

THE POSSIBILITIES ARE INFINITE

FUJITSU

2000

Environmental Report

Focused on the Green



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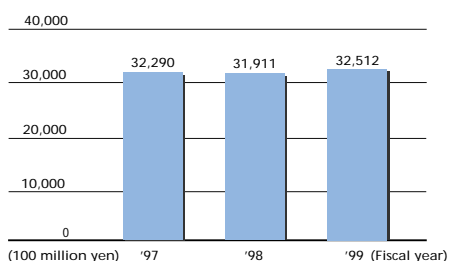
As part of its contribution to international forestation activities, Fujitsu is taking part in several forestation programs, focusing in particular on tropical rain forests in Southeast Asia. The cover illustration represents some mangrove trees that were planted in one of these programs.

* Newly added item. For main items, we have placed a comment from the people in charge.

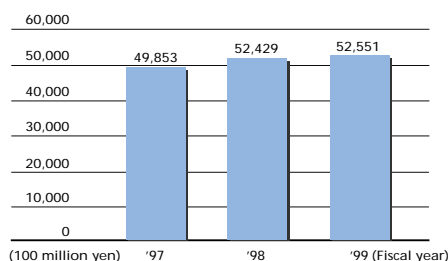
Corporate Profile (as of March 31, 2000)

Company name: FUJITSU LIMITED
 Address: Main Branch:
 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, Kanagawa 211-8588, JAPAN
 Office Headquarter:
 Marunouchi Center Bldg., 6-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8211, JAPAN
 Representative: Naoyuki Akikusa, President
 Date established: June 20, 1935
 Major businesses: Manufacture and sale of software and services, computers and information processing platforms, telecommunications systems, semiconductors and electronic devices.
 Capital: ¥306,246 million
 Financial year-end: March 31
 Employees: 43,627
 Group companies: Consolidated subsidiaries:
 493 [Japan: 134, overseas—Europe, Americas, Asia, Oceania: 359 (including 180 in ICL group, including 53 in Amdahl group)]
 Affiliates (using the applied equity method): 25 (including 9 in ICL group)

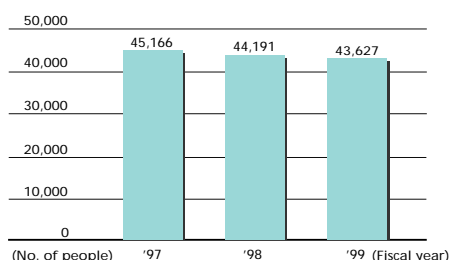
Net Sales (unconsolidated)



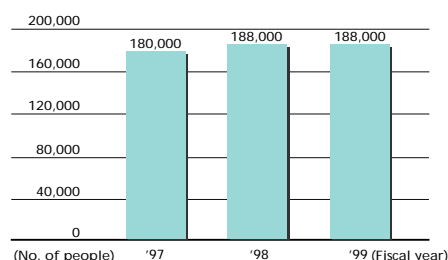
Net Sales (consolidated)



Employees at Fiscal Year-End (unconsolidated)



Employees at Fiscal Year-End (consolidated)



If you have any inquiries, please contact:

Environmental Engineering Center, Corporate Environmental Affairs Group, FUJITSU LIMITED

1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, Kanagawa 211-8588, JAPAN

Tel: +81-44-754-2010 Fax: +81-44-754-2748

Alternatively, please use the fax questionnaire at the end of this booklet, or go to our environmental information home page:
http://www.fujitsu.co.jp/hypertext/About_fujitsu/environment/index-e.html

This booklet reports on Fujitsu's environmental protection activities in fiscal 1999, together with plans for fiscal 2000.

The data contained were accurate as of the end of fiscal 1999. This report will be published annually, with the next one scheduled for release in June 2001.

Creating Things in Harmony with Nature



From left to right: Naoyuki Akikusa (President), Tatsuhiko Ohtaki (Executive Vice President and Chief Environmental Officer)

Ever since the company was founded, successive generations of Fujitsu employees have been inspired by our guiding philosophy of creating things in harmony with nature. Based on this fundamental approach, we have enthusiastically undertaken a variety of steps to protect the environment, such as forestation activities.

As we stand at the dawn of a new century, concern for the environment remains at the core of our corporate culture. For this new age, we have formulated a new concept called "Green Life 21: Focused on the Green" to help all of our employees internalize our eco-oriented approach more easily. This new concept has five components. "Green Earth" expresses how our environmental activities are conducted on a global scale. "Green Products" are products we are committed to developing that contribute to the environment. "Green Factories" encapsulates achieving the goal of zero-emission plants. "Green Solutions" is about our providing environmental expertise, while "Green Management" concerns the establishment of environmental management systems, and the dissemination and disclosure of environment-related information.

The concept incorporates the application of environmentally sound thinking to all stages of our operations—from research and development of products through to their recycling and disposal.

During fiscal 1999, continuing a record we set in fiscal 1998, we achieved all of our environmental goals related to the implementation of ISO 14001-based environmental management systems and the undertaking of various environmental measures. These included product recycling, cuts in industrial waste volumes and chemical emissions, and reductions in energy usage. We also made further progress in developing Green Products, which conform to exceptionally strict internal environmental standards, raising their total number to 141. Finally, as well as using it to calculate the costs and effects of our environmental protection programs, we applied the environmental accounting system that we introduced in March 1999 to establish various environmental-impact management indicators.

This report describes Fujitsu's environmental protection activities during fiscal 1999, and gathers together the results we achieved with the relevant performance data. To boost the credibility of the contents of this report (not only environmental accounting, but also environmental performance, etc.) and make our environmental efforts more transparent, once again we have obtained third-party validation of our efforts in expanded area (see page 48).

At Fujitsu, we intend to be one of the front runners leading the drive to create a recycling-oriented society. As well as continuing to raise our environmental activities to higher levels of achievement, we plan to use vehicles such as this report and the Internet to continue disclosing information on them. We hope you will appreciate and understand our stance on the environment. Please do not hesitate to give us the benefit of your honest opinions about this report.

June 2000



Naoyuki Akikusa
President, Fujitsu Limited

Fujitsu's Commitment to the Environment (Summary)

Fujitsu is dealing with global environmental issues based on the fundamental concept, fundamental principles and conduct guidelines expressed in "Fujitsu's Commitment to the Environment" established in July 1992.

Fundamental Concept

Fujitsu pledges to use its creativity and technology to harmonize human activity with the global environment.

Fundamental Principles

1. Organization-wide commitment and activities
2. Maintaining environmentally sound business operations
3. Contributing to society

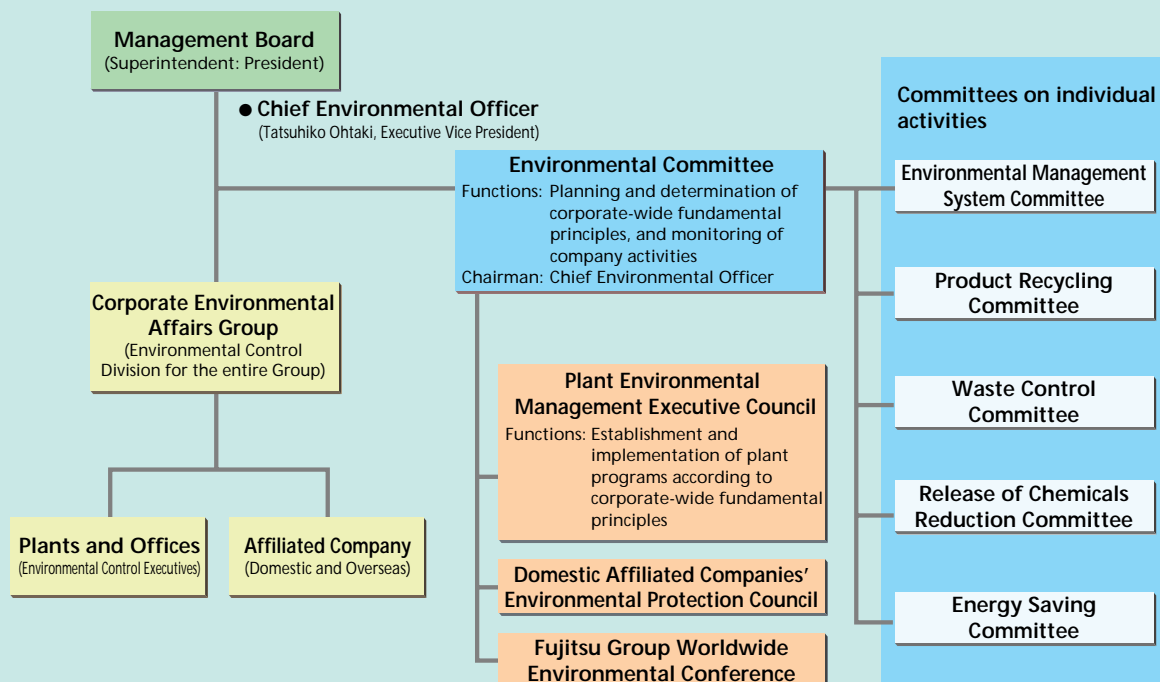
Conduct Guidelines

1. Taking account of the environmental impact of operations
2. Making efficient use of resources and energy
3. Developing technology that contributes to the protection of the global environment
4. Promoting governmental environmental policies
5. Participating in community environmental activities
6. Raising consciousness through environmental education
7. Establishing a system to promote environmental protection
8. Cooperating with affiliated companies

5

Environmental Organization

Fujitsu's organizational system for environmental activities is as follows.



Fujitsu Environmental Protection Program (Summary)

The Fujitsu Environmental Protection Program (2nd edition) defines concrete targets for implementing "Fujitsu's Commitment to the Environment." The following table shows both targets and results for fiscal 1999, as well as targets for fiscal 2000.

Targets

Item	Target	Fiscal 1999		Fiscal 2000 target	See page
		Target	Result		
Environmental management system	Establish and implement environmental management system in plants and offices (including development and service) based on the ISO standard by the end of fiscal 2000	2 offices should be certified as development/service offices	2 offices certified (achieved)	— *1	9
Product recycling	Attain a recycling rate of 90% on collected waste products by the end of fiscal 2000	90%	90% (achieved)	90%	17
Industrial waste cuts	Industrial waste output to be cut 80% by the end of fiscal 2000 based on fiscal 1991 results	83% reduction	85% reduction (achieved)	*2 88% reduction	23
Reduction of release of chemicals	Release of chemicals to be cut 20% by the end of fiscal 2000 based on fiscal 1995 results	17% reduction	17.3% reduction (achieved)	20% reduction	25
Energy-saving measures (against global warming)	Sales-based electricity consumption per unit to be cut 20 to 30% by the end of fiscal 2000 based on fiscal 1990 results	34% reduction	35.8% reduction (achieved)	*2 40% reduction	27

*1: Since targets have already been achieved, no target is set for fiscal 2000.

*2: Since the original industrial waste-cuts and energy-saving targets had already been met by the end of fiscal 1998, the targets for fiscal 2000 have been raised.

Major Concrete Measures for Attaining Targets

Environmental Management System

1. Introduction of ISO 14001

- Establishment and steady implementation of system through arrangement of common specifications
- Share of know-how on system establishment and implementation
- Verification of system effectiveness and enhancement of environmental performance by internal audits
- Assessments to determine the environmental impacts of products and within plants

Product recycling

1. Measures for environmental protection in product development and design stages

- (1) Promotion of the development of Green Products (environmental conscious products)
 - Establishment of concepts and promotion for developing Green Products
 - Improvement in environmental "consciousness" of products based on the results of Product Environmental Assessment
 - Improvement of recycling rates
- (2) Introduction of life cycle assessment (LCA)
 - Establishment of basic LCA
 - Application to development of Green Products
- (3) Development of packaging technologies (including returnable containers) considering recycling
- (4) Self-imposed control of usage of hazardous substances
 - Risk assessment and management
 - Support of product design by guidelines

2. Promotion of environmentally conscious procurement

- Active procurement of environmental friendly material, parts, and products

3. Collection and recycling of waste products

- Setting up of recycling centers all over the country
- Establishment of waste products disassembly procedure

Industrial Waste Cuts

1. Waste cuts

- Review of standards for disposing waste oil, and control of oil usage
- Enrichment of organic alkaline wastewater by decompression

2. Effective utilization of waste

- More effective reuse of valuable metals contained in sludge, developer, and plating liquid

3. Maintenance and practical use of waste reduction manuals and casebooks

Reduction of Release of Chemicals

1. Reduction in chemicals used in and released from plants

- Establishment of release reduction technologies
- Reduction in usage by improving use of chemicals

Energy-saving Measures

1. Promotion and introduction of energy-saving technologies and equipment in plants and offices

- Introduction of new equipment and development of technologies for energy-saving
- Development of manufacturing equipment and processes based on energy-saving technologies
- More efficient use of energy

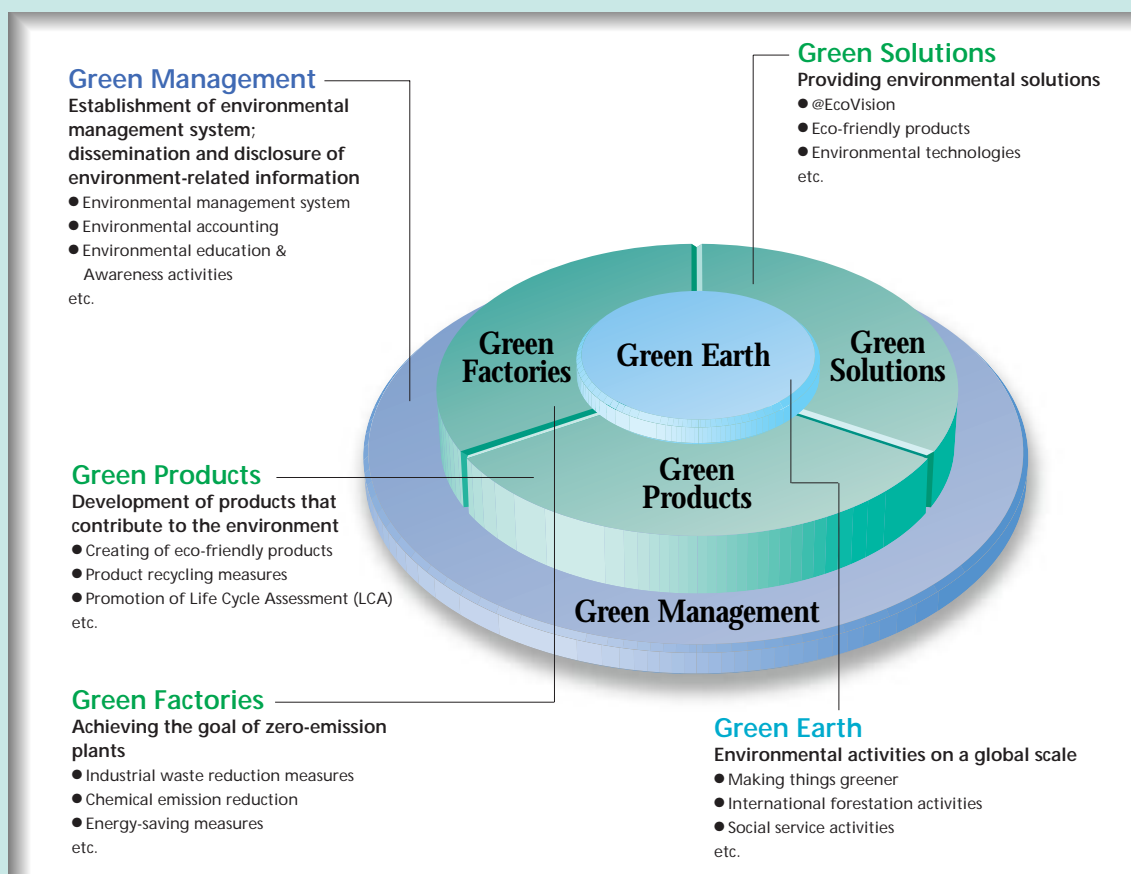
2. Exchange of energy-saving technologies and know-how between plants and offices

3. Establishment of measures and systems for accurate grasp of energy usage

Development of "Green Life 21" Philosophy

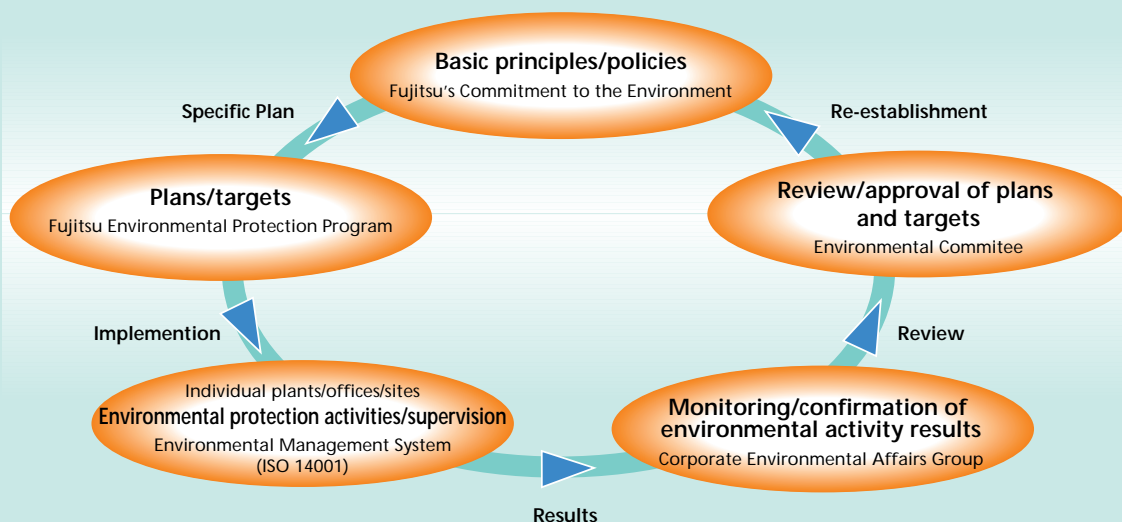
Focused on the Green

Since its establishment in 1935, Fujitsu has placed the environment at the top of its management priorities, with the emphasis on creating factories that operate in harmony with nature without harming the environment. At the start of a new century, the "Green Life 21" corporate philosophy has been designed to make this concept clearer. Placing a "Green Earth" at its center, the philosophy breaks down Fujitsu's efforts to make its entire operations eco-friendly into three areas: "Green Products," "Green Factories," and "Green Solutions." The "Green Management" base signifies the company's efforts to get involved with environmental issues.



