

Japan Atomic Energy Agency, Tokai Research and Development Center, Nuclear Fuel Cycle Engineering Laboratories, Reprocessing Facility (1st quarter of FY 2007)

Measured object	Sampling		Measurement		Measured value		Unit	*Comparative area	Remarks	Usual range of fluctuation (Note 3)
	Sampling point	Frequency	Object	Frequency	Object	Min to Max				
Seawater	Near discharge outlet: 5 points (A mixture of samples from the 5 points was measured)	Once/3 months	Total β radioactivity	Once/3 months	Total β radioactivity	ND	Bq/L	/	Data at Kuji-Oki and Isozaki-Oki will be reported in the 2nd and 4th quarters. Data at about 20 km north will be reported in the 2nd quarter.	ND
		Once/6 months	³ H	Once/6 months	³ H	ND				ND
	Kuji-Oki and Isozaki-Oki: 2 points	Once/6 months	Total β radioactivity	Once/6 months	Total β radioactivity	ND				ND
		Once/year	³ H	Once/year	³ H	ND				ND
About 20 km north: 1 point*	Once/year	Total β radioactivity	Once/year	Total β radioactivity	ND	ND	Bq/L	/	Will be reported in 2nd quarter.	ND - 0.0020
	Once/year	³ H	Once/year	³ H	ND	ND				
Near discharge outlet: 5 points (A mixture of samples from the 5 points was measured)	Kuji-Oki and Isozaki-Oki: 2 points	Once/6 months	Nuclide analysis	Once/6 months	⁹⁰ Sr	ND	Bq/kg dry	/		ND - 0.13
					¹³⁷ Cs	ND				ND
About 20 km north: 1 point*	Once/6 months	Nuclide analysis	Once/6 months	¹⁰⁶ Ru	ND	ND	ND	ND	ND	
				¹³⁴ Cs	ND	ND	ND	ND		
Kuji-Oki and Isozaki-Oki: 2 points	Once/6 months	Nuclide analysis	Once/6 months	¹³⁷ Cs	ND	ND	ND	ND	ND - 1.4	
				¹⁴⁴ Ce	ND	ND	ND	ND		
About 20 km north: 1 point*	Once/6 months	Nuclide analysis	Once/6 months	^{238,240} Pu	0.40 - 0.60	0.54	0.54	0.54	0.17 - 0.90	
Marine organism	White bait	Tokai village offshore: 1 point About 10 km beyond: 1 point*	Nuclide analysis	Once/3 months	⁹⁰ Sr	ND	Bq/kg raw	/		ND
					¹⁰⁶ Ru	ND				ND
					¹³⁷ Cs	ND				ND
					¹³⁷ Cs	0.048				0.058
	¹⁴⁴ Ce	ND	ND	ND						
	^{238,240} Pu	ND	ND	ND						
	Flatfish or flounder	Tokai village offshore: 1 point About 10 km beyond: 1 point*	Nuclide analysis	Once/3 months	⁹⁰ Sr	ND	Bq/kg raw	/	Object: flatfish	ND
					¹⁰⁶ Ru	ND				ND
					¹³⁷ Cs	ND				ND
					¹³⁷ Cs	0.067				0.051
	¹⁴⁴ Ce	ND	ND	ND						
	^{238,240} Pu	ND	ND	ND						
	Shellfish	Kuji beach offshore: 1 point About 10 km beyond: 1 point*	Nuclide analysis	Once/3 months	⁹⁰ Sr	-	Bq/kg raw	/	Sampling impossible at Kuji beach offshore. Object of about 10 km beyond: clam	ND
					¹⁰⁶ Ru	ND				ND
					¹³⁷ Cs	-				ND
					¹³⁷ Cs	-				ND
¹⁴⁴ Ce	-	ND	ND							
^{238,240} Pu	-	ND	ND							
Brown algae (seaweed, brown seaweed, etc.)	Kuji beach offshore: 1 point Isozaki offshore: 1 point About 10 km beyond: 1 point*	Nuclide analysis	Once/3 months	⁹⁰ Sr	0.022, 0.026	Bq/kg raw	/	Object: seaweed, Eisenia	0.034	
				¹⁰⁶ Ru	ND				ND	
				¹³⁷ Cs	ND				0.042	ND - 0.094
				¹⁴⁴ Ce	ND				ND	ND
^{238,240} Pu	ND	ND	ND - 0.0089							
Fishing net	Fishing net towed at Tokai village offshore	Once/3 months	Absorbed dose	Once/3 months	β radiation	ND	nGy/h	/	ND	
Hull	Deck	Once/3 months	Absorbed dose	Once/3 months	γ radiation	ND	nGy/h	/	ND	
			Surface dose		γ radiation	ND	nGy/h	/	ND	
Coastal water	Kuji beach coast: 1 point Ajigaura coast: 1 point	Once/6 months	Total β radioactivity	Once/6 months	Total β radioactivity	ND	Bq/L	/		ND - 0.085
			³ H		Once/6 months	³ H				ND
	About 20 km north and south: 1 point at each*	Once/6 months	Nuclide analysis	Once/year	⁹⁰ Sr	ND	Bq/L	/	Will be reported in 3rd quarter.	ND - 0.0021
					¹⁰⁶ Ru	ND				ND
					¹³⁷ Cs	ND				ND
					¹⁴⁴ Ce	ND				ND
^{238,240} Pu	ND	ND	ND - 0.000075							
Coastal sand	Kuji beach coast: 1 point Ajigaura coast: 1 point About 20 km north and south: 1 point at each*	Once/3 months	Surface dose	Once/3 months	β radiation	64, 70	min ⁻¹	/		52 - 86
					γ radiation	29, 38				nGy/h

(Note 1) ND: indicates below the determination limit.

