

**Toshiba Semiconductor (Thailand) Co., Ltd. Site Report Information**

Address: 135 Moo5, Bangkadi Industrial Park, Tivanon Rd, Pathumthani 12000, Thailand

Lot area: 99,080 m<sup>2</sup>, Building area: 31,862 m<sup>2</sup>, Green ratio: 52%

Establishment: 10, 10, 1990, Employees: 1,300 (as of Mar 2011)

Major products: Small Signal Device, Power Device, OPTO Device

ISO 14001 registered: September 1998, Integrated certification as Semiconductor Company: August 2009, The term of validity: August 2013 (Renewed in August 2010), Certificate number: EC98J2014



**Message from Environmental Preservation Chief**

Toshiba Semiconductor (Thailand) Co., Ltd. is manufacturing and exporting semiconductor devices. We have introduced all advanced technology to use in our manufacturing process to ensure the quality of product and strive to be excellent.

All employees have committed to conducting business with awareness on environment management system

This year TST strongly promote to preserve biodiversity and awareness "ECO style"



Environmental Preservation Chief  
Mr. Yasuo Ashizawa, President

**Major environmental activities in 2010**

Environmental audit

- ISO 14001:2004 annual surveillance on June 9-10'11: 4 Observations, 2 Opportunity For Improvement
- Toshiba Environmental Audit, Feb 10-11, 11 : TST has scored Environmental management audit A(98.4%), Plant audit A(97.4%)

Legal compliance

- Compliance with Thai laws and regulations

The 4th Voluntary plan result

- Emission of chemical substance 0.334 ton (target <= 0.936 ton).
- CO<sub>2</sub> emission 35,277 t-CO<sub>2</sub> (target <= 68,767 ton-CO<sub>2</sub>)
- Waste generated 1,269 Ton (target <= 1,653 ton)
- Water reduction 409 thousand ton (target <= 566 thousand ton)
- Waste sent to landfill 0.063 % (target <= 0.5%)

Environmental awareness activities for employee

Continue promote 3R Project for carton box, Glass, bottle and used cooking oil.

Collaboration with local people

Participation in various environmental events : Plant mangrove forest for 3,000 trees, Donate old magazine for the foundation of the blind, Donate used A4 paper for recycle for tree project, Donate tab of can to the Prostheses foundation, Donate money for environment magazine member for school..

**Development of products and environmental technologies, Environmental consideration point**

Toshiba Semiconductor (Thailand) Co., Ltd held its 20<sup>th</sup> anniversary celebration at the 5<sup>th</sup> Gymnasium Sports Center, Thammasart University. On the occasion, the company led by its **President Mr. Yasuo Ashizawa (left)** has donated 200,000 baht to Thai Society for the Prevention of Cruelty to Animals (TSPCA) support its initiatives to end cruelty to animals in Thailand.

To make public relation of TST good image by TSPCA magazine and website



Mr. Ashizawa, President donated 200,000 Baht TSPCA

**TST product**



Our main semiconductor products are Small signal devices, Power devices, Opto devices. These devices have implemented miniaturization and high efficiency that enabled energy efficient and resource saving solution for applications

**Environmental communication**

- Publication of annual Environmental report
- Participation in Environmental Good Governance Project (Continue).
- Participation in Open Factory Project (Continue)
- Promote "ECO Style" and "Green world by Bio-Diversity" together with the 20th TST Anniversary to all employee by T-Shirt



Promote "ECO style" and "Green World by Bio-Diversity" by T-Shirt

[ Internal Use Only ]

**Toshiba Semiconductor (Thailand) Co., Ltd. Environmental Statement of Philosophy  
Vision**

Recognizing Toshiba Group's Basic Policy for the Environment that the Earth is an irreplaceable asset and it is humankind's duty to hand it on to future generations in a sound state, Toshiba Semiconductor Company Group is pursuing creation of new values and symbiosis with the Earth. Also Toshiba Semiconductor Company Group contributes to the development of a sustainable society by promoting environmental activities designed to contribute to the realization of a world that is low-carbon, recycling-base and nature-harmonious.