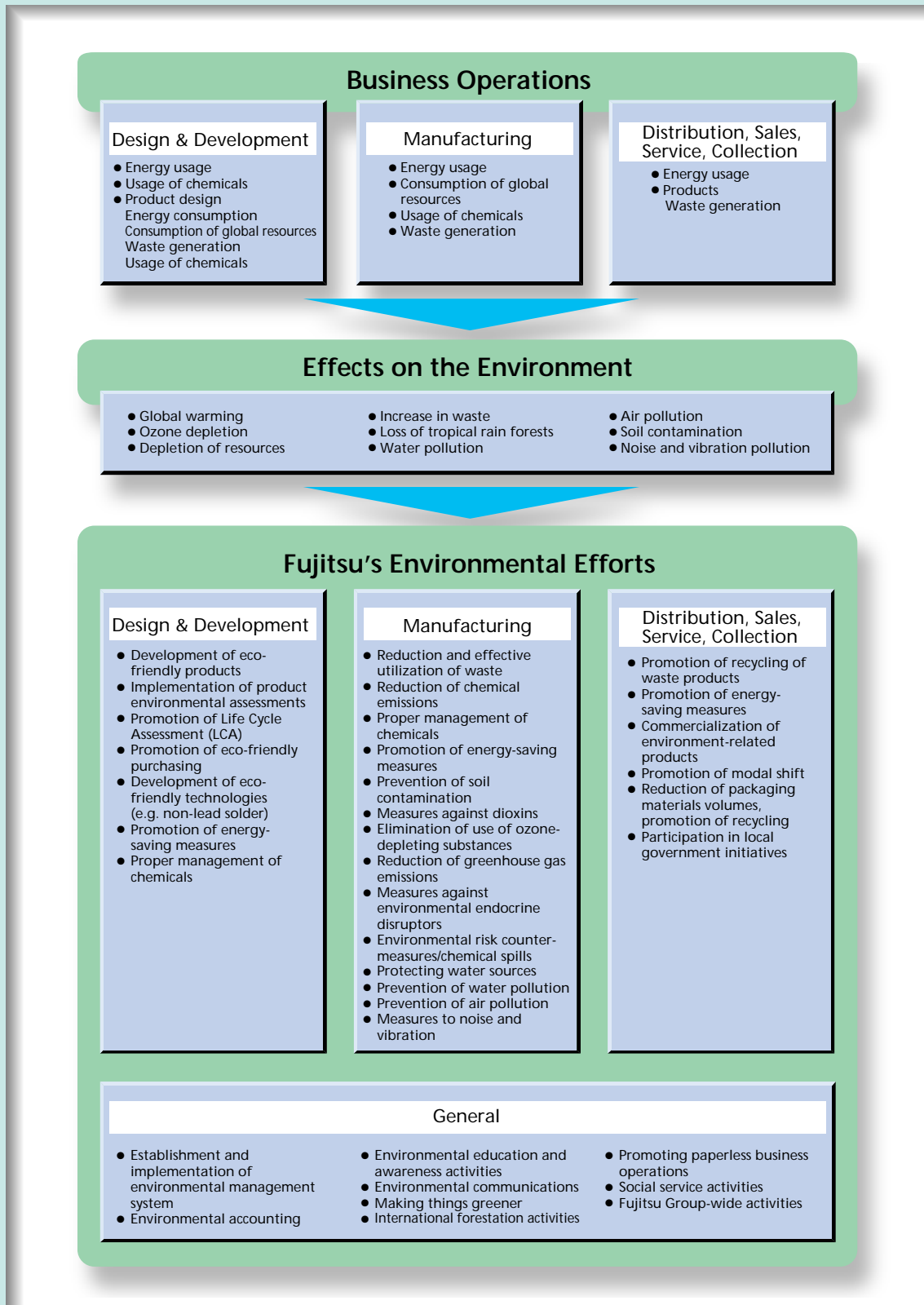
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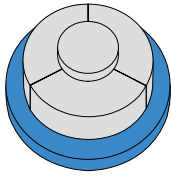
Environmental Efforts



Relationship Between Business Operations and the Environment

The relationship between Fujitsu's business activities and the environment are described below.





Environmental Management System

Fujitsu has been working to establish and implement an environmental management system based on the international ISO 14001 standard. The objectives for obtaining certification were as follows:

- All manufacturing plants by the end of fiscal 1997 (all 11 sites had obtained certification by December 1997)
- Principal development and service-related sites and offices by the end of fiscal 2000 (4 sites had obtained certification by March 2000)

Since the objective of establishing an environmental management system applies to the entire Fujitsu Group, overseas affiliated companies*¹ were also given the target of obtaining ISO 14001 certification.

- Principal domestic and overseas affiliates by the end of fiscal 1999 (67 sites and offices)*²

*1: Affiliates include consolidated subsidiaries and affiliates using the applied equity method.

*2: The number of principal domestic affiliates has now increased by 2 compared with the end of fiscal 1998, so the target date was postponed to the end of fiscal 1999.

External Certification Results

Development and service offices

During fiscal 1999, 2 sites obtained certification, bringing the total to 4 sites. This resulted in the achievement of the objective 1 year ahead of schedule.

- Tatebayashi Systems Center..... March 2000
- Kawasaki area sites*³..... March 2000

At the 13 sites where certification had already been obtained, a surveillance audit was conducted, producing a total of 36 suggestions for improvement—all of which were acted upon. Separately, 1 group that had not been included in the scope of the original objective also obtained ISO 14001 certification.

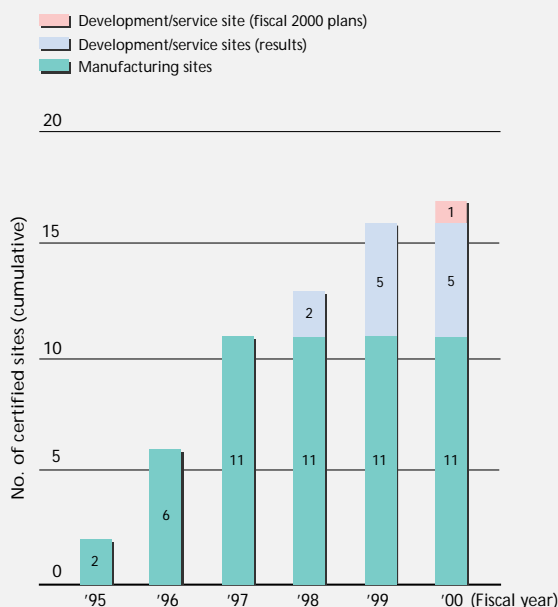
- Western-Japan Regional Sales Group
(located in Fujitsu Kyushu R&D Center)..... February 2000

Affiliated companies

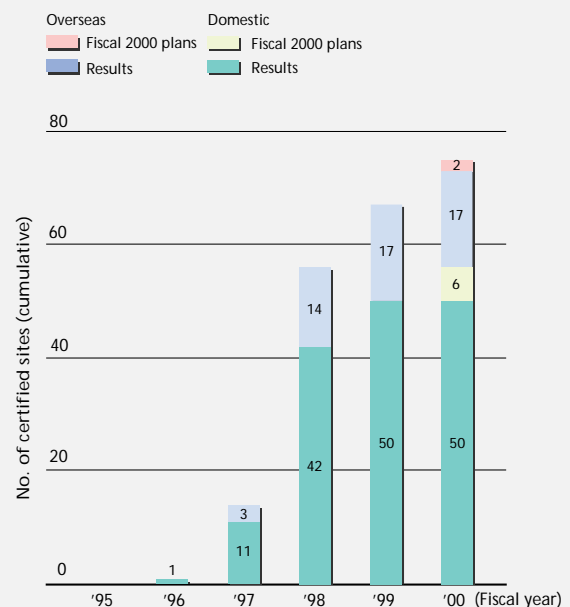
During fiscal 1999, 8 domestic and 3 overseas affiliates obtained certification, bringing the total number of certified affiliated company sites to 67 (consisting of 50 domestic and 17 overseas sites).

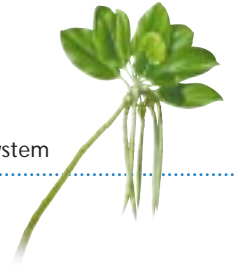
*3: Sites include: Kawasaki Plant, Nakahara Bldg., Kosugi Bldg., Musashi-Kosugi Tower Place, SSI Bldg., Suenaga Branch Office, Cross-Culture Center, Fujitsu Kawasaki Hospital, and Fujitsu Laboratories Ltd.

Results and plans for ISO 14001 site certification [Fujitsu]



Results and plans for ISO 14001 site certification [affiliates]





Certified domestic affiliates

- Advantest (Gyoda R&D Center) April
- Fujitsu Kyushu Communications Systems June
- Shinko Electric Industries (Wakaho) July
- Fujitsu Logistics (Tokyo Distribution Center) December
- Fujitsu FIP December
- Advantest (Sendai Laboratories) February
- Fujitsu Support & Services March
- Fujitsu CoWorCo March

Certified overseas affiliates

- Fujitsu Network Communications (U.S.A.) April
- Amdahl (U.S.A.) September
- Fujitsu Computer Products of Vietnam (Vietnam) September



An audit in process (Kawasaki site)

Principal activities

- Fujitsu has striven to make product design and R&D activities, which are concentrated at the Kawasaki site, conform to best environmental practice. As a result, environmental management systems now extend from R&D and product design all the way to the manufacturing stage.
- A total of 11 training sessions were held to educate internal environmental auditors. A total of 219 internal auditors were trained in this way, bringing the total number to 573.
- Internal environmental audits were conducted at all ISO-certified plants, and a total of 1120 points for improvement thus identified were acted upon.
- A trial audit system designed to enable the implementation of successful system improvements at other sites, and to encourage the parallel development and transfer of environmental management systems and performance levels, was introduced at a total of 13 sites.
- A comprehensive total of 163 emergency drills were conducted to prepare personnel.
- Fujitsu sought the understanding and cooperation of a total of 1,071 partner firms (consisting of 657 parts suppliers and 414 service providers) with its various environmental activities.

Activities conducted at the Fujitsu Group level

- A total of 11 lectures involving 626 participants were conducted during the year with the aim of increasing employee awareness of environmental issues.
- An exchange meeting involving 49 participants was held during the year with the aim of encouraging the exchange of information to spread best environmental practice and know-how throughout the Fujitsu Group.
- A variety of information on standards and related educational matters was distributed on company intranets (51 separate announcements).

Principal Plans for Fiscal 2000

Plans to obtain ISO 14001 certification

Development and service offices: 1 site

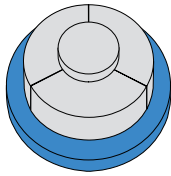
- Atsugi Technical Center

Domestic and overseas affiliates: 8 sites

- Nihon Dengyo
- Shinko Electric Industries (Kohoku)
- Yonago Fujitsu
- Fujitsu Denso (head office)
- Fujitsu AMD Semiconductor
- Takamisawa Electric (Miyazaki Tech)
- FKL Dong-Hwa (Korea)
- Fujitsu Compound Semiconductor (U.S.A.)

Improvement of environmental management system

With the aim of obtaining a integrated company-wide certification in fiscal 2001, further work will be done on real-time management of environment-related information, as well as on implementing a comprehensive audit system to enable inter-site performance comparisons to be made.



Environmental Accounting

Fujitsu uses an environmental accounting system, introduced in fiscal March 1999, to provide quantitative assessments of the costs and effects of environmental protection measures, and to evaluate the effectiveness of environmental investments. During the year, in response to opinions and comments made by people both inside and outside the company, Fujitsu revised its internally developed environmental accounting guidelines, introducing a number of improvements. To test its reliability and transparency, Fujitsu also obtained independent third-party certification of the system.

Environmental accounting system

System objectives

- To disclose information and company position to interested parties
- To raise the effectiveness of investments in environmental measures
- To implement continuous environmental activities with a long-term perspective
- To energize Fujitsu's environmental activity program

Principal points amended since previous year

- Scope of data collection expanded to 202 domestic and overseas affiliates
- Introduction of numerical indicators to measure improvements—i.e. reductions—in environmental impact (EI*¹ and EE*² indicators)

- Classification of environment-related personnel expenses broadened from two categories (specialist staff/non-specialist) to four (according to engaged ratio).

*1: Environmental improvement (EI) indicator: a measure of the environmental impact-reduction effect per unit cost (unit: ton-C/¥100 million*³). The EI indicator shows the effect of money spent (in this case, 100 million yen) on environmental measures in terms of the consequent reduction in environmental impact, as measured by the weight of carbon dioxide. It enables the effectiveness of environmental measures to be compared between different periods, and segments.

*2: Environmental efficiency (EE) indicator: a measure of total sales relative to the environmental impact (unit: ¥100 million/ton-C). The EE indicator shows the value added in terms of sales by environmental impact. It enables evaluation of the direct environmental load of business activities.

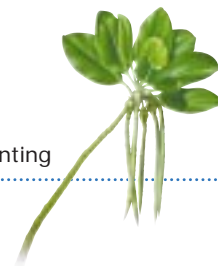
*3: The unit ton-C denotes the weight of carbon contained in the corresponding carbon dioxide (CO₂).

Results of Environmental Accounting in Fiscal 1999

Item		Scope
Costs	① Direct costs	Cost of environmental protection activities at manufacturing plants (costs of introduction and maintenance of environmental facilities)
	② Indirect costs	Costs of ongoing environmental protection activities (personnel expenses) and acquisition/maintenance of ISO 14001-series certification
	③ Energy saving	Cost of energy-saving measures
	④ Recycling	Costs of product collection, recycling and reuse Cost of waste treatment
	⑤ R&D	Cost of R&D for eco-conscious products and environmental technologies
	⑥ Social activities	Costs of greenery programs, environmental activity report production and environment-related publicity, etc.
	⑦ Other costs	Cost of tackling environmental risks posed by ground water and other contamination
		Total
Effects	① Value-adding effects on manufacturing	Contribution of environmental protection activities to the value added by manufacturing activities* ⁴
	② Energy-saving effects	Cost savings from reductions in consumption of electricity, oil and gas
	③ Recycling effects	Sales value of recycled and reused products Cost savings from reductions in waste volumes
	④ Risk management	Savings from avoidance of losses caused by plant non-operation due to non-observance of environmental laws and regulations* ⁵ Savings from avoidance of payment of insurance premiums and compensation to residents as a result of ground water contamination
	⑤ Environmental business activities	Sales contribution of environmental products (environmental solutions and Green Products)
	⑥ Efficiency improvements from environmental activities	Cost savings from paperless operations and use of management systems
	⑦ Environmental education activities	Effects of in-house training of environmental ISO consultants and auditors
		Total

*4: Calculated as the sum of proportions of product value-added at each plant, depending on the proportion of environmental protection activities undertaken at each site

*5: Estimate of risk avoidance assuming such events arise

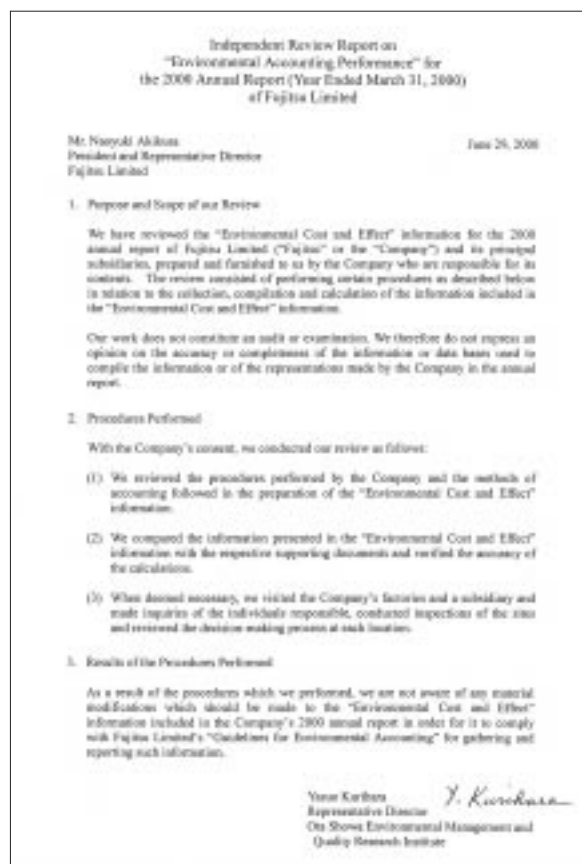


Third-party certification

To ensure the reliability and transparency of the data, Fujitsu obtained third-party certification of its environmental accounting system from Ota Showa Environmental Management and Quality Research Institute. For the second year running, the audit covered the data collection processes used to assess the costs and effects of environmental protection within the fiscal accounting period, and also checked the various procedure documents associated with the accounting process. In addition, after data collection had been completed, checks and audits of the data collection methodology and the documents from which the collected figures were taken were conducted in Fujitsu's plants and affiliates. Independent Review Report (right) was attached to the annual report.

Future plans

With a view to improving the system, Fujitsu plans to continue making quantitative assessments of the costs and environmental load-reduction effects of its various activities, and to disclose the results.



Independent Review Report found in the annual report (copy)

Fiscal 1999 results				(Unit: 100 million yen)
Fujitsu	Affiliated companies	Total	See page	
39	37	76	31~36	
13	18	31	9, 10	
10	1	11	27, 28	
3	3	6	17, 18	
8	10	18	23, 24	
3	6	9	19~22, 38	
3	3	6	15, 39, 40	
6	4	10	29, 30	
85	82	167		
37	40	77	31~36	
13	7	20	27, 28	
7	29	36	17, 18	
1	3	4	23, 24	
20	13	33	29~36	
7	16	23		
6	1	7	37, 38	
9	9	18	30	
3	1	4	13, 14	
103	119	222		

Environmental impact-reduction improvement indicators: fiscal 1999

(Fujitsu)

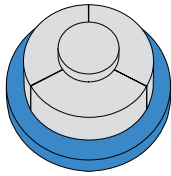
Item	Results
Environmental improvement indicator (EI) [ton-C/¥ -100 million]	113.7
Environmental efficiency indicator (EE) [¥ -100 million/ton-C]	0.19

Fiscal 1999 environmental impact-reduction effect (for reference)

(Fujitsu)

Effects/CO ₂ equivalents [ton-C]
9,661*6

*6: Out of the fiscal 1999 environmental impact-reduction effects, this value shows the reduction effect (CO₂ equivalents) gained by energy saving (electricity, oil, gas) and waste reduction (waste paper, waste plastic, waste oil, wood chips).



Environmental Education & Awareness Activities

Ongoing education is vital in helping to ensure that every single employee's awareness of their role in the company's environmental protection activities is continually raised. With this end in mind, Fujitsu organizes a wide variety of environmental education and training programs.

Environmental Education

Based on environmental training implementation regulations, Fujitsu undertook the environmental education and training programs.

Technical Education

● Common Courses

Environment-sensitive product design 1 lecture, 19 attendees
Methods for reducing the environmental impact of manufacturing operations 1 lecture, 25 attendees

● Divisional Courses

Course for newly assigned plant managers and Environmental Control Division management staff 3 lectures, 21 attendees
Course for new Environmental Control Division personnel 1 lecture, 11 attendees
Course for Environmental Control Division staff 1 lecture, 7 attendees
Total of 7 lectures, 83 attendees

General Education

● Basic Training Programs

(targeted at different management levels)

Program for senior managers 1 lecture, 118 attendees
Program for middle managers and other staff 1 lecture, 190 attendees
Program for new employees (graduate-level entrants/mid-term hires) 12 lectures, 1,131 attendees
Total of 14 lectures, 1,439 attendees

The company is also considering holding lecture courses aimed at the sales force after fiscal 1999.



