



Takeda implements measures in all areas of its business, with "Basic Principles on the Environment" as its benchmark.

Basic Principles on the Environment

1. Overall Policy

Give serious consideration to the impact on the environment in every aspect of corporate activities, including R&D, production, distribution, marketing, procurement and clerical works, and make the best efforts to conserve and improve the environment.

2. Efficient Utilization of Resources and Minimization of Waste

Conserve energy and other resources, and actively pursue waste minimization and resource recycling.

3. Assessment of Environmental Impact from Products and Manufacturing Processes

When developing new products and processes, evaluate the impact on the environment in advance, during development, and periodically after commercialization. Consider the entire business cycle from procurement of raw materials and supplies through the use and the final disposal of products to reduce the impact on the global environment.

4. Development and Utilization of Environmental Technologies

Develop technologies for environmental protection and improvement, and actively pursue outside technologies when it is beneficial.

5. Response to Emergencies

When an adverse effect on the environment is foreseen, exercise the best possible contingent efforts to eliminate or minimize such adverse impact.

6. Clear Definition of Accountability and Responsibility

Appoint executives and managers in charge of environment-related activities and clearly define their authority.

7. Cooperation with the Community and Society at Large

Actively cooperate with the environmental efforts of local communities and provide fair and unbiased information.

8. Education and Training

Educate and train each employee to understand and realize the importance of environmental issues and to act accordingly in his or her daily routine.

Basic Principles on the Environment

Responsible Care Program

Environmental Policy for Fiscal Year

Implementation Plan

See Takeda's website for details. <http://www.takeda.com/csr/environment/principle.html>

Takeda's Major Environmental Policies and Achievements in Fiscal 2005

Theme	Policies	Achievements
Promotion of basic efforts to respond to environmental issues	Develop legal compliance systems and adherence to in-house standards.	Established in-house standards, which are more stringent than the legal requirements and maintained legal compliance systems through regular environmental monitoring based on in-house standards.
Energy conservation and reduction in greenhouse gas emissions	Reduce CO ₂ emission to 399K tons by fiscal 2005.	Achieved a reduction of CO ₂ emission to 359K tons in fiscal 2005.
Waste reduction	Reduce the final waste disposal amount by more than 20% compared to the fiscal 2000 level.	Achieved a reduction of 83% compared to the fiscal 2000 levels by converting waste into valuable resources and ensuring the separate collection of waste is thoroughly implemented.
	Confirm whether appropriate treatment is implemented by the external waste treatment companies.	Inspected waste treatment companies (21 companies) to ensure appropriate treatment is being implemented.
Adequate management of chemical substances and reduction of their emissions into the environment.	Reduce emissions of the priority management chemical substances (toluene and dichloromethane) by more than 30% compared to the fiscal 2000 levels.	Achieved a reduction of 81% in toluene and 89% in dichloromethane respectively, compared to the fiscal 2000 levels.
Implementation of educational and awareness raising activities	Implement activities to raise all employees' awareness of environmental issues.	Improved employee awareness of environmental issues by utilizing the CSR Report, newsletter, display of posters and intranet.
	Promote compliance education in relation to environmental issues.	Provided compliance education in relation to environmental issues, utilizing a compliance status checklist.
Contribution to communities	Improve in communication with authorities and community members and strive toward the enhancement of living environmental sustainability.	Collected information from the "Sensing Monitors" from selected residents in the vicinities of the plant to ensure there is no problem.

Environmental Accounting

Takeda recognizes environmental protection costs as an absolutely essential investment for the future. Then, it has grasped and managed the amount of investment and expenditure for environmental protection even since fiscal 1980.

The total environmental protection costs: business area costs, upstream and downstream costs and administration costs were calculated in accordance with the "Environmental Accounting Guidelines 2005" by Ministry of the Environment and "Accounting Guidelines for Chemical Companies" by the Japan Chemical Industry Association, with the results shown as indicated on the right. In fiscal 2005, the amount of investment on environmental protection costs was approximately ¥500 million, with expenditure of ¥2.3 billion. One of the major investments made is on the new installation of high COD incinerator exhaust gas cooling

equipment at the Hikari Plant. The expenditure, totaling ¥2.3 billion accounts for approximately 2.8%, which is the current overall manufacturing cost incurred solely by Takeda, and largely dominated by the costs of waste treatment. The economic effect of the energy conservation was equivalent to approximately ¥50 million.

