

2006

Environment and Safety Report

Responsible Care Activities/Social Activities



DAICEL CHEMICAL INDUSTRIES, LTD.

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Environment and Safety Report 2006

This report is primarily a compilation of the environmental and safety ("Responsible Care") activities as well as the social activities of Daicel Chemical Industries, Ltd. for fiscal year 2005 (ended March 31, 2006).

The data contained in this report are the results of calculations related to the workplaces (plants and research centers) of Daicel Chemical Industries, Ltd. as outlined on page 30, unless otherwise stated. This includes the workplaces of the Daicel Group companies, which are indicated with a bullet in the Daicel plant data on page 29. Furthermore, in addition to this data, this report contains partial information on Group companies.

This report has been compiled according to the terms of the Environmental Reporting Guidelines (Fiscal 2003 edition) published by the Ministry of the Environment of Japan.

Please contact the Responsible Care, Daicel Chemical Industries, Ltd. as for opinions or inquiries about this report.

Responsible Care

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Definition of Term

"What Is Responsible Care?"

"Responsible Care" (RC) refers to a series of voluntary activities undertaken by those engaged in the production and handling of chemical substances. These activities include public disclosure of the results of activities and maintaining communication with the community; they also entail the voluntary implementation of all environmental, health and safety measures associated with chemical substances, from R&D to final disposal.

Responsible Care was promoted by the International Council of Chemical Associations (ICCA) and endorsed by Agenda 21, adopted at the 1992 Rio Earth Summit (UN Conference on Environment and Development). In essence, Responsible Care has long been recognized internationally as an important commitment to ensuring appropriate control over chemical substances.

The Japan Responsible Care Council (JRCC) was established within the Japan Chemical Industry Association in 1995 in collaboration with the ICCA. The numerous member companies of the JRCC promote the goals of Responsible Care.



A Message from the President

As part of our Basic Philosophy, Daicel Chemical Industries, Ltd. pursues continued growth and development together with society as an attractive, people- and environment-friendly chemical company. We have continually promoted our business activities on a foundation of product development aimed at contributing to a rich and productive society committed to sustainable development. We believe our Responsible Care activities help to ensure human health and safety while protecting the environment. Moreover, we are earning the public's trust through our corporate governance and corporate ethics initiatives, which are the driving force behind our commitment to our Basic Philosophy and which stand as the foundation supporting our corporate management. We are actively promoting these initiatives throughout the Daicel Group.

The prevention of global warming is believed to be a very important challenge to our environmental protecting efforts in particular. Our medium-term target for the prevention of global warming is to reduce our energy consumption rate index to less than 90% of our fiscal 1990 level by fiscal 2010. Toward this end, Daicel has been implementing initiatives involving the entire Daicel Group. We accelerated our achievement of this target in fiscal 2005, and we intend to continue improving on this performance. For example, our Aboshi Plant has converted its large boiler and industrial cracking furnace from heavy oil to natural gas, which contributes less CO₂ to the atmosphere. In addition, this plant has optimized the use of heat, which is an initiative several of our other plants are also implementing. As well, we are constructing a circulating fluidized-bed boiler at our Otake Plant that utilizes used tires as a boiler fuel. In support of these plant initiatives, we are actively promoting the prevention of global warming and adopting energy-conservation efforts at all our offices and logistics divisions; moreover, we are making significant efforts to offer highly energy-efficient products as well as materials that can be used to make energy-efficient products.

As a member of the chemical industry, we continue to participate in international and domestic efforts to assess the safety of chemical substances by fully cooperating with chemical industry associations.

As for our own products and technologies, we remain committed to continually improving their environmental and safety performance, particularly for existing products such as automobile air bag inflators. And in the area of R&D for new products and technologies, we are maintaining our dedication to the development of innovative oxidation technologies that hold the potential for dramatic energy savings compared to conventional technologies. At the same time, we are pursuing other potential leads that hold the promise of helping to reduce various environmental impacts.

Since 2000, we have been making a special effort to demonstrate our commitment to corporate ethical standards with the goal of operating at a higher ethical level, with good judgment, and in compliance with the law. We have taken these steps because we are highly aware that a corporation is also a member of society and must therefore earn the trust of the public. This approach is key to the very survival of every company. In April 2005, as part of our risk management initiative, we enriched a system for promoting risk management throughout the Daicel Group. In the future, we will continue to strengthen our efforts to remain a company worthy of the trust of society; moreover, we will continue to fulfill our responsibilities as a member of society.

This Environment and Safety Report presents the approach and activities of the Daicel Group for fiscal 2005 in the areas of health, safety, and the environment; it also introduces our efforts to gain the trust of society.

I trust this report will clarify the scope of our commitments, and I look forward to receiving your frank comments and opinions.

September 2006



Daisuke Ogawa
President and Chief Executive Officer

Daicel's Basic Philosophy and Promotion of Responsible Care

Daicel is committed to ensuring that every company in the Daicel Group remains focused on securing the health and safety of its customers, the residents of neighboring communities, and its employees by adhering to the three key principles of our Basic Philosophy as stated below.

In 1995, Daicel established its basic policies for Responsible Care. Daicel is deeply aware of its responsibility as a corporate citizen to protect the environment and ensure the health and safety of all those involved with the Company in whatever capacity and

whatever stage of its operations—from the design of products to their manufacture and disposal. Daicel's Basic Philosophy reflects the environmental and safety policies of the Japan Chemical Industry Association and is in accordance with the Responsible Care Code prescribed as part of the implementation of Responsible Care. Because Daicel is strongly conscious of the need to contribute to an affluent but sustainable society, all Daicel employees uphold Responsible Care practices.

◆ Daicel's Basic Philosophy

Continue to grow and develop together with society as an attractive, people- and environment-friendly chemical company.

Create value and trust in the market through technology and people abounding in individuality.

Help each member of the staff feel a sense of achievement and that they are making their presence felt, and help them to hone their skills and refine their characters.

◆ Daicel's Basic Policies for Responsible Care

In all aspects of our business operations, Daicel is making the utmost efforts to ensure Environmental Preservation, Process Safety and Disaster Prevention, Occupational Health and Safety, Chemical and Product Safety, Distribution Safety, and Communication with the Community in accordance with the Responsible Care Standards of the Japan Chemical Industry Association (JCIA). Daicel is making steady and continuous progress in all these areas.

- 1 While strictly abiding by laws and regulations currently in effect, in its business operations, Daicel will strive to uphold the principles of environmental preservation and attention to safety. All employees will be made aware of policy measures and their assistance will be secured during implementation to ensure sustained effort.
- 2 Daicel will conduct a thorough assessment of its new products' impact on health, safety, and the environment at every stage—development, manufacture, distribution, use, and disposal—prior to bringing them to market and installing facilities for their production. Daicel will also strive to produce and offer products that are considerate of people's health, safety, and the environment.
- 3 Daicel will collect and maintain a database of information regarding environmental and safety issues that relate to its products and the substances it handles. To ensure their safe handling and use, the Company will provide all necessary information to users and distributors.
- 4 Daicel will promote raw material-saving and energy-saving initiatives as well as the recycling of waste products and restraints on their production to protect the environment and economize on the use of limited raw materials.
- 5 Daicel will seek to constantly raise safety standards to achieve a no-accident, no-disaster record at the manufacturing stage. The Company will ensure that appropriate emergency response procedures are in place, training is undertaken, and, in the event of an accident, appropriate countermeasures are taken at once.
- 6 Daicel will research, develop, and introduce technologies and products that are healthier, safer, and more environment-friendly than ever.
- 7 Daicel pledges to strictly abide by regulations in force in the relevant jurisdictions and give due attention to the environmental and safety concerns of the other parties involved when engaging in international transactions involving chemical products, conducting international business, and transferring technologies abroad.
- 8 Daicel will actively lead and support the environment- and safety-related activities of the Daicel Group companies with the aim of securing a better and safer environment for all.
- 9 Daicel will participate in and cooperate with environmental preservation activities undertaken by the communities in which it operates and seek to gain the trust and understanding of society as a whole by establishing a dialog with it on safety and environmental matters.

[Established in 1995 when Daicel joined the Japan Responsible Care Council.]

Responsible Care Management System

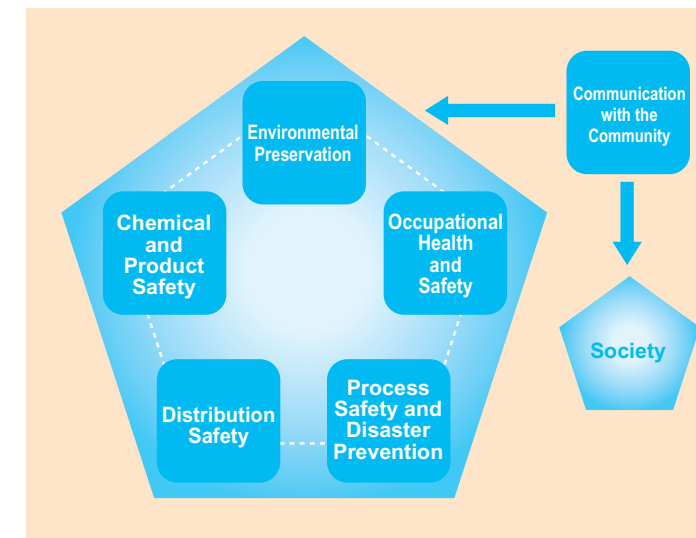
In keeping with our basic policies regarding Responsible Care (RC) under the RC Management System that oversees all RC activities, Daicel has been promoting Responsible Care in the following six areas: Environmental Preservation; Chemical and Product Safety; Occupational Health and Safety; Process Safety and Disaster Prevention; Distribution Safety; and Communication with the Community. In order to promote Responsible Care effectively, we have implemented a Total Environment, Health and Safety Assessment System and the ISO 14001 International Standards for Environmental Management Systems.

The RC Council, which is chaired by the director in charge of Responsible Care, deliberates on and determines company-wide Responsible Care policies and plans. Each plant and research

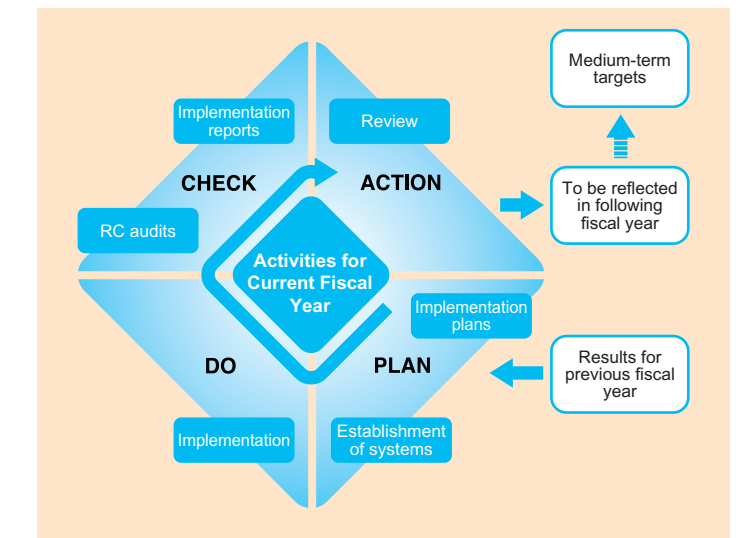
center establishes its own workplace RC Council, which develops and implements its own promotion programs in conformance with the company-wide Responsible Care promotion program. Each company and corporation within Daicel cooperates with and supports these activities. Working groups have been established as advisory organs to the RC Council to develop plans for specific Responsible Care issues.

Having identified its medium-term Responsible Care targets, Daicel is promoting continuous improvement through annual application of the PDCA (Plan-Do-Check-Action) cycle. We publicly disclose the results of this annual activity in this annual Environment and Safety Report and by other means in order to meet our responsibilities to release relevant information.

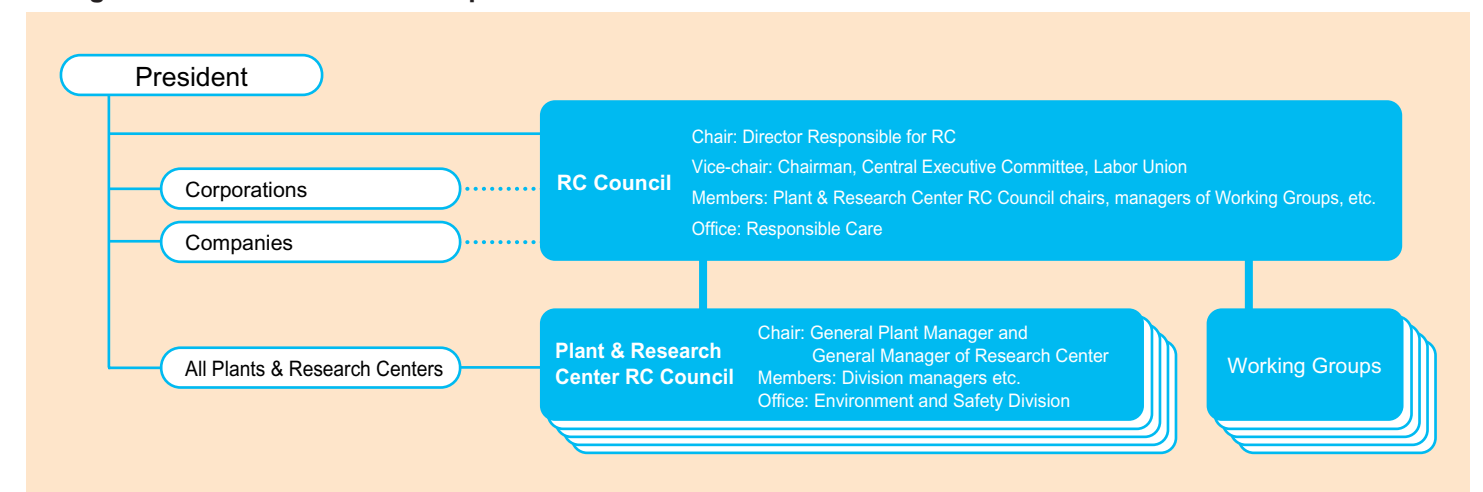
◆ Scope of Responsible Care Activities



◆ Implementation Scheme



◆ Organizational Structure for Responsible Care



Definition of Term

Unit Rate

This value indicates the efficiency rate of a specified index. Taking the indexing of energy as an example, the total amount of energy consumed—such as electric power and heat (fuel)—to produce a unit volume of products is called the energy consumption rate. The lower the energy consumption rate, the greater is the production efficiency (energy conservation). This can be considered very effective at preventing global warming.