Environment-sensitive Products Designing Course

Remote Broadcast Education system

Fujitsu uses a system that allows those at remote locations to participate in environmental education programs. The system works by joining together a number of remote classrooms over a network so that participants can all receive lectures at the same time.

Awareness activities

To promote greater knowledge and awareness of environmental issues, Fujitsu undertook a number of activities, including various events and the publication of regular bulletins.

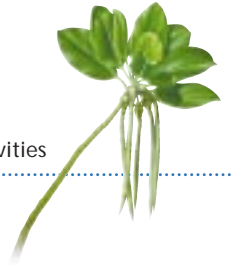
"Eco-Plaza" environmental bulletin

First published in 1994, this is an internal publication that introduces the company's various environment-related activities and highlights environmental issues. Distributed regularly to both domestic and overseas affiliates, mainly via a company intranet, issues #20-22 appeared in fiscal 1999. Eco-Plaza regularly features the environmental efforts of various overseas affiliates.



Eco-Plaza
(Japanese version)

(English version)



Events for environment month

During June 1999, which was designated "Environment Month" by the Environment Agency, Fujitsu organized a number of events inside the company and at domestic affiliates, all of which attracted large numbers of participants.

Main events

- Environmental lectures
..... Total of 27 lectures, 1,527 attendees
- Video presentations on environmental topics
..... Total of 21 presentations, 1,793 attendees
- Call for environmental slogans
..... 8,047 slogans submitted
- Environmental campaign (on energy saving)
- Other (environmental management system display, mini-exhibition on the environment, tours of environmental facilities, etc.)

Environmental Contribution Awards

Since fiscal 1995, Fujitsu has made awards to plants, divisions and individuals to recognize outstanding environmental protection activities. These awards cover all Fujitsu operations, including domestic and overseas affiliates. In fiscal 1999, 81 entries were submitted for such awards, substantially exceeding the 58 entries of the previous year. From these, 5 were selected for Environmental Contribution Awards, while a further 10 received Environmental Contribution Incentive Awards. All the awards were presented by the chief environmental officer.

Environmental Contribution Awards: fiscal 1999

- Energy savings and reductions in contracted electric power at Mie Plant
(Fujitsu Facilities Engineering)
- Development of PC housings using non-halogenated plastics
(Mobile Computing Div., Fujitsu Kasei, Fujitsu Laboratories)
- Green product development for FMV personal computers
(Personal Systems Business Group)
- Receipt of "Director-General of the Agency of Natural Resources and Energy Award" for promotion of energy-saving activities.
(PFU (Kasashima Plant))
- Donation of funds to WWF to help protect Malaysian environment through recycling activities
(Fujitsu Microelectronics (Malaysia))

Environmental Photo Contest

Since fiscal 1995, Fujitsu has organized an annual photo contest open to all Fujitsu employees (including domestic and overseas affiliates) and their families. The themes for the fiscal 1999 contest were "nature conservation," "warnings of environmental destruction," and "Earth salvation." The contest attracted a total of 448 entries—far in excess of the 267 received the previous year. One 1st prize was awarded, together with two second prizes and one special prize, five 3rd prizes, and eight honorable mentions (These awards were presented by the Group President of the Corporate Environmental Affairs Group).



Environmental lecture
(with signing interpretation)



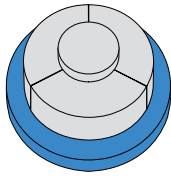
Environmental management system display
(Kumagaya Plant)



Environmental Contribution Award ceremony



Environmental Photo Contest: 1st Prize
"Natural Waterfall"
Fujitsu Microelectronics (Malaysia)



Environmental Communications

Fujitsu actively discloses information on its environmental activities. The company publishes environmental reports, and seeks the opinions and ideas of a wide range of people. Moreover, Fujitsu makes extensive use of the Internet as a communication medium to disseminate environmental information. The company is also an active participant in a number of environment-related exhibitions.

Publication of 1999 Environmental Activity Report

The environmental activity report for fiscal 1998, which was published during fiscal 1999, included details on the results achieved in the company's various environmental programs, together with a wide range of data. It also contained several new sections on environmental accounting, soil and ground water contamination countermeasures, and other topics. Printed copies of this report (11,000 copies of the Japanese version and 1,100 copies of the English version) were distributed both in Japan and overseas to customers, central and local government organizations, environmental protection groups, and investors. Both editions were also made available in the Environment section of the Fujitsu home page. The company received 45 opinions through the fax questionnaire contained at the back of that report. Fujitsu published its first environmental activity report in fiscal 1996.

Principal opinions expressed on fax questionnaire

- Evidence of third-party certification should be included in the report.
- While remaining simple and easy-to-read, the report should explain the relationship between environmental activities and the company's business and management strategy.
- Public relations channels other than the Internet would be good for keeping the public informed of Fujitsu's environmental activities.

Such concerns have been reflected in future activities and reports.

Internet home page

In 1997, Fujitsu added an environmental section to its home page. This section explained in detail all of Fujitsu's environmental activities, and provided the public with information on the company's eco-friendly products. Since fiscal 1999, this section has also contained links to new information on environmental products and technologies, as well as links to the environmental home pages of Group companies. A total of 29 press releases were issued through this page, and the company received 423 inquiries from customers via this channel (19 of these from overseas). After receiving any inquiries, Fujitsu always attempts to provide answers as quickly as possible.

Customer inquiries

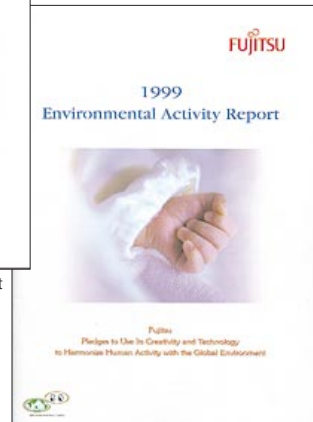
- Environmental Activity Report request251
- Environmental Accounting56
- Product recycling47
- Miscellaneous69

Environmental home page:

http://www.fujitsu.co.jp/hypertext/About_fujitsu/environment/Index-e.html



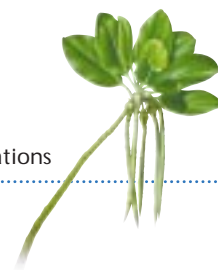
1999 Environmental Activity Report
(Japanese version)



(English version)



(English version)



Participation in exhibitions

Fujitsu actively participates in a number of environment-related exhibitions around Japan sponsored by local governments and other organizations (A total of 25 for fiscal 1999).

Name of exhibition	Exhibition sponsor
● Environment Fair '99	Edogawa Ward, Environmental Department
● The 55th National Convention of the Japan UNESCO Movement in Okayama	National Federation of UNESCO Association in Japan Japan UNESCO Young People Liaison Council Okayama Prefecture UNESCO Liaison Council Okayama UNESCO Association
● Yosakoi Eco-Festa	Yosakoi Eco-Festa Action Committee
● Tottori Young Science Festival	Tottori Young Science Festival '99 Action Committee Science and Technology Agency Japan Science Foundation, Science Museum Tokyo
● Cool Earth Fair Ishikawa	Ishikawa Environment Partnership Prefectural-Public Conference
● '99 Environment Festival & Citizens' Life Exhibition	Aizuwakamatsu City Aizuwakamatsu City Environment Festival Action Committee Citizens' Life Exhibition Action Committee
● New Earth '99	Osaka International Trade Fair Commission The Japan Society of Industrial Machinery Manufacturers Research Institute of Innovative Technology for the Earth
● Kumagaya Hometown Festival & Environment Fair	Kumagaya City
● Eco-Fiesta Wakayama 21	Wakayama Prefecture Wakayama Environment Fair Action Committee
● Wastec '99	Wastec Action Committee
● '99 The Tottori Industrial Technology Fair	Tottori Prefecture Tottori City Tottori Prefecture Industrial Technology Promotion Association
● '99 Kyoto Environment Festival	Kyoto Environment Festival Action Committee Kyoto Prefecture
● Eco-Products 1999	Japan Environmental Management Association for Industry Nihon Keizai Shimbun

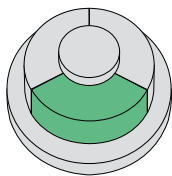
etc.



The 55th National Convention of the Japan UNESCO Movement in Okayama



Eco-Products 1999



Green Products

Product Recycling

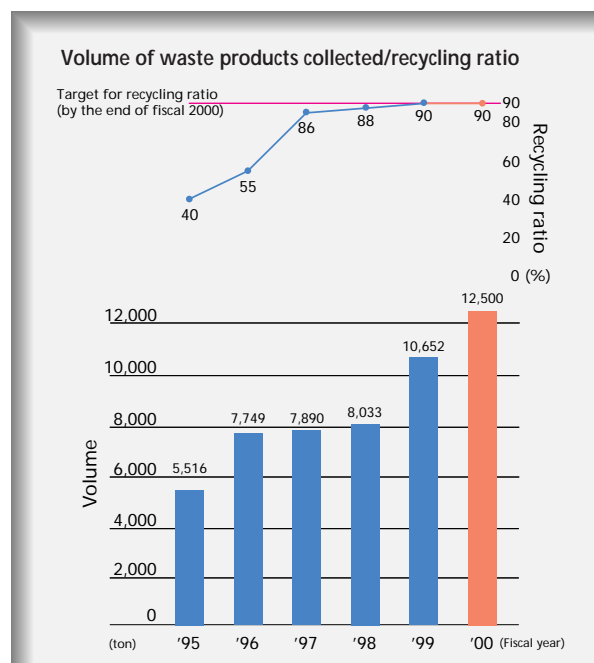
To achieve the goal of 90% product recyclability by the end of fiscal 2000, Fujitsu has been implementing its own recycling system, which focuses on recycling and reusing waste products collected from companies.

Results at the collection and disposal stages

During fiscal 1999, the Fujitsu recycling system collected a total of 10,652 tons of material. Waste products accounted for 7,900 tons; after recycling, these produced 7,111 tons of parts and materials, making the recycling ratio* 90%. This result not only surpassed the fiscal 1999 target, but also enabled the company to achieve the fiscal 2000 year-end target a full year ahead of schedule.



Fujitsu Chubu Area Recycling Center



* Recycling ratio = $\frac{\text{Amount of recycled parts and materials}}{\text{Amount of treated waste products}}$

Principal fiscal 1999 recycling developments

- Expansion in number of reusable new components, from 38 to 43 (internal)
- Boost in recycling efficiency through creation of disassembly manuals for waste products: 16 models (cumulative total: 69 models)

Fujitsu Recycling System

To increase recycling volumes in Japan, Fujitsu promoted a nationwide system of recycling centers, each of which have been granted an industrial waste-processing licence. Fujitsu was the first computing and communications appliance manufacturer in Japan to create such a nationwide distribution network. Comprising 9 distribution firms, it was completed in December 1998. During fiscal 1999, another firm joined this group, further boosting the effectiveness of the company's collection efforts.

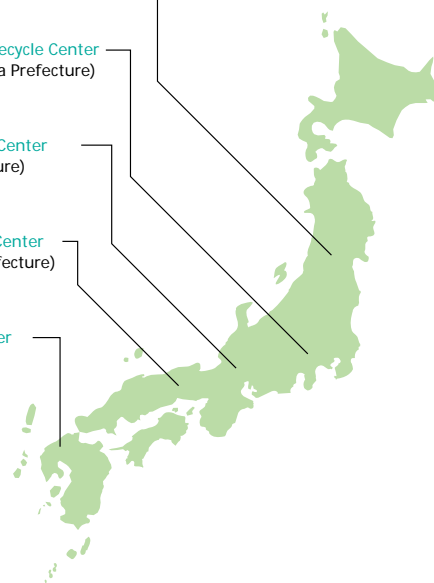
● Fujitsu North Japan Recycle Center
(Sendai City, Miyagi Prefecture)

● Fujitsu Metropolitan Area Recycle Center
(Sagamihara City, Kanagawa Prefecture)

● Fujitsu Chubu Area Recycle Center
(Kaizu County, Gifu Prefecture)

● Fujitsu West Japan Recycle Center
(Kakogawa City, Hyogo Prefecture)

● Fujitsu Kyushu Recycle Center
(Tosu City, Saga Prefecture)



Recycling center industrial waste materials processing licences

- Fujitsu Kyushu Recycle Center
..... Granted June 1998: licence no. 4123054477
- Fujitsu Metropolitan Area Recycle Center
..... Granted June 1998: licence no. 1422028930
- Fujitsu West Japan Recycle Center
..... Granted August 1998: licence no. 2824047575
- Fujitsu Chubu Area Recycle Center
..... Granted September 1998: licence no. 2120053003
- Fujitsu North Japan Recycle Center
..... Granted January 2000: licence no. 5422028930



Comment

Out of Fujitsu's 5 Recycle Centers in Japan, this facility was the first to begin operating, in April 1995. At the Metropolitan Area Recycle Center, we have developed a substantial recycling business based on communications devices and the full range of information devices. In fiscal 1999, we recycled more than 2,480 tons of materials. We intend to make further progress in developing reliable, advanced recycling technology to enhance our environmental protection efforts as a company.

Kiyoharu Suzuki

General Manager, Metropolitan Area Recycle Center



Implementation and development of recycling status management system

To make the management of the Fujitsu recycling system more efficient, the 5 Recycle centers and the Recycle Techno Center (located in the Kawasaki Plant) were connected online in April 1999. This system enables the recycling ratio, and the amounts and types of materials being collected and waste materials being processed to be managed in a unified manner. It also allows compilation of figures on the processing status of the company's recycling efforts on a daily basis.

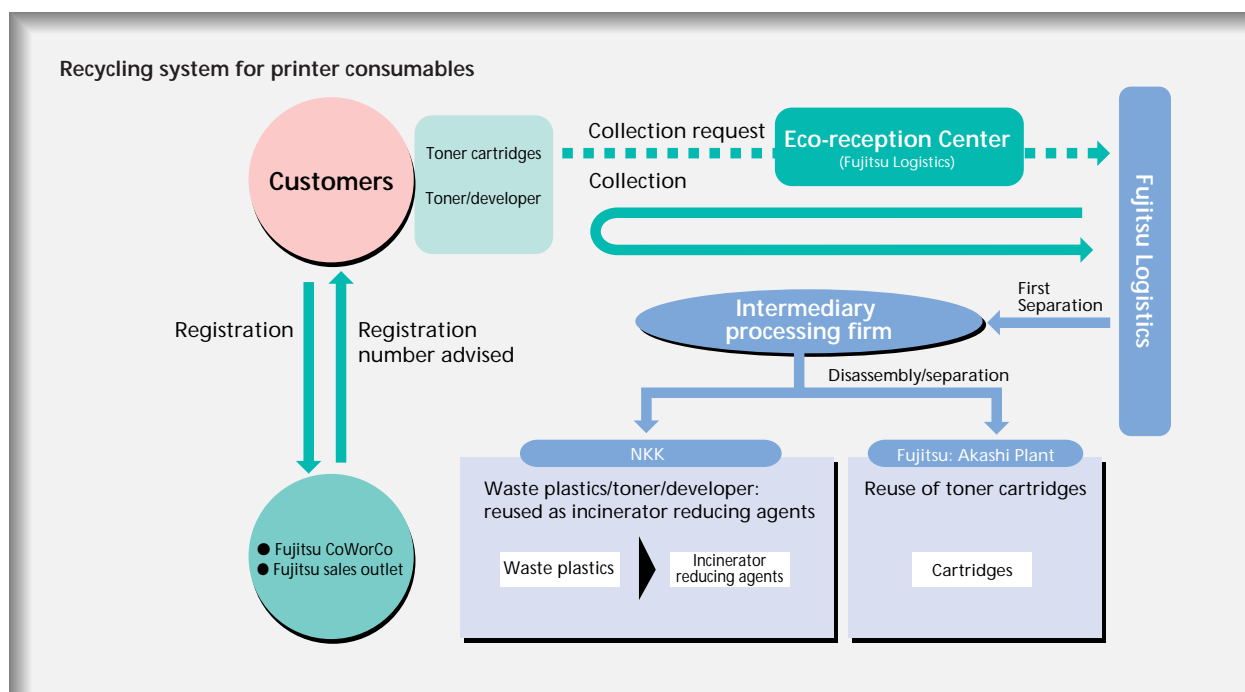


Recycling status management system screen

Recycling system for printer consumables

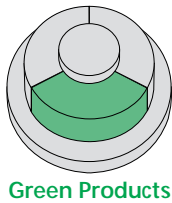
Fujitsu and Fujitsu CoWorCo have jointly developed and begun operating a collection and recycling system for consumables (principally toner cartridges and

toner/developer) used in Fujitsu's range of corporate laser printers. Once inspected and cleaned, toner cartridges are sent back to the plant so that they can be reused.



Principal plans for fiscal 2000

- Construction of collection system for used PCs from private homes



Creating Eco-Friendly Products

Based on the "Green Products Evaluation Standard," an internal criterion developed to encompass global environmental measures, Fujitsu is working to develop more eco-friendly products.

Development of eco-friendly products

During fiscal 1999, Fujitsu developed a total of 96 products that passed the internal "Green Products" standard. This range included products as varied as ATMs, mobile telephones and servers. Since fiscal 1998, the cumulative total of such products has risen to 141.

Green Products

• Desktop PCs	33 models
• Notebook computers	22 models
• Cathode-ray tube/liquid crystal displays	12 models
• Page printers	5 models
• Point-of-sale terminals	4 models
• Network equipment	2 models
• ATMs *	4 models
• IA servers *	4 models
• Scanners *	3 models
• Mobile telephones *	2 models
• Small magnetic disks *	2 models
• Opto-magnetic disks *	2 models
• Workstations *	1 model
Total: 96 models	

* Indicates new product categories (total: 7)

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Examples of Green Products

FMV-DESKPOWER

- Recyclable metallic coating on electronic information equipment (an industry first)
- Use of recycled plastic for PC legs
- Non-use of specified bromide flame-retardant
- Use of EcoMark approved recycled paper for manuals

FMV-BIBLO

- Use of more highly recyclable magnesium alloy in computers
- Use of non-halogen flame-retardant materials on computer plastic covers
- Use of EcoMark approved recycled paper for manuals

Implementation of Product Environmental Assessments

Since January 1996, Fujitsu has applied an internal design standard to all new products to assess their eco-friendliness. This product environmental assessment covers 40 specific items. In fiscal 1999, 440 products received such assessment, aiding the development of a wide range of eco-friendly products (including word processors, supercomputers, road video detection equipment, and color plasma displays). To date, a total of 1,294 assessments have been carried out.

Assessment items

• Compliance with environmental legislation	(9)
• Environmental protection	(1)
• Resource conservation	(2)
• Energy saving	(4)
• Recyclability	(6)
• Ease of processing and disposal	(4)
• Ease of collection and transportation	(1)
• Disclosure of information	(2)
• Packaging	(11)

The numbers in brackets indicate the number of criteria applied within each assessment item (total = 40).