Environmental Protection Costs

Category	(Unit: millions of yen)		
	Investment	Expenditure	
Business area costs	Pollution prevention costs	55	748
	Global environmental protection costs	32	6
	Resource circulation costs	411	1,039
Upstream/downstream costs	—	26	
Administration costs	47	443	
Total	546	2,262	

●Data collection period: April 1, 2005 to March 31, 2006

●Data collection sites: Shonan Plant, Osaka Plant, Hikari Plant and Tsukuba Research Center

ISO14001

Takeda's main production facility - Hikari Plant - obtained ISO 14001 certification, a globally accredited authentication for an environmental management system, in December 1998. Currently, eight sites of the Takeda group are ISO 14001 certified.

Responsible Care Activities

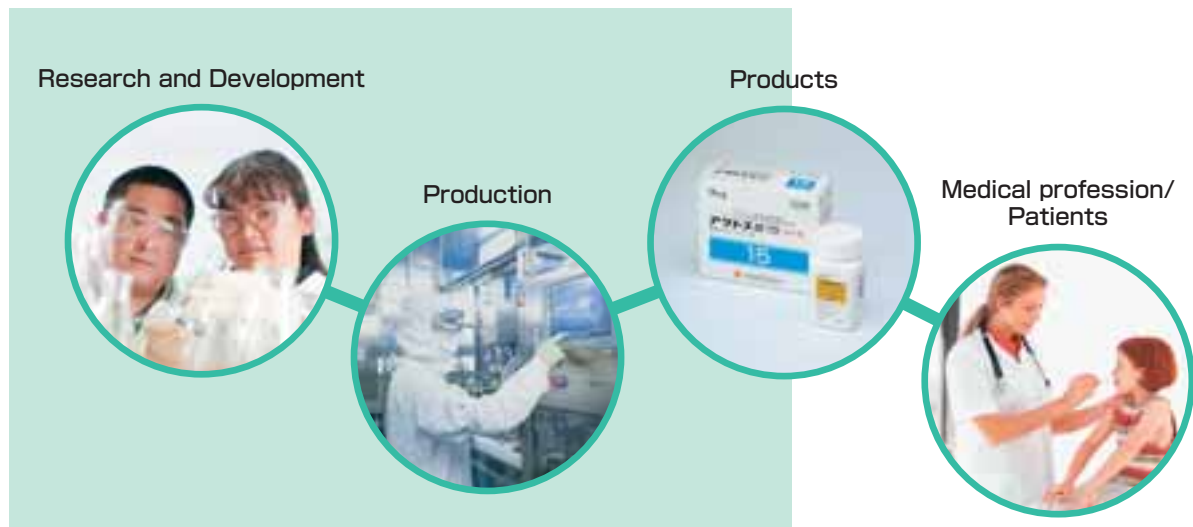
Responsible Care is an international voluntary program dealing with the management of chemical substances by businesses, with activities now extending to 52 countries. The purpose of the program is to secure "environment," "safety" and "health" while handling chemical substances and Takeda has been implementing such activities since 1995, when the Japan Responsible Care Council was launched.



Takeda strives for the reduction of the environmental impacts during its production processes as a pharmaceutical manufacturer.

Environmental Impacts Associated with Takeda Group Business Activities

Input energies		Input water resources
Total energy input: 7,868million MJ (Crude oil equivalent): 202,983 kL	Major energy resources Purchased electricity: 232,995K kWh Heavy oil: 99,558 kL City gas: 32,210K m³ Coal: 3,245 tons	City water: 3,927K m³ Industrial water: 6,455K m³ Groundwater: 523K m³



