## Status of Gaseous and Liquid Waste Management

① Commercial Power Reactor Facilities

		Radioactive gaseous waste Radioactivity			
		Rauloactive	- Suscous wasic		
				Radioactive	
		Noble gas	Iodine	liquid waste	
Power plant				(excluding <sup>3</sup> H)	
		(Bq)	(Bq)	(Bq)	
*1	Nuclear reactor			4	
Japan Atomic Power	facilities total		-	$2.8 \times 10$	
Company Co., Ltd	Annual release			7	
Tokai Power Station	Target control level	-	-	$7.4 \times 10$	
Japan Atomic Power	Nuclear reactor				
Company Co., Ltd.	facilities total	N.D.	N.D.	N.D.	
	Annual release	15	10	10	
Tokai Daini Power Station	Target control level	$1.4 \times 10$	5.9 × 10	$3.7 \times 10$	
Japan Atomic Power	Nuclear reactor	8			
Company Co., Ltd.	facilities total	$7.4 \times 10$	N.D.	N.D.	
Tsuruga Power Station	Annual release	15	10	10	
e	Target control level	$1.7 \times 10$	$3.8 \times 10$	$7.4 \times 10$	
Tohoku Electric Power Co.,	Nuclear reactor			,	
Inc.	facilities total	N.D.	N.D.	N.D.	
Onagawa Nuclear Power	Annual release	15	11	10	
Station	Target control level	$3.8 \times 10^{-10}$	$1.3 \times 10^{-11}$	1.1 × 10	
Tohoku Electric Power Co.,	Nuclear reactor				
Inc.	facilities total	N.D.	N.D.	N.D.	
Higashidori Nuclear Power	Annual release	15	10	9	
Station	Target control level	1.2 × 10	2.0 × 10	3.7 × 10	
Tokyo Electric Power Co.,	Nuclear reactor	1.2 10	2.0 10	5.7 10	
Inc.	facilities total	N.D.	N.D.	N.D.	
Fukushima Daiichi Nuclear	Annual release	15. 15	11 11	11.D.	
Power Station	Target control level	8.8 × 10	4.8 × 10	$2.2 \times 10^{-11}$	
Tokyo Electric Power Co.,	Nuclear reactor	0.0 / 10	4.0 / 10	2.2 ~ 10	
Inc.	facilities total	N.D.	N.D.	N.D.	
Fukushima Daini Nuclear	Annual release	15	11	11	
Power Station	Target control level	$5.5 \times 10^{13}$	$2.3 \times 10^{-11}$	$1.4 \times 10^{11}$	
Tokyo Electric Power Co.,	Nuclear reactor	5.5 ~ 10	2.3 ~ 10	1.4 ^ 10	
Inc.	facilities total	N.D.	N.D.	N.D.	
Kashiwazaki-Kariwa Nuclear	Annual release	N.D. 15			
Power Station		-	11 2 2 × 10	11 2.5 × 10	
Chubu Electric Power Co.,	Target control level Nuclear reactor	6.7 × 10	2.3 × 10	2.5 × 10	
Inc.	facilities total	N.D.	N.D.	N.D.	
Hamaoka Nuclear Power Station	Annual release	$6.3 \times 10^{15}$	$3.1 \times 10^{-11}$	$1.8 \times 10^{11}$	
Station	Target control level Nuclear reactor	0.3 ~ 10	5.1 ~ 10	1.8 ^ 10	
Hokuriku Electric Power Co.		ND	ND	ND	
	facilities total	N.D.	N.D.	N.D.	
Shika Nuclear Power Station	Annual release	15 1 1 × 10	10 2.0 × 10	10 2 7 × 10	
	Target control level	1.1 × 10	3.0 × 10	$3.7 \times 10$	
Chugoku Electric Power Co.,	Nuclear reactor		N.D.	N.D.	
Inc.	facilities total	N.D.	N.D.	N.D.	
Shimane Nuclear Power	Annual release	15	11	10	
Station	Target control level	$2.5 \times 10$	$1.3 \times 10$	$7.4 \times 10$	

\*1: Due to the commencement of the decommissioning process on December 4, 2001, <sup>60</sup>Co, <sup>134</sup>Cs and <sup>137</sup>Cs are the subjects of the annual release control targets for radioactive liquid waste.

		Radioactive gaseous waste		Radioactivity
				Radioactive
		Noble gas	Iodine	liquid waste
Power plant		°,	$\begin{bmatrix} 131 \end{bmatrix}$	(excluding <sup>3</sup> H)
		(Bq)	(Bq)	(Bq)
Hokkaido Electric Power Co.,	Nuclear reactor	9		
Inc.	facilities total	$3.4 \times 10$	N.D.	N.D.
Tomari Power Station	Annual release	15	10	10
	Target control level	$1.1 \times 10$	$1.1 \times 10$	$7.4 \times 10$
Kansai Electric Power Co.,	Nuclear reactor	9		
Inc.	facilities total	1.9 × 10	N.D.	N.D.
Mihama Power Station	Annual release	15	10	11
	Target control level	2.1 × 10	$7.4 \times 10$	$1.1 \times 10$
Kansai Electric Power Co.,	Nuclear reactor	10		5
Inc.	facilities total	$1.6 \times 10$	N.D.	3.1 × 10
Takahama Power Station	Annual release	15	10	11
	Target control level	$3.3 \times 10$	$6.2 \times 10$	$1.4 \times 10$
Kansai Electric Power Co.,	Nuclear reactor	11	8	
Inc.	facilities total	4.1 × 10	$1.9 \times 10$	N.D.
Ohi Power Station	Annual release	*2 15	11	11
	Target control level	3.9 × 10	$1.0 \times 10$	$1.4 \times 10$
Shikoku Electric Power Co.,	Nuclear reactor	9		
Inc.	facilities total	3.9 × 10	N.D.	N.D.
Ikata Power Plant	Annual release	15	10	11
	Target control level	$1.5 \times 10$	8.1 × 10	1.1 × 10
Kyushu Electric Power Co.,	Nuclear reactor	10		
Inc.	facilities total	$1.6 \times 10$	N.D.	N.D.
Genkai Nuclear Power Plant	Annual release	15	10	11
	Target control level	$2.2 \times 10$	5.9 × 10	$1.4 \times 10$
Kyushu Electric Power Co.,	Nuclear reactor	10		
Inc.	facilities total	$4.4 \times 10$	N.D.	N.D.
Sendai Nuclear Power Station	Annual release	15	10	10
	Target control level	$1.6 \times 10$	$6.2 \times 10$	$7.4 \times 10$

Notes: The radioactivity (Bq) of gaseous (or liquid) waste is obtained by multiplying the concentration of the radioactive material (Bq/cm<sup>3</sup>) in the released gas (or liquid) by the amount of released gas (or liquid) (m<sup>3</sup>). Values lower than the detection limit of radioactivity are indicated as N.D.

The detection limits are as follows.

Radioactive noble gases:  $2 \times 10^{-2}$  (Bq/cm<sup>3</sup>) or less Radioactive iodine:  $7 \times 10^{-9}$  (Bq/cm<sup>3</sup>) or less

Radioactive liquid waste (excluding <sup>3</sup>H):  $2 \times 10^{-2}$  (Bq/cm<sup>3</sup>) or less ( the <sup>60</sup>Co value is used)

\*2: According to the amendment to the Reactor Facility Safety Regulations, the annual gaseous radioactive release control target levels for noble gases have been changed since October 2004.