Comment

Since we are mainly involved in the development of desktop computers, we are acutely aware of the importance of making Green Products to reduce the environmental impact of Fujitsu's operations. During fiscal 1999, we completed the development of a further 33 Green Products, bringing the cumulative net total to 48 models. We are continuing to work to reduce the power consumption of the products that we develop, and to use materials that are more highly recyclable or reusable.



Yasuo Doi
Manager, No. 4 Mechanical Engineering Dept., Desktop Products Division

Green Products Evaluation Standard [essential criteria (16 items)]

Resource conservation

- Minimum recyclability of 75% for all parts
- Minimum recyclability of 70%, by weight, of all plastics used weighing 25g or more

Energy saving

- Compliance with Japanese energy-saving laws
- Compliance and registration with the International Energy Star Program
- Power-saving function

Recyclability

- Capable of being separated and disassembled into component materials or units with either hands or general-purpose tools
- Marking of any plastic parts weighing more than 25g
- Painting or coating of any plastic parts weighing more than 25g kept to a minimum
- Products requiring nickel-cadmium (Ni-Cd) batteries to be clearly marked; batteries must be easily removable
- Use of recycled paper for all packing boxes, without any surface processing that could prevent recycling

- Expanded polystyrene foam to be limited to a maximum of 10% of all packing materials by weight
- Use of only polyethylene or paper as materials for protective bags
- Marking of any plastic parts used as packaging weighing more than 20g

Compliance with hazardous materials regulations

- Absence from product or packaging materials of any externally regulated hazardous materials (such as asbestos or PCB, etc.)
- Absence from product or packaging materials of any internally regulated hazardous materials (such as tetrachloroethylene, trichloroethylene, etc.)

Environmental information disclosure

- All matters requiring special attention at time of final disposal to be clearly marked

Note: A further 27 more stringent criteria are being applied to the next generation of Green Product models.

Use of "Environmental Emblem" to mark Green Products

Since November 1998, to demonstrate the company's environmental credentials to a wider audience and to mark environmentally friendly products clearly, Fujitsu has been applying an internally designed "Environmental Emblem" to catalogs and packing boxes to delineate Green Products.



Example

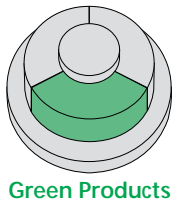
Adoption of internal hazardous materials standard

With the objective of developing more environmentally friendly products, Fujitsu adopted a voluntary internal standard banning or restricting the use of a variety of hazardous chemicals. These rules come into force in the earliest stages of product design.

- Banned materials: PCB, asbestos, Polychlorinated Naphtalene, CFCs, specified halons, carbon tetrachloride, etc. (30 substances in total)
- Regulated materials: Cadmium, hexavalent chromium, arsenic, mercury, selenium, lead, HCFCs, HFCs, halogenated compounds, etc. (155 substances in total)

Principal plans for fiscal 2000

- Expand applicability of main Green Product lines
Move into UNIX servers, system printers, etc.
- Improve Green Products Evaluation Standard
Establish standards for each product, and make the standards stricter



Life Cycle Assessment (LCA)

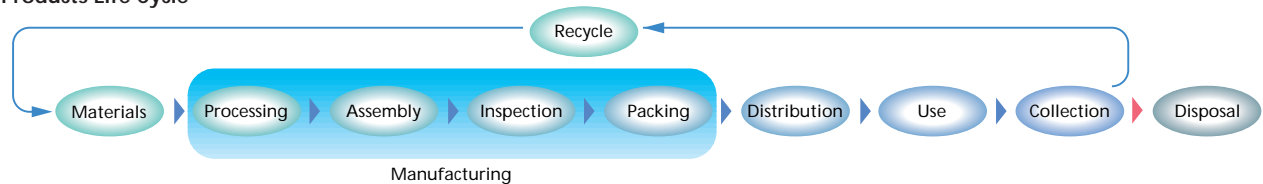
Progress made on Life Cycle Assessment (LCA)

Fujitsu is working to expand the scope of its product development efforts to take into account the effects of products on the environment over their entire life cycle, and to try to prevent them contributing to global warming. During fiscal 1999, Fujitsu completed evaluating what effect 21 product models have over their product life cycles in terms of the amounts of carbon dioxide produced—a generally accepted measure of the possible global warming effect. The company also finished developing an LCA support system designed to increase the overall efficiency of the LCA process.

Products evaluated via LCA process

● Notebook computers	5 models
● Desktop PCs	2 models
● Mobile telephones	3 models
● ATMs	4 models
● Cathode-ray tube/liquid crystal displays	2 models
● IA servers	2 models
● Scanners	1 model
● Routers	1 model
● Point-of-sale terminals	1 model
Total: 21 models	

Products Life Cycle

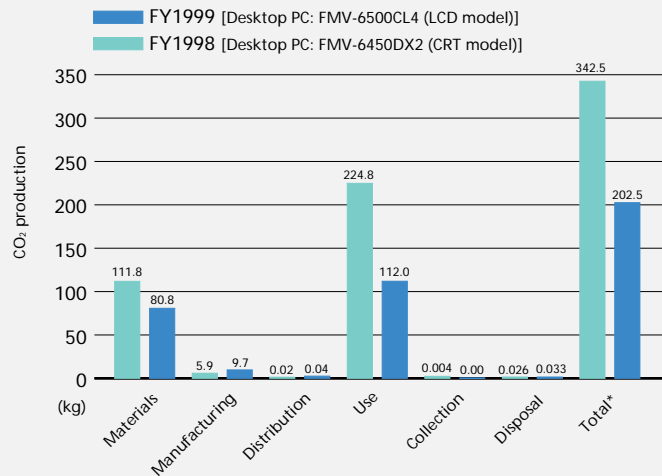


Desktop PC: example of evaluation results for CO₂ emission



FMV-6500CL4

* Compared with older models, the fiscal 1999 models make possible reductions in CO₂ production of up to 27% at the purchasing stages and 50% at the usage stages, respectively* for a total reduction of 40%.

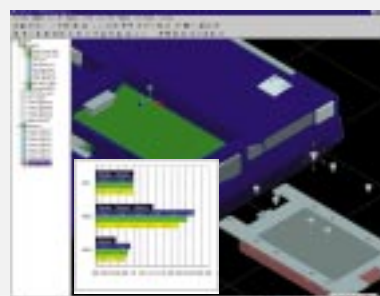


LCA support system

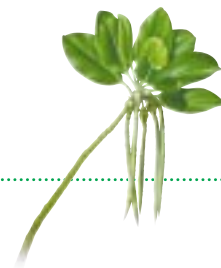
- The LCA support system enables quantitative assessments of the environmental impact of a product to be made not just during use, but also at all the other stages of its life cycle, from manufacturing through to disposal.
- To make calculations of the amounts of carbon dioxide emitted by a product, Fujitsu has developed the FJVPS/ECODESIGN system, which is connected to a 3-dimensional CAD system. This system can automatically calculate in real time the effect of any changes in component shape or material on the carbon dioxide production of a product over its life cycle, thus enabling developers to improve its design quickly.

Principal plans for fiscal 2000

- Expand application of LCA to all products
Unix servers, system printers, etc.



FJVPS/ECODESIGN screen



Lead Reduction / Eco-Friendly Purchasing

Elimination of Lead Solder

Fujitsu has been developing non-lead solders, with the aim of introducing them into all of its products during the next phase of the lead reduction plan, thereby, in time, completely eliminating the use of lead solder.

Lead reduction plans

- Switch completely to non-lead solder with all LSI products from October 2000
- Reduce use of lead solder in 50% of all printed circuit assemblies by 50% from December 2001
- Elimination of lead solder from all product lines from the end of December 2002

Development of technology

In conjunction with Fujitsu Laboratories Ltd., the company has developed highly reliable forms of non-lead solder. These were first employed in the printed circuit assemblies used in the GS8900 global server model launched in October 1999.

Development items

- Development of materials and junction methods for solders made from a tin-silver mixture
- Development of materials and junction methods for solders made from silver and a tin-bismuth eutectic mixture
- Development of manufacturing processes at multiple temperature levels using solders developed from the above two types that have multiple melting points



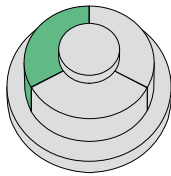
Global Server GS8900



GS8900 Printed Circuit Assembly
(Non-lead Solder is used)

Eco-friendly purchasing

Starting in fiscal 1998, Fujitsu's ISO 14001-certified manufacturing plants began conducting surveys of their suppliers to determine how their business activities conformed to environmental regulations, and to find out their approaches to environmental issues. In fiscal 1999, this survey was extended to include the suppliers (a total of 49 firms) of the Kawasaki Plant, which is the company's main design and development center. This brought the total number of surveyed firms to 320. The results obtained from the 271 firms surveyed in fiscal 1998 were also compiled in a database. Fujitsu began using an Internet-based system to work with suppliers in designing and developing more eco-friendly products, exchanging information via a home page.



Green Factories

Industrial Waste Reduction

In line with its corporate aim of reducing industrial waste output by 88% from its actual fiscal 1991 level by the end of fiscal 2000, Fujitsu is working to lessen the amount of industrial waste (waste acids and alkalis, waste paper, waste plastics and waste oils) produced by its factories, and to reuse them more effectively.

Industrial waste reduction measures

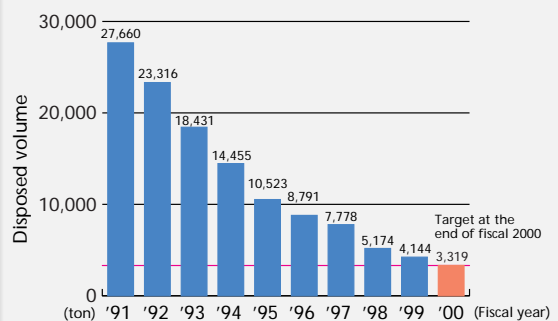
The total volume of industrial waste output*¹ in fiscal 1999 amounted to 4,144 tons, 19.9% less than the previous year and 85% below the actual fiscal 1991 level. Thus, by the end of fiscal 1999, the target of a total reduction of more than 83% was achieved.

*1: Amounts entrusted to disposers

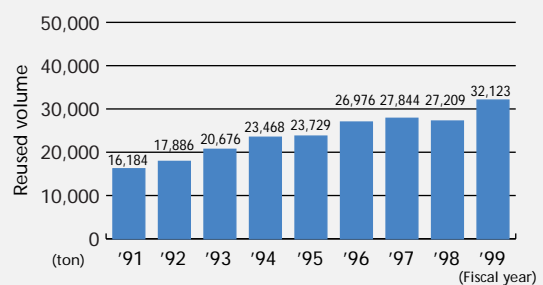
Targeted waste

- waste acids and alkalis
- waste paper
- waste glass
- glass and ceramic shards
- cinders
- waste oil
- metal scraps
- waste plastics
- wood chips
- fiber scraps
- sludge

Changes in output volume of industrial waste



Changes in reused volume*²



*2: Reused or converted into fresh resources

Principal waste reduction measures

Reductions at source:

- Internal waste acid processing to render non-toxic: Kanuma Plant (120 tons)
- Internal hydrofluoric acid processing to render non-toxic: Iwate Plant (124 tons)

Reuse of waste materials

- Use of desiccated sludge from paint scraps as a raw material for cement: Oyama Plant (14 tons)
- Use of waste plastics as fuel: Oyama Plant (50 tons)

Investment

Total of ¥63 million in equipment

- Construction of equipment for internal processing of waste acids: Iwate Plant (¥46 million)
 - Crushing/pulverization equipment for waste plastics: Nasu Plant (¥6.9 million)
- etc.

Principal plans for fiscal 2000

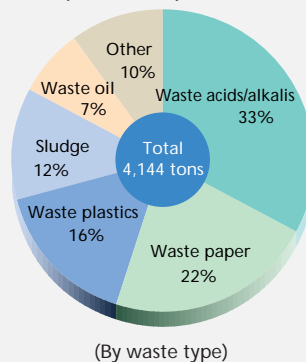
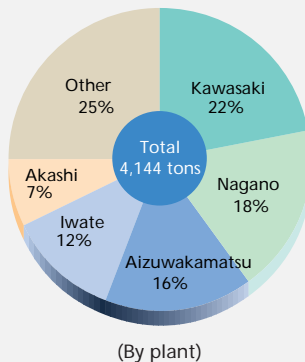
- Substitution of waste alkali for incinerator cooling water Nagano Plant (150 tons)
- Production of organic fertilizer from kitchen garbage — development of system at other sites: Minami-Tama Plant, Kumagaya Plant

**Comment**

In March 2000, we became the first Fujitsu plant to achieve zero-emissions of waste materials. Prior to this, we had already eliminated the production of waste materials in manufacturing processes through recycling programs. By improving our processing equipment to allow us to convert kitchen garbage and organic sludge into organic fertilizer, we were able to achieve our goal. At the moment, this fertilizer is used in fields and vegetable gardens in the plant grounds, but from 2001 onwards we plan to start supplying local farmers too. We also plan to use the produce in the plant cafeteria.



Motoo Chiya
General Manager, Numazu Plant

Volume of disposed waste (Fiscal 1999)

Internal treatment of hydrofluoric acid
(Iwate Plant)

Zero-emission Activities

Fujitsu aims to achieve zero-emissions (defined as 100% reuse of any waste output from a site, so that no material is sent to a landfill) at 15 sites by the end of fiscal 2003. In fiscal 1999, the Numazu Plant and the Akashi Plant achieved zero-emissions.



Organic fertilizer production system
(Numazu Plant)

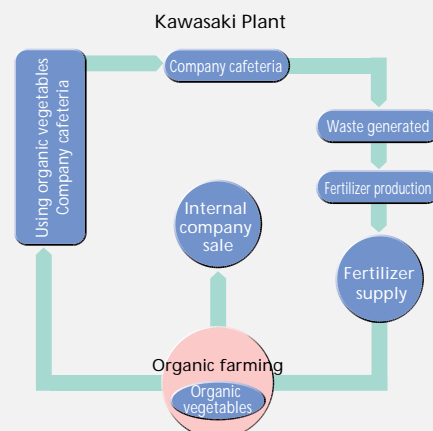
Reuse of kitchen waste in organic fertilizer*³

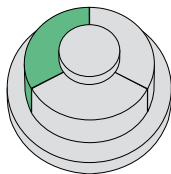
In fiscal 1999, through tie-ups with organic farms, the staff cafeterias at 2 Fujitsu plants began reusing their kitchen wastes as organic fertilizer, resulting in the production of around 4 tons of cabbage and 0.5 tons of lettuce. As well as being used in the cafeterias, these vegetables are also being sold to Fujitsu employees. The plan is to expand the volume and scope of this system in fiscal 2000, by broadening the range of vegetables produced and by extending the scheme to other manufacturing sites, notably the Minami-Tama and Kumagaya plants. The aim eventually is to make this a company-wide recycling initiative.

*3: Implemented at Oyama Plant and Numazu Plant

Targeted zero-emission wastes

- waste acids and alkalis
- waste plastics
- waste oil
- animal/vegetable matter (kitchen wastes)
- purified sludge
- metal scraps
- glass and ceramic shards
- wood chips
- fiber scraps
- waste paper
- sludge

Recycling system for kitchen garbage



Green Factories

Chemical Emission Reduction

Targeting chemical substances used in manufacturing processes such as fluorine compounds, xylene and toluene, Fujitsu is working to reduce emissions of such chemicals by 20% from their actual fiscal 1995 levels by the end of fiscal 2000. Specifically, the company is trying to reduce the amount of substances employed, to use substitute chemicals, and to restrict emissions in general.

Reductions in chemical emissions

The total volume of chemical emissions*¹ in fiscal 1999 amounted to 43.1 tons, 1% less than in the previous year and 17.3%, or 9.0 tons, lower than actual fiscal 1995 levels. Thus, by the end of fiscal 1999, a total reduction of more than 17% had been achieved.

Targeted chemical substances:

- Fluorine compounds
- Nickel compounds
- Lead compounds
- Chromium compounds
- Bromine compounds
- Phosphine
- 3,3-dichloro-4,4-diaminodiphenylmethane
- Xylene
- Manganese compounds
- Cadmium compounds
- Arsenic compounds
- Cyanide compounds
- Hydrazine derivatives
- Phenols
- Toluene

Principal chemical emission reduction measures

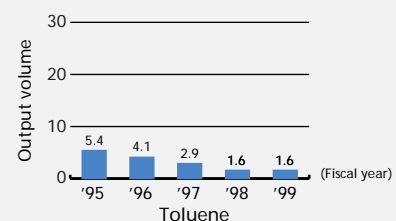
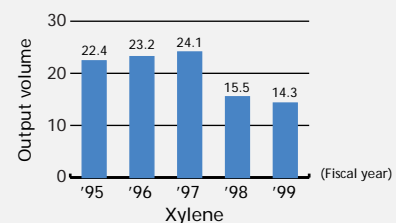
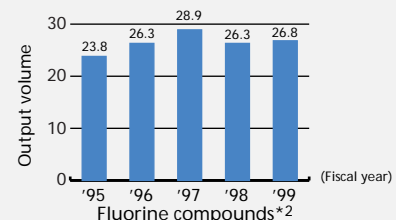
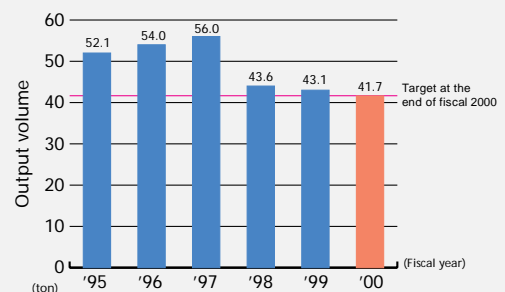
- Reuse of thinners (toluene/xylene) via introduction of solvent recovery equipment:
..... Akashi Plant (emissions reduction: 1 ton)
- Elimination of toluene-containing chemicals:
..... Mie Plant (emissions reduction: 0.2 tons)



Solvent recovery equipment (Akashi Plant)

*1: Calculation methods for chemical emission reductions: Values are calculated by multiplying total volumes of effluent (for fluorine, nickel, manganese and other compounds) or atmospheric emissions (for xylene, toluene and other chemicals) by the concentrations of the relevant substances, which are measured at the point where the discharge from the site occurs. Alternatively, with xylene, toluene and other chemicals, values can be based on the amounts of chemicals purchased and used.

Reductions in chemical emissions



*2: With fluorine compounds, despite efforts to reduce emissions, higher production volumes meant that emissions in fiscal 1999 actually increased over the previous year. In fiscal 2000, Fujitsu plans to achieve reductions by improving waste liquid separation and recovery systems at its manufacturing plants.

**Comment**

Since 1995, we have been working at reducing emissions of chemicals used in the production processes for electronic devices. During fiscal 1999, we completed the switch from a toluene-containing cleaning agent used in the photomask process to another chemical that did not contain toluene. In doing so, we have reduced chemical emissions by 30% from their fiscal 1995 level. Now we are working on reducing emissions of fluorine compounds, which are used in processing wafer surfaces.



