

**FUJITSU SEMICONDUCTOR LIMITED**  
**Akiruno Technology Center**  
**Environmental Report**  
**2010**



## 1. Welcome



Akiruno Technology Center  
Center Manager: Ikuo Kato

This center was established in July 2000 and celebrated its 10th anniversary this year. During this period, we have been continually reducing the environmental load emitted from business operations in this center for environmental risk reduction by utilizing an environmental management system. In addition, we have been always designing and developing semiconductor products in the views of "low power consumption," "compact size and light weight," and "high efficiency." We continue to work toward those points. Furthermore, we continuously promote the environmental social contributions and biodiversity preservation based on our local communities. Our web site introduces our efforts in the fiscal year 2009 including these activity results.

## 2. Introduction to Akiruno Technology Center



This center was established in July 2000 based on the fundamental principle, "project for the coexistence of the natural environment and cutting-edge IT technology."

This center develops, plans, and designs the cutting-edge LSIs used in a wide range of products that support our life-styles such as personal computers, mobile phones, and car navigation systems.

Name: FUJITSU SEMICONDUCTOR LIMITED, Akiruno Technology Center

Established: July 2000

Number of employees: 1300

Business: Basic technological development, product planning, and design of cutting edge LSIs

### 3. Aim and Achievement in Environmental Activities

#### ■ Report on objectives and results of activities in the year 2009

The environmental objectives and their results in the year 2009 are listed below. Since the semiconductor prototyping line was transferred to the Mie Plant in the year 2008, our environmental load was reduced to the one fourth for the amount of wastes and to four fifths for the emissions of CO<sub>2</sub> through energy consumption both compared to the amounts in the previous year.

Objectives in the year 2009	Result	Achievement Status
Reduce the emissions of CO <sub>2</sub> through energy consumption to the level of 13,500 ton-CO <sub>2</sub> or less.	The objective was achieved with 9,284 ton-CO <sub>2</sub> compared to the annual target of 13,500 ton-CO <sub>2</sub> (27% more reduction than the objective).	Success
Reduce the amount of wastes to the level of 120 ton or less.	The objective was achieved with 92 ton compared to the annual target of 120 ton or less (24% more reduction than the objective). This was achieved through further appropriate separations such as changing into valued products.	Success
Carry out 3 or more activities of environmental social contribution per year.	The objective was achieved (3 activities) The objective was achieved through the local cleanup activities, etc.	Success

#### ■ Objectives of activities in the year 2010

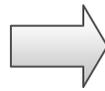
Starting from this fiscal year, particularly further more reductions of CO<sub>2</sub> emissions through energy consumption are required by the “system regarding emissions trading and the obligation to reduce total emissions of greenhouse gases” in Tokyo Metropolitan Ordinance on Environmental Preservation and the law regarding the rationalization of energy use. Setting as a shared issue, all of the staff members at this center will work together to fully comply with these laws.

Objectives in the Year 2010
Reduce the CO <sub>2</sub> emissions through energy consumption to 11,900 ton-CO <sub>2</sub> or less.
Reduce the amount of wastes to 120 ton or less.
Carry out 3 or more environmental social contribution activities per year based on the local community.
Hold 3 or more activities related to preservation, familiarization, and awareness of biodiversity for the local community.

## 4. Green Factories

### ■ Measures to save energy

The main energy saving measure in the year 2009 was to improve the electricity uses by revising the layout of the airconditioning outdoor units for computer equipment room, and we were able to reduce the emissions of CO<sub>2</sub> by about 17 ton per year compared to the existing level. We are planning to investigate the energy saving measures by sorting out the divisions (equipment) that consume large amounts of energy within the plant and take those measures in order from high cost-effective sections.



**Increase waste heat efficiency of airconditioning outdoor units for computer equipment room**  
Note: Relocated them to a well-ventilated location for releasing waste heat more easily

### ■ Zero emissions of wastes (measure for wastes reduction)

The amount of wastes increased in the year 2009 due to the centralization of the Keihin area offices and others; however, we were still able to achieve the reduction objective because we limited the wastes at the minimum by promoting to change the wastes into valued products. In addition, we are working to reduce the amount of wastes by composting food wastes from our cafeteria. The resultant organic fertilizer is distributed for free of charge to local residents during events and other occasions.