Unit Rate Index

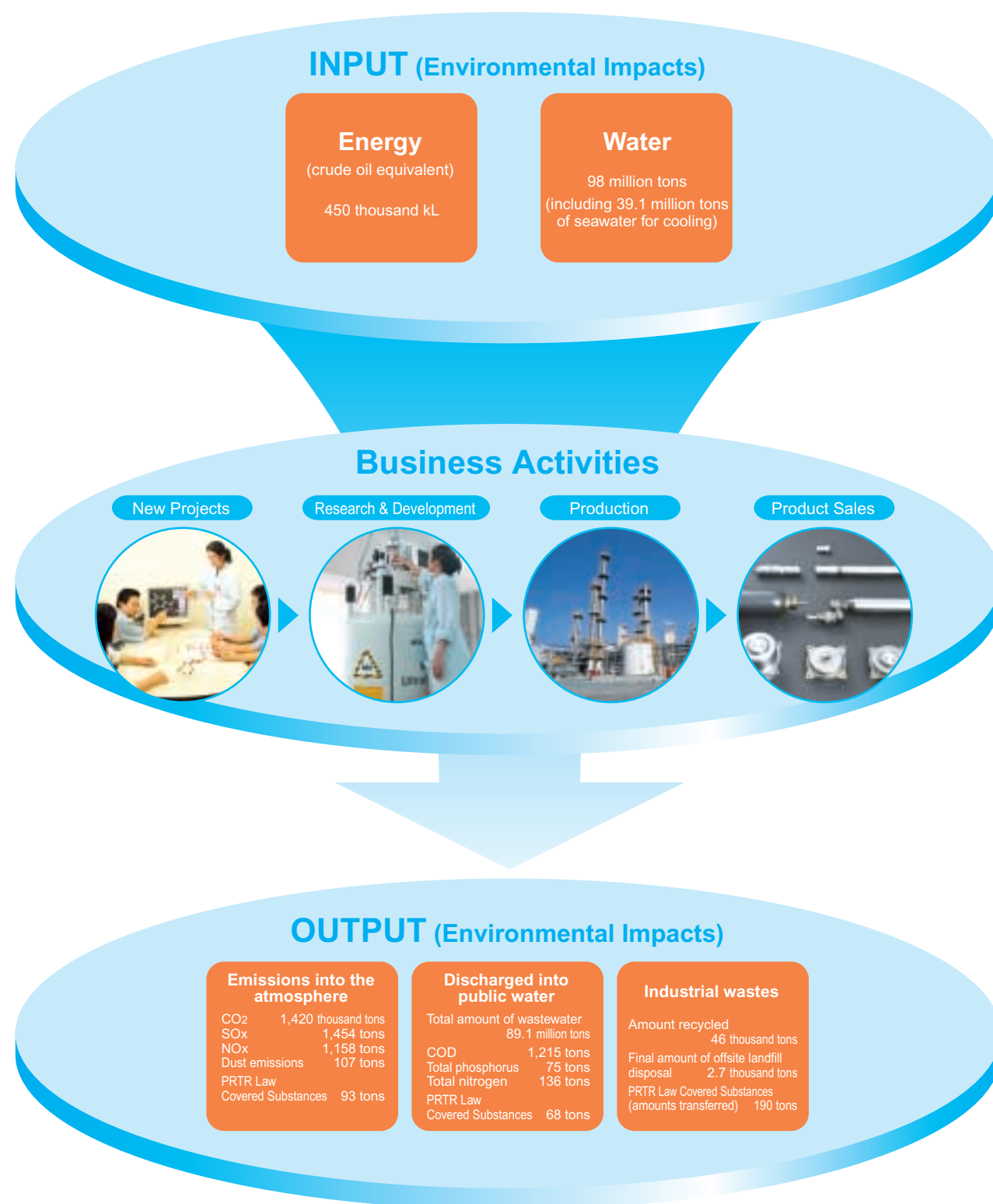
Secular fluctuations are indexed to the unit rate of the baseline year; this is called the unit rate index. Taking the indexing of energy as an example, Energy consumption rate index for a particular year = (Energy consumption rate for a particular year) / (Energy consumption rate of baseline year) × 100.

Targets and Outline of Responsible Care Activities

Daicel has developed a medium-term Responsible Care plan scheduled to conclude in fiscal 2006. It is now taking steps to meet this plan. In fiscal 2005, we accelerated the schedule and achieved our RC medium-term targets for prevention of global warming and energy conservation and for waste reduction and recycling.

Measures		RC Medium-term Plan		Measures for Fiscal 2005		Reference page
		Details of efforts and targets for the final fiscal year of the plan		Targets	Results	
Environmental Preservation	Energy conservation and the prevention of global warming	Reduction of the energy consumption rate index (relative to the fiscal 1990 level of 100) to a maximum of 94 in fiscal 2006 and 90 in fiscal 2010		Reduction of the energy consumption index to 90 (relative to the fiscal 1990 level of 100)	Achieved an energy consumption index of 88. Achieved the RC medium-term (fiscal 2010) targets for the second consecutive year.	p.11
	Reduction and recycling industrial waste	Reduction of final disposal by landfill index (relative to the fiscal 1990 level of 100) to a maximum of 23 in fiscal 2006 and 20 in fiscal 2010		Reduction of final landfill disposal by recycling the residue from incineration of waste tires	Reduced final landfill disposal index to 13 (relative to the fiscal 1990 level of 100) through utilization of entire volume of residue from incineration of waste tires as a raw material for cement production, achieving the accelerated medium-term (fiscal 2010) RC targets.	p.12
	Air and water pollution control	_____		Compliance with laws and regulations and with established values negotiated with local communities for emissions of air and water pollutants and the like	Achieved compliance with laws and regulations and with established values negotiated with local communities and the like at all plants.	p.13
Chemical and Product Safety	Relevant management and controlled emissions of chemical substances	Development and implementation of the 3rd-term plan to reduce emissions of chemical substances		Modification of the 3rd-term plan to reduce emissions of chemical substances (including VOC emissions reduction plan)	Established a 3rd-term plan to reduce emissions of chemical substances, including the VOC emissions reduction plan. Achieved the targets.	pp.14–15
	Compliance with global management policies for chemical substances	Accurate monitoring of global trends in chemical substance management policies and implementation of proper response		Implementation of one chemical substance report as a cosponsor of the OECD HPV (High Production Volume) Program	Report on one chemical substance completed. Achieved the targets.	p.16
Occupational Health and Safety	Elimination of on-the-job accidents	Establishment of an occupational health and safety management system to ensure continued improvement toward the goal of eliminating on-the-job accidents		Implement activities to ensure circulation of the PDCA cycle at all workplaces and zero accidents leading to suspension of operations during the year.	Two accidents leading to suspension of operations occurred; targets were not achieved.	p.17
Process Safety and Disaster Prevention	Elimination of plant-related accidents and enhancement of emergency response measures	Prevention of severe plant accidents (by stabilizing plant operations through stringent production reforms and by implementing strict static discharge-induced accident prevention guidelines)		Zero accidents leading to fire, explosion or leakage	Two accidents occurred; targets were not achieved.	p.18
		Reconstruction and implementation of Process Safety and Disaster Prevention systems that reflect the situation in individual workplaces		Implementation and development of the disaster prevention action plan based on the Process Safety and Disaster Prevention Guidelines that reflect the circumstances of workplace organizations	Established a disaster prevention action plan at all workplaces and achieved targets.	p.18
Distribution Safety	Increased awareness of logistics safety and elimination of logistics accidents	Assumption of responsibility for zero logistics accidents (accidents involving fire and explosion or leakage, outflow, and loss of dangerous and harmful substances)		Elimination of at-fault accidents for zero logistics accidents (accidents involving fire, explosion or leakage, outflow, and loss of dangerous and harmful substances)	One at-fault transportation accident occurred. Target was not achieved.	p.18
Communication with the Community	Communication with the Community (stakeholders)	Development of the current Environment and Safety Report into a Sustainability Report in order to respond to the needs of stakeholders		Updating of the report to a Sustainability Report and enhancing the content by incorporating information on social activities.	Published information on social activities in the 2005 Environment and Safety Report.	_____

Business Activities and Their Environmental Impacts (Results for Fiscal 2005)



Environmental Accounting

Daicel introduced an environmental accounting system in fiscal 2001 with the goal of implementing efficient environmental preservation activities; ensuring further corporate transparency; and quantitatively assessing and evaluating the investments, costs, and effectiveness of our environmental preservation activities.

The values determined from our environmental accounting have been calculated according to the Environmental Accounting Guidelines, Year 2002 Edition, published by the Ministry of the Environment of Japan, and the Environmental Accounting Guidelines for the Chemical Industry published by the Japan Chemical Industry

Association (JCIA).

The amounts of investments are actual sums for capital investment in environmental preservation in fiscal 2005 (settlement basis). The cost amounts are the totals for actual expenses of equipment depreciation, maintenance, management, and labor related to environmental preservation. The economical achievements in fiscal 2005 are indicated as monetary benefits. The physical effects are summarized in the section Environmental Preservation Measures (page 11–13).

◆ Environmental Preservation Costs (reported totals are the same as those appearing on the inside front cover of this report.)

Classification		Major efforts	Investment (¥ million)	Cost (¥ million)
(1) Environmental preservation costs of controlling the environmental impacts in our production and service business activities (business area costs)			1,090	4,451
Breakdown	[1] Pollution prevention costs	Prevention of air and water pollution, control of harmful substances, levies for pollution-related health damages	276	3,402
	[2] Global environmental preservation costs	Energy conservation, capital expenditures for fuel conversion, cost of thermal pinch analysis	787	281
	[3] Resource recycling costs	Appropriate treatment and disposal of industrial waste	27	768
(2) Costs of controlling environmental impacts of production and service activities occurring upstream or downstream (upstream and downstream costs)		Costs of recycling containers and packing materials and green purchasing	0	0
(3) Environmental preservation costs in management activities (environmental management costs)		Labor costs of environmental management, expenses for EMS operations and maintenance, costs of environmental education, costs of environmental impact alleviation	0	565
(4) Environmental preservation costs in R&D activities (R&D costs)		R&D work for reducing environmental impacts of products and technologies	0	797
(5) Environmental preservation costs in community activities (community activities costs)		Costs of environmental promotion activities, and participation in community events	0	35
(6) Costs of environmental damage (environmental damage costs)		Environmental remediation costs, compensation for damages related to environmental preservation, and insurance premiums and transfers to reserves for environmental damage	12	97
Total			1,102	5,945

Item	Amount (¥ million)	Environmental rate (%)
Capital expenditures in the applicable period	12,444	8.9
R&D expenditures in the applicable period	8,101	9.8

Economic effects (monetary benefits) resulting from environmental preservation activities	Amount (¥ million)
[1] Cost reduction through energy conservation	24
[2] Improvement of total thermal efficiency through in-house power generation	2,199
[3] Cost reduction through resource conservation	8
[4] Benefits obtained by recycling	193
[5] Reduction of expenses for waste treatment or disposal	58
Total	2,482

Responsible Care—Audits

The divisions responsible for implementation of Responsible Care activities conduct voluntary audits of the results of their goal-oriented activities. Moreover, all plants and research centers throughout Daicel Chemical Industries undergo executive audits (comprehensive audits managed by the director responsible for RC) and specialist audits (audits focused on specific themes administered by the Manager of Responsible Care).

To ensure the continued improvement and effectiveness of Daicel's Responsible Care activities, the results of the RC audits are reflected in the action plan for the following fiscal year.

Although we have not yet implemented the RC audit phase at our international production bases, we are utilizing various opportunities to provide support and instruction targeting environmental and safety improvements.

In fiscal 2005, we participated in a pre-operational safety review meeting for production equipment at Daicel Safety Technologies (Thailand) Co., Ltd., a manufacturer of initiators for automotive air bag inflators. We then performed a follow-up to the Total ESH Assessment (prior assessment) carried out at the planning stage. At the same time, we discussed ways of enhancing environmental safety activities.



Safety review meeting in Thailand

Responsible Care—Education and Training

To increase awareness of the philosophy and policy of Responsible Care and improve the quality of our activities, we have convened Daicel Group RC Promotion Conventions and RC Conventions at plants and research centers. These include group-wide collective education and workplace education and training programs.



Daicel Group RC Promotion Convention



RC Convention at Harima Plant

Total Environmental, Health and Safety Assessment System for New Projects

To ensure all new projects follow Responsible Care policies, Daicel undertakes prior assessments based on its unique Total Environmental, Health and Safety (ESH) Assessment System right from the project planning stage.

From a risk management perspective, this system is indispensable to ensuring effective company management.