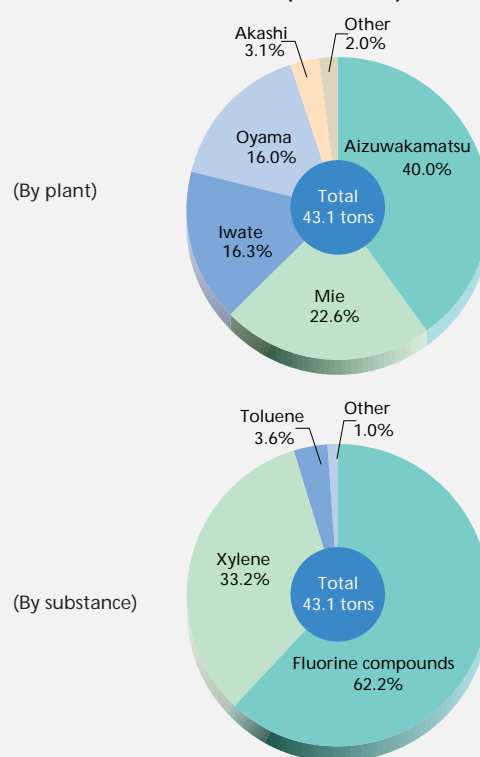
Yukio Kaneko
General Manager, Mie Plant

Principal plans for fiscal 2000

- Reductions in xylene emissions through improved performance of processing equipment for organic chemical waste: Aizuwakamatsu Plant (projected emissions reduction: 1.6 tons)
- Improvements of electrolytic regeneration equipment for permanganic acid:
..... Akashi Plant (projected emissions reduction: 0.01 tons)
- Substitution of sulfates for fluorine compounds used in coating processes:
..... Kanuma Plant (projected emissions reduction: 0.04 tons)

PRTR (Pollutant Release & Transfer Register) system

Fujitsu has implemented a system based on the PRTR guidelines issued jointly by 5 organizations related to the electric and electronic appliance industries in Japan. The PRTR system aims to reduce the emissions of chemical substances that could be harmful to the environment—specifically, by causing air or water pollution—by requiring companies to report the amounts of substances being released. This system also enables Fujitsu to comply with the provisions of Japanese legislation, enacted in March 2000, that governs the release of specified substances into the environment and any improvements made to the handling of such processes. In line with both of these initiatives, in October 2000 Fujitsu began implementing an integrated intranet-based management system*3 for potentially harmful chemical substances at all of its domestic manufacturing and related operations (11 plants, including the Kawasaki Plant, plus Fujitsu Laboratories, Ltd.). This system ensures the proper management of such chemicals from purchase through to final disposal, while also monitoring and measuring the amounts of any chemicals that are transferred or emitted. *3: (see page 37)

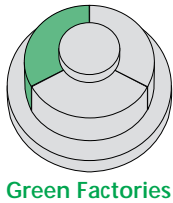
Chemical emission volumes (fiscal 1999)**PRTR survey results (Fiscal 1998)**

(Fujitsu)

Name of chemical	Amount handled	Amount emitted or transferred				Amount consumed (of product, etc.)	Amounts disposed of	Amount recycled
		Air emissions	Water emissions	Amount of waste transferred	Subtotal			
Hydrogen chloride (excepting hydrochloric acid)	0.2	0.05	0	0.09	0.14	0	0.06	0
Chlorine	1.43	0	0	0.27	0.27	0	1.16	0
Xylene compounds	121.19	17.03	0	63.22	80.25	0	0	40.87
Cyanide compounds	2.59	0	0	1.99	1.99	0	0.6	0
N,N-dimethylformamide (DMF)	2.14	0	0	2.14	2.14	0	0	0
Copper compounds	197.46	0	0.39	0	0.39	0	2.01	195.06
Toluene	7.42	1.51	0	5.92	7.42	0	0	0
Lead compounds	7.61	0	0.02	0	0.02	0	0	7.59
Nickel compounds	6.51	0	0.61	0	0.61	0.41	0	5.49
Hydrazine	2.36	0	0	0	0	0	2.36	0
Hydrogen fluoride	141.71	0.6	15.66	35.45	51.71	0	67.59	22.41
Fluorine compounds (inorganic)	13.68	0	2.88	10.47	13.35	0	0.3	0.03
Formaldehyde	21.46	0	0.06	10.34	10.4	0	11.06	0
Manganese compounds	4	0	0.02	3.98	4	0	0	0
Aluminum compounds (soluble chloride salts)	403.37	0	0	0	0	0	403.37	0
Monoethanolamine (MEA)	96.21	0	0	96.21	96.21	0	0	0
2-ethoxyethyl acetate	2.36	0	0	2.36	2.36	0	0	0
Total *4	1031.7	19.18	19.64	232.43	271.26	0.41	488.51	271.45

*4: Total is slightly different, because items are rounded off.

(tons)



Energy-Saving Measures (Against Global Warming)

Aiming to reduce electric power consumption per unit of sales at manufacturing plants and other sites by 40% from its actual fiscal 1990 level by the end of fiscal 2000, Fujitsu has been implementing a variety of energy-saving measures. This has included the introduction and expansion of energy-saving equipment and technology, as well as efforts to promote operational energy efficiency in general.

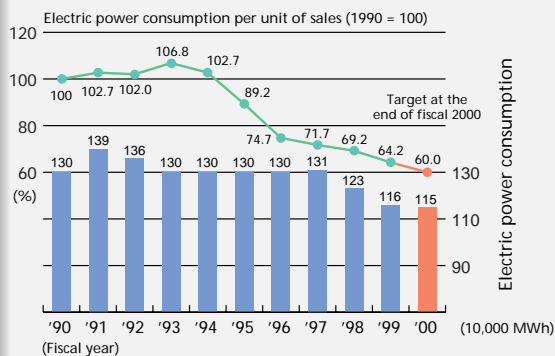
Energy-saving results

Actual electric power consumption per unit of sales in fiscal 1999 amounted to 35.8 MWh per 100 million yen of sales—a reduction of 7.2% compared with the previous year, and 35.8% below the level recorded in fiscal 1990. This exceeded the published target for fiscal 1999, which was a reduction of 34% relative to the fiscal 1990 level.

Reference note: if expressed in terms of CO₂ emission equivalents, total energy consumption (representing electricity, oil and gas) in fiscal 1999 amounted to 170,000 ton-C*¹, or 5.2 ton-C/100 million yen (per unit of sales). This was 4.4% lower than in the previous year, and 13.6% below the fiscal 1990 level.

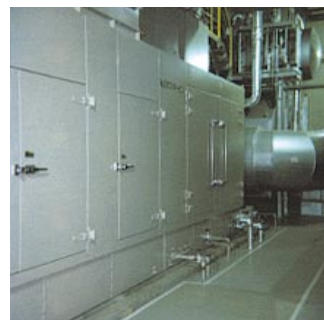
*1: The unit ton-C denotes the weight of carbon contained in the corresponding carbon dioxide (CO₂).

Reductions in electric power consumption



Principal energy-saving measures

- Introduction of co-generation system: Iwate Plant (single unit)
Annual reduction: 33,600 MWh
- Operational control via an inverter-mediated load-switching mechanism: Mie Plant (22 pumps)
Annual reduction: 3,390 MWh
- Reduction in excess lighting voltage via economizing devices: Information Processing Systems Laboratory (8 units)
Annual reduction: 120 MWh
- Effective use of cold external air during winter: Suzaka Plant
(using outside air to cool water in cooling towers to lessen the load on refrigeration equipment)
Annual reduction: 80 MWh
- Changes made to internal air conditioning and humidity control systems: Oyama Plant (6 units)
Annual reduction: 350 MWh
- Introduction of power measurement/management systems: Kanuma Plant

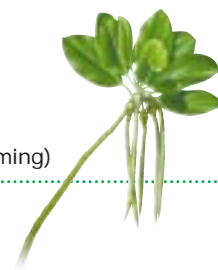


Co-generation system (Iwate Plant)

Investment in equipment

Total of ¥920 million

- Co-generation system (¥520 million)
- Introduction of inverters (¥220 million)
- Cold water manufacturing units to utilize external air (¥14 million)
- Clean room insulation (¥13 million)
- etc.



Comment

We have been implementing a full-scale program of energy-saving measures since 1994. During fiscal 1999, through the introduction of two co-generation system units and a reduction in the capacity of the pumps used for cooling water, we managed to reduce our energy consumption by 2.4% compared with fiscal 1990. In terms of carbon dioxide output, this is equivalent to a reduction of approximately 3,800 ton-C. We have also been successful in reducing the amount of fuel and gas we use. Both these measures have a potentially positive effect on global warming, and we plan to keep on making further improvements.



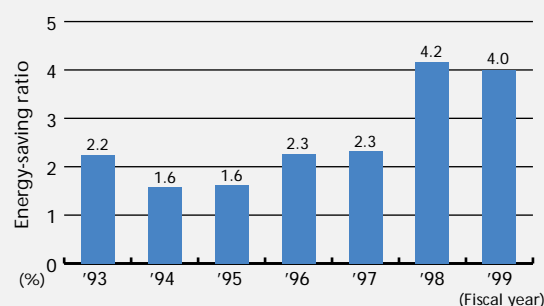
Izumi Tanaka
General Manager, Iwate Plant

Site management based on energy-saving ratio*2

Since fiscal 1993, Fujitsu has been employing an energy-saving ratio to measure and manage the effects of energy-saving measures at its plants and other sites. In fiscal 1999, in terms of crude oil equivalents, the amount of energy saved was 17,000 kℓ. Comparing this figure with total consumption of 414,000 kℓ shows that the overall energy-saving ratio was 4.0%—well above the operational yardstick of 2.0%.

*2: Energy-saving ratio = amount of energy saved /
(total energy consumption + amount of energy saved)
Amount of energy saved: energy reduction resulting from energy-saving measures
Total energy consumption: total of electricity, oil and gas

Energy-saving ratios



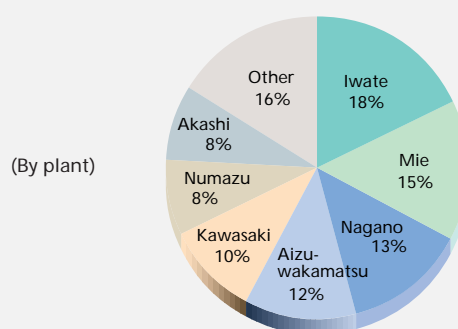
Absolute energy consumption reduction target

From fiscal 2001, Fujitsu plans to replace the relative units used to date to measure energy-saving efforts with a new indicator that tracks reductions in the absolute amount of energy consumed. This shift will help Fujitsu reduce the consumption of not only electric power, but also that of oil and gas. At the same time, it will be applied to all Fujitsu buildings, offices and factories. Fujitsu is also working to hit the carbon dioxide emission reduction targets for fiscal 2000 set out in the plan for autonomous environmental measures by Japanese industry issued by the Federation of Economic Organizations.

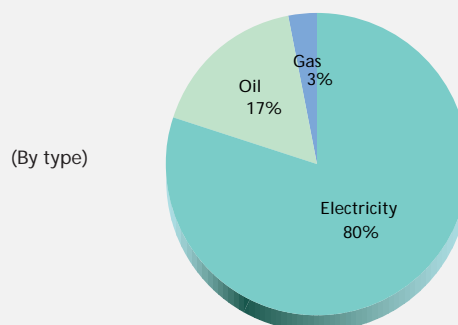
Principal plans for fiscal 2000

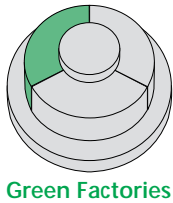
- Introduction/expansion of energy-saving equipment and technologies:
 - Inverters: plants at Kawasaki, Oyama, Nasu, Nagano, Numazu, Akashi, Suzaka, and Mie plants
 - Economization devices: Nasu, and Kumagaya; Tatebayashi Systems Center; Information Processing Systems Laboratory
 - Collection and reuse of waste heat: Kawasaki, Akashi, Aizuwakamatsu, and Iwate plants
 - Reuse of outside air: Oyama, Nagano, Aizuwakamatsu, and Mie plants
- Clean room energy-saving measures
- Sampling of energy losses to diagnose energy-saving opportunities and consider countermeasures

Actual electricity usage (fiscal 1999)



Actual energy usage (fiscal 1999)





Plant Environmental Control (Environmental Risk Countermeasures)

Fujitsu is undertaking a variety of measures to protect the environment in and around its plants. As well as purifying soil and ground water, the company is working to prevent the emission of global warming gases and of dioxins from waste incineration. (In 1999, there were no environmental accidents.)

Soil and ground water purification

Based on the results of surveys conducted in fiscal 1998 to determine the status of chlorine compound levels (specifically, trichloroethylene, methylene chloride, etc.) in soil and ground water in and around company plants, Fujitsu is continuing its purifying efforts. All factories in the Fujitsu Group fall within recognized contamination limits. However, to accelerate such efforts at 3 sites, the company is investing in purification equipment and increasing the number of wells used in connection with these clean-up programs. In addition, as a preventative measure, the company has begun drilling fresh observation wells. Moreover, Fujitsu's internal rules mandate that a full evaluation of soil or ground water contamination be made prior to the acquisition of any land to ensure that it is unpolluted.



Purification equipment (Kawasaki Plant)

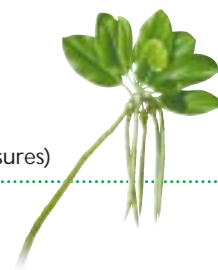
Dioxin emission prevention measures

Committees to oversee the implementation of countermeasures to prevent dioxin emissions were formed in May 1998 at all plants that had incinerators at that time. As a result of the committees' investigations, it was found that 2 plants did not need to be regulated. Nevertheless these 2 plants shut down their incinerators in March, 1999. The 3 plants which were to be regulated shut down their incinerators in January, 2000. Ten of Fujitsu's manufacturing affiliates abolished their incinerators in August, 2000.

- Oyama Plant Stopped in November 1998
- Tatebayashi Systems Center Stopped in November 1998
- Kanuma Plant Stopped in March 1999
- Akashi Plant Stopped in August 1999
- Numazu Plant Stopped in January 2000



Abolished incinerator (Numazu Plant)



Measures against environmental endocrine disruptors

Since fiscal 1997, Fujitsu has been measuring, and reducing the use at its factories of all of the 67 chemical substances designated by the Environment Agency of Japan as having potentially harmful effects on human endocrine systems. During fiscal 1999, the company used 140.7 kg of such substances, 38% less than in fiscal 1998. The number of substances in use was also reduced from 6 to 3. Through an internal registration system, Fujitsu will continue to work to restrict and reduce the use of new chemicals.

Results

Name of substance	Amount used	Principal uses
Nonyl phenol	135	Degreasing agent
Bisphenol A	3.61	Raw material for resins
Di-n-butyl phthalate	2.10	Plasticizer; reagent

(kg)

* Substances whose use has been entirely eliminated:

Styrene dimer; styrene trimer
Diethyl phthalate
Di-2-ethylhexyl phthalate

Environmental risk countermeasures: chemical spills

To prevent acids, alkalis or solvents leaking into the environment from waste water treatment facility storage tanks in the event of earthquakes or accidents, Fujitsu and its affiliates have constructed concrete embankments and other barriers at manufacturing and R&D sites. The company also maintains and repairs such facilities on a regular basis.



Embankment at waste water treatment facility to contain chemical spills (Kawasaki Plant)

Elimination of use of ozone-depleting substances

Fujitsu has completely eliminated the use of ozone-depleting substances in its manufacturing operations. In addition, measures have been taken to ensure that any CFC coolants used in air conditioning or refrigeration equipment do not leak into the atmosphere. Whenever such kinds of equipment are renovated, the opportunity is taken to replace coolants with non-CFC alternatives.

Results

Ozone-depleting substance	Date of elimination
Cleaning freons (CFC-113, CFC-115)	End of 1992
Carbon tetrachloride	End of 1992
1,1,1-trichloroethane	End of October 1994
Substitute freons (HCFCs)	End of March 1999

Greenhouse gas emission prevention

The Japanese semiconductor industry has established a voluntary code of conduct to cut emissions of greenhouse gases such as perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF₆). At a meeting convened in April 1999, the global semiconductor industry also agreed to common emission reduction targets. Fujitsu's efforts in this area are being spearheaded by the Electronic Devices Division, which has formulated a plan to ensure that internal emission countermeasures meet the national and international targets. Specific measures include the following:

- Use of substitutes for liquid PFCs
- Application of emissions-reduction technologies to new production lines
- Survey/measurement of emission levels
- Support for R&D programs of substitutive technologies, collection and reuse technologies

All of Fujitsu's activities in terms of surveying and collecting data on the amounts of such emissions by the Electronic Devices Division are reported to the Electronic Industries Association of Japan. The company continues to work to achieve its internal emission plan.

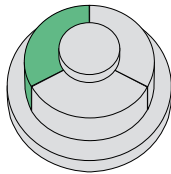
Promotion of paperless operations

To conserve forests and reduce the amount of waste paper produced, Fujitsu is promoting the internal use of networks, and double-sided printing. During fiscal 1999, the company reduced its paper usage by the equivalent of around 40 million sheets of A4 paper.

Results

(Fujitsu Group)

Sheets (A4 equivalents, estimated)/millions	
1998	900
1999	860
Reduction	40



Green Factories

Protecting Water Sources

Fujitsu factories use substantial volumes of water in a number of manufacturing processes—for example, during the cleaning of coatings, or for cooling purposes. The company works to ensure that this water is used as efficiently as possible, both in manufacturing processes and afterwards. The volume of water used at Fujitsu's 15 plants (and offices) during fiscal 1999 totaled approximately 18.3 million cubic meters. At the Kawasaki Plant, purified water is used to supply a garden pond that supports a variety of wildlife, including fish and ducks. Other water usage examples are given below.



Kawasaki Plant

Water usage examples

Oyama Plant



At the Oyama Plant, through circulating water used to cool communications equipment in heat-shock vats (used to test reliability by exposure to alternate high and low temperatures) via cooling towers, the amount of underground water used was reduced by 111,829 m³ per year.

Nasu Plant



At the Nasu Plant, the addition of cooling-water recirculation equipment to high-temperature quality inspection machines resulted in an annual reduction in water usage of 6,000 m³.

Aizuwakamatsu Plant



At the Aizuwakamatsu Plant, the waste water from the vacuum pumps used in manufacturing equipment had previously been allowed to drain away because it was acidic. By neutralizing this water with ammonia, it became possible to recycle it, resulting in an annual reduction in water usage of 89,289 m³.

Suzaka Plant



At the Suzaka Plant, water used to clean the coatings applied during the manufacture of electronic devices is purified with ion-exchange resins and then recycled. As a result, of the 189,747 m³ of cleaning water used, only 3,249 m³ (1.7%) had to be introduced fresh—producing a total reduction of 186,498 m³.

Plant Environmental Countermeasures: Air/Water/Noise/Vibration Pollution

For air, water, noise and vibration in factories and offices, Fujitsu implements in-house limits stricter than laws and regulations, and prevents pollution by regular measurement, maintenance and management of environmental protection equipment. Fujitsu took remedial measures at plants and offices which exceeded in-house limits.

