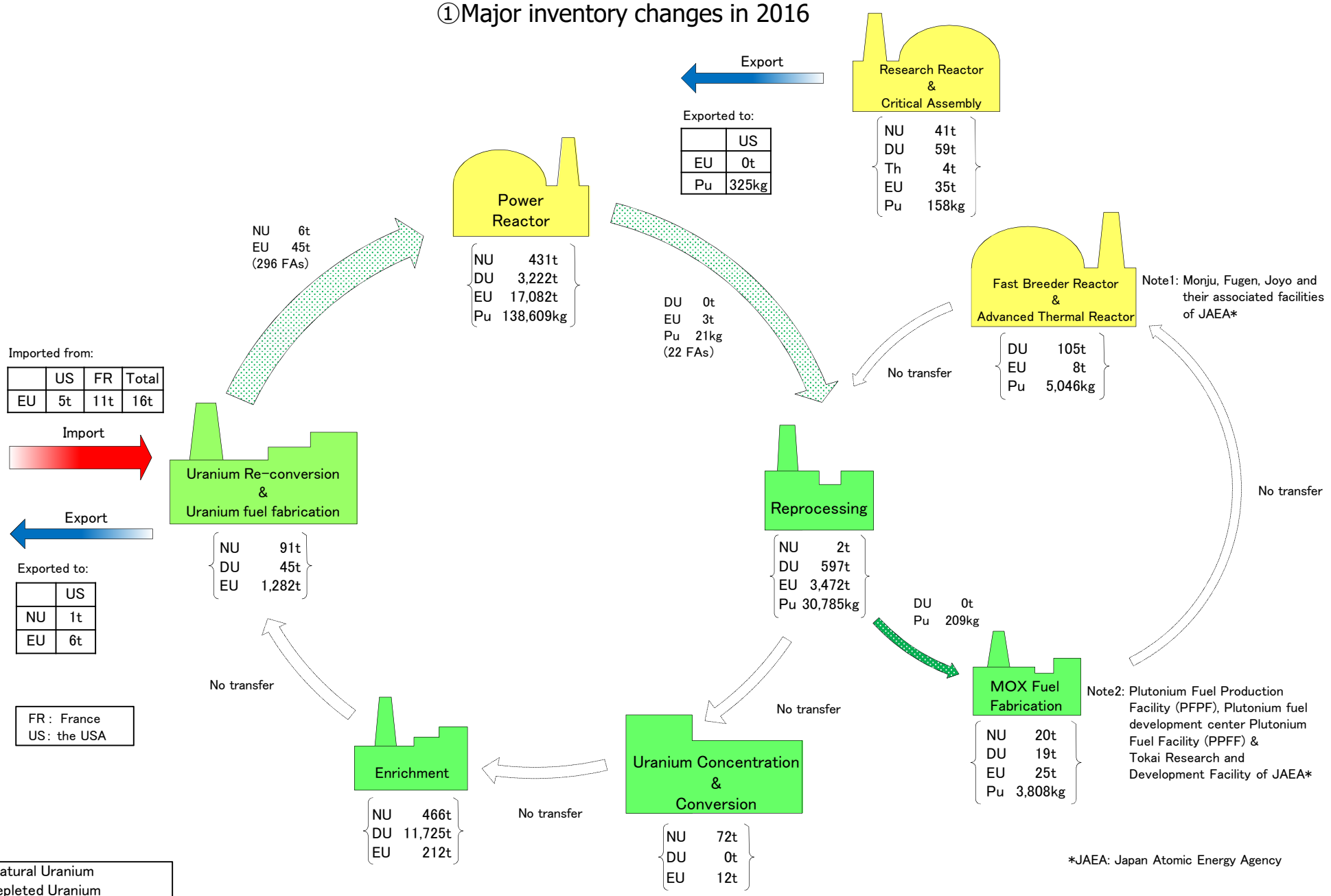
	Number of in the field for verifications	Person-days of in the field for verifications
Design Information Verification[11]	76 (75)	96 (114)
Complementary Access[12]	24 (16)	45 (33)
Total	100 (91)	141 (147)

11 The IAEA simultaneously with JSGO, conducts DIVs based on safeguards agreement to verify the correctness and completeness of the design information of facilities provided to the IAEA.

12 The IAEA conducts CAs based on additional protocol to the safeguards agreement to confirm the absense of undeclared nuclear material and activities. MOFA staff and JSGO inspectors accompany the IAEA inspectors at CAs.