◆ Features

- Applicable to new projects associated with all business activities including planning, R&D, production, consumption, disposal, etc.
- Ranking system according to priority (Rank I, Rank II)
- Linked to a final-decision system
- Follow-up at implementation stage

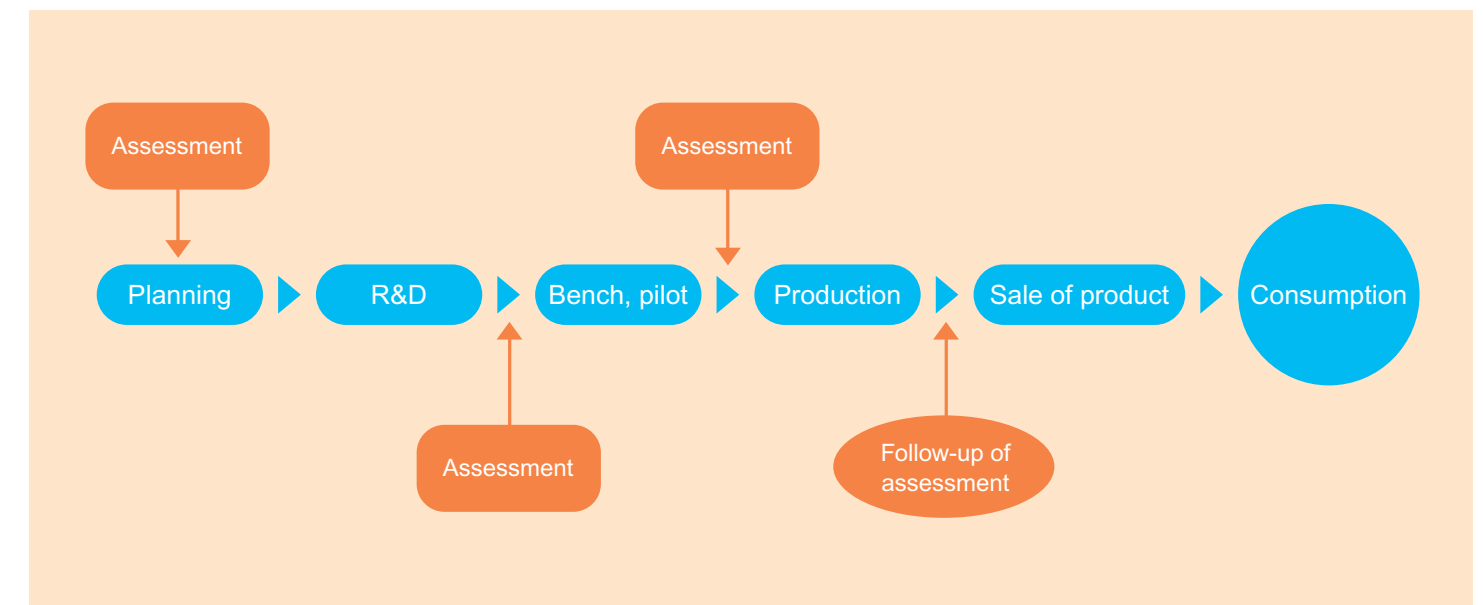
◆ Details of New Projects

- (1) New business program
- (2) New construction, expansion and alteration of facilities
- (3) Alteration program targeting items associated with manufacturing (raw materials, synthesis methods, processes, utilities, site logistics, quality standards, subcontracting, etc.)
- (4) Introduction of new logistics system; alteration of logistics system
- (5) Adoption of new customers and purposes; alteration of customers and purposes
- (6) Land acquisition program
- (7) Land and facility transfer projects
- (8) New or modified program for commissioning of manufacturing, purchases or sales
- (9) New or modified program for waste disposal

◆ Items Assessed

- Compliance with applicable laws and regulations
- Safety of chemical substances handled
- Coping with environmental impacts
- Occupational health and safety of employee
- Safety of facilities used
- Product safety
- Safety in logistics
- Safety during consignment of manufacture and purchase and sales

◆ Model Flowchart of Total ESH Assessment



ISO 14001 International Standards for Environmental Management Systems

We have committed ourselves to a program to ensure that all Daicel's plants and research centers acquire certification of registration with ISO 14001, the international standards for environmental management systems. This is intended to promote environmental preservation, an important aspect of Responsible Care. Consequently, by the end of fiscal 2001, all Daicel's plants and research centers had acquired certification of registration. As of April 2006, all Daicel's plants and research centers had passed assessments based on the revised 2004 versions of the standards.

Daicel Group companies are committed to the adoption of ISO 14001 compliant environmental management systems. Four companies (comprising eight workplaces) have already acquired this certification, while the remaining companies are in the process of acquiring certification.

◆ Certification Acquisition Dates and Certificate Numbers (Plants & Research Centers)

Plant or Research Center	Year and Month	Certificate No.
Otake Plant	August 1999	JQA-EM0492
Sakai Plant	March 2000	JQA-EM0785
Himeji Research Center and Tsukuba Research Center	June 2000	JQA-EM0894
Aboshi Plant	December 2000	JQA-EM1229
Hirohata Plant	April 2001	JQA-EM1511
Harima Plant	July 2001	JQA-EM1683
Kanzaki Plant	December 2001	JCQA-E-0329
Arai Plant	December 2001	JCQA-E-0339

◆ Certification Acquisition Dates and Certificate Numbers (Group Companies)

Group Companies	Year and Month	Certificate No.
Polyplastics Co., Ltd. (R&D Division)	February 1999	JQA-EM0337
Polyplastics Co., Ltd. (Fuji Plant)	April 1999	JQA-EM0414
Polyplastics Co., Ltd. (Ta Fa Plant, Taiwan)	February 1999	7XEE016-02 BSMI, Ministry of Economic Affairs, Taiwan
Polyplastics Asia Pacific Sdn. Bhd. (Kuantan Plant, Malaysia)	February 2001	197011 Lloyd's Register Quality Assurance
Dainippon Plastics Co., Ltd.	March 2002	JCQA-E-0355
Mikuni Plastics Co., Ltd.	June 2002	JCQA-E-0388
Daicel Novafoam Ltd. (Head Office, Nagano Workplace)	February 2003	C2003-00362 Perry Johnson Registrars Inc.
Daicel Novafoam Ltd. (Okayama Workplace)	June 2004	C2004-01523 Perry Johnson Registrars Inc.

ISO 14001 Certificate



Energy Conservation and the Prevention of Global Warming

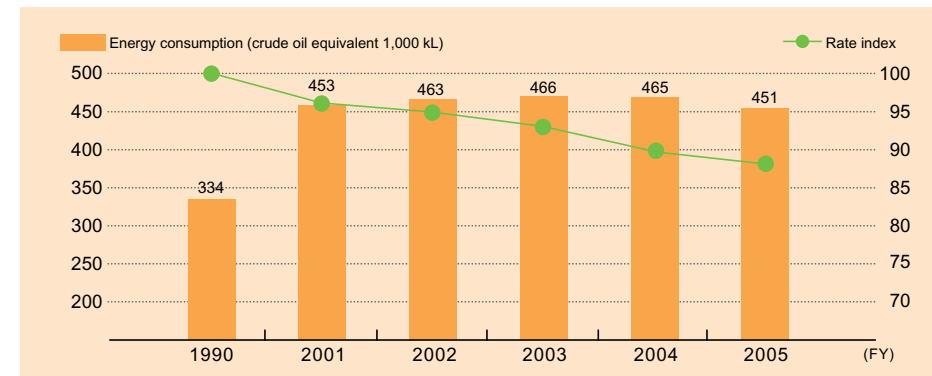
Daicel has long been committed to reducing emissions of greenhouse gases by promoting energy conservation. As part of our energy conservation efforts, Daicel has been voluntarily reducing its energy consumption rate index (relative to the fiscal 1990 level of 100) to 90 by the end of fiscal 2010 as defined in the Chemical Industry Voluntary Environmental Preservation Action Plan proposed by the Japan Chemical Industry Association (JCIA). Our energy consumption rate index for fiscal 2005 was 88; this was the second consecutive year in which we achieved our voluntary action plan target. For fiscal 2005, our emissions of carbon dioxide, a common greenhouse gas, totaled 1.42 million tons (total of energy-derived and process-derived sources).

Daicel has adopted a variety of energy conservation initiatives by utilizing several techniques, including thermal pinch analysis. In fiscal 2005, our Arai Plant initiated the utilization of waste heat as part of our fiscal 2005 company-subsidized project targeting rationalized energy use. Our logistics division, in addition to the manufacturing division in our Arai Plant, initiated an effort to improve the energy efficiency of transportation by equipping all trucks with digital

tachometers with voice output. This initiative was undertaken in cooperation with Y.S. Logistics Service Co., Ltd., a member of the Daicel Group. As well, our office divisions, which comprise our Tokyo and Osaka head offices, are initiating additional energy conservation efforts such as limiting air conditioner use and turning off unnecessary lights as part of our Eco Office Action initiative. Additionally, we are conserving energy by supplying highly energy-efficient products and providing materials for use in energy-efficient products.

In the future, we will convert the fuel used for the power generation boiler and industrial cracking furnace from conventional heavy oil, which contributes to global warming, to less harmful natural gas. In our logistics division, we are scheduled to implement a modal shift from truck transportation to marine transportation in order to promote energy conservation through our carriers. In our office division, we will fully implement our Eco Office Action initiative and enhance energy conservation awareness among our employees and their families. We will remain committed to conserving energy and reducing greenhouse gas emissions well into the future.

◆ Energy Consumption and Rate Index

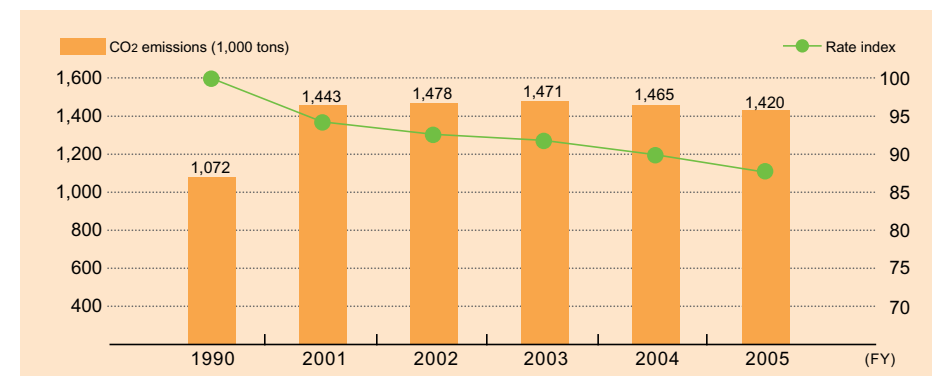


Definition of Term

Thermal Pinch Analysis Technique

This is an energy conservation technique for understanding the thermal balance of an entire plant and optimizing the recovery and utilization of thermal energy. With this technique, the quantity of heat and the quality of heat (temperature) of fluids that constitute processes are determined, and the quantity and quality of heat are commonly plotted on a complex thermal diagram. As a result, the performance of the heat recovery system and possibility of energy conservation are comprehensively determined. Recently, the scope of application of this technique has been increasing to the point at which it now covers the optimization of the heat utilization design of a given plant as well as the optimization of a heat utilization system for an entire plant complex or local area.

◆ Amounts and Rate Index of CO2 Emissions



Reduction and Recycling of Industrial Waste

Because the number of available final disposal sites has been decreasing, waste is sometimes disposed of improperly. Consequently, it has become necessary to meet the significant challenge of devising measures for appropriate disposal, recycling, and commercialization of waste products.

Daicel intends to reduce the amount of final disposal by landfill to a maximum of 20% of the fiscal 1990 level by the end of fiscal 2010. This target is identical to that defined in the Chemical Industry Voluntary Environmental Preservation Action Plan proposed by the Japan Chemical Industry Association (JCIA).

Since fiscal 2004, we have been recycling the incineration residue (bottom ash) remaining from the incineration of waste tires; in fiscal 2005, we succeeded in using this material completely as a component of cement. As a result, we have been able to reduce final disposal in external landfills to 13% of the fiscal 1990 rate, thus accelerating our achievement of the target for fiscal 2010.

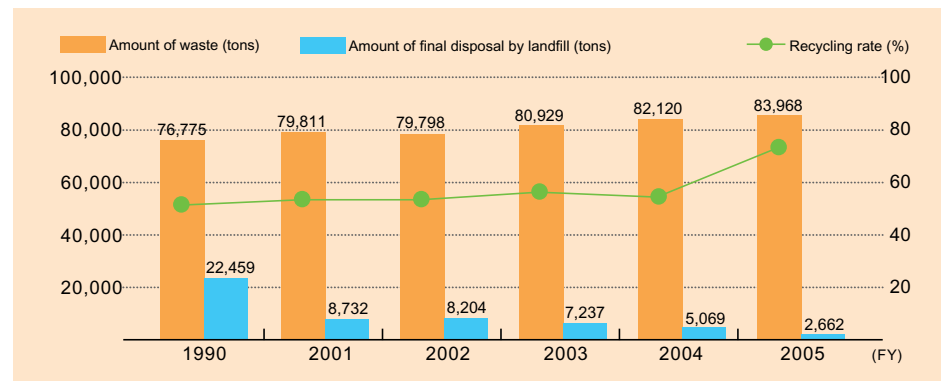
Additionally, as a result of our proactive promotion of recycling in fiscal 2005, our Hirohata Plant maintained its zero emissions of industrial waste (refuse), while our Otake Plant and Aboshi Plant mirrored this performance by achieving a final landfill disposal rate of less than 1%.

In the future, Daicel will strongly promote the reduction, reuse and recycling of waste, the so-called 3R activities.

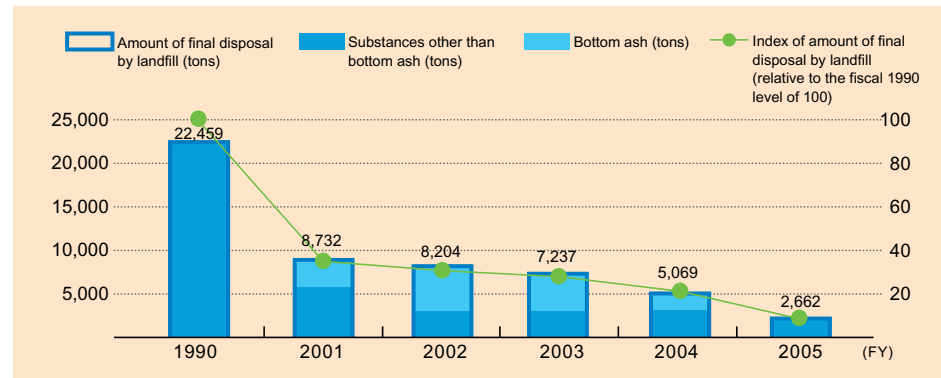


On-site disposal of incineration residue (bottom ash) of waste tires as a raw material for cement

◆ Amount of Industrial Waste



◆ Amount and Index of Final Disposal by Landfill



Definition of Term

3Rs

An abbreviation of the expression "reduce, reuse and recycle," this term represents the essence of the effort to establish a recycle-oriented society while maintaining compatibility between the environment and the economy. Specifically, the term means to produce little or no refuse, to reuse used products and parts that are no longer needed, and to recycle waste products.

Recycling Rate

This term represents the ratio of "the amount reused and recycled" to "the amount of waste generated or emitted." Daicel defines the term as the ratio of "the amount reused and recycled (including heat recovery) by Daicel and by treatment contractors" to the "amount of industrial waste generated."

Air and Water Pollution Control

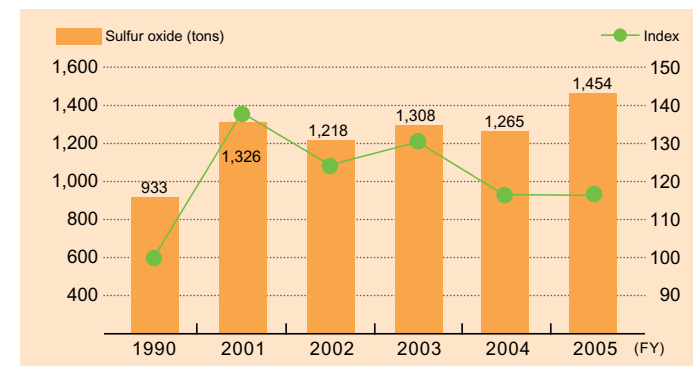
Daicel has actively implemented air and water pollution controls. We comply with laws and regulations covering emissions of air pollutants as well as values each plant has negotiated with its neighboring community. Consequently, in fiscal 2005, all our plants complied with laws and regulations and met the values negotiated with local communities. As for air pollution control, emissions of sulfur oxide (SOx), nitrogen oxide (NOx), and dust totaled 1,454 tons, 1,158 tons, and 107 tons, respectively, in fiscal 2005.