Kawasaki Plant (Location: Kawasaki, Kanagawa)

Results of waste water measurement

ND: Not detected Units: ppm (mg/ℓ)

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit #1	Local govt. limit	In-house limit	
Plant waste water	Effluent load (m ³ /day)				158
	Cadmium	0.1	0.1	0.05	ND (<0.01)
	Total cyanide	1	1	0.5	ND (<0.01)
	Organic phosphorus	1	0.2	—	*2
	Lead	0.1	0.1	0.05	0.078 (*3)
	Hexavalent chromium	0.5	0.5	0.1	ND (<0.01)
	Arsenic	0.1	0.1	0.05	0.002
	Total mercury	0.005	0.05		
	Organic mercury	ND	ND		
	PCB	0.003	0.003	—	*2
	Selenium	0.1	0.1		
	Benzene	0.1	0.1	0.01	ND (<0.001)
	Trichloroethylene	0.3	0.3	0.03	ND (<0.001)
	Tetrachloroethylene	0.1	0.1	0.01	ND (<0.0015)
	1,1,1-trichloroethane	3	3	0.3	ND (<0.001)
	Carbon tetrachloride	0.02	0.02	0.01	ND (<0.0015)
	Dichloromethane	0.2	0.2	0.01	ND (<0.001)
	1,2-dichloroethane	0.04	0.04	0.01	ND (<0.0015)
	1,1,2-trichloroethane	0.06	0.06	0.01	ND (<0.0015)
	1,1-dichloroethylene	0.2	0.2	0.02	ND (<0.0005)
	cis-1,2-dichloroethylene	0.4	0.4	0.04	ND (<0.0005)
	Hydrogen ion concentration (pH)	5.7-8.7	5.7-8.7	6.0-8.5	6.84-7.56
	BOD (biochemical oxygen demand)	300	300	80	12.18
	Iodine consumption	—	220	80	23.68
	SS (suspended solids)	300	300	50	27.8
	n-hexane (mineral)	5	5	—	*2
	n-hexane (animal/plant)	30	30		
	Phenols	5	0.5	0.4	ND (<0.01)
	Copper	3	3	1	0.33
	Zinc	5	3	1	0.62
	Soluble iron	10	10	2	4.75 (*4)
	Soluble manganese	10	1	0.8	0.15
	Total chromium	2	2	0.5	ND (<0.06)
	Fluorine	15	15	10	2.58
	Nitrogen	150	150	60	19.98
	Phosphorus	20	20	8	2.16
	Nickel	—	1	0.8	0.17

Note: Values for effluent are average daily values; pH values express ranges, defined numerically.

*1: National standard is based on Sewage Water Law. *2: Excluded from measurement due to unused amounts of specific pharmaceuticals.

*3: The in-house limit for lead was exceeded in only one measurement; however the limit was not exceeded in any of the other regular measurements.

*4: The in-house limit for soluble iron was exceeded due to an inability to remove the iron from wastewater; however, the process was improved, and the limit was not exceeded in any of the other regular measurements.

Results of air quality measurement

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit #5	
Facility name	Nitrogen oxides (NOx) [ppm]	150	0.33g/10 ³ kcal	100	30
Boiler No. 1	Sulfur oxides (SOx) [Nm ³ /h]	2.3	0.34g/10 ³ kcal	—	*6
	Soot/dust/particulates [g/Nm ³]	0.15	0.05g/10 ³ kcal	0.01	0.001
Facility name	Nitrogen oxides (NOx) [ppm]	150	0.33g/10 ³ kcal	100	49.9
Boiler No. 2	Sulfur oxides (SOx) [Nm ³ /h]	3.0	0.34g/10 ³ kcal	—	*6
	Soot/dust/particulates [g/Nm ³]	0.15	0.05g/10 ³ kcal	0.01	0.001
Facility name	Nitrogen oxides (NOx) [ppm]	150	0.33g/10 ³ kcal	100	87.6
Boiler No. 3	Sulfur oxides (SOx) [Nm ³ /h]	6.5	0.34g/10 ³ kcal	—	*6
	Soot/dust/particulates [g/Nm ³]	0.15	0.05g/10 ³ kcal	0.01	0.001
Facility name	Nitrogen oxides (NOx) [ppm]	150	0.33g/10 ³ kcal	100	46.7
Boiler No. 4	Sulfur oxides (SOx) [Nm ³ /h]	9.4	0.34g/10 ³ kcal	—	*6
	Soot/dust/particulates [g/Nm ³]	0.05	0.05g/10 ³ kcal	0.01	0.001
Facility name	Nitrogen oxides (NOx) [ppm]	150	0.33g/10 ³ kcal	100	67.7
Boiler No. 5	Sulfur oxides (SOx) [Nm ³ /h]	0.5	0.34g/10 ³ kcal	—	*6
	Soot/dust/particulates [g/Nm ³]	0.05	0.05g/10 ³ kcal	0.01	0.001

*5: In-house limits were calculated from local government limits.

*6: Sulfur oxides are excluded from measurement because their value is calculated based upon usage of kerosene and municipal gas.

Results of noise and vibration measurement

Units: dB

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Noise	Daytime	*7	62.5	60	53.1
	Morning/evening		57.5	57.5	49.3
	Night		50	49.5	48.9
Vibration	Day		70	50	41.1
	Night		60	50	38.1

*7: Law provides that regulatory limit should be provided by mayor.

Nasu Plant (Location: Otahara, Tochigi)

Results of waste water measurement

ND: Not detected Units: ppm (mg/ℓ)

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Plant waste water	Effluent load (m ³ /day)				125
	Cadmium	0.1	0.1	0.01	ND (<0.005)
	Total cyanide	1	1	0.01	ND (<0.01)
	Organic phosphorus	1	1	—	*1
	Lead	0.1	0.1	0.01	ND (<0.005)
	Hexavalent chromium	0.5	0.1	0.01	ND (<0.01)
	Arsenic	0.1	0.1	0.05	ND (<0.005)
	Total mercury	0.005	0.005	ND	ND (<0.005)
	Organic mercury	ND	ND	ND	ND (<0.0005)
	PCB	0.003	0.003	ND	ND (<0.0005)
	Selenium	0.1	0.1	0.01	ND (<0.002)
	Benzene	0.1	0.1	0.01	ND (<0.01)
	Trichloroethylene	0.3	0.3	0.01	ND (<0.01)
	Tetrachloroethylene	0.1	0.1	0.01	ND (<0.01)
	1,1,1-trichloroethane	3	3	0.03	ND (<0.01)
	Carbon tetrachloride	0.02	0.02	0.002	ND (<0.001)
	Dichloromethane	0.2	0.2	0.02	ND (<0.01)
	1,2-dichloroethane	0.04	0.04	0.004	ND (<0.001)
	1,1,2-trichloroethane	0.06	0.06	0.006	ND (<0.001)
	1,1-dichloroethylene	0.2	0.2	0.02	ND (<0.02)
	cis-1,2-dichloroethylene	0.4	0.4	0.02	ND (<0.04)
	Hydrogen ion concentration (pH)	5.8-8.6	5.8-8.6	6.0-8.0	6.9-7.4
	BOD (biochemical oxygen demand)	160	25	8	3.8
	COD (chemical oxygen demand)	160	25	20	8.9
	SS (suspended solids)	200	50	10	ND (<1.0)
	n-hexane (mineral)	5	5	1	ND (<0.5)
	n-hexane (animal/plant)	30	10	1	ND (<0.5)
	Phenols	5	1	0.1	ND (<0.01)
	Copper	3	3	0.1	0.09
	Zinc	5	5	0.3	0.046
	Soluble iron	10	3	0.5	0.067
	Soluble manganese	10	3	0.5	ND (<0.05)
	Total chromium	2	2	0.2	ND (<0.05)
	Fluorine	15	8	1	0.77
	Nitrogen	120	20	20	5.4
	Phosphorus	16	2	8	2.6

Note: Values for effluent are average daily values; pH values express ranges, defined numerically.

*1: Excluded from measurement due to unused amounts of specific pharmaceuticals.

Results of air quality measurement

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Facility name	Nitrogen oxides (NOx) [ppm]	150	150	120	62
Boiler No. 1	Sulfur oxides (SOx) [Nm ³ /h]	2.2	2.2	1.76	ND (<0.0001)
	Soot/dust/particulates [g/Nm ³]	0.1	0.1	0.02	0.001

Results of noise and vibration measurement

Units: dB

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Noise	Daytime	*2	75	65	50
	Morning/evening		70	65	57
	Night		60	55	50
Vibration	Day		70	55	<30
	Night		65	50	<30

*2: Limit set by prefectural governor, in accordance with legislation.

Akashi Plant (Location: Akashi, Hyogo)

Results of waste water measurement

ND: Not detected Units: ppm (mg/ℓ)

Item			Regulatory limit (max.)			Fiscal 1999 actual
			National limit	Local govt. limit	In-house limit	
Plant waste water	Toxic substances	Effluent load (m³/day)				5,292
		Cadmium	0.1	0.05	0.008	ND (<0.005)
		Total cyanide	1	0.7	0.08	ND (<0.02)
		Organic phosphorus	1	0.7	0.08	ND (<0.08)
		Lead	0.1	0.1	0.05	ND (<0.05)
		Hexavalent chromium	0.5	0.35	0.04	ND (<0.01)
		Arsenic	0.1	0.1	0.04	ND (<0.01)
		Total mercury	0.005	0.005	0.0005	ND (<0.0005)
		Organic mercury	ND	ND	ND	ND (<0.0005)
		PCB	0.003	0.003	0.0005	ND (<0.0005)
		Selenium	0.1	0.1	0.01	ND (<0.01)
		Benzene	0.1	0.1	0.01	ND (<0.001)
		Trichloroethylene	0.3	0.3	0.03	ND (<0.002)
		Tetrachloroethylene	0.1	0.1	0.01	ND (0.0005)
		1,1,1-trichloroethane	3	3	0.03	ND (<0.0005)
		Carbon tetrachloride	0.02	0.02	0.01	ND (<0.0005)
		Dichloromethane	0.2	0.2	0.02	ND (<0.002)
		1,2-dichloroethane	0.04	0.04	0.01	ND (<0.004)
		1,1,2-trichloroethane	0.06	0.06	0.01	ND (<0.006)
		1,1-dichloroethylene	0.2	0.2	0.02	ND (<0.002)
		cis-1,2-dichloroethylene	0.4	0.4	0.04	ND (<0.004)
	General items	Hydrogen ion concentration (pH)	5.8-8.6	5.8-8.6	6.2-8.2	7.05-7.9
		BOD (biochemical oxygen demand)	35	35	12.0	10.9
		COD (chemical oxygen demand)	35	35	12.1	10.5
		SS (suspended solids)	50	50	11.2	10.2
		n-hexane (mineral)	5	1.5	0.8	0.15
		n-hexane (animal/plant)	30	15	12	0.56
		Phenols	1	1	0.5	ND (<0.1)
		Copper	3	3	1	0.46
		Zinc	5	5	1	0.11
		Soluble iron	10	10	2	0.68
		Soluble manganese	10	10	1	0.93
		Total chromium	2	2	0.5	0.05
		Fluorine	15	15	10	0.85
		Nitrogen	120	120	40	10.7
		Phosphorus	16	16	1	0.23

Note: Values for effluent are average daily values; pH values express ranges, defined numerically.

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Results of air quality measurement

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Facility name Boiler No. 2	Nitrogen oxides (NOx) [ppm]	150	20 ton/year (*1)	104	40.1
	Sulfur oxides (SOx) [Nm ³ /h]	5.5	5.5	0.053	ND (<0.004)
	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.04	0.0006
Facility name Boiler No. 10	Nitrogen oxides (NOx) [ppm]	130	20 ton/year (*1)	104	39.8
	Sulfur oxides (SOx) [Nm ³ /h]	4.9	4.9	0.057	ND (<0.006)
	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.12	0.0011
Facility name Boiler No. 17	Nitrogen oxides (NOx) [ppm]	150	20 ton/year (*1)	104	56.1
	Sulfur oxides (SOx) [Nm ³ /h]	3.8	3.8	0.015	ND (<0.001)
	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.04	0.0004
Multi-layer chimney boiler	Nitrogen oxides (NOx) [ppm]	150	20 ton/year (*1)	104	71.0
	Sulfur oxides (SOx) [Nm ³ /h]	0.4	0.4	0.006	ND (<0.001)
	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.04	0.0006

*1: This value is fixed from the areawide total pollutant load control, and in-house standards are converted from it.

Results of noise and vibration measurement

Units: dB

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Noise	Daytime	*2	65	63.5	61
	Morning/evening		60	58.5	53
	Night		50	49.8	49.6
Vibration	Day	*2	65	62.5	45
	Night		60	57.5	45

*2: Limit set by prefectural governor, in accordance with legislation.

Iwate Plant (Location: Kanegasaki, Isawa, Iwate)

Results of waste water measurement

ND: Not detected Units: ppm (mg/ℓ)

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Plant waste water	Effluent load (m ³ /day)				10,525
	Cadmium	0.1	0.1	0.01	ND (<0.01)
	Total cyanide	1	1	0.1	ND (<0.01)
	Organic phosphorus	1	1	ND	ND (<0.1)
	Lead	0.1	0.1	0.07	ND (<0.008)
	Hexavalent chromium	0.5	0.5	0.05	ND (<0.01)
	Arsenic	0.1	0.1	0.05	ND (<0.001)
	Total mercury	0.005	0.005	—	*1
	Organic mercury	ND	ND		
	PCB	0.003	0.003		
	Selenium	0.1	0.1		
	Benzene	0.1	0.1	0.03	ND (<0.002)
	Trichloroethylene	0.3	0.3		
	Tetrachloroethylene	0.1	0.1		
	1,1,1-trichloroethane	3	3		
	Carbon tetrachloride	0.02	0.02	0.002	ND (<0.0005)
	Dichloromethane	0.2	0.2		
	1,2-dichloroethane	0.04	0.04		
	1,1,2-trichloroethane	0.06	0.06		
	1,1-dichloroethylene	0.2	0.2	—	*1
	cis-1,2-dichloroethylene	0.4	0.4		
	Hydrogen ion concentration (pH)	5.8~8.6	5.8~8.6	5.9~8.5	6.4~7.3
	BOD (biochemical oxygen demand)	160	160	25	9.3
	COD (chemical oxygen demand)	160	160	30	21
	SS (suspended solids)	200	200	30	2.4
	n-hexane (mineral)	5	5	—	*1
	n-hexane (animal/plant)	30	30	3	0.5
	Phenols	5	5	—	*1
	Copper	3	3	0.5	0.03
	Zinc	5	5	0.5	0.19
	Soluble iron	10	10	1	0.98
	Soluble manganese	10	10	1	ND (<0.02)
	Total chromium	2	2	0.2	ND (<0.06)
	Fluorine	15	15	5	4
	Nitrogen	120	120	70	28.6
	Phosphorus	16	16	5	0.59

Note: Values for effluent are average daily values; pH values express ranges, defined numerically.
 *1: Excluded from measurement due to unused amounts of specific pharmaceuticals.

Results of air quality measurement

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Facility name Boiler No. 1	Nitrogen oxides (NOx) [ppm]	150	150	100	71
	Sulfur oxides (SOx) [Nm ³ /h]	21.4	21.4	12.3	4.1
	Soot/dust/particulates [g/Nm ³]	0.25	0.25	0.1	0.02
Co-generation system	Nitrogen oxides (NOx) [ppm]	70	70	67.5	66.1
	Sulfur oxides (SOx) [Nm ³ /h]	3.94	3.94	2.25	1.0
	Soot/dust/particulates [g/Nm ³]	0.05	0.05	0.045	0.014

Results of noise and vibration measurement

Units: dB

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Noise	Daytime	*2	70	60	55
	Morning/evening		70	55	53
	Night		65	55	53
Vibration	Day	*3	—	—	—
	Night				

*2: Limit set by prefectural governor, in accordance with legislation.
 *3: Not regulated because location is an industrial area.

Fujitsu Laboratories (Atsugi) (Location: Atsugi, Kanagawa)

Results of waste water measurement

ND: Not detected Units: ppm (mg/ℓ)

Results of waste water measurement

ND: Not detected Units: ppm (mg/L)

Item			Regulatory limit (max.)			Fiscal 1999 actual
			National limit #1	Local govt. limit	In-house limit	
Plant waste water	Toxic substances	Effluent load (m ³ /day)				208
		Cadmium	0.1	0.1	0.01	ND (<0.002)
		Total cyanide	1	1	0.5	ND (<0.01)
		Organic phosphorus	1	0.2	—	*2
		Lead	0.1	0.1	0.05	ND (<0.02)
		Hexavalent chromium	0.5	0.5	0.1	ND (<0.05)
		Arsenic	0.1	0.1	0.05	ND (<0.005)
		Total mercury	0.005	0.005	0.004	ND (<0.0005)
		Organic mercury	ND	ND		
		PCB	0.003	0.003	—	*2
		Selenium	0.1	0.1	0.01	ND (<0.002)
		Benzene	0.1	0.1	0.01	0.0002
		Trichloroethylene	0.3	0.3	0.03	ND (<0.0002)
		Tetrachloroethylene	0.1	0.1	0.01	ND (<0.0002)
		1,1,1-trichloroethane	3	3	0.3	ND (<0.0002)
		Carbon tetrachloride	0.02	0.02	0.01	ND (<0.0002)
		Dichloromethane	0.2	0.2	0.02	0.0011
		1,2-dichloroethane	0.04	0.04	0.01	ND (<0.0002)
		1,1,2-trichloroethane	0.06	0.06	—	*2
		1,1-dichloroethylene	0.2	0.2	0.02	ND (<0.0002)
		cis-1,2-dichloroethylene	0.4	0.4	0.04	0.0008
	General items	Hydrogen ion concentration (pH)	5.0~9.0	5.0~9.0	6.0~8.6	6.7~7.3
		BOD (biochemical oxygen demand)	<600	<600	80	10
		Iodine consumption	—	220	100	98.96
		SS (suspended solids)	<600	<600	50	14
		n-hexane (mineral)	5	5	5	ND (<2.5)
		n-hexane (animal/plant)	30	30	15	*2
		Phenols	5	0.5	0.4	0.029
		Copper	3	3	1	0.12
		Zinc	5	3	1	0.1
		Soluble iron	10	10	2	0.08
		Soluble manganese	10	1	0.8	0.15
		Total chromium	2	2	0.5	ND (<0.05)
		Fluorine	15	15	10	6.3
		Nitrogen			60	22.57
		Phosphorus	—		8	0.12
		Nickel		1	0.8	0.05

Note: Values for effluent are average daily values; pH values express ranges, defined numerically.

*1: National standard is based on Sewage Water Law.

*2: Excluded from measurement due to unused amounts of specific pharmaceuticals.