**Policy**

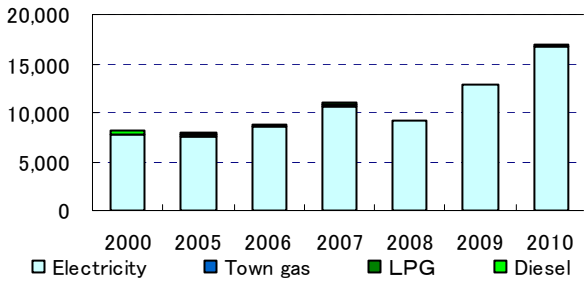
Toshiba Semiconductor (Thailand) Co., Ltd, based upon Toshiba Semiconductor Company Group's Environmental Statement of Philosophy, considers environmental stewardship to be one of management's primary responsibilities, and promotes environmental activities proactively to reduce the environmental impact in the manufacturing process for semiconductor devices in harmony with economic activities. Toshiba Semiconductor (Thailand) Co., Ltd strives to continuously improve and effectively apply the environmental management of its business activities including with regard to biodiversity which comprehend manufacturing, setting and review objectives and targets with respect to the reduction of environmental impact and pollution prevention, and execute proactive environmental measures including the following

1. In order to preserve biodiversity, Toshiba Semiconductor Company Group strives to assess and mitigate the environmental impact of its business activities on biodiversity and seeks to make a better contribution to society.
2. To require all its staff to follow all the law and regulations enforced in Thailand and to observe relevant international regulations, customer requirements and comply with the global policies of Toshiba Semiconductor Company and Toshiba Group.
3. Promoting reduction of TST contribution to global warming by applying appropriate technologies, improving productivity, implementing energy saving.
4. Promoting risk reduction on environmental issues by control chemical in use, applying appropriate technologies related to reduction of specified chemicals and implementation to reduce discharge.
5. To encourage its workers to conserve natural resources by being economical and efficient in the use of materials, water, electricity and promote 3R(reduce, reuse, recycle) activities together with appropriate technology.
6. To be leader of energy conservation compare with same business of Thailand.
7. To support the propagation of knowledge of environment and maintain good public relations inside and outside the company to help employee and people know, understand and apply good environmental practice.
8. To support social activity projects both inside and outside the company whose purpose is to remedy, conserve and improve the environment.
9. Managers or supervisors of each section are responsible for ensuring that their subordinates and subcontractors strictly and correctly follow the rules and regulations relevant to the environment.
10. To publicize these policies to all staff, all subcontractors and relevant sectors.

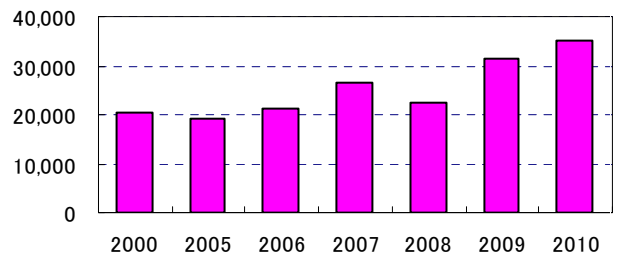
**(Mr. Yasuo Ashizawa)****President**Date : **3 May, 11** Rev.5

**Environmental load data**

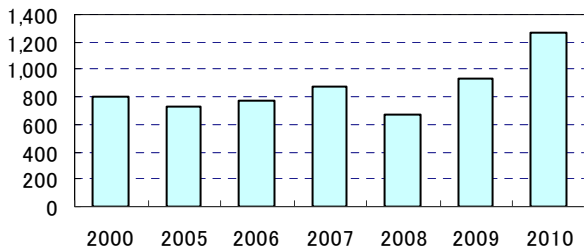
Energy usage (unit:kL)



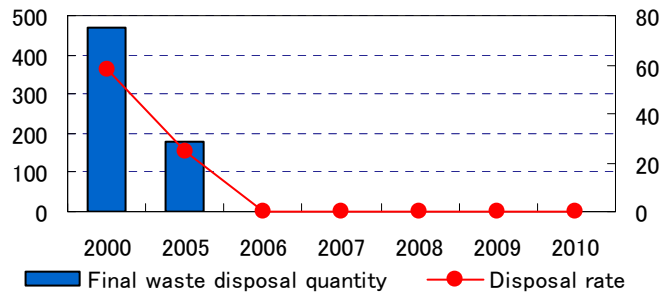
CO<sub>2</sub> emission (unit: ton-CO<sub>2</sub>)



Total waste produced (unit: ton)

