

④ Reprocessing Facilities

Facility		Radioactive gaseous waste		
		Krypton [⁸⁵ Kr] (Bq)	Iodine [¹²⁹ I] (Bq)	Iodine [¹³¹ I] (Bq)
Japan Nuclear Cycle Tokai Works (Reprocessing facility)	*1 Reprocessing Facilities Total	3.7 × 10 ¹⁵	9.9 × 10 ¹⁵	N.D. ¹⁵
	Annual release	16	9	10
	Target control level	8.9 × 10	1.7 × 10	1.6 × 10
Japan Nuclear Fuel Ltd. Reprocessing Plant (Reprocessing facility)	*2 Reprocessing Facilities Total	N.D.	N.D.	-
	Annual release	5.0 × 10 ¹³	1.0 × 10 ⁸	-
	Target control level	5.0 × 10	1.0 × 10	-

Facility		Radioactive liquid waste		
		Total α radioactivity (Bq)	Total β radioactivity (excluding ³ H) (Bq)	Strontium [⁸⁹ Sr] (Bq)
Japan Nuclear Cycle Tokai Works (Reprocessing facility)	*1 Annual release	N.D.	N.D.	N.D.
	Annual release	4.1 × 10 ⁹	9.6 × 10 ¹¹	1.6 × 10 ¹⁰
	Target control level	4.1 × 10	9.6 × 10	1.6 × 10
Japan Nuclear Fuel Ltd. Reprocessing Plant (Reprocessing facility)	*2 Annual release	-	-	-
	Annual release	-	-	-
	Target control level	-	-	-

Facility		Radioactive liquid waste		
		Cesium [¹³⁷ Cs] (Bq)	Cerium [¹⁴¹ Ce] (Bq)	Cerium -praseodymium [¹⁴⁴ Ce, ¹⁴⁴ Pr] (Bq)
Japan Nuclear Cycle Tokai Works (Reprocessing facility)	*1 Annual release	N.D.	N.D.	N.D.
	Annual release	5.5 × 10 ¹⁰	5.9 × 10 ⁹	1.2 × 10 ¹¹
	Target control level	5.5 × 10	5.9 × 10	1.2 × 10
Japan Nuclear Fuel Ltd. Reprocessing Plant (Reprocessing facility)	*2 Annual release	-	-	-
	Annual release	-	-	-
	Target control level	-	-	-

Notes: The radioactivity (Bq) of gaseous (or liquid) waste is obtained by multiplying the concentration of the radioactive material (Bq/cm³) in the released gas (or liquid).

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

The detection limits are as follows.

Radioactive gaseous waste

⁸⁵Kr : 2.4 × 10⁻³ (Bq/cm³) or less (*1)

: 2.0 × 10⁻² (Bq/cm³) or less (*2)

¹²⁹I : 3.7 × 10⁻⁸ (Bq/cm³) or less (*1)

: 4.0 × 10⁻⁸ (Bq/cm³) or less (*2)

¹³¹I : 3.7 × 10⁻⁸ (Bq/cm³) or less

³H : 3.7 × 10⁻⁵ (Bq/cm³) or less (*1)

¹⁴C : 4.0 × 10⁻⁵ (Bq/cm³) or less

Total radioactive particulate matter (Total α rays) : 1.5 × 10⁻¹⁰ (Bq/cm³) or less

Total radioactive particulate matter (Total β and γ rays) : 1.5 × 10⁻⁹ (Bq/cm³) or less

Other radionuclides (nuclides that emit α rays) : 4.0 × 10⁻¹⁰ (Bq/cm³) or less (*2)

Other radionuclides (nuclides that do not emit α rays) : 4.0 × 10⁻⁹ (Bq/cm³) or less (⁶⁰Co value was used) (*2)

④ Reprocessing Facilities (cont.)

