Reducing the Environmental Burden of Factories and Business Offices

We are advancing eco-friendly business activities through comprehensive environmental protection activities in our factories and offices.

The Thinking behind Our Activities to Reduce Environmental Burdens in Factories and Offices

The Group continually strives to reduce the quantities of materials and energy used in its operations, as well as the amounts of chemicals and waste materials generated and atmospheric pollutants emitted, while trying to minimize manufacturing costs. It also takes a rigorous approach to complying with laws and regulations and eliminating environmental risks.

Applying the Green Factory and Green Office Systems

To reduce even further the environmental burden of our factories and business offices, we initiated in fiscal 2007 our Green Factory and Green Office systems, designed to comprehensively evaluate our level of eco-friendliness and autonomous initiatives and render them 'visible.'

In Fujitsu Group Environmental Protection Program (Stage V), we propose achieving a two star (★★) or higher level in the Green Factory or Green Office system at every one of our relevant business sites in Japan by the end of fiscal 2009, and we have worked to achieve the certified levels and improve and heighten our eco-friendliness.

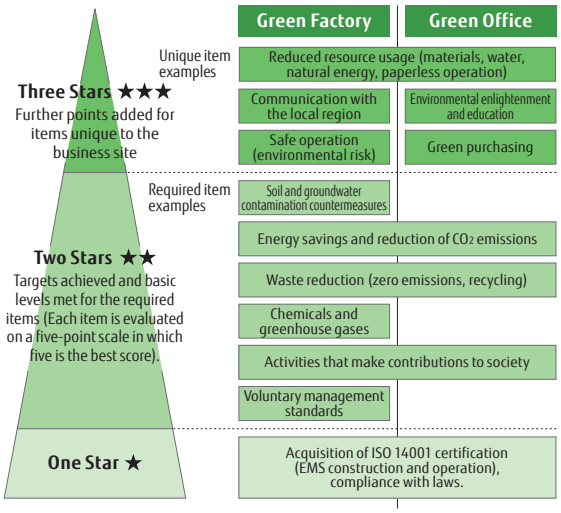
Thanks to these efforts, for the 42 sites evaluated according to the Green Factory system in fiscal 2009, all sites achieved at least two stars while 14 sites received three stars or more.

In addition, by increasing the number of sites participating in the Nationwide Paper Recycling System (please refer to page 72) and implementing training for local auditors and employees responsible for waste management, we targeted a three-star score for all of our 371 business sites being evaluated under the Green Office system. Thanks to these and other measures, every site achieved a three-star rating and all 371 sites also achieved zero emissions* for waste, the largest number for any organization in Japan.

We intend to achieve four stars or more for all our business sites by the end of fiscal 2012, which is the goal set in Environmental Protection Program (Stage VI). With this aim, we are carrying out initiatives such as creating opportunities for locations to discuss common problems and further unifying our waste disposal management across multiple sites.

*** Zero emissions**
For simple calculations of emissions from the incineration or landfill disposal of industrial waste and paper waste

Certification Levels



Using Green Process Activities to Reduce the Environmental Burden in Our Manufacturing Processes

The Group promotes Green Process activities with the aim of further lightening our environmental burden by reducing energy usage in our factories, rigorously controlling chemicals, reducing waste, etc.

These activities are conducted in parallel with cost-reduction activities, and consist of initiatives such as optimizing the amount of energy and raw materials used in manufacturing processes and switching to alternatives with a lower environmental burden.

In these activities, we first identify the total input of materials (raw materials, chemical additives, etc.) and energy into the process, together with their purchasing costs, and then establish our own original CG (Cost Green) index*. We then set quarterly reduction targets (planned values) at the production line level for each factory and evaluate the degree of attainment of these targets while going through the PDCA cycle. Based on the results, we try to continually improve our production processes through initiatives like introducing new manufacturing technology, revising our processes, and improving the work procedures.

A more effective way to reduce the environmental burden generated by plants is to link activities involved in manufacturing processes with those involved non-manufacturing processes. We have therefore incorporated the CG index and the philosophy that underlies it into the activities of all relevant departments, not just manufacturing.

*** CG index: Cost/Green index**
This index describes the product of input volume used per product, the cost (input materials and energy), and the environmental impact (on a scale from 1 to 10).

Example of a Green Process Activity
Fujitsu Integrated Microtechnology Ltd.