Furthermore, we worked on extracting "valuable products" from our "wastes" as much as possible by thoroughly sorting out the wastes in this center.

Main measures to reduce wastes: Promoting to change wastes into valued products, composting food wastes from the cafeteria, promoting separations (thorough separations of metal components, etc.)



Device for processing food wastes



Organic fertilizer

## 5. Environmental Social Contribution Activity

In the year 2009, we worked on preserving undeveloped woodlands near populated areas within Tokyo metropolitan area in cooperation with Tokyo Greenship Action. We also continued our annual "Cleanup Activity Around the Center."



Activity to preserve undeveloped woodlands near populated area



Cleanup activity around the center

## 6. Environmental Awareness Activities for Employees

In the environmental awareness month set in June, we held events on environmental education to inspire our employees.



Environmental lecture by external instructors



Workshop on separating garbage within the plant

## 7. Efforts for Safe and Secure Plants

We periodically check for changes in laws and regulations and confirm our compliance status. The compliance is also confirmed during the internal audits. There were no violations of laws and regulations in the year 2009.

### ■ Measures to counter risks

We have practiced risk management based on the environmental pollution risk management standards. In the year 2009, there was no instance of soil and groundwater contamination. We continue to work on reducing environmental risks through environmental risk education and others.

### ■ Preventing atmospheric and water pollutions

We have been monitoring environments according to Air Pollution Control Act, Water Pollution Control Act, Tokyo Metropolitan ordinances, and agreements with Akiruno City. In the year 2009, there was no instance of atmospheric and water pollutions. We continue to monitor the environment.

## 8. Compliance with Environment-Related Rules and Regulations

We hold environmental committee meetings to check the law revisions periodically. Compliance is also confirmed during the internal audits. There was no violation of laws and regulations in the year 2009.

## 9. Environmental Accounting

The Fujitsu Group introduced "Environmental Accounting" in the year 1998 and has been quantitatively understanding the costs and outcomes related to environmental protections and evaluating the environmental investment and its outcomes.

2009 Environmental accounting results table (unit: million yen)

Item	Scope	Cost	Outcome
Costs and outcomes within the operation area	Preventing pollutions, preserving the global environment, recycling resources, etc.	236	664
Costs and outcomes in upstream and downstream processes	Waste product recycling, green procurement, etc.	5	0
Management activity costs and outcomes	ISO14001, environmental education, environmental public relations, etc.	128	20
Research and development and solution business costs and outcomes	Research of environmentally friendly technology for products, etc.	0	0
Social activity costs and outcomes	Donation to and support of environmental preservation groups, etc.	0	0
Handling environmental damage costs and outcomes	Restoration from soil and groundwater contamination, etc.	0	0
<b>Total</b>		<b>369</b>	<b>684</b>

## 10. Environmental Management Systems



### ■ Integrated certification

The Fujitsu Group expanded the scope of our environmental management system conformed to ISO 14001 certified by the Japan Audit and Certification Organization (JACO) and Det Norske Veritas AS (DNV) to include overseas consolidated subsidiaries and acquired global integrated certification in March 2006. The scope of this global integrated certification as of March 2006 covers a total of 102 companies of 90 Fujitsu and domestic consolidated subsidiaries and 11 overseas consolidated subsidiaries.

The Akiruno Technology Center was evaluated as being compliant with ISO14001: 2004 based on the results of an update check by the Japan Audit and Certification Organization (JACO) on January 10th and 11th, 2006.

Date Fujitsu Group World-Wide  
integrated certification obtained: 23rd March 2006  
Certificate number: EC98J2005

### ■ Environmental audits

We have annual internal audits in order to reduce environmental loads and ensure our compliance with ISO standard requirements. The 2009 audit was conducted on 11 floors in the headquarters and the center.

## FUJITSU SEMICONDUCTOR LIMITED, Akiruno Technology Center

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