In seeking to maintain water quality, we have completed the upgrading of wastewater treatment facilities to accommodate the requirements for total phosphorus emissions as stipulated by the 5th total water quality

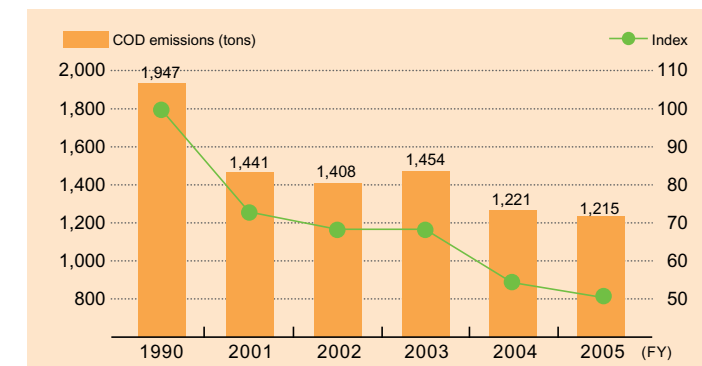
regulation of the Law Concerning Special Measures for Conservation of the Environment of the Seto Inland Sea. This facility is now in full-scale operation.

Looking to the water pollution index as compared with the previous year, COD was slightly improved, while emissions of total phosphorus and total nitrogen increased. The rise in total phosphorus emissions was caused by increased use of phosphorus compounds arising from expanded production, while the increase in total nitrogen emissions was caused by the deteriorated operation efficiency of equipment for treating products containing nitrogen.

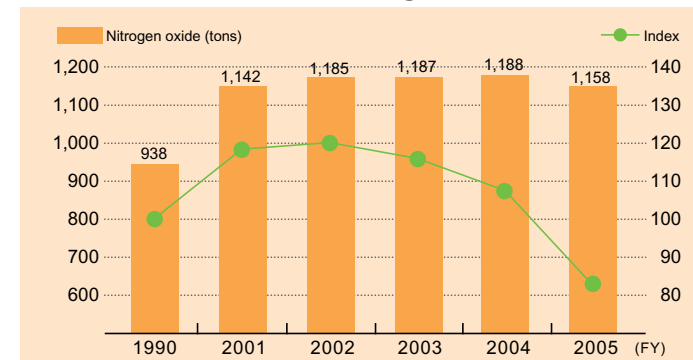
◆ Amounts and Index of Sulfur Oxide Emissions



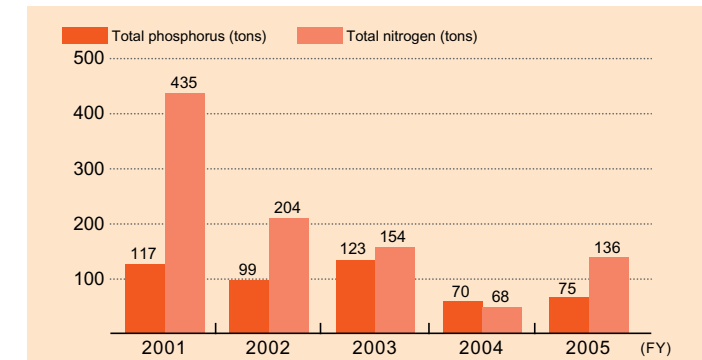
◆ Amounts and Index of COD Emissions



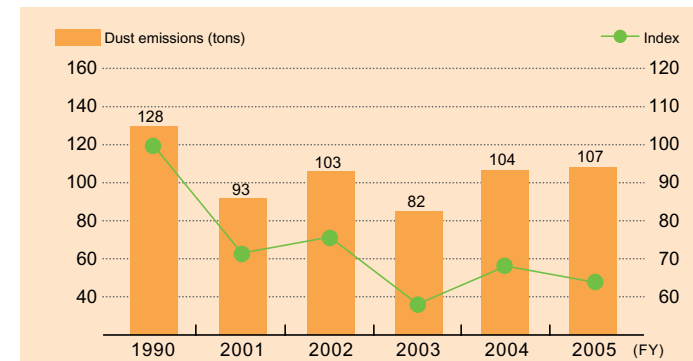
◆ Amounts and Index of Nitrogen Oxide Emissions



◆ Total Phosphorus and Total Nitrogen Emissions



◆ Amounts and Index of Dust Emissions



Definition of Term

SOx

SOx is a generic term for sulfur oxides including sulfur dioxide (SO₂) and sulfur trioxide (SO₃). They are all hazardous substances released into the atmosphere by human activities, typically by the burning of petroleum fuels.

NOx

NOx is a generic term for nitrogen oxides, which include nitrogen monoxide (NO) and nitrogen dioxide (NO₂), which are causes of acid rain and photochemical smog.

COD (Chemical Oxygen Demand)

COD is an index of water pollution caused by organic matter that measures the amount of oxygen required for an oxidizing agent to chemically oxidize the organic matter that is polluting the water.

Relevant Management and Controlled Emissions of Chemical Substances

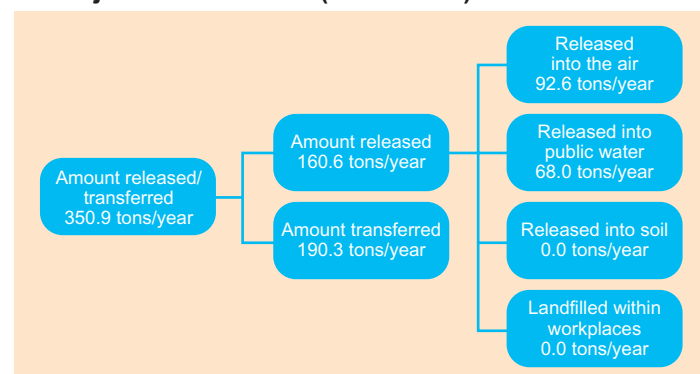
Monitoring and Reduction of Released or Transferred Chemical Substances

Since 1996, Daicel, as a member of the JCIA, has been voluntarily monitoring the amounts, produced or used by any of our workplaces in amounts exceeding one ton per year, of JCIA-specified chemical substances being released or transferred. Furthermore, under our unique chemical substance emission reduction plan, we have been substituting substances with fewer health risks and have initiated emission control measures such as stricter prevention of waste gas

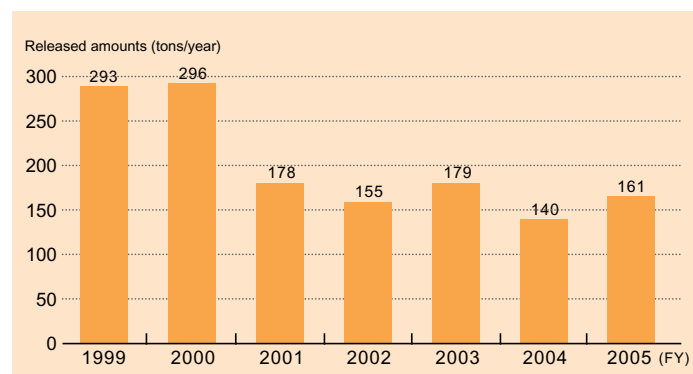
leakage and introduction of waste gas absorption facilities.

Incidentally, since the Pollutant Release and Transfer Register (PRTR) Law came into effect in March 2000, it has become mandatory for manufacturers to investigate and report to the national government the amounts of the specified substances being released or transferred (354 substances). Below is PRTR data for fiscal 2005 covering the 57 specified substances handled by Daicel.

Released or Transferred Amounts of Substances Subject to PRTR Law (fiscal 2005)



Released Amounts of Substances Subject to PRTR Law



Reducing Emissions of Specified Hazardous Chemical Substances Contributing to Air Pollution

The Air Pollution Control Law specifies a number of hazardous air pollutants under its priority initiative. Daicel handles seven of these: acrylonitrile, acetaldehyde, ethylene oxide, 1,3-Butadiene, 1,2-dichloroethane, benzene, and formaldehyde. We have subjected these seven substances to systematic emission reduction measures. The amount of these substances released into the air in fiscal 2005 totaled 26.9 tons, representing a reduction of 10.3% from the total at the initial implementation in fiscal 1996.

The Revised Air Pollution Control Law of May 2004 targets control of emissions of volatile organic compounds (VOCs), which are

believed to be harmful to human health, as they contribute to the formation of photochemical oxidants and suspended particulate matter in the atmosphere.

We are now implementing measures that respond to legally mandated VOC regulations and have adopted a voluntary plan to reduce chemical emissions, particularly through controls of VOC emissions. This plan targets a 30% reduction in VOC emissions in fiscal 2010 compared with the benchmark level of fiscal 2000. Going forward, we will actively implement reductions in VOC emissions according to this plan.

Relevant Control of PCBs

In compliance with the Law Concerning Special Measure against PCB waste, Daicel's workplaces practice appropriate storage at proper storage sites of PCB-contaminated objects as well as capacitors and transformers employing PCBs (polychlorinated biphenyls), which are persistent chemical substances and strongly toxic. Every year, Daicel's workplaces report the results to the appropriate municipalities. Moreover, we are addressing the

conditions under which PCBs are stored at all our workplaces.

In 2005, Daicel undertook early registration of high-voltage transformers and capacitors, which comprise some of our stored PCB wastes. This step was undertaken in relevant workplaces according to the early registration system of the Japan Environmental Safety Corporation, a body certified by the national government under its PCB Waste Treatment Project.

Breakdown of Main Target Substances under the PRTR Law (tons/year) (Note 1)

Designed by government ordinance	Substance description	Total amount released					Transferred to sewage	Transferred to outside of workplaces
		Released into the air	Released into public water	Released into soil	Landfilled within workplaces			
227	Toluene	46.3	45.4	0.9	0.0	0.0	0.0	38.5
259	Pyridine	27.1	0.6	26.4	0.0	0.0	0.0	0.0
299	Benzene	15.1	14.8	0.2	0.0	0.0	0.0	0.0
65	Glyoxal	12.9	0.0	12.9	0.0	0.0	0.0	0.0
336	3-Methyl pyridine	12.5	0.0	12.4	0.0	0.0	0.0	0.0
11	Acetaldehyde	12.1	9.2	2.9	0.0	0.0	0.0	0.0
177	Styrene	7.7	7.6	0.1	0.0	0.0	0.0	0.0
102	Vinyl acetate	6.4	2.7	3.8	0.0	0.0	0.0	0.0
121	CFC-12	4.9	4.9	0.0	0.0	0.0	0.0	0.0
80	Chloroacetate	3.8	0.6	3.2	0.0	0.0	0.0	0.1
42	Ethylene oxide	2.6	2.5	0.0	0.0	0.0	0.0	0.0
22	Allyl alcohol	2.1	0.8	1.3	0.0	0.0	0.0	0.0
45	Ethylene glycol monomethyl ether	1.4	0.0	1.4	0.0	0.0	0.0	0.0
145	Dichloromethane	1.4	1.4	0.0	0.0	0.0	0.0	6.9
85	HCFC-22	0.8	0.8	0.0	0.0	0.0	0.0	0.0
70	Chloroacetyl chloride	0.6	0.1	0.5	0.0	0.0	0.0	0.0
8	Acrolein	0.5	0.5	0.0	0.0	0.0	0.0	0.0
7	Acrylonitrile	0.4	0.3	0.1	0.0	0.0	0.0	0.0
320	Methyl methacrylate	0.3	0.0	0.3	0.0	0.0	0.0	0.0
101	2-Ethoxyethyl acetate	0.2	0.0	0.2	0.0	0.0	0.0	0.0
44	Ethylene glycol monoethyl ether	0.2	0.0	0.2	0.0	0.0	0.0	0.0
63	Xylene	0.2	0.0	0.2	0.0	0.0	0.0	0.0
4	Ethyl acrylate	0.2	0.0	0.1	0.0	0.0	0.0	0.0
103	Ethylene glycol monomethyl ether acetate	0.2	0.0	0.2	0.0	0.0	0.0	0.0
266	Phenol	0.2	0.1	0.1	0.0	0.0	0.0	0.0
56	1,2-Epoxy propane	0.1	0.0	0.0	0.0	0.0	0.0	0.0
310	Formaldehyde	0.1	0.0	0.1	0.0	0.0	0.0	0.0
268	Butadiene	0.1	0.1	0.0	0.0	0.0	0.0	0.0
270	Di-n-butyl phthalate	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Ethylene glycol	0.0	0.0	0.0	0.0	0.0	0.0	38.8
3	Acrylic acid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
314	Methacrylic acid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255	4-Vinyl-1-cyclohexene	0.0	0.0	0.0	0.0	0.0	0.0	0.0
319	n-Butyl methacrylate	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Acetonitrile	0.0	0.0	0.0	0.0	0.0	0.0	1.2
2	Acrylamide	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95	Chloroform	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66	Glutaraldehyde	0.0	0.0	0.0	0.0	0.0	0.0	0.0
313	Maleic anhydride	0.0	0.0	0.0	0.0	0.0	0.0	0.0
—	Others (Note 2)	0.0	0.0	0.0	0.0	0.0	0.0	104.7
179	Dioxins (Note 3)	18.7	18.2	0.6	0.0	0.0	0.0	2.8

Note 1: The threshold for amounts handled was 1 ton/fiscal year/workplace.

Note 2: Substances emitted at levels less than 1 kg/year are included under "Others."

Note 3: The unit used for measurement of dioxin emissions is mg-TEQ/year.

Definition of Term

Pollutant Release and Transfer Register (PRTR)

This system calculates the extent to which the production, use, and storage of chemical substances result in the release and transfer of those substances into the environment.

To encourage the development of a system to reduce the amounts of chemical substances released or transferred, the PRTR Law was originally enacted in July 1999.

According to the PRTR Law, an amount transferred is defined as the total sum of amounts commissioned to waste disposal and treatment contractors and amounts released into public sewage systems.

Safety Assessments of Chemical Substances

To ensure the safety of the chemical products we supply to our customers, Daicel has been actively promoting product safety assessments. As control of chemical substances has intensified

worldwide, we are participating in the HPV (High Production Volume) Program and the Japan Challenge Program. We also promote the improvement and collection of safety data for chemical substances.