Inventory and Inventory changes of Nuclear Material in Japan

①Major inventory changes in 2016



NU: Natural Uranium
DU: Depleted Uranium
Th: Thorium
EU: Enriched Uranium
Pu: Plutonium
FAs: Number of Fuel Assemblies

・Facilities are categorized according to the stages of nuclear fuel cycle.
This categorization does not correspond to regulatory categorization.
Each stage includes not only main facilities, but also their associated facilities.
Inventory is based on the weight of elements as of 31 December 2016.

② Nuclear Material Inventory by facility types

Categories of Nuclear Material[1] / Categories under legal system for nuclear regulation[1]	Natural uranium (t)	Depleted uranium (t)	Thorium (t)	Enriched uranium		Plutonium (kg)
				U(t)	U-235(t)	
Uranium Concentration	-	-	-	-	-	-
Nuclear Fuel Fabrication	556 (663)	11,768 (11,678)	0 (0)	1,495 (1,519)	60 (61)	- (-)
Research Reactor	31 (31)	63 (63)	0 (0)	34 (35)	2 (2)	1,842 (2,173)
Power Reactor	430 (424)	3,222 (3,222)	- (-)	17,082 (17,046)	369 (370)	138,609 (137,393)
Power Reactor under R&D stage	- (-)	95 (95)	- (-)	3 (3)	0 (0)	3,323 (3,323)
Storage	-	-	-	-	-	-
Reprocessing	2 (2)	597 (597)	0 (0)	3,472 (3,469)	33 (33)	30,785 (30,981)
Disposal	-	-	-	-	-	-
Various users (R&D etc.)	122 (122)	239 (239)	4 (4)	49 (49)	1 (1)	3,889 (3,680)
Minor Users (Nuclear Use)	0 (0)	0 (0)	0 (0)			
Minor Users (Non-Nuclear Use)	0 (0)	0 (0)	0 (0)			
Total[2]	1,142 (1,243)	15,984 (15,894)	5 (5)	22,135 (22,121)	465 (468)	178,448 (177,551)

* Figures are based on the data as of 31 December, 2016. For comparison, corresponding data as of 31 December, 2015 are provided in parantheses below.

1 Categorization is in accordance with the Law for the Regulations of Nuclear Source Material, Nuclear Fuel Material and Reactors (Nuclear Reactor Regulation Law) and the relevant cabinet order.

2 Due to rounding, total figure may not correspond to the sum of figures above.

③ Inventory of nuclear material subject to bilateral nuclear cooperation agreements

As of 31 December 2016

Supplying Party \ Categories of Nuclear Material[1]	Natural Uranium (t)	Depleted Uranium (t)	Thorium (t)	Enriched Uranium		Plutonium (kg)
				U (t)	UNil235 (t)	
United States of America	93 (93)	3,692 (3,692)	1 (1)	16,005 (16,001)	327 (329)	128,306 (127,609)
United Kingdom of Great Britain and Northern Ireland	13 (13)	447 (447)	0 (0)	2,275 (2,275)	47 (47)	18,648 (18,888)
France	54 (106)	6,482 (6,438)	0 (0)	5,973 (5,966)	100 (101)	56,660 (56,382)
Canada	780 (829)	5,179 (5,133)	0 (0)	5,643 (5,643)	105 (107)	51,344 (50,853)
Australia	25 (35)	1,025 (1,016)	Nil (Nil)	3,997 (3,998)	86 (87)	29,559 (29,147)
China	27 (27)	253 (253)	Nil (Nil)	278 (278)	7 (7)	2,046 (2,003)
EURATOM	67 (119)	6,484 (6,440)	0 (0)	7,918 (7,917)	178 (179)	18,686 (18,563)
Kazakhstan	Nil (Nil)	Nil (Nil)	Nil (Nil)	23 (23)	1 (1)	Nil (Nil)
Republic of Korea	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)
Viet Nam	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)
Jordan	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)
Russia	Nil (Nil)	Nil (Nil)	Nil (Nil)	67 (67)	3 (3)	Nil (Nil)
Turkey	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)
United Arab Emirates	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)	Nil (Nil)
IAEA	1 (1)	2 (2)	Nil (Nil)	0 (0)	0 (0)	1 (1)
Other	193 (194)	2,054 (2,053)	4 (4)	372 (360)	10 (9)	3,767 (3,766)

* This table shows the weight of nuclear material subject to each bilateral nuclear cooperation agreement or agreement on the supply of uranium from the IAEA. Multiple agreements sometimes apply to the same nuclear material. In such cases, the material is counted in multiple times.

* Records in 2015 are shown in parentheses below for comparison.

1 Categorization is in accordance with the Law for the Regulations of Nuclear Source Material, Nuclear Fuel Material and Reactors (Nuclear Reactor Regulation Law) and the relevant cabinet order.