Release into air	Release into water	Release of waste and others
CO ₂ : 473K tons SO _x (sulfur oxides): 371 tons NO _x (nitrogen oxides): 410 tons Dust: 40 tons PRTR designated substances: 142 tons	Effluent volume: 9,929K m³ COD: 790 tons Total Phosphorus: 11 tons Total Nitrogen : 479 tons PRTR designated substances: 8 tons	Generated waste: 23,620 tons Final disposal: 1,373 tons Recycled waste: 10,115 tons Used packaging materials: 3,176 tons <small>(Minimum obligation volume for recycling in accordance with the Container and Packaging Recycling Law)</small>

Compilation Method of Environmental Data

Data collection period: from April 1, 2005 to March 31, 2006

Data collection sites: Worldwide production and research sites. However, in regard to PRTR designated substances, total phosphorus and total nitrogen, production and research sites in Japan only.

We believe continuously implementing environmental protection and accident prevention audit with sincerity also represents the realization of Takeda-ism.

Environmental Protection and Accident Prevention Audit

In order to realize "sincerity," which is an essential part of Takeda-ism, Takeda implements periodic environmental protection and accident prevention audit, aiming to reduce possible risks in the course of environmental protection and accident prevention activities, as well as to confirm compliance. Circumstances in which the respective business sites are situated vary according to the site and Takeda is responsible for the implementation of environmental protection and accident prevention audit, carefully conducting thorough individual actions, and achieving optimal results in efforts toward environmental protection and accident prevention in each business site.

Our efforts toward environmental protection and accident prevention audit, which started in 1995, have seen their contacts enhanced year after year and currently consist of two aspects: the system audit, confirming the regulatory compliance status in terms of environmental protection and accident prevention as well as the operation status for the management system and the process audit, verifying based on the aspects of the production procedures and its facilities by each process. After conducting the environmental protection and accident prevention audit, we also implement follow-up measures, aiming to further ensure Takeda's environmental protection and accident prevention measures by requiring a progress report for all highlighted problems, using the Monthly Report on Environmental Protection and Accident Prevention, which is submitted by each site on a monthly basis.



System audit conducted at Takeda San Diego, Inc. (TSD)

2nd from the left Paul M Eiler (TSD),
4th from the left Hiroshi Sato (Environment & Safety Department, TPC)

GENERAL DESCRIPTION OF THE IMPLEMENTATION OF THE ENVIRONMENTAL PROTECTION AND ACCIDENT PREVENTION AUDIT IN FISCAL 2005

The environmental protection and accident prevention audit of production and research sites has been implemented, including worldwide subsidiaries, ever since its commencement as a range of activities. In fiscal 2005, the audits were implemented at a total of twelve sites; namely nine Japanese and two European and one Asian sites.

The environmental protection and accident prevention audit involves the overall environmental protection and accident prevention aspects being inspected and more detailed auditing is implemented in terms of priority specified subject every year. In fiscal 2005, the two points confirming



Process audit conducted at TSD

measures to prevent hazardous liquid leakage and compliance status for "Takeda Group's Standard for Environmental Protection and Accident Prevention Work" were appointed as priority subjects. As for measures to prevent hazardous liquid leakage, some problems were highlighted for correction during the audit and the improvements for all such problems are scheduled for completion by the end of fiscal 2006. Based on the results of the environmental protection and accident prevention audit in fiscal 2005, no problems were found with the compliance status.

In addition, the "Takeda Group's Standard for Environmental Protection and Accident Prevention Work" was established in 2004 and the results of the audit specifying the adequacy of the Standard were generally satisfactory.

Henceforth, we will strive to ensure the independence and improvement of each site, as well as enhancing the environmental protection and accident prevention audit system, aiming to further improve our business operations by ensuring all sites promote their service based on the "Takeda Group's Standard for Environmental Protection and Accident Prevention Work" and confirming its practices in accordance with our own internal audits.



Hikari Plant: Its sophisticated management system takes environmental protection into careful consideration.

Since 1974, Takeda has systematically implemented energy conservation programs which lead to a reduction in CO₂ emissions.

Major indicators reflecting our efforts in fiscal 2005

- CO₂ emissions from Takeda in fiscal 2005 amounted to 359K tons, successfully accomplishing the target of keeping them under 399K tons.
- Takeda implemented 75 energy conservation measures and the resulting CO₂ reduction was 2.1K tons.
- Takeda group's CO₂ emissions in fiscal 2005 was 473K tons.