Improving the efficiency of cold-water supply for air conditioners used in an LSI packaging process

Fujitsu Integrated Microtechnology Ltd., which provides package solutions for LSI products, has revised its framework for measures to reduce environmental burdens by extending measures from manufacturing to non-manufacturing departments, as more of the latter participated in green process programs, linking the activities of entire plants.

On starting a program, every department within the plant sets individual targets based on CG index calculations and then carries out programs to achieve these targets. For example, the Facilities Department in its Miyage Plant established energy efficiency CG index values for air conditioners and other power plant equipment and then implemented energy-saving measures to achieve the targets at every facility within the plant.

One of these measures was to improve the efficiency of the cold water supply for air conditioners. In the past, heat-storage tanks used by the air conditioners throughout the plant were supplied separately by individual chillers. But as some were not operating at maximum capacity they could be connected to each other by pipes to increase operating efficiency. Also, turning some of them off outside the peak summer season reduced power consumption by an average of about 33.0% along with the costs per CG unit and unit of cold water.

Reducing the Amount of Waste Generated

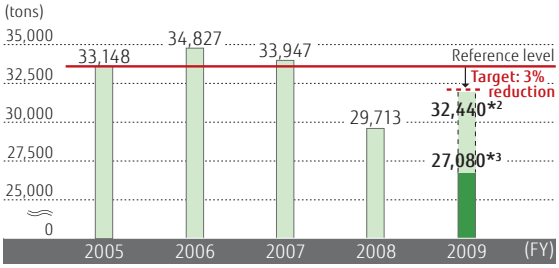
Basic Approach

Working towards a recycling-minded society, our 3R policy (reduce, reuse and recycle) encourages all employees to separate waste materials into different categories for effective recycling.

FY 2009 Performance

In Fujitsu Group Environmental Protection Program (Stage V), we set the goal of reducing the amount of waste generated by our business operations by 3% compared to fiscal 2005 levels by the end of fiscal 2009.

Amounts of Waste Generated*1



***1** Statistics for eight Fujitsu sites and 31 Group companies.
***2** Includes the amounts for companies consolidated from FY 2009: in Japan, FDK Ltd.; overseas, FTS.
***3** Volume of waste generated by the business sites included when establishing Stage V targets.

The amount of waste generated by business sites included in our targets for Stage V of the program was 27,080 tons, an 8.9% reduction year on year, and an 18.3% reduction below FY 2005. This means we achieved our Stage V target. Our success lay in converting waste paper, acids and other materials into valuable resources, but there were also significant market changes.

Fujitsu Group waste came to 32,440 tons in fiscal 2009, including the two companies newly consolidated, FDK Ltd. in Japan and FTS overseas. From fiscal 2010 we will push on with programs to realize our ambitious target of a 20% reduction below FY 2007 by the end of FY 2012.

Example of Activities to Reduce the Amount of Waste Generated
Fujitsu Integrated Microtechnology Ltd. Kyushu Plant

Reducing sludge generated by treatment of waste water from silicon polishing

Waste water containing sludge is generated during the silicon wafer back-polishing process, the first stage in product assembly. Without using chemicals, we were able to reduce the amount of silicon sludge generated to just one quarter of the previous amount by installing new equipment to concentrate and dry the waste.


Decompression dehydration dryer (left), membrane concentrator (right)


Silicon sludge

Basic Policy for Chemical Substances Management

Basic Approach

Prevention of environmental risks that could lead to environmental pollution or adverse health effects due to the use of harmful chemical substances has been established as our basic policy for chemical substances management. We manage the amounts used for about 1,200 chemicals, and we work to reduce the amount discharged and implement appropriate management at every business site.

Results for FY 2009

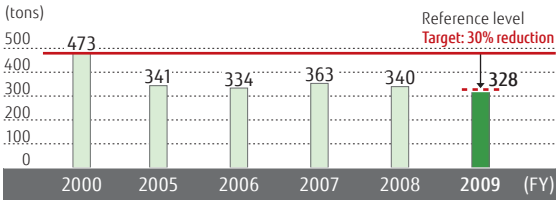
In Fujitsu Group Environmental Protection Program (Stage V), we proposed the target of reducing volatile organic compound (VOC) atmospheric emissions from business sites by 30% from FY 2000 levels by the end of FY 2009.