Results of air quality measurement

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Facility name	Nitrogen oxides (NOx) [ppm]	180	150	144	96
Boiler No. 1	Sulfur oxides (SOx) [Nm ³ /h]	23.9	0.8	0.8	ND (<0.017)
	Soot/dust/particulates [g/Nm ³]	0.3	—	0.24	0.011
Facility name	Nitrogen oxides (NOx) [ppm]	180	150	144	89
Boiler No. 2	Sulfur oxides (SOx) [Nm ³ /h]	23.9	0.8	0.8	ND (<0.022)
	Soot/dust/particulates [g/Nm ³]	0.3	—	0.24	0.01
Heating/cooling unit RF-2	Nitrogen oxides (NOx) [ppm]	180	150	144	56
	Sulfur oxides (SOx) [Nm ³ /h]	24.1	1.1	1.1	ND (<0.017)
Building No. 1	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.24	0.0056
Heating/cooling unit RF-3	Nitrogen oxides (NOx) [ppm]	180	150	144	61
	Sulfur oxides (SOx) [Nm ³ /h]	24.1	1.1	1.1	ND (<0.017)
Building No. 1	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.24	0.0075
Heating/cooling unit RF-3	Nitrogen oxides (NOx) [ppm]	180	150	144	72
	Sulfur oxides (SOx) [Nm ³ /h]	29.6	1.3	1.3	ND (<0.024)
Building No. 2	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.24	0.0064
Heating/cooling unit RF-4	Nitrogen oxides (NOx) [ppm]	180	150	144	82
	Sulfur oxides (SOx) [Nm ³ /h]	29.6	1.3	1.3	ND (<0.027)
Building No. 2	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.24	0.0048
Heating/cooling unit RF-5	Nitrogen oxides (NOx) [ppm]	180	150	144	71
	Sulfur oxides (SOx) [Nm ³ /h]	37.2	0.71	0.71	ND (<0.028)
Building No. 2	Soot/dust/particulates [g/Nm ³]	0.3	0.3	0.24	0.0047

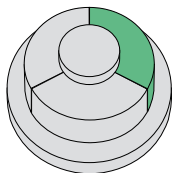
Results of noise and vibration measurement

Units: dB

Item		Regulatory limit (max.)			Fiscal 1999 actual
		National limit	Local govt. limit	In-house limit	
Noise	Daytime	*3	65	60	50
	Morning/evening		60	50	*4
	Night		50	50	48
Vibration	Day		65	55	47.2
	Night		60	55	47.2

*3: Limit set by prefectural governor, in accordance with legislation.

*4: Vibration measurements only taken for day and night.



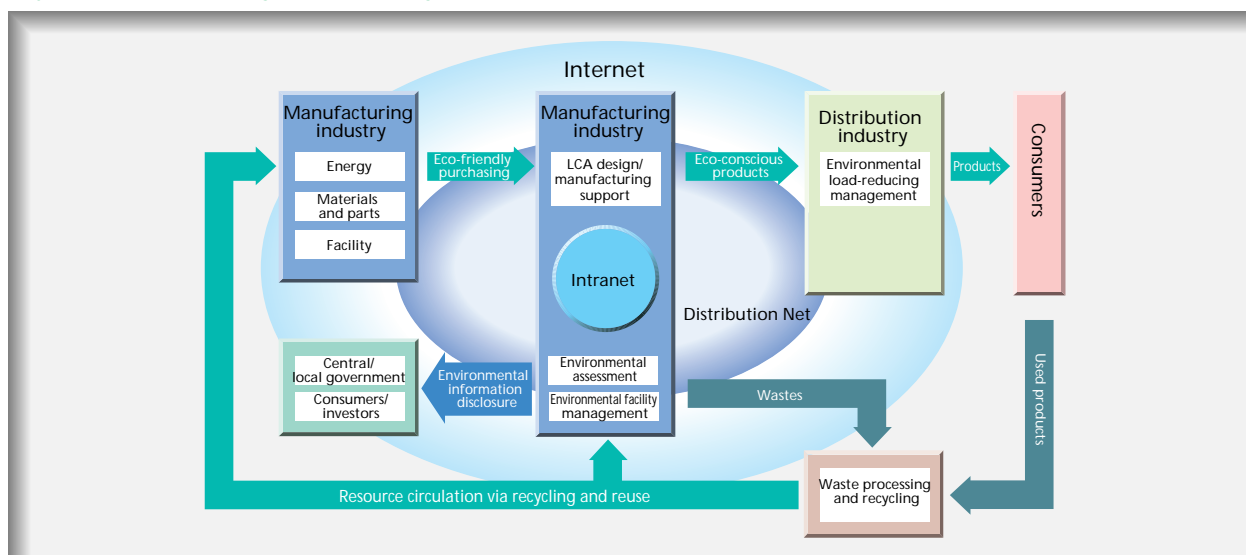
Green Solutions

@EcoVISION

@EcoVision is the brand under which Fujitsu markets a range of environmental solutions. Designed to help customers tackle their own environmental management issues, @EcoVision solution packages bring together the accumulated experience of the Fujitsu Group. Using the latest Internet technology, they provide users with comprehensive support in all areas related to the creation of a 21st century "Eco-Society." @EcoVision solutions fall into four main categories, listed below.

- Environmental management system solutions
- Environmental accounting solutions
- Environmental solutions for manufacturing industries
- Environmental solutions for local government bodies

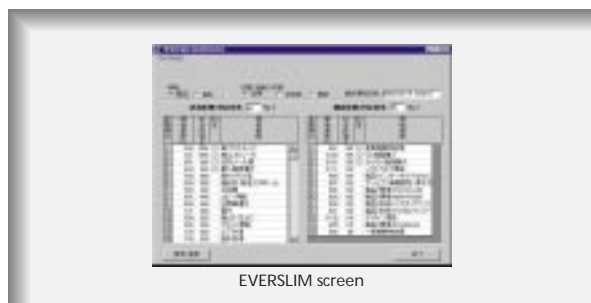
Fujitsu's 21st Century "Eco-Society"



Examples of Solutions

Environmental management system solutions

"EVERSLIM" is an environmental management system support package that facilitates evaluation of the effects of all manner of processes on the environment. Capable of being input with various environmental parameters and of undertaking sophisticated quantitative analysis and data collection, it is an ideal tool for companies trying to meet evaluation standards for ISO 14001 certification.



Environmental solutions for manufacturing industries

The "eco-HCMS for Intranet" hazardous materials management system allows usage, income and expense data on chemical materials to be collected and managed throughout their life cycle—from purchase through usage and disposal. Fully fitted with PRTR* functions, it is an extremely efficient and useful management system.

* PRTR = Pollutant Release & Transfer Register





Eco-Friendly Products / Environmental Technologies

Examples of Green Products



FMV-DESKPOWER C3/60L3

Recyclability 93%
Standby power consumption 27W
Uses recyclable paint
All plastic parts of more than 25g marked



FMV-BIBLO NE3/45L

Recyclability 83.8%
Standby power consumption 3.8W
Uses non-halogen flame-retardant materials and recycled plastics
All plastic parts of more than 25g marked



GP5000-series MS600 server

Recyclability 98%
All plastic parts of more than 25g marked



FACT-V ATM

Recyclability 98.7%
All plastic parts of more than 25g marked



F502i HYPER cellular phone

Recyclability 76.5%



VSP130 image scanner

Recyclability 95.9%
Standby power consumption 4.04W
All plastic parts of more than 25g marked

Other Green Products

- XL-6010 page printer
- NetVehicle-S20 router
- NetShelter/FW specialty security device
- Team POS 5000 point-of-sale terminal
- Team Pad 7500 hand-held terminal
- MPF3204AT magnetic disk device
- MCE3130SS opto-disk device
- RS-C30 color pen scanner

Environmental Technologies

Development of easy-to-recycle printer toner

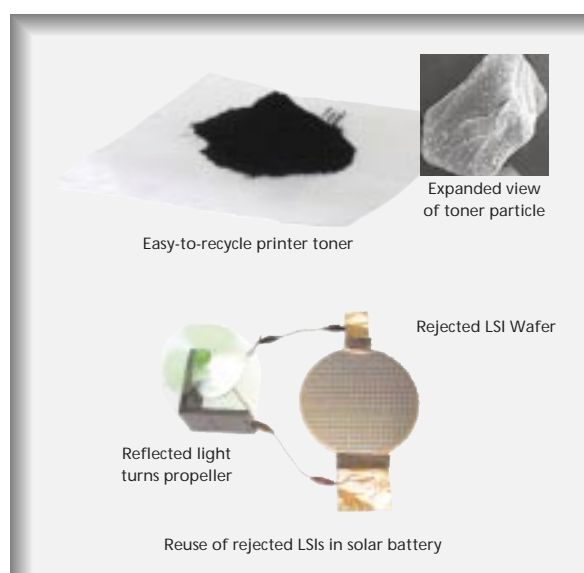
Paper from printers, photocopiers and other office automation (OA) equipment has often been difficult to recycle because the toner used in these machines remains as an impurity. Fujitsu has been able to develop a toner whose residue in recycled paper can be reduced to as little as 0.05% of that of conventional toners, making it possible for the first time to recycle paper from OA equipment.

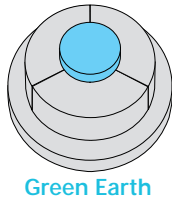
Application of rejected LSIs in solar batteries

If light is shone on an LSI, photo voltaic-power is generated between the power supply line and the ground line. Fujitsu has developed a way of extracting energy generated by this force to use in solar batteries, thereby creating a way to reuse LSIs that have either been rejected as faulty or are at the end of their useful life.

Benefits of method

- Reuses waste materials
- Produces clean energy
- Zero energy required for recycling (no refining or grinding of materials needed)





Making Things Greener/ International Forestation Activities

Fujitsu is promoting factory site greening, and overseas forestation activities, mainly in Southeast Asia.

Making Manufacturing Plants Greener

During fiscal 1999, as a result of continuous aggressive tree-planting programs, green buds of environmental concern could be seen spontaneously sprouting at many of Fujitsu's manufacturing plants. For its success in harmonizing the factory with the rich local countryside, the Numazu Plant received an award from the Japanese Ministry of International Trade and Industry that commended it on the greenness of the site.

Vietnam forest planting

Following a tropical forestation project in Thailand in fiscal 1998, this year in the Fujitsu-Vietnam "Forest of Friendship" people began planting 250,000 mangrove trees over an area of 25 hectares in Vietnam. The funds for this activity were provided by an appeal conducted among Fujitsu employees. Many local employees also volunteered their help and participated in the program. In fiscal 2000, the plan is to plant a further 250,000 trees over a remaining 25-hectare area. Fujitsu is also looking into using surplus donations to expand the activity's scope.



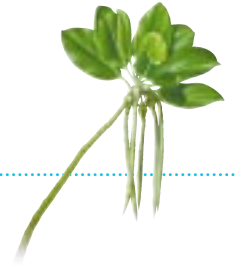
Factory site-greening activities at Numazu Plant



Vietnam forestation project (mangrove)



Volunteers participating in Vietnam program



Social Service Activities

Fujitsu is actively contributing to society in a number of areas. In terms of helping the environment, among other things, the company conducts programs to clean up local communities, and organizes factory tours. These activities are aimed at helping improve regional environments and foster productive interchange with local communities. Fujitsu is also involved with a number of external organizations.

Regional Clean-up Activities

Employees at Fujitsu plants participated with their families in regional volunteer clean-up activities. In fiscal 1999, the Aizuwakamatsu Plant, the Nagano Plant, the Oyama Plant and others participated in a clean-up of the surrounding areas and flood plains. (Total 3,887 persons)

Involvement with external organizations

Fujitsu is a keen contributor to the activities of a number of external organizations (in total, approximately 30 groups and institutions). This collaboration furnishes such groups with access to Fujitsu environmental information and technology, and enables the company to become involved in a wider range of environmental protection activities.

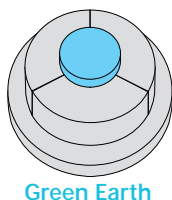
- Optimal Energy Demand Management Study Committee, Agency of Natural Resources and Energy, Ministry of International Trade and Industry
- Chemical Products Council, Ministry of International Trade and Industry
- High-Tech Industry Environmental Protection Committee, Kawasaki City
- Networking Group, Keidanren Committee on Nature Conservation
- Committee on Environmental Protection, Japan Electronic Industry Development Association
- Special Committee on Environment, Electronic Industries Association of Japan
- Environmental Preservation Committee, Communications Industry Association of Japan
- Environmental Management Committee, Japan Electric Manufacturers' Association
- Life Cycle Assessment Society of Japan, Japan Environmental Management Association for Industry
- Examination Committee for Environmental Management Standard, Japanese Standards Association
- Green Purchasing Network, Japan Environment Association
- Japan Forest Policy Research Institute
- Network for Environmental Reporting, Environmental Partnership Office



Aizuwakamatsu Plant employees taking part in a local clean-up program



Environmental lecture, also attended by local people



Fujitsu Group Environmental Activities

Fujitsu Group members—both domestic and overseas affiliates—meet regularly to discuss how to tackle environmental problems together. In addition Fujitsu holds group-wide environmental exhibitions.

Domestic Affiliated Companies' Environmental Protection Council

Domestic delegates at these meetings, which bring together representatives of 36 affiliates (mainly domestic manufacturing firms), have responsibility for environmental issues at their respective companies. Such meetings allow them to discuss common Fujitsu Group policies and topics, and report the status and results of their companies' environmental activities. Two such meetings were held during the year, bringing the cumulative total to 13.

Main discussion topics

- Setting new company and Group targets for fiscal 2001 and beyond
- Promoting the issuance of environmental activity reports by affiliates
- Promoting the creation of environmental home pages and inter-site links

Affiliate's technical exchange meetings

Various technical exchange meetings were held during the year on different themes. These provided opportunities for Group member companies to develop and exchange information on effective environmental technologies and related expertise. A total of five such meetings were held during the year, bringing the cumulative total to 34.

Main themes

- Environmental management systems
- Product recycling measures
- Industrial waste reduction measures
- Chemical emission reduction measures
- Energy-saving measures

For example, one of the meetings discussed the parallel development of expertise in the construction and operation of environmental management systems.

1999 Fujitsu Group Environmental Exhibition

The 1999 Fujitsu Group Environmental Exhibition highlighted the advances being made by Fujitsu in marrying business and the protection of the environment. It also introduced many of Fujitsu's latest eco-friendly products and technologies—together with the efforts being made at many overseas affiliates. The 4th such exhibition held featured a total of 64 displays, organized around the theme of "Challenge to the 21st Century 'Green Life 21'—Focused on the Green".

As well as Fujitsu employees, the exhibition was visited by, customers, government officials, people from the industry and members of the public, with a total number of attendees of over 2,700.



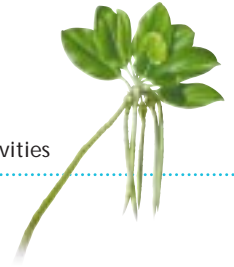
Domestic Affiliated Companies' Environmental Protection Council



Affiliates Technical exchange meeting



1999 Fujitsu Group Environmental Exhibition (Kawasaki Plant)



Fujitsu Group Worldwide Environmental Conference

Delegates at this November 1999 meeting, which brought together 29 representatives from 21 affiliates in North America, Asia & Oceania, and Europe, are responsible for environmental issues at their respective companies. The meeting allowed them to discuss common Fujitsu Group policies and topics and exchange a variety of information. The 3rd gathering of this type, it implemented consensus by getting delegates to break up into small groups to discuss practical environmental problems being faced by Fujitsu affiliates overseas, as well as Group targets. The 2-day meeting proved highly productive. The next conference is scheduled to take place in October 2001.

Main themes

The main discussion themes at the conference were as follows:

- Environmental management system
- Recycling of packaging materials and computers
- Plant energy-saving measures
- Environmental accounting
- etc.



3rd Fujitsu Group Worldwide Environmental Conference

Participating affiliates

North America

- Fujitsu Network Communications
- Fujitsu Compound Semiconductor
- Fujitsu Computer Packaging Technologies
- Amdahl

Asia and Oceania

- Fujitsu Component Malaysia (Malaysia)
- Fujitsu Microelectronics Malaysia (Malaysia)
- Fujitsu Thailand (Thailand)
- FKL Dong-Hwa (Korea)
- Fujitsu Computer Products Corporation of the Philippines (Philippines)
- Fujitsu Computer Products of Vietnam (Vietnam)
- Fujitsu Australia (Australia)

Europe

- Fujitsu ICL Espana (Spain)
- Fujitsu Microelectronics Europe (Germany)

Overseas Environmental Information Network

This information network, which connects Fujitsu's overseas affiliates, enables environmental information and expertise to be shared, providing those responsible for environmental measures with a useful communications channel and a source of expertise.

Examples of network project use

- EU Waste Electrical and Electronic Equipment Directive (draft)
- Survey of energy usage based on Fujitsu Group policies
- Appeal for entries to environmental awards and photo contest

Participating network affiliates*

- North & South America: 13 companies
- Asia & Oceania: 25 companies
- Europe: 14 companies

Total: 52 companies
(19 countries)



* The numbers have changed since the previous year owing to loss and consolidation of various affiliates.

Distribution & Environmental Protection

Fujitsu Logistics, which handles the distribution of products, parts, materials, and recycled items for the Fujitsu Group, endeavors to reduce the environmental load of the entire distribution process—from the design of packaging to product storage and transportation. In particular, it takes the following measures:

- Promotion of modal shift
- Promotion of the reduction and recycling of expanded polystyrene shock-absorbing packaging materials
- Promotion of energy-saving measures

Principal environmental measures and progress status

Promotion of modal shift

The thrust of this initiative is to reduce emissions of CO₂, NO_x and SO_x within transportation processes as a means of preventing atmospheric pollution and combating global warming. As part of this initiative since fiscal 1995, Fujitsu Logistics has been shifting part of the distribution load, which has tended to be transported mainly by truck, to rail.

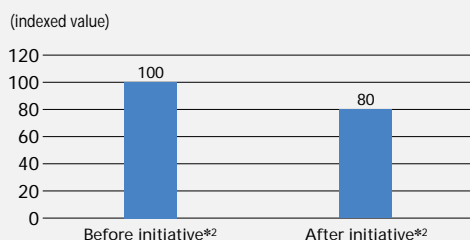
Promotion of the reduction and recycling of polystyrene shock-absorbing packaging materials

Where possible, Fujitsu Logistics is trying to reduce the amount of polystyrene materials being used—particularly, with consumer products—by shifting to shock-absorbing packaging materials made from cardboard. The company is using old cardboard, which, when processed and recycled, can produce a paper-type shock-absorbing material.

Promotion of energy-saving measures (electric power consumption reductions)

Since fiscal 1999, as part of environmental management system operation at the Tokyo Distribution Center, target values for reductions in electric power consumption have been set. This produced substantial results—a 17% savings per month. Other distribution centers are now following suit.

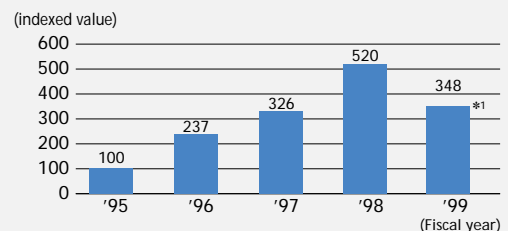
Electric power consumption at Tokyo Distribution Center (before initiative=100)



*2: Before initiative: April—September, 1999
After initiative: October, 1999—March, 2000

Use of rail containers

(Number of rail containers in fiscal 1998=100)



*1: In fiscal 1999, the number of rail containers used dropped due to the overall reduction in the amount of goods handled.