Major efforts toward CO₂ reduction

- Shutdown and reduction of the operation hours of the circulation pumps during holidays and nighttime
- Introduction of an energy-saving steam trap.

TAKEDA'S BASIC POLICY TOWARD GLOBAL WARMING PREVENTION

The global warming issue is a matter of great international concern and a range of measures have been implemented in each of the developed nations in order to accomplish the goals, as defined in the Kyoto Protocol.

In Japan, further voluntary approaches by people and businesses have been promoted in a variety of ways, in addition to the "Calculation, Report and Publication Scheme for Greenhouse Gas Emission" introduced since April 2006. This is a mandatory scheme requiring those who generate more than a certain amount of greenhouse gas emissions to calculate their greenhouse gas emissions, report amount of emissions to the government, who will then calculate all the data collected

and announce the results to the public.

Takeda organized the energy conservation committee in 1974, following the first major oil shock in 1973, having since been updating energy-saving facilities and implementing other activities in terms of energy conservation to date. However, since the combustion of fossil fuels is a cause of global warming, we currently consider the need to reduce greenhouse gases as the primary goal of the environmental protection activities, striving to implement a wide range of efforts with this in mind.

EFFORTS MADE IN FISCAL 2005

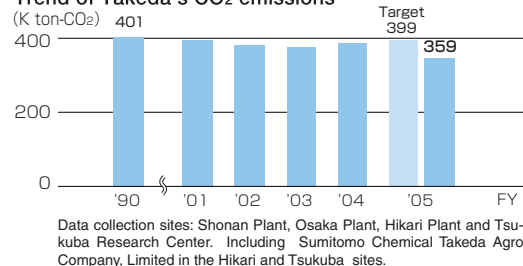
Fiscal 2005 was the final year of Takeda's energy-saving countermeasure: the 8th five-year energy conservation program. The target value of CO₂ emissions was 399K tons, which is equivalent to a reduction of 2.9 percent compared to the fiscal 1999 level, and aimed at Shonan, Osaka and Hikari Plants and Tsukuba Research Center. To accomplish the target, in fiscal 2005, Takeda implemented 75 energy-saving measures, including shutdown and reduction of the operation hours of the circulation pumps during holidays and nighttime, partial shutdown of the operation of several turbulators, the introduction of an energy-saving steam trap, an energy-saving inverter on the fluorescent ballasts, an inverter control on the pumps, etc. as revisions of operation methods of the plant facilities and were consequently successful in reducing CO₂ emissions by 2.1K tons.

As a result of such efforts, CO₂ emissions in fiscal 2005 amounted to 359K tons, thus accomplishing the target.

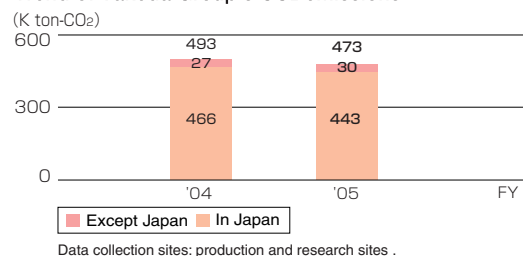
In addition, as for the goal of attaining the voluntary action plan set by the Japan Pharmaceutical Manufacturers Association: "Reduction of CO₂ emissions of Pharmaceutical Companies by 2010 to 1990 levels," the CO₂ emissions generated by Takeda have been consistently less than 401K tons, the CO₂ emissions level in fiscal 1990, since 2001 and we are confident of our ability to accomplish the goal in 2010.

Takeda also started calculating the overall CO₂ emissions of the Takeda group since fiscal 2004, and it amounted to 473K tons in fiscal 2005.

Trend of Takeda's CO₂ emissions



Trend of Takeda Group's CO₂ emissions



THE 9th ENERGY CONSERVATION PROGRAM

Takeda has developed the 9th five-year energy conservation program for the period 2006-2010. The program includes contribution of the head office as a site of data collection, while also incorporating future production and fuel conversion plans and the specified target involves reducing CO₂ emissions by 215K tons, which is equivalent to a 40 percent reduction on fiscal 2005 levels by 2010.