(Note 2) *: indicates the comparative area.

(Note 3) The usual range of fluctuation is that in the past 10 years from FY 1997 to FY 2006.

(Note 4) The usual range of fluctuation is that in the past 3 years from FY 2004 to FY 2006.

(Note 4)

Measured object	Sampling		Measurement		Measured value			*Comparative area	Remarks	Usual range of fluctuation (Note 3)	
	Sampling point	Frequency	Object	Frequency	Object	Min to Max	Unit	Min to Max		Min to Max (Note 4)	
Air radiation	Dose rate	Inside environmental monitoring area: 9 points	Continuously	γ radiation	Continuously	Monitoring post	35 - 44	nGy/h	/	Eight monitoring posts	33 - 46 (42±9)
		Outside environmental monitoring area: 3 points				Monitoring station	32 - 36			32	Four monitoring stations
Air radiation	Cumulative dose (TLD)	Inside environmental monitoring area: 15 points	Continuously	γ radiation	Once/3 months	γ radiation	60 - 110	μGy/91 days	50 - 100	From March 27 to June 26	40 - 120 (80±40)
		Outside environmental monitoring area: 25 points									
Air	Air-borne dust	Inside environmental monitoring area: 3 points	Continuously	Total α radioactivity	Once/week	Total α radioactivity	ND - 0.048	mBq/m ³	0.022 - 0.052		ND - 0.088
				Total β radioactivity	Once/3 months	Total β radioactivity	ND		ND		ND - 0.93
		Outside environmental monitoring area: 4 points	Nuclide analysis	⁹⁰ Sr	ND	ND	ND	ND			
				¹³⁷ Cs	ND	ND	ND	ND			
	Outside environmental monitoring area: 4 points	Nuclide analysis	^{239,240} Pu	ND	ND	ND	ND				
Iodine	Inside environmental monitoring area: 1 point	Continuously	¹³¹ I	Once/week	¹³¹ I	ND	mBq/m ³	ND		ND	
Gaseous beta radioactivity concentration	Inside environmental monitoring area: 1 point	Continuously	⁸⁵ Kr	Continuously	⁸⁵ Kr	ND	kBq/m ³	ND		ND	
³ H in water	Outside environmental monitoring area: 2 points	Continuously	³ H	Once/month	³ H	ND	Bq/L	ND		ND - 6.9	
Rain water	Inside environmental monitoring area: 1 point	Continuously	³ H	Once/month	³ H	ND	Bq/L	/		ND - 4.8	
Settled dust	Inside environmental monitoring area: 1 point	Continuously	Total β radioactivity	Once/month	Total β radioactivity	12 - 14	Bq/m ²	/		ND - 65	
Drinking water	Inside environmental monitoring area: 1 point	Once/3 months	Total β radioactivity	Once/3 months	Total β radioactivity	0.044 - 0.057	Bq/L	0.063		ND - 0.090	
			Outside environmental monitoring area: 3 points	³ H	Once/3 months	³ H		ND		ND	ND
Leaf vegetable	Outside environmental monitoring area: 3 points	Once/3 months	Nuclide analysis	¹³¹ I	Once/3 months	¹³¹ I	ND	Bq/kg raw	ND	Object: spinach	ND
				⁹⁰ Sr	Once/year	⁹⁰ Sr	/		/		ND - 0.21
				¹³⁷ Cs	Once/year	¹³⁷ Cs	/		/		ND
				^{239,240} Pu	Once/year	^{239,240} Pu	/		/		ND
Polished rice	Outside environmental monitoring area: 3 points	Once/year	¹⁴ C	Once/year	¹⁴ C	/	Bq/g*carbon	/	Will be reported in 3rd quarter.	0.23 - 0.27	
			⁹⁰ Sr	Once/year	⁹⁰ Sr	/	Bq/kg raw	/		ND	
Milk	Outside environmental monitoring area: 2 points	Once/3 months	¹³¹ I	Once/3 months	¹³¹ I	ND	Bq/L raw	ND	Will be reported in 3rd quarter.	ND	
			⁹⁰ Sr	Once/year	⁹⁰ Sr	/		/		ND - 0.034	
Surface soil	Inside environmental monitoring area: 2 points	Once/year	Nuclide analysis	⁹⁰ Sr	Once/year	⁹⁰ Sr	/	Bq/kg dry	/	Will be reported in 3rd quarter.	ND - 6.1
				¹³⁷ Cs	Once/year	¹³⁷ Cs	/		/		2.8 - 36
				^{239,240} Pu	Once/year	^{239,240} Pu	/		/		0.058 - 1.2
River water	Shinkawa: 3 points Kuji river upstream: 1 point*	Once/6 months	Total β radioactivity	Once/6 months	Total β radioactivity	ND	Bq/L	0.067		ND - 0.21	
			³ H	Once/6 months	³ H	ND		ND		ND	
River-bottom soil	Shinkawa: 3 points Kuji river upstream: 1 point*	Once/6 months	Total β radioactivity	Once/6 months	Total β radioactivity	570 - 600	Bq/kg dry	700		450 - 720	

(Note 1) ND: indicates below the determination limit.

(Note 2) *: indicates the comparative area.

(Note 3) The usual range of fluctuation of air radiation is that in the past 3 years from FY 2004 to FY 2006; the usual range of fluctuation of other measured objects is that in the past 10 years from FY 1997 to FY 2006. As for cumulative dose, howe

(Note 4) As for the usual range of fluctuation of air radiation, the top values indicate the min to max, and bottom values in parentheses indicate the average ±3σ. Values of other measured objects indicate min to max.