Implementation of the HPV Program

In 1992 the OECD (Organization for Economic Co-operation and Development) began coordinating the collection of safety data on chemical substances used in high production volumes (more than 1,000 tons/year per country). This initiative is known as the HPV (High Production Volume) Program.

We are supporting the OECD's HPV Program by undertaking safety assessments of nine chemical substances that have been specified as assessment target substances under the program.

As a leading member of the program, we have completed the safety assessment of two chemical substances; as a cosponsor working in cooperation with the manufacturers, we have completed safety assessments of another five chemical substances.

While we are addressing the remaining two chemical substances, we will continue to assess the safety of new substances in cooperation with other companies and corporations, both domestic and overseas.

Participation in the Japan Challenge Program

In 2005, the Japanese Government launched the Japan Challenge Program, a public-private initiative to gather and disseminate safety information on existing chemical substances. This step was taken to further facilitate the compiling of safety information on existing chemical substances under an initiative the national government had

long been promoting. Daicel announced its participation in the program by targeting four manufactured substances. Adoption of the plan under this program is expected to advance the improvement and collection of safety data.

Implementation of Safety Assessments at Our GLP-certified Laboratories

Our laboratories that have been certified as Good Laboratory Practice (GLP) assess the safety of chemical substances through biodegradability tests, bioaccumulation tests, and partition coefficient tests specified in accordance with the Law Concerning the Examination and Regulation of Manufacture, Etc. of Chemical Substances. We will continue to develop and market products that are friendly to humans and the environment through safety assessments of chemical substances.

In fiscal 2005, we initiated safety assessments of five new substances covered by the above law.



Biodegradability tests unit



Partition coefficient tests unit



Bioaccumulation tests unit

Definition of Term

Law Concerning the Examination and Regulation of Manufacture, Etc. of Chemical Substances (established in 1973)

Prompted by public attention to the pollution and health hazards caused by PCBs, this law was established in 1973 to prevent environmental pollution and human health problems from general chemical substances. This law was first in the world to incorporate the practice of pre-evaluation of products.

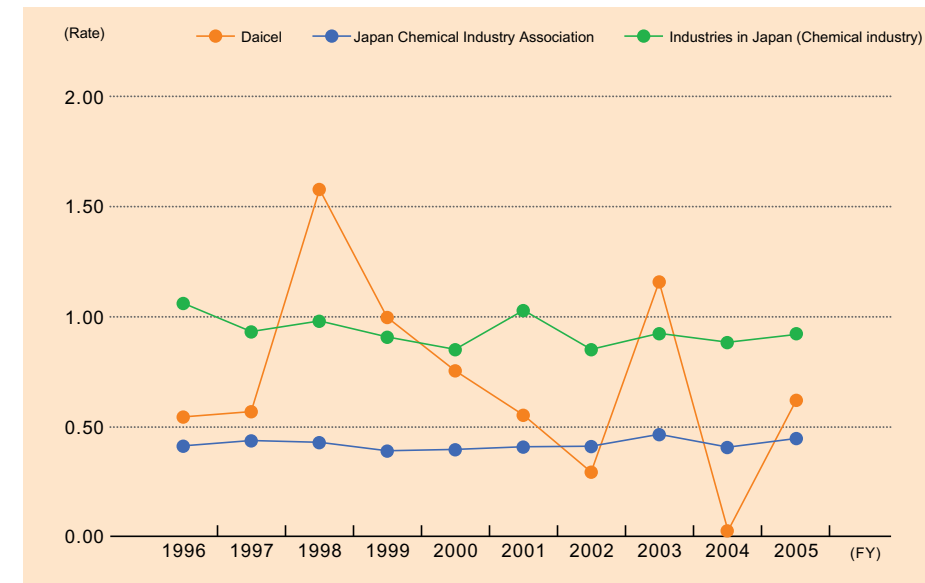
At Daicel, we are committed to improving the occupational health and safety record of all our plants and research centers. Toward this end, we have adopted the "PDCA cycle" in our Responsible Care activities and have strongly promoted continual improvement. Also, in a manner appropriate for each plant and research center, we routinely practice industrial accident prevention by implementing hazard prediction and avoidance activities and the STOP (Safety Training Observation Program) initiative devised by DuPont & Co.

By practicing these activities, we are aiming at our target of zero on-the-job accidents; however, we were unable to meet this goal in fiscal 2005, as two accidents requiring suspension of operations occurred. As a result, the ratio of suspension of operations has exceeded the ratio of the Japan Chemical Industry Association. Going forward, we intend to more strongly implement continuous improvements and routine practices in an effort to achieve our goal of zero on-the-job accidents.

Regarding the public issues surrounding the use of asbestos, we have carried out investigations focused on exposure points requiring caution, such as asbestos spraying. Moreover, we have drawn up improvement plans that consider the severity of exposure and are instituting countermeasures. At the same time, in accordance with the Ordinance on Prevention of Hazards Due to Asbestos, we have formulated our own voluntary guidelines for operations such as dismantling and we will continue to take steps to ensure safety. Meanwhile, we have undertaken a survey of health problems caused by asbestos. This survey, which included workers previously engaged in tasks involving asbestos exposure, revealed no reports of health problems attributable to asbestos. As for gaskets containing asbestos, we have submitted to the Ministry of Economy, Trade and Industry an independent plan to substitute these items by fiscal 2008 and are currently implementing this plan.

Daicel Chemical Industries will maintain its focus on dealing aggressively with the asbestos issue.

◆ Suspension of Operation Rates



Responsible Care Calendar



Responsible Care Calendar featuring prize-winning responsible care posters and slogans

Definition of Term

Suspension of Operation Rate

This safety index reflects the incidence of work-related accidents using the following method of calculation: Suspension of Operation Rate = (Number of injured persons) / (Total working hours in one million working hours)

Process Safety and Disaster Prevention and Emergency Response

Daicel is committed to accommodating legal reforms such as the Fire Services Law and the Petroleum Complex Disaster Prevention Act. We are also committed to various process safety and disaster prevention activities such as responding to the Tonankai and Nankai Earthquakes and reducing facility malfunctions.

In fiscal 2005, with the goal of achieving zero fire, explosion, and leakage accidents, each workplace established a disaster prevention action plan based on the company-wide policy of the Process Safety and Disaster Prevention Guidelines, and implemented improvements. Moreover, regarding daily process safety and disaster prevention, we undertook initiatives targeting upgrades.

However, we experienced two process accidents: in May 2005, a small fire occurred at a filling site for pharmaceutical materials in our Arai Plant; and in January 2006, a small fire occurred during an experiment at our Himeji Research Center. Regrettably, these incidents greatly inconvenienced the residents of our local communities.

To avoid any future occurrences of fire, explosion or leakage incidents, we will further strengthen our commitment to prevent reoccurrences through cause analysis, prior assessments by means of Total ESH Assessment, and daily initiatives.

At our Aboshi Plant, our acetic acid production facility has acquired certification for two years of continuous operation by implementing process safety inspections according to the safety regulations for industrial complexes under the revised High Pressure Gas Safety Law.



Comprehensive Disaster Prevention Training (Otake Plant)



High Pressure Gas Process Safety Certificate

Logistics Safety Initiatives

Daicel, together with Y.S. Logistics Service Co., Ltd., a Daicel Group company involved in transportation and warehousing, continues to work to ensure all company distribution operations remain safe and eco-friendly.

In fiscal 2005, we set out to ensure the safety of our logistics operations by achieving zero at-fault logistics accidents (including fire, explosion, and leakage, outflow, and loss of dangerous and harmful substances). Moreover, we have implemented an action plan to reduce stock accidents by 50% at Y.S. Logistics Service Co., Ltd. In addition, we have provided training to operators of hired vehicles. Nonetheless, we fell short of our objective due to one vehicle fire that occurred while the vehicle was in transit. As for distribution limited to our company's premises, we strove to maintain safety measures during the transport of hazardous materials; provided safety training to logistics companies; and provided training in the assumed emergency response to be taken in the event of a logistics disaster.

Looking to the logistics environment, we recognized revisions to the Law Regarding the Rationalization of Energy Use that accompanied the Kyoto Protocol, which stipulated obligatory energy conservation measures within the product distribution sector. In response, Y.S. Logistics Service Co., Ltd. has equipped all trucks with digital tachometers with voice output and has promoted energy-efficient transportation (through a fiscal 2005 businesses-subsidized project to rationalize energy use).

In addition, we have addressed the following initiatives:

- instructed drivers to always carry yellow cards;
- instituted "container yellow cards";
- provided training and instruction to prevent overloading;
- introduced measures to reduce emissions of suspended particulate matter and nitrogen oxides contained in truck exhaust; and
- provided instruction to prevent crushing and damage to cargo during handling.

Definition of Term

Yellow Card

A yellow card specifies the properties of a chemical substance being transported. It is used in the event an accident—such as a leak or fire—occurs during the transport of a chemical substance in order to ensure a rapid and appropriate response. The card clearly specifies the emergency measures to be taken, the emergency parties to call, and the parties to contact.

Container Yellow Card

Previously used yellow cards were hard to carry when transporting many hazardous substance types in small amounts or when transferring small amounts of a hazardous substances beyond stockyards. In order to solve this problem, JCIA developed "First Aid Guidelines—Application of Container Yellow Cards (Label Type)" and decided that chemical products should have labels indicating First Aid Guideline Numbers and UN Numbers.



Initiatives at Plants and Research Centers

Osaka Production Sector/Sakai Plant

■ Location: 1, Teppo-cho, Sakai-ku, Sakai-shi, Osaka 590-0905, Japan
 ■ Total area: 110,000 m² ■ Number of employees: 97

Item	Fiscal 2005	
Water Consumption (1,000 tons)	824	
Energy Consumption (crude oil equivalent in kL)	31,789	
SOx Emissions (tons)	3	
NOx Emissions (tons)	87	
Dust Emissions (tons)	13	
CO ₂ Emissions (tons)	79,030	
COD (BOD) Emissions (tons)	27	
Substances Subject to PRTR Law	Released (tons)	—
	Transferred (tons)	—
Waste Disposal by Landfill (tons)	236	

Unique Initiatives

As an urban plant, the Sakai Plant is actively promoting RC activities through voluntary health, safety, and environmental measures and through efforts to achieve synergy with the regional community. During fiscal 2005, the Sakai Plant submitted its activity report to residents at community meetings in the JRCC Sakai and Takaishi districts. It also undertook health, safety, and environmental initiatives within the plant that were acknowledged by the residents. Moreover, the plant initiated beautification and cleanup efforts around the plant, earning the gratitude of local residents. The Sakai Plant is officially scheduled to relocate by the second half of 2007. Although the plant is currently drafting a withdrawal plan, it will enforce its health, safety, and environmental conservation efforts until all operations are concluded.



Kazuo Notsu, Safety & Environment Control

Osaka Production Sector/Kanzaki Plant

■ Location: 12-1, Kanzaki-cho, Amagasaki-shi, Hyogo 661-0964, Japan
 ■ Total area: 70,000 m² ■ Number of employees: 154

Item	Fiscal 2005	
Water Consumption (1,000 tons)	362	
Energy Consumption (crude oil equivalent in kL)	9,388	
SOx Emissions (tons)	0	
NOx Emissions (tons)	14	
Dust Emissions (tons)	0	
CO ₂ Emissions (tons)	17,745	
COD (BOD) Emissions (tons)	11	
Substances Subject to PRTR Law	Released (tons)	29
	Transferred (tons)	36
Waste Disposal by Landfill (tons)	807	

Unique Initiatives

All employees of the Kanzaki Plant participate daily in Responsible Care activities according to our policy of "practicing basic improvement activities to further strengthen our business foundation." The plant's specific initiatives in fiscal 2005 include basic improvement activities in automotive industry model area 3S and clean-up of common areas. The plant has implemented back-to-basics activities such as accident avoidance and hazard prediction training as part of the concerted effort to achieve zero accidents. This plant intends to continue these initiatives in order to retain the trust that local residents and customers have shown in the plant.



Yasuo Takahara, Safety & Environment Control

Himeji Production Sector/Aboshi Plant

■ Location: 1239, Shinzaike, Aboshi-ku, Himeji-shi, Hyogo 671-1281, Japan
 ■ Total area: 790,000 m² ■ Number of employees: 543

Item	Fiscal 2005	
Water Consumption (1,000 tons)	29,715	
Energy Consumption (crude oil equivalent in kL)	259,511	
SOx Emissions (tons)	230	
NOx Emissions (tons)	425	
Dust Emissions (tons)	53	
CO ₂ Emissions (tons)	899,939	
COD (BOD) Emissions (tons)	315	
Substances Subject to PRTR Law	Released (tons)	37
	Transferred (tons)	126
Waste Disposal by Landfill (tons)	407	

Unique Initiatives

As one of its longstanding objectives, the Aboshi Plant has sought to obtain certification for the second consecutive year. By constructing the high-pressure gas safety control system, the plant was able to obtain the certification dated March 31, 2006, from the Ministry of Economy, Trade and Industry. The plant established and applied the "total operability study" technique that establishes and standardizes the decision-making process such as assumed causes, judgment logic, impacts and actions against any assumed gaps in process. Under this qualification review, this initiative earned high praise. In the future, we will ensure safe operation by implementing safety controls, facility controls, and operational controls suitable for a certified plant.



Yutaka Ashikawa, Safety & Environment Control

Initiatives at Plants and Research Centers

Himeji Production Sector/Hirohata Plant

■ Location: 12, Fuji-cho, Hirohata-ku, Himeji-shi, Hyogo 671-1123, Japan
 ■ Total area: 170,000 m² ■ Number of employees: 93

Item	Fiscal 2005	
Water Consumption (1,000 tons)	374	
Energy Consumption (crude oil equivalent in kL)	11,014	
SOx Emissions (tons)	0	
NOx Emissions (tons)	1	
Dust Emissions (tons)	0	
CO ₂ Emissions (tons)	32,096	
COD (BOD) Emissions (tons)	1	
Substances Subject to PRTR Law	Released (tons)	12
	Transferred (tons)	1
Waste Disposal by Landfill (tons)	19	

Unique Initiatives

All employees of the Hirohata Plant are engaged in Responsible Care activities with the intention of supplying the safe, eco-friendly and highly functional products needed by society. Last fall, the plant prepared its first local edition of the Environment and Safety Report and presented details of the report at the RC Convention for all plant employees.