In addition, we also plan to set a goal for CO₂ emissions on a global scale for the future. Takeda pledges to strengthen our efforts to confront global warming issues on a group-wide basis, in order to realize the goal.

CALCULATION METHOD

■ Calculation object

CO₂ emissions for calculation object refer to direct emissions generated by combustion of fossil fuels while indirect emissions from electricity use, and CO₂ emissions associated with transportation are excluded.

■ CO₂ emissions factor

As for the results in Japan, they are calculated based on the "Guidelines for Calculating Greenhouse Gas Emissions by Businesses (Version 1.6)" and the CO₂ emissions factor for purchased electricity is used from year-on-year average emissions factor of the nationwide all power supply, released by the Federation of Electric Power Companies of Japan. As for the CO₂ emissions factor for purchased electricity outside Japan, country-specific factors are used from the GHG Protocol.

Takeda is promoting group-wide air and water quality conservation while working on reducing waste and emissions of chemical substances.

Waste Reduction

Major indicators reflecting our efforts in fiscal 2005

- The amount of Takeda's final waste disposal in fiscal 2005 was 246 tons, reduced by 82 percent compared to the fiscal 2000 level, successfully accomplishing the target of reducing more than 20 percent.

Major efforts toward waste reduction

- Reuse of raw materials and product packages.
- Thorough verification of separate collection by patrol.
- Select waste treatment companies who are promoting re-utilization.

BASIC STANCE ON WASTE REDUCTION

Takeda's basic stance on waste reduction is reflected in the effective re-utilization and the reduction amount within the sites, while promoting off-site recycling, as well as suppression of waste generation. We aim to contribute to creating a society with an environmentally-sound material cycle by reducing the amount of final disposal of waste through these efforts.

THE 3rd WASTE REDUCTION PROGRAM

Takeda has been continually promoting waste reduction activities since 1993. The 3rd waste reduction program started in 2001 aims at the goal: "reducing industrial and non-industrial waste by 20 percent compared to the fiscal 2000 level by fiscal 2005," striving toward reduction in the amount of final disposal of waste. In order to attain the goal, we have been promoting efforts to reduce the amount of final disposal of waste such as an intensive promotion of recycling of waste by separate collection at the sites, while preferentially selecting waste treatment companies who are promoting recycling and reutilization after intermediate treatment of waste. As a result, the amount of final disposal of waste in fiscal 2005 decreased by 55 tons to 246 tons, 82 percent down from the fiscal 2000 level.

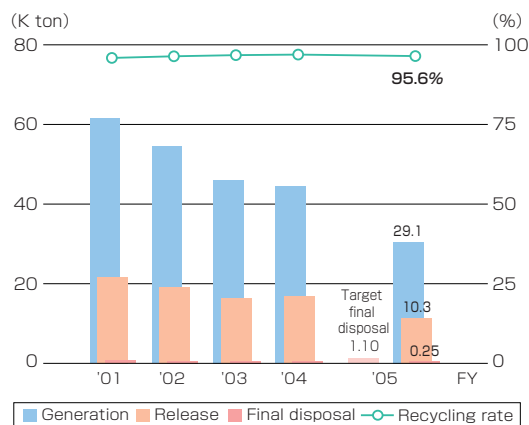
APPROPRIATE TREATMENT OF WASTE

To prevent illegal dumping or inappropriate handling of waste, Takeda appropriately manages control manifest of industrial waste, while regularly visiting commissioned waste treatment companies and their facilities to ensure their proper handling, using a checklist.

FUTURE EFFORTS

Takeda launched the 4th waste reduction program since fiscal 2006, aiming at "reducing the amount of final disposal of waste by 30 percent using on the basis of the amount of final disposal of waste in fiscal 2004 as a benchmark by fiscal 2010." We will continue to strive to promote thorough waste reduction activities as well as intending to expand them to Takeda group-wide activities in future.