Thanks to these efforts, the entire Group's atmospheric VOC emissions for FY 2009 came to 328 tons, a 31% reduction below FY 2000, and we successfully achieved the target set in Fujitsu Group Environmental Protection Program (Stage V).

Reducing the Environmental Burden of Factories and Business Offices

In FY 2010, we are aiming for the new target set in Stage VI of the Program, which calls for reducing emissions of specific chemicals by 10% by the end of FY 2012 compared with FY 2007.

VOC Atmospheric Emissions



Example of Measures to Reduce VOCs
Shinko Electric Industries Co., Ltd.

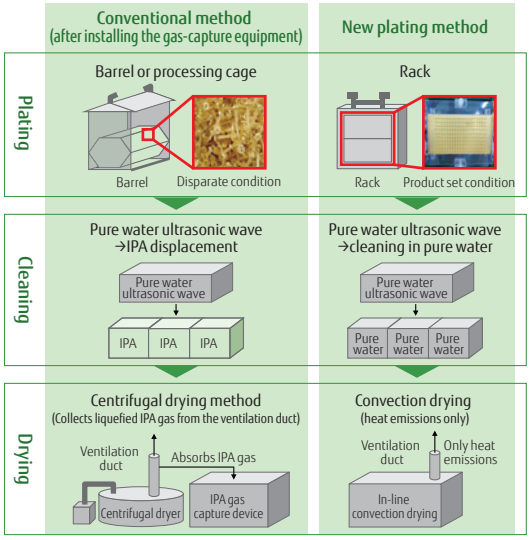
Reducing IPA gas emissions

Shinko Electric Industries' Takaoka plant has introduced a new method into its plating processes that has enabled it to eliminate one type of VOC, IPA (Isopropyl alcohol). In addition, it was also able to cut the volume of its IPA gas emissions in plating processes yet to adopt this new method, by installing equipment to capture IPA gases.

The new method involved introducing rack equipment at the plating stage and also redesigning the structure of the equipment used. These changes allows the plant to use water instead of IPA gases at the cleaning stage, which in turn results in zero IPA emissions at the drying stage.

In addition, it is reducing IPA gas emissions on those lines not yet upgraded to the new method by installing equipment to capture IPA gases at the drying stage

Comparison of the plating processes



Compliance with the Revised Chemical Management Law

Following revisions to the Chemical Management Law*1, more chemical substances are now covered by the MSDS*2 system and the PRTR*3 system (revisions applied to the MSDS system from October 2009, and to the PRTR system from April 2010).

Responding to these revisions, the Fujitsu Group has asked its suppliers to cooperate in the delivery of chemicals, and based on the revised PRTR system it is carrying out initiatives to obtain and accurate grasp of the amounts of chemicals transported and emitted.

***1 Chemical Management Law**
A law to promote correct understanding, management, and reporting of amounts of designated chemicals emitted into the environment

***2 MSDS**
A system that requires attachment of a Material Safety Data Sheet to chemical deliveries

***3 PRTR**
Abbreviation of Pollutant Release and Transfer Register. This system requires the registration and reporting of data relating to the emission of harmful chemicals into the environment and volumes within transported waste.

Environmental Liabilities

We intend to be a corporate group that accurately forecasts and evaluates today the extent of its environmental liability tomorrow, that does not defer settlement of this liability to a later date, and that discloses information to its stakeholders on the soundness of the group from a medium- to long-term perspective. To achieve this, at the end of fiscal 2009 we recorded as a liability on the Group's consolidated balance sheet 6.04 billion yen for soil-pollution cleanup costs and high-level PCB waste disposal costs. Based on data previously acquired, this total is the amount we calculate to be necessary for the Fujitsu Group in Japan to carry out these tasks.

Responding to Soil and Groundwater Pollution

We have reviewed our internal rules established in fiscal 2006 in response to soil and groundwater problems and will handle such problems based on these revised rules for soil and groundwater surveys, policies, and disclosure. In the future, at the same time as performing planned surveys and, if pollution is discovered, implementing cleanup operations and countermeasures appropriate for the conditions at each business site, we will also disclose relevant information in collaboration with government authorities.

The following website gives an overview of our initiatives to combat soil and groundwater pollution, together with the results of our surveys of groundwater pollution at our sites in Japan and the status of our cleanup operations at those sites:

WEB **Our initiatives to combat soil and groundwater pollution (in Japanese)**
http: //jp.fujitsu.com/about/csr/eco/factories/gwater/

Status of New Soil and Groundwater Pollution Measures Undertaken in FY 2009

A voluntary survey in fiscal 2009 revealed soil and groundwater contamination at two sites.