The plant asked all employees to explain the Hirohata Plant's RC initiatives to their family members, who are closest to local residents. The plant will continue these RC activities with all employees and will continue to maintain the trust that local residents and customers have shown in the plant.



Kazumi Arimoto, Safety & Environment Control

Harima Plant

■ Location: 805, Umaba, Ibogawa-cho, Tatsuno-shi, Hyogo 671-1681, Japan
 ■ Total area: 3,200,000 m² ■ Number of employees: 1,685

Item	Fiscal 2005	
Water Consumption (1,000 tons)	255	
Energy Consumption (crude oil equivalent in kL)	13,654	
SOx Emissions (tons)	3	
NOx Emissions (tons)	9	
Dust Emissions (tons)	0	
CO ₂ Emissions (tons)	22,744	
COD (BOD) Emissions (tons)	0	
Substances Subject to PRTR Law	Released (tons)	0
	Transferred (tons)	2
Waste Disposal by Landfill (tons)	3	

Unique Initiatives

The Harima Plant is surrounded by beautiful mountains. Its employees conduct daily activities—such as the Clear Air & Clean Water initiative—intended to protect nature, and they are seeking to retain the trust of local residents and customers. The plant's growing production volume has led to an increased quantity of waste; nonetheless, all employees remain committed to Responsible Care activities and the ISO 14001 standards for environmental management systems, both of which are focused on promoting an eco-friendly plant. The plant is seeking to recycle useful raw materials by recovering possible useful resources and examining refuse treatment methods, with the ultimate aim of achieving zero emissions.



Masaru Sakai, Safety & Environment Control

Arai Plant

■ Location: 1-1, Shinko-cho, Myoko-shi, Niigata 944-8550, Japan
 ■ Total area: 180,000 m² ■ Number of employees: 401

Item	Fiscal 2005	
Water Consumption (1,000 tons)	20,540	
Energy Consumption (crude oil equivalent in kL)	43,143	
SOx Emissions (tons)	969	
NOx Emissions (tons)	288	
Dust Emissions (tons)	30	
CO ₂ Emissions (tons)	134,400	
COD (BOD) Emissions (tons)	94	
Substances Subject to PRTR Law	Released (tons)	20
	Transferred (tons)	21
Waste Disposal by Landfill (tons)	1,128	

Unique Initiatives

The Arai Plant aims to focus on R&D. Toward that end, it is engaged in Responsible Care activities with all employees of Daicel Chemical, Daicel Arai Chemical, and Arai Sangyo in order to develop the necessary flexibility.

The plant is further improving its potential hazard removal (AHK) activities and basic improvement activities with the participation of all employees engaged in Responsible Care. The plant will remain diligent to ensure safety and environmental conservation and is committed to earning the continued trust of customers and society at large.



Masahiro Asami, Safety & Environment Control

Otake Plant

■ Location: 2-1-4, Higashisakae, Otake-shi, Hiroshima 739-0695, Japan
 ■ Total area: 330,000 m² ■ Number of employees: 333

Item	Fiscal 2005	
Water Consumption (1,000 tons)	45,932*	
Energy Consumption (crude oil equivalent in kL)	80,151	
SOx Emissions (tons)	249	
NOx Emissions (tons)	334	
Dust Emissions (tons)	11	
CO ₂ Emissions (tons)	232,333	
COD (BOD) Emissions (tons)	767	
Substances Subject to PRTR Law	Released (tons)	63
	Transferred (tons)	3
Waste Disposal by Landfill (tons)	58	

* Includes 39.126 million tons of seawater.

Unique Initiatives

All line leaders in the Otake Plant are committed to activities based on the STOP (Safety Training Observation Program) initiative developed by DuPont & Co. in order to eliminate all injuries and occupational illnesses. Moreover, the plant's workers are committed to risk prediction (KY) activities. This program is dedicated to ensuring a "clean sweep" of unsafe activities through daily patrols of the site by all line leaders under the plant manager; through dialogs with operators; and through observation of operation KY details. By building on these two activities, we are addressing the goal of zero work-related fatalities and injuries, including even minor injuries.



Yoshikazu Kitamura, Safety & Environment Control

Himeji Research Center

■ Location: 1239, Shinzaike, Aboshi-ku, Himeji-shi, Hyogo 671-1283, Japan
 ■ Total area: 30,000 m² ■ Number of employees: 267

Item	Fiscal 2005	
Water Consumption (1,000 tons)	41	
Energy Consumption (crude oil equivalent in kL)	1,023	
SOx Emissions (tons)	—	
NOx Emissions (tons)	—	
Dust Emissions (tons)	—	
CO ₂ Emissions (tons)	1,273	
COD (BOD) Emissions (tons)	0	
Substances Subject to PRTR Law	Released (tons)	0
	Transferred (tons)	1
Waste Disposal by Landfill (tons)	2	

Unique Initiatives

The Himeji Research Center handles a variety of chemicals. In meeting its chemical-handling responsibilities, the research center is actively promoting measures targeting health, safety, and the environment. One measure was the construction of a system for chemical substance control, which now controls the research center's chemicals all the way from purchase to disposal. Moreover, the research center pays especially careful attention to disposal of chemical substances and has adopted thorough leakage countermeasures by working hand-in-hand with waste liquid treatment contractors. The center is committed to maintaining its Responsible Care activities with the participation of all employees and will continue to maintain very close communication with the local community. The center will continue to participate in activities intended to maintain the confidence of local residents.



Shinji Shuto, Safety & Environment

Tsukuba Research Center

■ Location: 27, Miyukigaoka, Tsukuba-shi, Ibaraki 305-0841, Japan
 ■ Total area: 30,000m² ■ Number of employees: 18

Item	Fiscal 2005	
Water Consumption (1,000 tons)	3	
Energy Consumption (crude oil equivalent in kL)	334	
SOx Emissions (tons)	—	
NOx Emissions (tons)	—	
Dust Emissions (tons)	—	
CO ₂ Emissions (tons)	507	
COD (BOD) Emissions (tons)	0	
Substances Subject to PRTR Law	Released (tons)	—
	Transferred (tons)	—
Waste Disposal by Landfill (tons)	3	

Unique Initiatives

The Tsukuba Research Center is located in the Western Industrial Park in Tsukuba City. As part of its dialog and exchanges with the community, the center is engaged with 15 companies in the industrial park to establish a liaison network. A general council meeting is held every two months where the member companies engage in exchanges of opinions and acknowledge messages from the municipality. The activities of the center's environmental division are intended to address common environmental issues and the like. On the other hand, although the group engaged in the Center's own Responsible Care activities is small, all staff members are involved and are able to undertake detailed activities. No major problems occurred in fiscal 2005, and the center was able to concentrate on R&D. The center recognizes that the ongoing RC activities of each member of the staff contribute directly to the growth of the company. All members remain firmly committed to participating in these activities.



Akinobu Matsuyama, Tsukuba Research Center

Quality Assurance and Provision of Product Safety Data

In order to provide products that earn the confidence of our customers, we have undertaken a range of measures for our customers, including incorporating prior assessments of product safety; implementing quality management based on the ISO 9001 international standards for quality management systems; and formulating and providing Material Safety Data Sheets (MSDS) for products.

Prior Assessment of Product Safety

To ensure the safety of our products and fulfill the responsibilities associated with Product Liability (PL), Daicel has incorporated Product Safety Assessment Standards into its Total ESH Assessment System to evaluate their safety prior to production and marketing in order to prevent hazards arising from products.

Quality Assurance

All Daicel plants have successfully transferred their certifications of registration to the 2000 revision of the ISO 9001. We are basing our quality management on this system and remain committed to providing products that gain the confidence of our customers.

Provision of Product Safety Data

Whenever legally regulated chemical substances containing products are supplied to customers, the law stipulates the provision of Material Safety Data Sheets (MSDS) containing safety information so that appropriate precautions can be taken. Daicel also prepares MSDS for products other than legally regulated chemical substances to ensure such products can be used safely.

Definition of Term

MSDS (Material Safety Data Sheet)
This sheet contains chemical safety data. Such sheets are provided to the suppliers, users, and handlers of each of our products in order to prevent chemical accidents.



Corporate Governance

Basic Approach to Corporate Governance

Daicel recognizes corporate governance as an important aspect of business that can contribute to improved corporate value. As a publicly listed enterprise, Daicel is committed to carrying out its social mission and responsibilities. We believe in the need to strengthen our relationships with various stakeholders.

We ensure our maneuverability by clarifying the role-sharing of various organs, and we have implemented an agile management system capable of timely decision-making and execution. We can respond quickly to opinions from outside the company and can apply them to our corporate operations. We intend to maintain our sound company administration by improving the transparency and fairness of management.

Major Corporate Governance Initiatives

February 2005: The Project to Promote Strengthening of Internal Controls of Information Disclosure was developed to institute a procedural standardization and verification system. This includes the clarification of role-sharing among relevant departments when compiling the balance sheet and financial statement report and drawing up detailed manuals.

The number of essential personnel in the Audit Office—the internal audit division for further strengthening the internal check and control function—was increased.

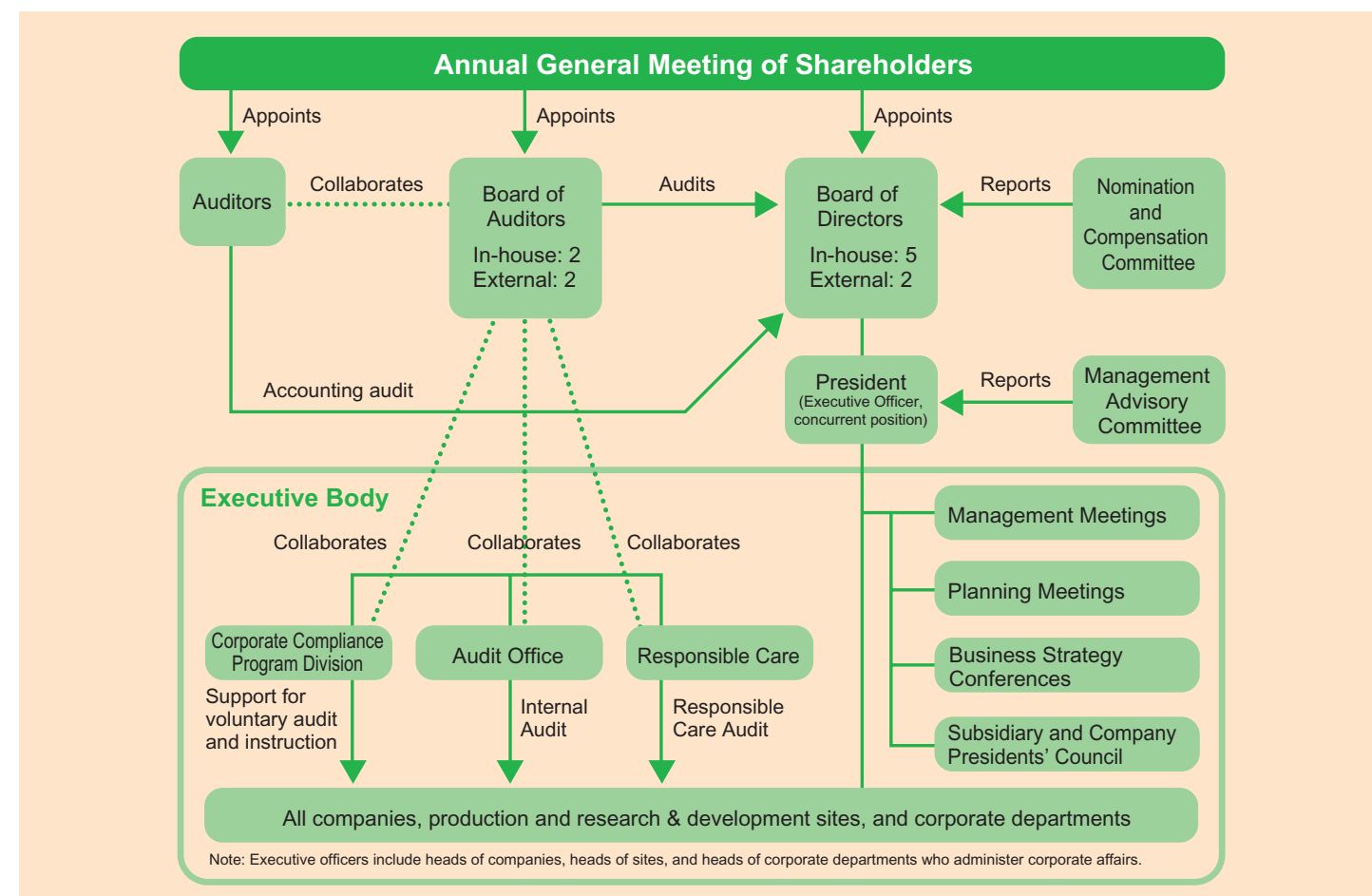
March 2006: The Information Disclosure Code was established to set out the information disclosure policy and disclosure criteria to ensure timely and appropriate information disclosure.

The Information Disclosure Committee was established with the president as chairman to deliberate and determine specific details, timing and method of information disclosure. As well, this committee deliberates on issues that could be covered by information disclosure requirements in the future.

April 2006: The Risk Management Code was established to ensure a proper response to the risks that exist among the activities of the Daicel Group companies.

The Risk Management Committee was established with the president as committee chairman to deliberate and determine policies for the company-wide promotion of risk management. The committee is also charged with evaluating the risk management circumstances of Daicel and each group company.

Corporate Governance Framework



Commitment to Corporate Ethics

For any enterprise to survive and prosper, it must not only strictly observe existing laws and regulations but also maintain stringent ethical standards and norms so that it earns the trust of society. Daicel has adopted compliance with laws and ethical behavior as the very basis of its business; in this regard, Daicel emphasizes stringent compliance in all its business operations.

Establishment of the Corporate Compliance Program Division

In October 2000, Daicel established its Corporate Compliance Program Division with the goals of strengthening its commitment to corporate ethics and continuing to promote awareness and activities of corporate ethics. At the same time, we appointed a corporate ethics officer. Moreover, we adopted a Corporate Ethics Management Rule to encourage Daicel's departments and sections to voluntarily promote and implement a commitment to corporate ethics. As a result, Daicel's various departments and sections have not only complied with laws and regulations but have also adopted an even higher standard of corporate ethical behavior through repetition of the PDCA (Plan, Do, Check, Action) cycle.

Establishment of the Daicel Policy for Ethical Conduct and Guidelines for Business Activities

The Daicel Policy for Ethical Conduct establishes a corporate ethics framework and action principle so that Daicel and all its employees can offer assistance and earn the trust of the community at large. The Daicel Guidelines for Business Activities, based on the Daicel Policy for Ethical Conduct, clearly state how each Daicel employee should think and react in specific situations.