Trend of waste generation, release, final disposal and recycling rate



Data collection sites: Shonan Plant, Osaka Plant, Hikari Plant and Tsukuba Research Center

CALCULATION METHOD

■ Release of waste

The total amount of non-industrial waste, industrial waste and valuable resources

■ Recycling rate

The amount of recycling / (the amount of re-utilization + the amount of final disposal of waste) x 100

■ The amount of re-utilization

The total amount of reuses, recycling and heat recovery (including valuable resources)

Reduction in Emissions of Chemical Substances

Takeda has been ongoingly promoting reduction in emissions of the priority management chemical substances since fiscal 1995. The priority management chemical substances are the chemical substances handled by Takeda and those which Takeda independently determined that it is necessary to reduce their emissions in terms of the properties and quantity consumed. In the 2nd chemicals reduction program started in fiscal 2001, toluene and dichloromethane were selected as the priority management chemical substances and we have been striving toward the goal of reducing in emissions of those substances by 30 percent compared to the fiscal 2000 levels by 2005. With the efforts made by Takeda such as

installation of activated carbon adsorption equipment and combustion equipment for exhaust gases and reduction of usage of chemical substances by outsourcing, the amounts of emissions of toluene and dichloromethane in fiscal 2005 were reduced by 81 percent and 89 percent respectively, achieving largely in excess of the goal. Fifty six substances were designated as the PRTR(Pollutant Release and Transfer Register) reported substances in the Takeda group because of the business diversity of the group. We grasp the current status of emissions of these substances into the environment as well as their transfers in waste and utilize it for management of chemical substances.

PRTR Data Reported (From April 2005 to March 2006)

(Unit: tons)

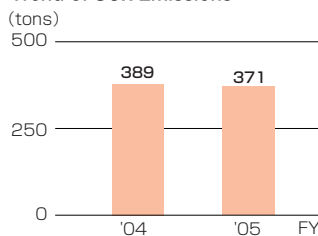
Chemical Substances	Releases			Transfers	
	Air	Publicly-owned water bodies	Land	Transfers to sewerage	Transfers in waste
Dichloromethane	24	0.048	0.0	0.0045	480
Acetonitrile	73	0.0	0.0	0.21	250
Toluene	14	0.0	0.0	0.0008	300
N, N-dimethylformamide	0.13	0.0	0.0	0.024	13
1, 2-dichloroethane	10	0.0	0.0	0.0	2.8
1, 4-dioxane	10.	0.0	0.0	0.0	0.0

Data collection sites: Production and research sites of the Takeda group in Japan. Chemical substances of which total amount of releases and transfers were more than 10 tons are shown.

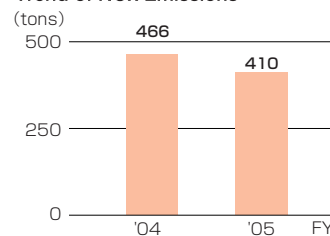
Air and Water Quality Conservation

The Takeda group voluntarily establishes the in-house standards, which are more stringent than the legal regulation values of the Air Pollution Control Law and Water Pollution Control Law, regulations of local governments or regional agreed values in the sites and through regular environmental monitoring, compliance with such standards is maintained. When a value exceeding the level of in-house standard is discovered during regular monitoring, we immediately find out and rectify causes of the problem, striving to drop it down to a lower level than the in-house standards. We also implement regular monitoring in terms of noise and unpleasant odor, confirming their compliance.

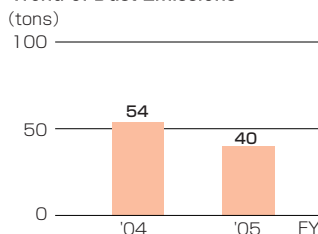
Trend of SOx Emissions



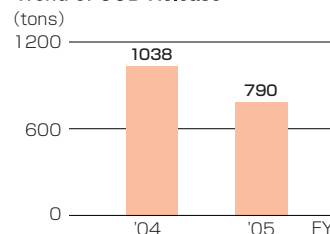
Trend of NOx Emissions



Trend of Dust Emissions



Trend of COD Release



Data collection sites: Worldwide production and research sites of the Takeda group.