Radioactive gaseous waste					
Tritium [³ H] (Bq)	Carbon [¹⁴ C] (Bq)	Total radioactive particulate matter		Other radionuclides (nuclides that emit α rays) (Bq)	Other radionuclides (nuclides that do not emit α rays) (Bq)
		[total α] (Bq/cm ³)	[total βγ] (Bq/cm ³)		
2.8 × 10 ¹²	1.7 × 10 ¹¹	N.D.	N.D.	-	-
5.6 × 10 ¹⁴	5.1 × 10 ¹²	*3 2.2 × 10 ⁻⁸	*3 1.1 × 10 ⁻⁴	-	-
7.5 × 10 ⁹	-	-	-	N.D.	N.D.
1.0 × 10 ¹¹	-	-	-	6.1 × 10 ⁶	1.0 × 10 ⁷

Radioactive liquid waste				
Strontium [⁹⁰ Sr] (Bq)	Zirconium -niobium [⁹⁵ Zr- ⁹⁵ Nb] (Bq)	Ruthenium [¹⁰³ Ru] (Bq)	Ruthenium -Rhodium [¹⁰⁶ Ru- ¹⁰⁶ Rh] (Bq)	Cesium [¹³⁴ Cs] (Bq)
N.D.	N.D.	N.D.	N.D.	N.D.
3.2 × 10 ¹⁰	4.1 × 10 ¹⁰	6.4 × 10 ¹⁰	5.1 × 10 ¹¹	6.0 × 10 ¹⁰
-	-	-	-	-
-	-	-	-	-

Radioactive liquid waste					
Tritium [³ H] (Bq)	Iodine [¹²⁹ I] (Bq)	Iodine [¹³¹ I] (Bq)	Plutonium [Pu (α)] (Bq)	Other radionuclides (nuclides that emit α rays) (Bq)	Other radionuclides (nuclides that do not emit α rays) (Bq)
1.3 × 10 ¹⁴	1.9 × 10 ⁷	N.D.	6.0 × 10 ⁶	-	-
1.9 × 10 ¹⁵	2.7 × 10 ¹⁰	1.2 × 10 ¹¹	2.3 × 10 ⁹	-	-
9.0 × 10 ⁹	N.D.	-	-	N.D.	N.D.
5.6 × 10 ¹⁰	3.0 × 10 ⁷	-	-	1.3 × 10 ⁸	6.3 × 10 ⁹

Radioactive liquid waste

Total α radioactivity : 1.1 × 10⁻³ or less

Total β radioactivity (excluding ³H)
: 2.2 × 10⁻² or less

⁸⁹Sr : 2.2 × 10⁻³ or less

⁹⁰Sr : 1.1 × 10⁻³ or less

⁹⁵Zr-⁹⁵Nb : 4.3 × 10⁻³ or less

¹⁰³Ru : 1.1 × 10⁻³ or less

¹⁰⁶Ru-¹⁰⁶Ru : 3.2 × 10⁻² or less

¹³⁴Cs : 1.1 × 10⁻³ or less

¹³⁷Cs : 1.8 × 10⁻³ or less

¹⁴¹Ce : 2.2 × 10⁻³ or less

¹⁴⁴Ce-¹⁴⁴Pr : 2.2 × 10⁻² or less

³H : 3.7 × 100 or less (*1)

Unit: Bq/cm³

¹²⁹I : 1.4 × 10⁻³ (Bq/cm³) or less (*1)

: 2.0 × 10⁻³ (Bq/cm³) or less (*2)

¹³¹I : 1.8 × 10⁻³ (Bq/cm³) or less

Pu (α) : 3.7 × 10⁻⁵ (Bq/cm³) or less

Other radionuclides (nuclides that emit α rays)

: 4.0 × 10⁻³ (Bq/cm³) or less (*2)

Other radionuclides (nuclides that do not emit α rays)

: 2.0 × 10⁻² (Bq/cm³) or less

(the ⁶⁰Co value was used) (*2)

*3 Three-month average control concentration targets