Cardboard shock absorbers for consumer products



Paper-type shock-absorbing materials

ISO 14001 certification

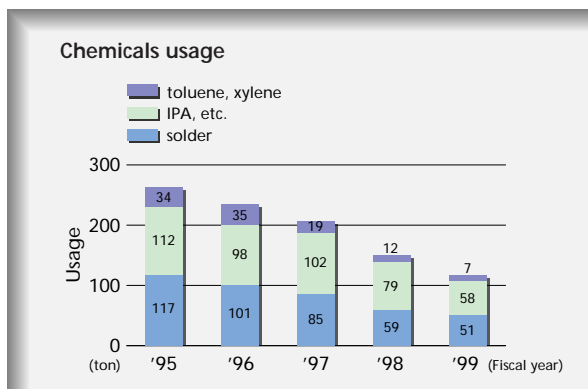
Fujitsu Logistics has been establishing and running environmental management systems based on the ISO 14001 international standard. In December 1999, the Tokyo Distribution Center became the first Fujitsu Logistics site to gain ISO 14001 certification.

Fujitsu Group Companies' Activities (Domestic)

Fujitsu's domestic affiliates are engaged in a variety of environmental protection measures, such as attempts to reduce the use of chemicals and save energy. The following are 2 examples.

Environmental protection activities at Fujitsu Ten

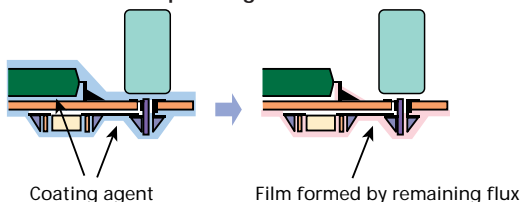
Following the company-wide commencement of environmental protection activities in 1992, all Fujitsu Ten domestic sites had gained ISO 14001-series certification by October 1997. In terms of reducing the use of chemicals, the company has undertaken a variety of measures. First, consolidation of production lines has helped to raise the efficiency of the overall manufacturing process. Second, the company has cut the number of soldering units. These changes have resulted in substantial reductions in the consumption of electric power, isopropyl alcohol (IPA), and solder dross. Further, through adjustments to the control of the pumps supplying IPA to soldering units, the amount of IPA being used in cleaning these units has been halved.



Reduction in chemicals usage through new material development

In the past, to make electronic devices for cars more moisture-proof, the surfaces of printed circuit boards would require a special moisture-proof coating. The company has been able to reduce the need for this by developing a method of creating a moisture-proof film over the printed circuit boards with the flux that remains after soldering. As a result, the amounts of coating agents (xylene and toluene) needed have been reduced by about 80%.

Use of moisture-proofing flux



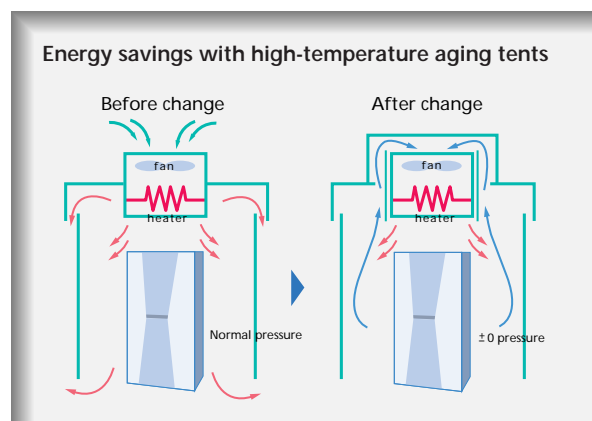
Environmental protection activities at PFU

After the commencement of environmental protection activities in 1993, PFUs Kasashima Plant had gained ISO 14001-series certification in October 1996. It continues to promote energy-saving and recycling measures—for example, through the use of high-temperature aging tents and the recycling of kitchen wastes as organic fertilizer, which is used in the company's own vegetable garden.

Energy-saving improvements with high-temperature aging tents

Improvements to the aging process have resulted in energy savings. Instead of taking in heated air from an indoors heater, the process was changed so that warmed air could recirculate inside the aging tent. The absence of hot air leaks resulted in energy savings (39 tents).

Annual reduction in electric power consumption: 7.6 MWh
Energy saving = 16%



Fujitsu Group Companies' Activities (Overseas)

As a global company doing business on an international basis, Fujitsu has affiliates all over the world, in North America, Asia, Oceania and Europe. These overseas affiliates are also actively involved in a variety of environmental protection programs. The following are 3 examples: Fujitsu (Thailand), Fujitsu Network Communications, and ICL.

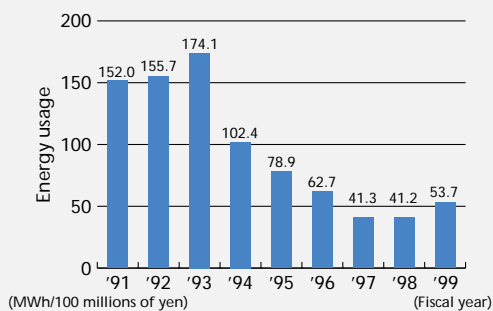
Environmental protection activities in Thailand

Fujitsu (Thailand) (FTC) has gained ISO 14001 certification for its environmental management systems and ISO 9002 certification for its quality control systems. It is also in the process of obtaining TIS 18001 certification for its safety and hygiene management systems. FTC's environmental activities slogan is "In Harmony with Nature."

Reducing energy usage

After a full data-based analysis of their energy consumption, all of FTC's sites are now working to reduce energy consumption per unit of sales by 20% from its actual fiscal 1996 level by the end of fiscal 2000.

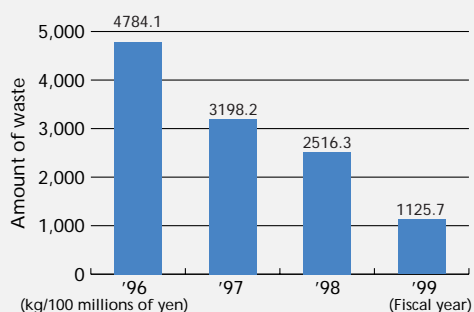
Energy savings



Recycling activities

FTC recycles paper, packaging materials, plastics, metals and components in order to minimize waste materials. The company has achieved a recycling ratio of 60%.

Waste reductions (per sales)



Secondary forestation project

FTC began forestation in 1997. As well as helping to expand the total area of rainforest in Thailand, these programs have helped raise environmental awareness among FTC employees.



FTC president Mr. Saito (left) presents the Crown Prince of Thailand (right) with funds donated towards forestation projects

Seminar attendance

In January 2000, as one of the recipients of a Distinguished Company award from the Thai government for its contributions to the cause of environmental protection, FTC introduced its various environmental activities at a special seminar.



Introducing FTC's environmental activities

Environmental protection activities at Fujitsu Network Communications, Inc. (U.S.A)

At Fujitsu Network Communications (FNC), while constructing environmental management systems, efforts have been made to make maximum use of intranets that are as user-friendly as possible. Staff at FNC are also trying to reduce paper usage. Through the establishment of an environmental management system, the company has been able to reduce the use of chemicals and cut the volume of waste materials.

Reductions in chemicals usage

Through the introduction of advanced technology, the volume of chemical wastes produced (relative to production) has been cut by 60%, which in turn has contributed to lower operating costs.

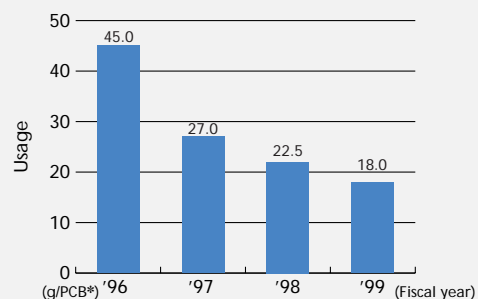
Reductions in solid wastes

FNC has established a number of recycling programs for cardboard, plastics, paper, metals, and other materials. Through these, FNC has managed to cut waste volumes (relative to production) by 77% from their actual fiscal 1997 levels. From September 1999 through February 2000, the company recycled 113 tons of cardboard, 16 tons of paper, and 5 tons of plastic.



Employee participating in FNC cardboard recycling program

Reductions in chemicals usage



*PCB: Printed Circuit Board

Environmental protection activities at ICL (U.K.)

ICL has been recycling used computers for more than 20 years. The company has its own recycling standards, and has established an environmental audit program for itself and a number of companies with which it cooperates on recycling. These standards stipulate the criteria for how companies within this recycling alliance conduct audits, and ICL certifies that the companies work to these criteria.

Main criteria for environmental audits

- Measurement and reporting of volumes of all devices, parts and materials —whether received from ICL, or recycled/reused
- Effective monitoring and control of the environmental impact of industrial processes in terms of soil, water and air pollution
- Proper handling of products and materials, with correct separation and handling of toxic and recycled materials
- Provision of guidelines on separation, handling, and disposal
- Recycling licence obtained from U.K.'s Environment Agency



ICL

External Awards

Fujitsu has received a number of external awards and commendations in recognition of the company's involvement with environmental issues and its superior environment-related technology. Fujitsu Group companies overseas have also received widespread praise for their various programs of environmental measures.

Awards from External Organizations

Name of award Date received	Sponsor/patron	Achievements receiving recognition
The 3rd prize in Golden Jubilee Planting Tree Contest September, 1999	Sponsor: Thai Ministry of Agriculture	Recipient: Fujitsu (Thailand) In recognition of the planting of 50,000 local-variety trees (including eucalyptus and acacia) over 50 hectares of Petchaburi Province, Southwest of Bangkok, in September 1998. The first prize ever award to a Japanese company in Thailand.
Distinguished Company Contest (Environmental Prime Minister's "Distinguished company Award") September, 1999	Sponsors: Thai Ministry of Industry, Thai Ministry of Commerce	Recipient: Fujitsu (Thailand) In recognition of the company's ISO 14001-certified environmental management systems.
Excellent Green Factory: Minister of International Trade and Industry Award October, 1999	Sponsor: Japan Greenery Development and Research Center Patrons: Ministry of International Trade and Industry; Ministry of Agriculture, etc.	Recipient: Numazu Plant In recognition of the creation and maintenance of an external factory environment worthy of the name "Industrial park," and of the harmony created over the long term between the plant and its surroundings.
Waste Reduction Award Program (WRAP Award) October, 1999	Sponsors: U.S. State of California; U.S. Environmental Protection Agency; Integrated Waste Management Board	Recipient: Amdahl Corporation In recognition of contributions to improvements in the environment through the reduction of waste.
9th Environment Advertisement Concours: Special Prize (Newspapers), Excellence Award (Magazines) October, 1999	Sponsors: Japan Eco-Life Center; <i>Nihon Keizai Shimbun</i> ; Toyama Prefecture Patrons: Environment Agency; Ministry of International Trade and Industry; Ministry of Construction; Ministry of Home Affairs	Awards for: (Newspapers) ad in <i>Nihon Kogyo Shimbun</i> , September 10, 1998; (Magazines) ad in <i>Producer-Goods Forum</i> , September 1998. In recognition of excellent environmental advertising.
1999 Hanazono Contest: Excellence Award November, 1999	Sponsor: Citizen's Charter Promotion Committee, Aizuwakamatsu City	Recipient: Aizuwakamatsu Plant In recognition of promotion of multi-variety flower beds and contribution to the creation of a beautiful city, as espoused in the Citizen's Charter.
3rd Green Reporting Awards: Excellence Award (Environmental Reports) November, 1999	Sponsors: Global Environmental Forums <i>Zenkoku Kankyo hozon suishin rengokai</i> Patrons: Environment Agency; <i>Mainichi Shimbun</i> ; <i>Nihon Keizai Shimbun</i> In collaboration with: Environmental Audit Committee	Award for: 1999 Environmental Activity Report In recognition of: ease-of-reading, inspired design, with action plans collated in single tables, plus display of related pages; past achievements, targets and results all easy to understand; disclosure of information that could create a negative image, such as in parts on soil contamination.
Electricity-Usage Rationalization Committee Award: Distinguished Award February, 2000	Sponsor: Kanto Region Electricity-Usage Rationalization Committee Patron: Tokyo Electric Power Company	Recipient: Nasu Plant In recognition of promotion of energy-saving measures, such as use of inverters with lighting.
Excellence in Plant Energy Management (Electricity): Chubu Region Trade and Industry Bureau Chief Award February, 2000	Sponsor: Chubu Region Trade and Industry Bureau Patron: Energy Conservation Center	Recipient: Suzaka Plant In recognition of promotion of power-saving activities over many years.
Excellence in Plant Energy Management (Heat): Tohoku Region Trade and Industry Bureau Chief Award February, 2000	Sponsor: Tohoku Region Trade and Industry Bureau Patron: Energy Conservation Center	Recipient: Iwate Plant In recognition of reductions in energy usage per unit of production.



Excellent Green Factory Site: Minister of International Trade and Industry Award



3rd Green Reporting Awards: Excellence Award

Independent Review Report

Independent Review Report on "Fujitsu 2000 Environmental Report"

Mr. Naoyuki Akikusa
President and Representative Director
Fujitsu Limited

June 29, 2000

1. Purpose and Scope of our Review

We have reviewed the "Fujitsu 2000 Environmental Report" (the "Report") of Fujitsu Limited ("Fujitsu" or the "Company") and its principal subsidiaries, prepared and furnished to us by the Company who are responsible for its contents. The review consisted of performing certain procedures as described below in relation to the collection, compilation and calculation of the information included in the Report.

Our work does not constitute an audit or examination. We therefore do not express an opinion on the accuracy or completeness of information or data bases used to compile the information or the representations made by the Company in the Report.

2. Procedures Performed

With the Company's consent, we conducted our review as follows:

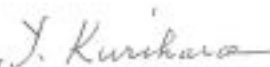
- (1) We reviewed the procedures performed by the Company and the methods of accounting followed in the preparation of the "Environmental Performance" and the "Environmental Cost and Effect" information.
- (2) We compared the "Environmental Performance" and the "Environmental Cost and Effect" information presented in the Report with the respective supporting documents and verified the accuracy of the calculations on a sample basis.
- (3) We compared the descriptive information other than the "Environmental Performance" and the "Environmental Cost and Effect" information presented in the Report with the respective supporting documents and verified the accuracy of the calculations.
- (4) When deemed necessary, we visited the Company's factories and a subsidiary and made inquiries of the individuals responsible, conducted inspections of the sites and reviewed the decision-making process at each location.

3. Results of the Procedures Performed

As a result of the procedures performed,

- (1) we are not aware of any material modifications which should be made to the "Environmental Performance" and the "Environmental Cost and Effect" information presented in the Report in order for it to comply with the Company's policies for gathering and reporting such information; and
- (2) we are not aware of any material modifications which should be made to the descriptive information presented in the Report in order for it to comply with the Company's policies for gathering and reporting such information.

Yasuo Kurihara
Representative Director
Ota Showa Environmental Management and
Quality Research Institute



History of Environmental Activities

1935	Park-style design adopted for Kawasaki Plant on suggestion of the first president Mr. Yoshimura
1972	Environmental control sections established at each plant
1987	Ozone Layer Protection Committee established
1989	Environmental Committee established
1990	Environmental control evaluation system implemented
1991	Environmental Engineering Center established
1992	"Fujitsu Commitment to the Environment" formulated Use of cleaning CFCs and carbon tetrachloride abolished Energy Saving Committee established
1993	Product Recycling Committee established Wastes Control Committee established Fujitsu Environmental Protection Program (1st edition) formulated Product Environmental Assessment Guideline formulated Domestic Affiliated Companies' Environmental Protection Council established Environmental Information Service (FJ-CUG) opened
1994	Inaugural issue of Eco-Plaza environmental bulletin published Use of 1,1,1-trichloroethane abolished "The 1st Fujitsu Group Environmental Technology Exhibition" held Fujitsu Environmental Emblem determined Overseas Environmental Information Network begins operating
1995	Environmental Management System Committee established Fujitsu recycling system established and implemented "The Fujitsu Group Worldwide Environmental Conference" established
1996	Fujitsu Environmental Protection Program (2nd edition) formulated Environmental Engineering Center home page set up on intranet Chemical Emissions Reduction Committee established First Environmental Activity Report published
1997	Environmental home page established ISO 14001 certification gained by all domestic manufacturing plants
1998	Forestation program undertaken in Thailand Launch of Green Products
1999	Introduction of environmental accounting Forestation program undertaken in Vietnam
2000	ISO 14001 certification gained by 4 domestic development and service sites Corporate Environmental Affairs Group established Fujitsu Environmental Protection Program (Stage III) planning commenced

Glossary of Terms

1. ISO 14001

The standard set by the International Organization for Standardization for environmental management systems (EMS). It certifies that a company's organization and systems work with consideration for the environment in mind, and that the systems have been constructed to ensure that the environmental impact of the company's operations is continuously being reduced.

2. Surveillance audit

An audit carried out on an annual basis to confirm the effectiveness of environmental management systems and improve their performance.

3. Environmental Performance Evaluation (EPE)

An EPE evaluates the environmental behavior and results of an organization using both qualitative and quantitative parameters.

4. Eco-friendly purchasing

Purchasing that places preference on products that have a low environmental impact.

5. Life Cycle Assessment (LCA)

An LCA is a way of analyzing quantitatively what impact a product has on the environment throughout the various stages of its life.

6. PRTR Law

This is a law designed to encourage companies to make improvements in their measurement and management of specific chemical emissions. It requires them to report to the government the amounts of substances being released or transferred, so that public disclosure will help to reduce the environmental risks associated with such chemicals or other pollutants. The law will be promulgated in Japan in March, 2000. PRTR stands for Pollutant Release & Transfer Register.

7. Co-generation system

While producing power using an engine and turbines, a co-generation system uses the waste heat generated to supply hot water and provide heating or cooling. In this way, it raises total energy efficiency.

8. Inter-modal distribution

An environmental protection initiative to save energy and reduce emissions of CO₂, NO_x and SO_x within transportation processes by shifting freight from road to rail or sea.



To: Environmental Engineering Center, Corporate Environmental Affairs Group, Fujitsu Limited

Q1. How did this report compare with the 1999 Environmental Activity Report?

Q2. Did you know anything about Fujitsu's environmental protection activities previously?

Q3. What was your impression of this report?

Q4. Which sections of this report most interested you? (please select one or more)

Q5. From what viewpoint were you reading this report?

Q6. How did you learn about the existence of this report?

Q7. Please use the space below to send us any other comments or requests you may have concerning Fujitsu's environmental activities.

Thank you for your cooperation. Please also be kind enough to fill in the following:

Name: _____ Male/Female _____ Age: _____

Mailing address (for 2001 report):

Occupation (employer): _____ Department/position: _____

Telephone contact: _____ E-mail: _____

FUJITSU LIMITED



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