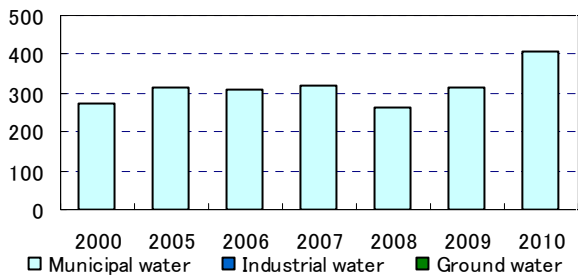


Final waste disposal quantity & disposal rate (unit: ton,%)

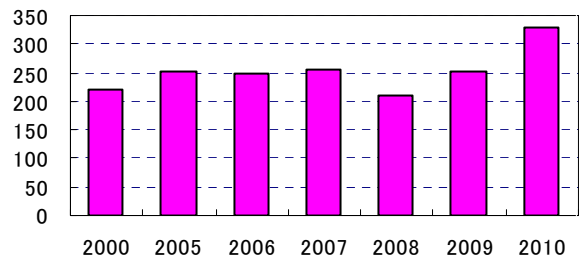


Major wastes: Plastic, Sludge, Metal, etc.

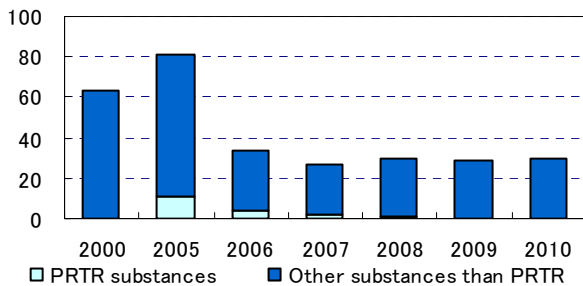
Water usage (unit: 1,000m<sup>3</sup>)



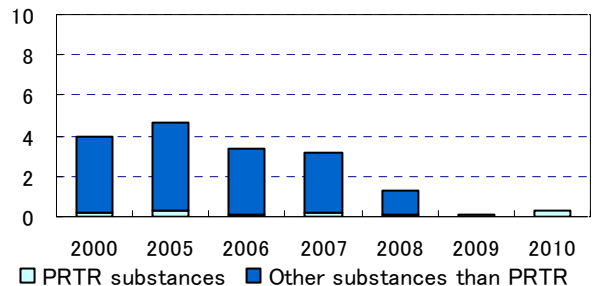
Wastewater volume (unit: 1,000m<sup>3</sup>)



Handing substances (unit: ton)



Substances volatilized and released to water (unit: ton)



Major chemical substances: HCl, CH<sub>3</sub>OH, Pb

**Compliance management**
Atmospheric measurement results (Boiler(Diesel oil): 2 units)

	3	Self-control value	Actual measurement	Measurement frequency
NOx (ppm)	200	100	15.03	Once/Year
SOx (ppm)	950	475	86.07	Once/Year
Soot & dust (mg/ppm)	240	120	5.1	Once/Year

Wastewater measurement results (major results) (Chemical treatment 2 plants,Electrical treatment 2 plant: Wastewater to be discharged to BIP (Wastewater treatment Center))

	Regulation value	Self-control value	Actual measurement	Measurement frequency
Hydrogen ion concentration (pH)	5-9	5.5-8.5	6.72-7.53	Once/Month
BOD (mg/L)	<500	<250	1.5-18	Once/Month
COD (mg/L)	<750	<375	12.5-96	Once/Month
SS (mg/L)	<200	<135	12-73	Once/Month
Nitrogen (mg/L)	<100	<50	0.65-14.75	Once/Month
Fluorine (mg/L)	Not applicable			

Noise & vibration measurement results

	Location: Time	Regulation value	Self-control value	Actual measurement	Measurement frequency
Noise (dB)	Lot boundary: Day	70 dBA	67 dBA	Point#1: 57.7,57 Point#2:60.8,62.2 Point#3:60.8,60.7	Once/6 month
	Lot boundary: Night	Not Applicable			
Vibration (dB)	Lot boundary: Day	Not Applicable			
	Lot boundary: Night	Not Applicable			

Other measurement results (Sewage Water Law: Major results)

	Regulation value	Self-control value	Actual measurement	Measurement frequency
Hydrogen ion concentration (pH)	Not Applicable			
BOD (mg/L)	Not Applicable			
SS (mg/L)	Not Applicable			

Environmental accidents, administrative advices and complaints

	State
Environmental accident	None
Environmental problem around the factory and in the local area	None
Administrative advice or direction	None
Complaint from neighboring residents	None