

Government Plan to Reduce Dioxins Levels Resulting from Business Activities in Japan
(Outline)

1. Reduction Target of Estimated Emission of Dioxins by Business Fields

Reduction target of emission of dioxins in FY 2010 for each business fields in Japan is as follows:

WHO-TEF(1998) (Unit: g-TEQ/year)

Type of Businesses	Reduction Target	(Reference) Estimated emission	
		Emission in 1997	Emission in 2003
1. Waste Treatment	164 ~ 189	7,205 ~ 7,658 (Water) 5.3	219 ~ 244 (Water) 0.60
(1) Municipal solid waste incinerators	51	5,000 (Water) 0.044	71 (Water)0.004
(2) Industrial waste incinerators	50	1,505 (Water)5.3	75 (Water) 0.60
(3) small-scale waste incinerators	63 ~ 88	700 ~ 1,153	73 ~ 98
2. Industry	146	470 (Water) 6.3	149 (Water)0.93
(1) Electric furnaces for steel making	80.3	229	80.3
(2) Facilities for sintering steel	35.7	135	35.7
(3) Zinc recovering facilities (furnaces for roasting, sintering, smelting and melting, dry kilns)	5.5	47.4 (Water) 0.0036	5.5 (Water) 0.0066
(4) Aluminum alloy manufacturing (furnaces for roasting and melting, dry kilns)	14.3	31.0 (Water) 0.34	17.4 (Water) 0.029
(5) Copper recovering facilities	0.048	0.053	-
(6) Pulp manufacturing (bleaching process)	0.46	0.74 (Water) 0.74	0.46 (Water) 0.46
(7) Other facilities	9.9	26.5 (Water) 5.2	9.9 (Water) 0.44
3. Others	4.4 ~ 7.7	4.8 ~ 7.4 (Water) 1.2	4.4 ~ 7.3 (Water) 0.56
Total	315 ~ 343	7,680 ~ 8,135 (Water) 12.8	372 ~ 400 (Water) 2.1

Notes : 1. The value of target reduction is expressed in annual quantity emitted after the treatment of exhaust gas and waste Water to reduce dioxins.

2. "Total reduction target" is 95.8 ~ 95.9% reduction compared to estimated emission of 1997 and 14.3 ~ 15.3 % reduction compared to that of 2003.

3. "Others" includes crematories, cigarette smoke, automobile exhaust gas, and sewage final

treatment plant and disposal site. The increase of target reduction is the increase of estimated emission from crematories due to increased aging population.

4. "Water" in the table indicates emission to the water body. The figure for water is included in the figure above in the same field.
5. "-" indicates facilities are not operated for the respective year.
6. When values are expressed in the range, estimation is conducted by multiple methods.

2. Measures to be performed by the businesses to achieve the target

- (1) Complying with emission standards, etc.
 - (i) Complying with emission standards for air and water.
 - (ii) Prevention of environment pollution by dioxins, including accident prevention.
 - (iii) Appropriate measures to be taken for large scale emission accident of dioxins.
 - (iv) Monitoring of pollution by dioxins.
 - (v) Designation of pollution control supervisor responsible for monitoring utilization of dioxins generating facilities.
 - (vi) Others (including prohibition of open air incineration).
- (2) Management of handling of designated chemical substances including dioxins including manufacture, utilization.
- (3) Promotion of reduction, reuse and recycling of wastes which generate dioxins.

3. Measures to be performed by the national and local governments to promote recycling and to reduce wastes which generate dioxins

- (1) Measures for reducing wastes
 - (i) Promotion of measures based on the Fundamental Law for Establishing a Sound Material-Cycle Society, etc.
 - (ii) Promotion of measures based on Wastes Disposal and Public Cleansing Law, etc.
 - (iii) Support measures for capital investment incurred for wastes reduction.
- (2) Achieving the target for waste reduction by the entire government
- (3) Others
 - (i) Reduction and appropriate treatment of wastes generated from governmental facilities.
 - (ii) Enhancement of environmental education and studies.

4. Other measures required to reduce dioxins emission resulting from business activities

- (1) Accurate and smooth implementation of Stockholm Convention on Persistent Organic Pollutants (developing and implementing an action plan, promoting use of best available technology (BAT) and best environment practice (BEP), etc.)
- (2) Promotion of measures for dioxins sources
 - (i) Promotion of wastes management.
 - (ii) Promotion of measures for emission sources which are not under control.
 - (iii) Promotion of financial and technical support to local governments in establishing waste incineration facilities, and facilitation of their development. Promotion of upgrading equipments for industrial waste incineration plants.

- (iv) Support measures for capital investment used for emission reduction.
- (3) Obtaining information on dioxins emission status
 - (i) Compiling and publicizing a dioxins emission inventory.
 - (ii) Implementation of constant monitoring and other field survey for dioxins and measures based on the survey results.
 - (iii) Promotion of effective and efficient measurement such as introduction of quick and low cost simple measuring method and promotion of quality control and quality assurance.
- (4) Promotion of research and development and technology development for dioxins
- (5) Appropriate provision and disclosure of information to general public
 - (i) Provision and disclosure of information on dioxins, such as status of impacts on human health and environment.
 - (ii) Organized PR activities for reducing wastes which causes generation of dioxins.