Intended for all Daicel directors, officers and employees, the Daicel Policy for Ethical Conduct and the Guidelines for Business Activities have been distributed in booklet form to all directors, officers and employees. Furthermore, because of the importance of group management, we are asking all group companies worldwide to develop their own policies and guidelines that reflect their commitment to corporate ethics and the features of that commitment.

The Corporate Ethics Help Line

In cases where the action of an individual or organization appears to violate the Daicel Guidelines for Business Activities or violate a law or regulation, and a quick solution through a superior is not available, the Corporate Ethics Help Line—a unique in-house reporting system—can offer appropriate advice. In addition, we have established an external Corporate Ethics Help Line to further promote use of this initiative.

To ensure fair operation of this system, the Help Line adopts the following rules: the assurance of confidentiality for those reporting a problem or seeking a consultation; a ban on any retaliation; and in cases where such unfairly treatment has occurred, measures to restore the reputation of anyone who has reported a problem or sought a consultation.

Corporate Ethics Training

Daicel provides scheduled position-specific corporate ethics training programs for all Daicel workers, from newly hired employees to directors and officers. Every employee, director and officer is required to attend such a program at least once a year. Moreover, Daicel has continually offered training sessions to impart the knowledge of laws and regulations required for business operations.



A corporate ethics training session at the H.R. Training Center

Daicel Chemical Industries Policy for Ethical Conduct

We, directors, officers and employees, as members of Daicel Chemical Industries, Ltd., shall acknowledge and come to a deep understanding of this policy for ethical conduct. Each of us shall keep this policy in mind voluntarily and implement it concretely in our daily activities.

1 Basic policy

We acknowledge that a corporation is a member of not only the Japanese society, but also the international society. As a "good corporate citizen," it shall take actions with high ethical standards and common sense in excess of simply observing, whether domestic or foreign, all laws, regulations, rules, and their ethos.

2 Obligations and responsibilities to society

We aim to be widely trusted by society as a corporation which gives careful consideration to the environmental protection and safety, and pursues profit through fair competition. Also, we shall not involve ourselves in any antisocial activities, be conscious of changes in society, and conduct our business activities based on independent judgments and self-responsibilities.

3 Obligations and responsibilities to stockholders and investors

In order for stakeholders, including stockholders and investors, to have better understanding of our corporate management and business activities, we shall disclose not only the corporate information in accordance with law, but also the useful and reliable corporate information timely and appropriately based on our own judgment through social norms and from international perspectives. We shall maintain proper and comprehensive information management in order to prevent insider transaction and/or profit offering to a third party by using undisclosed information gained through our business activities.

4 Relationship with business connections

We shall have high regard not only for customers, but also for all people who are connected with us, and always maintain the best manners in our associations with them. We shall strictly refrain from business entertainment and/or giving and receiving gifts that deviate from social common sense. We shall associate with all business connections on equal and fair footing, and conduct faithful business activities in accordance with the basic principles of fair and free competition, related laws and contracts.

5 As members of Daicel Chemical Industries, Ltd.

We shall observe the company's rules and regulations, and administrate and maintain corporate assets and business information appropriately. We shall make consistent efforts to maintain a comfortable and safe work environment where no discrimination, harassment, injuries and accidents exist.

[Established on March 2001]

In Harmony with the Community

Engaging in Dialog with the Local Community

As a part of "Communication with the Community," a Responsible Care item promoted by the Japan Responsible Care Council (JRCC), the company engages in such dialogs—co-hosted by collaborating companies—through the Sakai Plant for the Sakai and Takaishi districts as well as the Otake Plant for the Iwakuni and Otake districts. Participants included local residents and delegates from neighborhood enterprises, schools, and local government offices. In total, attendants included about 80 participants from the Sakai and Takaishi districts and about 130 participants from the Iwakuni and Otake districts. They were made aware of RC activities in detail through plant tours, announcements of case examples of various activities, and panel discussions with participants and plant employees.



Dialog with the local community in the Sakai & Takaishi districts



Dialog with the local community in the Iwakuni & Otake districts

"Trial Week" Activities

"Trial Week" is a work-study program presented by Hyogo Prefecture in which students of a public junior high school can gain work experience and engage in volunteer activities at regional institutions and retail stores.

Daicel's Aboshi Plant accepted five students from Aboshi Junior High School and provided them with work experience. This project included fire-fighting training at the Disaster Control Center in the Aboshi Plant as well as training in operating analyzers and conducting experiments at the Himeji Research Center.

The students later provided written comments and clearly indicated how much they enjoyed the experience and how they learned valuable lessons such as the importance of greeting people.



Aboshi Junior High School's "Trial Week Newspaper"
(Work experiences are related in the style of newspaper articles.)



Volunteer Activities

The Daicel Labor Union carries out a variety of volunteer activities.

In 2005, the labor union raised donations from employees and contributed to humanitarian support to the Japanese Red Cross Society for the victims of typhoons and earthquakes. Additionally, the labor union launched an annual fund-raising campaign at year-end and donated the funds to welfare organizations in various regions.

The labor union collaborates with the Japanese Federation of Chemical Workers' Unions (JFCWU) to collect misaddressed postcards and unwanted prepaid cards and the like. These items are sent through JFCWU to HUNGER FREE WORLD, a Specified Non-profit Corporation (an international NGO dedicated to creating a world free of hunger and poverty). The postcards and prepaid cards are returned for cash that helps to support the economic independence of developing countries.



Guide to a Hunger Free World

Human Resource Cultivation Efforts

Adhering to the principles of human-centered management, Daicel believes that personal growth also means corporate growth and it is therefore committed to various aspects of human resource cultivation.

Specifically, Daicel offers programs such as the following to promote personal growth from various perspectives.

1. an MBO (management based on objectives) framework that helps employees develop by allowing them to challenge objectives;
2. the provision of tools and information such as OJT (on-the-job training) guides etc., so that superiors can train their subordinates more efficiently;
3. the establishment of objectives for programmed human resource cultivation for each employee through the human resource cultivation plan;
4. a voluntary reporting system according to which all employees express their wishes and consider their future careers;
5. a human resource cultivation rotation that reflects the aptitude of an individual; and
6. education and training curriculums that can be categorized into recommendation and official invitation.

◆ Training Curriculums

- 1 Curriculum implemented according to Daicel's policy**
Corporate ethics & compliance training, Responsible Care training, training for enhancing management, mental health, etc.
- 2 Curriculum implemented for all stages of career development**
Novice employee training, handicraft training, core employee training, training for newly assigned superintendents, basic managerial seminars, etc.
- 3 Curriculum implemented for special ability development**
Various education & training courses for basic specialty training and patent-related training for production engineers, training for sales persons, etc.
- 4 Curriculum implemented for development of common basic business skills**
Training related to financial affairs, training for acquiring action skills, training for enhancing information literacy, training for improving legal knowledge, training for improving language skills to deal with internationalization, encouragement of selfeducation through monetary support for correspondence education, acquisition of qualifications, and seminars held outside Daicel, etc.
- 5 Curriculum implemented to develop an inventory of abilities when an individual is promoted**
Inventory checks and skill assessments of employees, performed when an individual employee is promoted to an upper grade according to the professional ability grade system

◆ A Training Center that Brings Employees Together for Study and Interchange

In order to provide a place where Daicel employees can study together, communicate, and refresh themselves, Daicel opened the H.R. Training Center in 1998 housing up to 70 trainees and offering seven training rooms. Situated rather far from Daicel's other facilities, this training center allows trainees to think deeply, discover new ideas, and develop their intelligence.

More than 70,000 trainees have already used this facility for training courses, in-company testing, project meetings and discussions.



H.R. Training Center

Promoting Mental Health

In the past several years, many enterprises have been placing a higher priority on mental health. Not limiting its mental health efforts to caring for employees who have developed mental disorders, Daicel believes that mental health is a critical issue in corporate management that encompasses issues of communication, feelings of belonging, and risk management issues associated with

prevention of on-the-job accidents and emergencies. In this context, on January 1, 2003, Daicel established the Health Care Committee, a company-wide organization for addressing mental health issues.

The following describes the promotion system of the Health Care Committee and the implementation themes.

◆ Mental Health Promotion Organizations

Central Health Care Committee

Located in the Osaka Head Office
(Daicel, Labor union, Health Insurance Society)

1. Planning and project development for various policies associated with maintenance and promotion of mental health
2. Dissemination of knowledge and provision of mental health information
3. Implementation of mental health checkups and provision of treatment for any resulting diagnosis
4. Coordination with external specialist organizations

Workplace Health Care Committee

Osaka Head Office, Tokyo Head Office,
and each plant & research center

1. Creating active and cheerful worksites that are easy to work in
2. Improving surroundings by providing for good operating conditions and work environments
3. Health consultations and guidance for better mental health maintenance
4. Early detection of mental disorders and provision of support for timely treatment

◆ Implementation Themes of the Health Care Committee

1 Mental Health Checkups

Daicel offers its employees mental health checkups with the intention of enabling all Daicel employees to maintain good mental and physical health through a clearer understanding of their own mental health. These checkups have been offered every two years since 1999.

2 Stress Management Handbook

We developed this handbook and distributed it to all Daicel employees. Its purpose is to eliminate misunderstandings about mental health and allow Daicel employees to gain clear knowledge about mental health while enhancing their immunity to stress through routine health management. The Workplace Health Care Committee also utilizes the handbook in its activities.

3 Guide to Mental Disorders

Every worksite creates various stresses. Extremely severe stresses can prompt employees to take sick leave. To help absent employees solve this problem, we have developed and adopted the Problem-solving Flow Model.

4 System of Abbreviated Work Hours for Sick or Injured Employees

On January 1, 2004, Daicel introduced a system of abbreviated work hours for sick or injured employees (work during rehabilitation system).

This system is intended to allow an employee with a physical or mental disorder or one who wishes to return to work after hospitalization or recuperation at home to undergo a scheduled rehabilitation process through abbreviated work hours that enable a smoothly return to duty.

Daicel Group

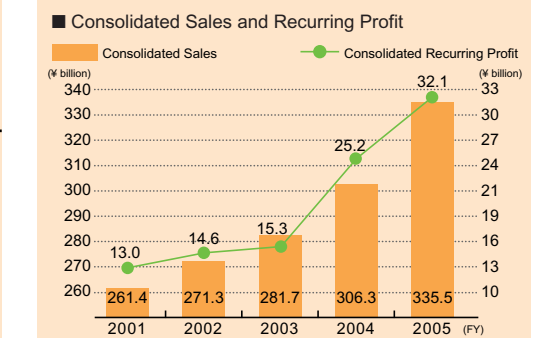
The Daicel Group companies include Daicel Chemical Industries, its 68 subsidiaries and 14 affiliated companies. The company's primary business is the manufacture and sales of cellulosic derivatives,

organic chemicals, plastics and films, pyrotechnic devices and other products. The business segments of Daicel Chemical Industries, its subsidiaries and affiliated companies are shown below.

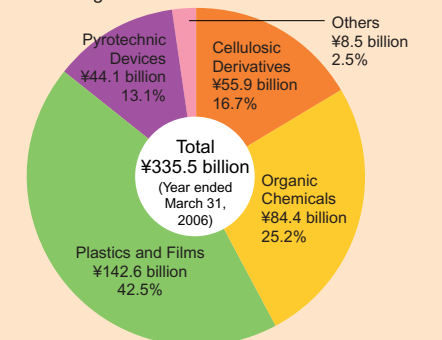
As of March 31, 2006

Segments	Principal Products	Major Affiliates
Cellulosic Derivatives	Cellulose acetate, acetate tow for cigarette filters, carboxymethyl cellulose, and other products	Domestic Daicel Chemical Industries, Ltd. Daicel FineChem Ltd. 4 total, including other companies Overseas Xi'an Huida Chemical Industries Co., Ltd. 7 total, including other companies
Organic Chemicals	Acetic acid and its derivatives, caprolactone derivatives, epoxy compounds, various intermediates for pharmaceuticals, optical isomer separation columns, and other products	Domestic Daicel Chemical Industries, Ltd. ● Kyodo Sakusan Co., Ltd. Dainichi Chemical Corp. 12 total, including other companies Overseas Chiral Technologies, Inc. Chiral Technologies Europe S.A.S. 8 total, including other companies
Plastics and Films	Polyacetal resin, PBT resin, SAN/ABS resins, engineering plastic alloy resins, various synthetic resins for molding products, and other products	Domestic Polyplastics Co., Ltd. Dainippon Plastics Co., Ltd. ● Daicel Polymer Ltd. ● Daicel Pack Systems, Ltd. ● Daicel Value Coating Ltd. ● Daicel-Degussa Ltd. Mikuni Plastics Co., Ltd. Daicel Novafoam Ltd. 31 total, including other companies Overseas Shanghai Daicel Polymers, Ltd. Daicel Chemical (Asia) Pte. Ltd. 16 total, including other companies
Pyrotechnic Devices	Automotive air bag inflators, emergency-escape systems for aircraft crew, propellants, and other products	Domestic Daicel Chemical Industries, Ltd. ● Daicel Safety Systems Inc. Japan Shotshell Ltd. 3 companies total Overseas Daicel Safety Systems America, LLC Daicel Safety Systems (Thailand) Co., Ltd. Daicel Safety Systems Europe Sp.z o.o. 6 total, including other companies
Others	Membrane separation modules for water treatment, transportation & storage services, and other products	Domestic Daicel Chemical Industries, Ltd. ● Daicen Membrane-Systems Ltd. ● Daicel Sakai Jitsugyo Co., Ltd. ● Daicel Aboshi Sangyo Co., Ltd. ● Daicel Otake Sangyo Co., Ltd. ● Daicel Arai Chemical, Ltd. ● Y.S. Logistics Service Co., Ltd. 9 total, including other companies Overseas Daicel Chemical (China) Investment Co., Ltd.

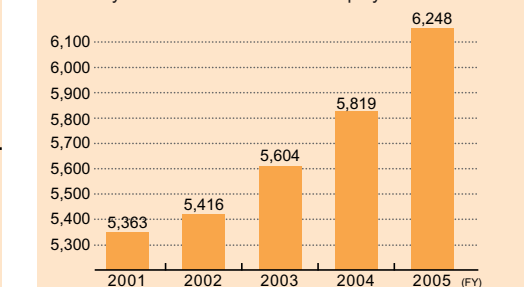
◆ Consolidated Data for the Daicel Group Companies



■ Consolidated Sales and Share of Total Sales by Business Segment



■ Five-year Trend in Number of Employees



* The data contained in this report includes data on all Daicel Group companies marked with a bullet above.

