

4) Reprocessing Facilities (Gaseous Waste)

Japan Atomic Energy Agency Tokai Research and Development Center Nuclear Fuel Cycle Engineering Laboratories (Reprocessing Facilities)	*1		Krypton [⁸⁵ Kr] (Bq)	Iodine [¹²⁹ I] (Bq)
		Reprocessing Facilities Total	15 3.1 × 10	8 1.5 × 10
		Annual release Target control level	16 8.9 × 10	9 1.7 × 10
Japan Nuclear Fuel Limited Reprocessing Plant (Reprocessing Facilities)	*2	Radioactive Argon (Bq) *5	Krypton [⁸⁵ Kr] (Bq)	Iodine [¹²⁹ I] (Bq)
		Reprocessing Facilities Total	N.D.	N.D.
		Annual release Target control level *4	-	3.3 × 10 ¹⁷ (5 × 10 ¹³)

Japan Atomic Energy Agency Tokai Research and Development Center Nuclear Fuel Cycle Engineering Laboratories (Reprocessing Facilities)	*1	Total radioactive particulate matter		
		[total α] (Bq)		[total βγ] (Bq)
		Reprocessing Facilities Total	4 8.2 × 10	N.D.
	Annual release Target control level	*3 2.2 × 10	-8	*3 -4 1.1 × 10
Japan Nuclear Fuel Limited Reprocessing Plant (Reprocessing Facilities)	*2	Other radionuclides (nuclides that emit α rays)	Radionuclide(s) categorized into the left group Plutonium [Pu (α)] (Bq) *5	Other radionuclides (nuclides that do not emit α rays)
		Reprocessing Facilities Total	N.D.	N.D.
		Annual release Target control level *4	3.3 × 10 ⁸ (6.1 × 10 ⁶)	-

Note: The radioactivity (Bq) of gaseous waste is obtained by multiplying the concentration of the radioactive material (Bq/cm³) in the released gas by the amount of released gas (m³).

Values lower than the detection limit of radioactivity are indicated as N.D.

The detection limits are as follows.

Radioactive argon	: 5×10 ⁻⁴	(Bq / cm ³) or lower (*2)
⁸⁵ Kr	: 2.4×10 ⁻³	(Bq / cm ³) or lower (*1)
	: 2×10 ⁻²	(Bq / cm ³) or lower (*2)
¹²⁹ I	: 3.7×10 ⁻⁸	(Bq / cm ³) or lower (*1)
	: 4×10 ⁻⁸	(Bq / cm ³) or lower (*2)
¹³¹ I	: 3.7×10 ⁻⁸	(Bq / cm ³) or lower (*1)
	: 7×10 ⁻⁹	(Bq / cm ³) or lower (*2)
³ H	: 3.7×10 ⁻⁵	(Bq / cm ³) or lower (*1)
¹⁴ C	: 4.0×10 ⁻⁵	(Bq / cm ³) or lower (*1)
	: 4×10 ⁻⁵	(Bq / cm ³) or lower (*2)
Total radioactive particulate matter (Total α rays)	: 1.5×10 ⁻¹⁰	(Bq / cm ³) or lower
Total radioactive particulate matter (Total β and γ rays)	: 1.5×10 ⁻⁹	(Bq / cm ³) or lower
Other radionuclides (nuclides that emit α rays)	: 4×10 ⁻¹⁰	(Bq / cm ³) or lower (represented by a value relative to total α)
Pu (α)	: 2×10 ⁻¹²	(Bq / cm ³) or lower
Other radionuclides (nuclides that do not emit α rays)	: 4×10 ⁻⁹	(Bq / cm ³) or lower (represented by a value relative to total β (γ))
⁹⁰ Sr - ⁹⁰ Y	: 4×10 ⁻¹⁰	(Bq / cm ³) or lower
¹⁰⁶ Ru - ¹⁰⁶ Rh	: 4×10 ⁻⁹	(Bq / cm ³) or lower
¹³⁷ Cs - ^{137m} Ba	: 4×10 ⁻⁹	(Bq / cm ³) or lower

4) Reprocessing Facilities (Gaseous Waste) (cont.)

Iodine [¹³¹ I] (Bq)	Tritium [³ H] (Bq)	Carbon [¹⁴ C] (Bq)
N.D.	¹² 1.9 × 10	¹¹ 1.8 × 10
¹⁰ 1.6 × 10	¹⁴ 5.6 × 10	¹² 5.1 × 10
Iodine [¹³¹ I] (Bq) *5	Tritium [³ H] (Bq)	Carbon [¹⁴ C] (Bq) *5
N.D.	¹⁰ 1.7 × 10	N.D.
¹⁰ 1.7 × 10 ¹⁰ (-)	¹⁵ 1.9 × 10 ¹⁵ (1 × 10 ¹¹)	¹³ 5.2 × 10 ¹³ (-)

Radionuclide(s) categorized into the left group		
Strontium -Yttrium [⁹⁰ Sr - ⁹⁰ Y] (Bq) *5	Ruthenium -Rhodium [¹⁰⁶ Ru - ¹⁰⁶ Rh] (Bq) *5	Cesium - Barium [¹³⁷ Cs - ^{137m} Ba] (Bq) *5
N.D.	N.D.	N.D.
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*3 Three-month average control concentration targets (Bq/cm³)

*4 The figures in parentheses in the annual release target control level row indicate control targets set to be achieved by March 30, 2006.

*5 Since active tests were introduced in March 31, 2006, these radionuclides were added as items to be measured.