We reported the state of contamination at both sites and explained our countermeasures to local citizens and authorities.

Sites Continuing to Undertake Cleanup Operations and Institute Countermeasures in FY 2009 Stemming from Past Business Activities

We have dug wells to monitor groundwater contamination near our sites where soil or groundwater contamination has been found. We continuously monitored five such sites in fiscal 2009.

The table below lists the largest of the most recent measurements for chemicals whose measurements are recognized to have exceeded legal limits in fiscal 2009 stemming from past business activities.

Work to clean the soil and groundwater at the site of the former Minamitama Plant was completed in October 2007. Following two years of monitoring underground water conditions as prescribed by law, we confirmed that all values remained below legally prescribed safe levels.

Business sites where soil or groundwater contamination has been found

Site Name	Location	Cleanup and countermeasure status	Monitoring well maximum value (mg/ℓ)		Regulation value (mg/ℓ)
			Substance	Measured value	
Kawasaki plant	Kawasaki, Kanagawa Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	2.9	0.04
Oyama plant	Oyama City, Tochigi Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	3.679	0.04
			Trichloroethylene	4.711	0.03
Nagano plant	Nagano City, Nagano Prefecture	We are continuing initiatives to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.35	0.04
Shinetsu Fujitsu	Shinano machi, Kamiminochi Gun, Nagano Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.13	0.04
Fujitsu Optical Compo-nents	Oyama City, Tochigi Prefecture	We are continuing to clean up VOCs by pumping and aeration.	Cis-1, 2-dichloroethylene	0.17	0.04
			1, 1-dichloroethylene	0.041	0.02
			Trichloroethylene	0.63	0.03

Reducing the Environmental Burden in Offices

The Fujitsu Group also promotes environmental activities in its administrative offices, saving energy, working toward zero waste emissions and contributing to society and, of course, ensuring legal compliance. In fiscal 2007, we began operating our Green Office System to energise and enhance these activities. Under this system, the level each office has achieved in its environmental activities is evaluated and awarded one to three stars. All of the offices that come under this system achieved a three-star ranking by the end of fiscal 2009 (see page 69).

In this way, we plan to render the details of the activities carried out by our offices 'visible,' construct databases that allow the activities to be shared with and rolled out to other offices, and continue to raise the level of environmental activities throughout the Fujitsu Group.

On-Site Waste Disposal Auditing

The important "Law on Waste Disposal and Cleaning" applies to all offices in Japan.

To confirm that ICT equipment and other types of industrial waste are being properly dealt with, we perform standardized Group-level checks of the regular on-site audits at Fujitsu Recycling Centers that have elected to dispose of in-house ICT equipment. Specifically, a member of the Fujitsu Corporate Environmental Strategy Unit visits the recycling center once a year with the person in charge of waste disposal from the relevant office, using a standardized checklist to check the documentation and the onsite disposal operation itself.

Creating a Database of Environmental Activity Measures, and Utilizing Checklists

By operating the Green Office system, we survey energy-saving, waste reduction and paper reduction measures and build them into a database, which we then use to make checklists.

These checklists are proving useful not only as materials for considering the measures to adopt when our offices set their environmental objectives and targets but also for invigorating and improving the activities by making visible operational improvement issues and measures that require investment.

Conducting a Field Survey in Response to the Revised Energy Conservation Law

The revised Energy Conservation Law of May 30, 2008, requires administrative offices to identify their energy usage.

In response, we used the Green Office system to investigate and clarity the theoretical and actual values of the electricity allocation method and meter positions in all affected offices.

A Green Office Example

Achieving Zero Emissions for Waste Paper by a Nationwide Paper Recycling System

We have gradually increased the number of sites taking part in the Nationwide Paper Recycling System created last year, and as of June 2010, 285 sites are participating in the scheme. Waste-paper processing companies in all the regions where we have business sites are collecting and processing confidential documents and non-confidential used paper as a set. This is enabling us to achieve very high levels of recycling and zero emissions according to simple calculations from the disposal of paper by incineration or land fill.

Also, all of the waste-processing companies we use are carrying out integrated ICT data management for the paper they collect. As a result, we can quantity and make visible our environmental performance and also reduce the work load of data processors who deal with this data in companies throughout the Group.