Daicel Chemical Industries, Ltd.

Daicel Chemical Industries, Ltd. has gained 87 years of experience as a chemical company since its formation through the merger of eight celluloid producers in 1919.

Our products cover a wide range and include: cellulose acetate, which uses pulp and other natural fibers for raw material; cigarette filter tow; many varieties of cellulose products, including water-

soluble polymers; numerous products comprised of organic compounds, principally acetic acid and acetic acid derivatives; organic fine chemical products such as pharmaceutical intermediates; products related to aerospace and defense systems, such as propellants and emergency escape systems for aircraft crew; and inflators for automobile air bag systems.

◆ Daicel Chemical Industries, Ltd.

Head Office: 1, Teppo-cho, Sakai-ku, Sakai-shi, Osaka 590-8501, Japan

Incorporated: September 8, 1919

Capital: ¥36,275 million (as of March 31, 2006)

Locations:

Offices

Osaka Head Office: 1, Teppo-cho, Sakai-ku, Sakai-shi, Osaka 590-8501, Japan

Tokyo Head Office: JR Shinagawa East Bldg., 2-18-1, Konan, Minato-ku, Tokyo 108-8230, Japan

Osaka Sales Office: Osaka Kokusai Bldg., 2-3-13, Azuchi-machi, Chuo-ku, Osaka-shi, Osaka 541-0052, Japan

Nagoya Sales Office: Horiuchi Bldg., 3-25-9, Meieki, Nakamura-ku, Nagoya-shi, Aichi 450-0002, Japan

Fukuoka Office: Fukuoka Central Bldg., 1-15-33, Daimyo, Chuo-ku, Fukuoka-shi, Fukuoka 810-0041, Japan

Plants

Osaka Production Sector/Sakai Plant: 1, Teppo-cho, Sakai-ku, Sakai-shi, Osaka 590-0905, Japan

Osaka Production Sector/Kanzaki Plant: 12-1, Kanzaki-cho, Amagasaki-shi, Hyogo 661-0964, Japan

Himeji Production Sector/Aboshi Plant: 1239, Shinzaike, Aboshi-ku, Himeji-shi, Hyogo 671-1281, Japan

Himeji Production Sector/Hirohata Plant: 12, Fuji-cho, Hirohata-ku, Himeji-shi, Hyogo 671-1123, Japan

Harima Plant: 805, Umaba, Ibogawa-cho, Tatsuno-shi, Hyogo 671-1681, Japan

Arai Plant: 1-1, Shinko-cho, Myoko-shi, Niigata 944-8550, Japan

Otake Plant: 2-1-4, Higashisakae, Otake-shi, Hiroshima 739-0695, Japan

Research Centers

Himeji Research Center: 1239, Shinzaike, Aboshi-ku, Himeji-shi, Hyogo 671-1283, Japan

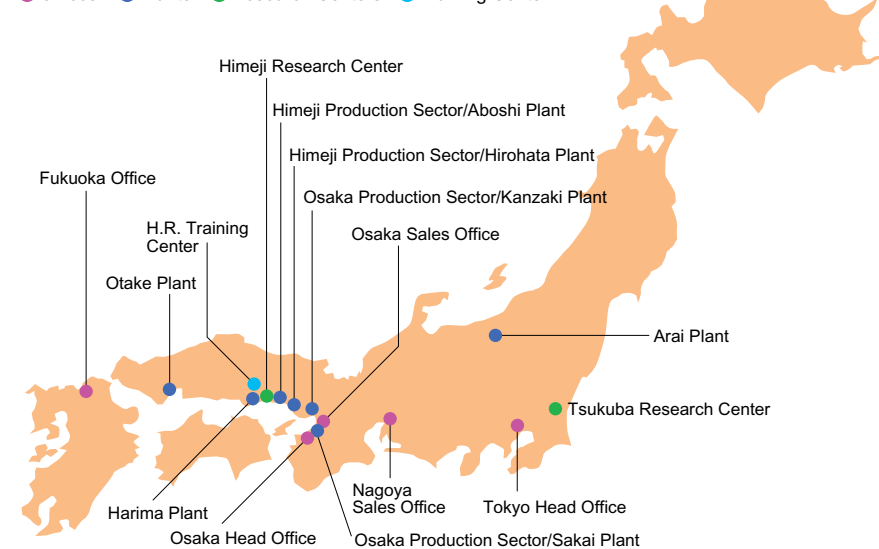
Tsukuba Research Center: 27, Miyukigaoka, Tsukuba-shi, Ibaraki 305-0841, Japan

Training Center

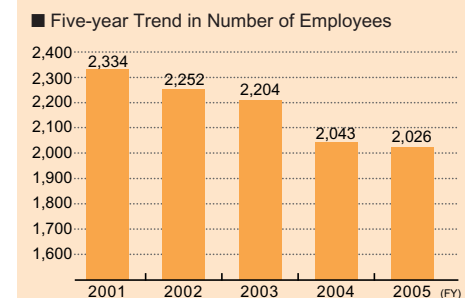
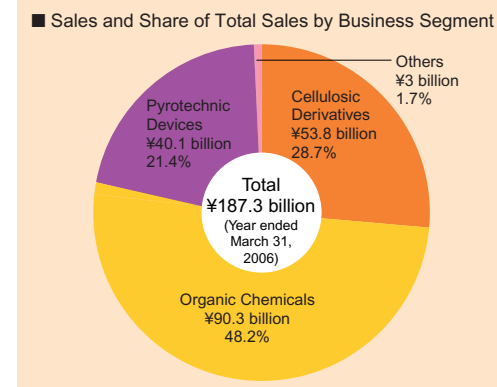
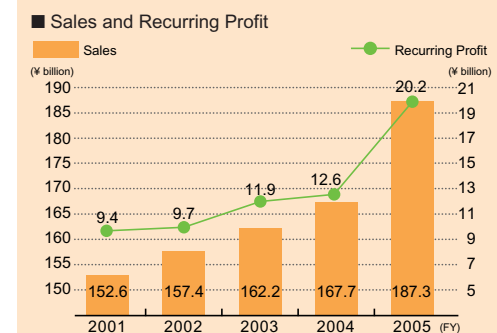
H.R. Training Center: 3-14-1, Kouto, Kamigori-cho, Ako-gun, Hyogo 678-1205, Japan

◆ Main Domestic Locations

● Offices ● Plants ● Research Centers ● Training Center



◆ Nonconsolidated Data for Daicel Chemical Industries, Ltd.



*For more information about Daicel's business activities, visit our website at www.daicel.co.jp.

Dainichi Chemical Corp.



Offices & Quality Assurance Department



Production Plant No. 1 (left) & No. 2 (right)

Corporate Data

■ **Date Established:** October 1, 1991

■ Locations:

Head Office: 1, Teppo-cho, Sakai-ku, Sakai-shi, Osaka 590-8501, Japan

Tel: +81-72-227-3083 Fax: +81-72-227-3099

Iwaki Plant: 23-11, Kuidesaku, Jobanshimofunao-machi, Iwaki-shi, Fukushima 972-8312, Japan

Tel: +81-246-44-5255 Fax: +81-246-44-5251

R&D Department: 3-17-14, Nishiawaji, Higashiyodogawa-ku, Osaka 533-0031, Japan

Tel: +81-6-6322-4351 Fax: +81-6-6322-6555

■ **Scope of Business:** Consigned manufacture of organic chemical products for electronic materials, industrial-use coating resins, sensitive materials, high-polymer additives, pharmaceutical intermediates, and adhesive components

■ **Number of Employees:** 40 (as of March 31, 2006)

■ **2005 Net Sales:** ¥2.004 billion

■ **ISO 9001 Registration:** Acquired November 2003 throughout the company



10-cubic-meter stainless steel reaction unit

Environmental and Safety Activities

The plant of Dainichi Chemical Corp. is located in the city of Iwaki, while its R&D division is located in Osaka City. Under the slogan, "Yes, we can. Beyond the customer expectation," the company has expanded its business to include contract manufacturing and is using its expertise as an advantage.

In 2000, the company acquired certification of ISO 9002 registration, switching over to ISO 9001 registration in 2003 after the company management enhanced its commitment to the ISO spirit. The company is committed to manufacturing products compatible with ISO safety, environmental and quality requirements. The company considers its 5S program activities as the foundation of its safe production activities. The company is taking steps to create a Dainichi Chemical culture, adopting the "environment 5S," the "information 5S," and the "communication 5S" as part of its daily activities.

In fiscal 2005, the company initiated activities advocating an environmental safety policy stipulating the maintenance and improvement of a level of environmental safety suitable for society.

The company experienced no fire, explosion or leakage incidents thanks to on-site patrols and hazard prediction (KYT) activities intended to prevent serious accidents.

In the area of environmental preservation, we decreased the quantity of waste subject to external treatment by using low-sulfur and low-nitrogen waste solvents as a boiler fuel and by concentrating acetone for cleaning.

Using general equipment, Dainichi Chemical produces a range of chemical compounds under contract. With reference to Daicel Chemical's Total ESH Assessment code, Dainichi Chemical has established and implemented its own total assessment code that considers special circumstances such as multi-model production with general equipment. In the future, the company will seek to predict health, safety, and the environmental hazards while adequately examining and implementing prevention and protection measures.

Introduction to the Development of Safe and Eco-friendly Products & Technologies

Development of Safe and Eco-friendly Technology

The Daicel Group has actively developed technologies and products that consider both safety and the environment. These include the development of an energy-efficient water treatment technology utilizing a separation membrane system; an organic-solvent-free water-based paint; a technology that reduces the energy consumption of existing processes; and an aerobic oxidation technology utilizing N-hydroxyphthalimide (NHPI) catalyst, among others.

This aerobic oxidation technology was invented by Professor Yasutaka Ishii of Kansai University in 1994. Since 1999, Daicel Chemical has conducted full-scale practical research on this technology. This method is notable for oxidizing various hydrocarbons under moderate temperature and pressure and yields a large amount of oxidative product compared with conventional methods. This technology is attracting public attention for its potential at reducing environmental impacts.

Daicel Chemical is also industrializing numerous chemical products by employing this oxidation method with nylon 6.6, a well-known synthetic fiber; adipic acid, a raw material for various resins; and various aromatic carboxylic acids and photoresist raw materials that are widely used as general-purpose raw materials for resins, fragrances and pharmaceuticals.

For example, with the conventional method, adipic acid releases nitrous oxide, which has 310 times the global warming effect of carbon dioxide. On the other hand, the aerobic oxidation method utilizing NHPI catalyst improves this process because it does not release nitrous oxide. Moreover, this method enables synthesis at a lower temperature and pressure than does the existing method while improving yield. Thus, it contributes to energy conservation and is expected to generate a greatly reduced environmental impact compared with the conventional method.

As a result of such innovations, Daicel Chemical has been awarded the 3rd Green and Sustainable Chemistry Award awarded by the Minister of Education, Culture, Sports, Science and Technology; and the 53rd CSJ Technical Development Award; among others.

Against the background of these achievements, the Company has received a proposal from the Ministry of Economy, Trade and Industry to establish a research association with the goal of developing green chemical process technologies for bulk products. As a result, Mitsubishi Chemical Corporation, Maruzen Petrochemical Co., Ltd., and Daicel Chemical Industries, Ltd. jointly established the Research Association for Ishii Oxidation Technology in 2005. This association is engaged in the development and dissemination of chemical process technology utilizing the eco-friendly aerobic oxidation method with NHPI catalyst.



Professor Yasutaka Ishii (center) of Kansai University with Daicel Chemical staff following the presentation of the 53rd CSJ Technical Development Award



Daicel Chemical's Himeji Research Center is developing the aerobic oxidation technology utilizing NHPI catalyst.

Safe and Eco-friendly Products

Automotive Air Bag Inflators

An air bag inflator, a central component of automotive air bag systems, dispenses gas to the protective air bag at the moment of impact in the event of a collision.

Daicel Chemical had been actively involved in environmental measures since inflators were first developed.

In order to contribute to improved automobile fuel consumption, we have been developing lightweight inflators. This effort has achieved a 25% weight reduction compared to our 2000 product.



Automotive Air Bag Inflators

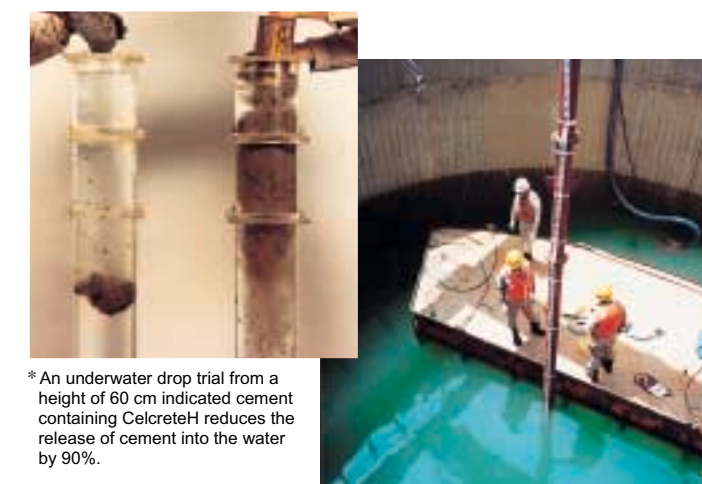
The Law Concerning Recycling Measures for End-of-life Vehicles (The End-of-life Vehicle Recycling Law) came into effect in Japan on January 1, 2005. In response, we launched the full-scale operation of our inflator recycling business. This business utilizes the air bag inflator recovery and processing system demonstrated and established by the Japan Automobile Manufacturers Association, Inc., the Japan Auto Recycling Partnership, and other organizations in 1998. As a result, inflators that have been removed and recovered from end-of-life vehicles can be safely recycled.



Air bag inflator recovery and processing facility

Water-immersed Non-disjunction Concrete CelcreteH

CelcreteH, an anti-separation agent used in underwater cement, is a cellulose-based thickener that is added to underwater cement to minimize the severity of water pollution. Generally, if ordinary cement is used for underwater concreting, the cement components dissolve into the water, possibly causing water pollution. CelcreteH, however, incorporates an anti-separation agent that actively reduces* the release of cement components into the water and prevents pollution of the water environment. Notably, this cement release is much less than that of regular cement for construction work in moving waters, and can greatly reduce pollution of the water environment.



*An underwater drop trial from a height of 60 cm indicated cement containing CelcreteH reduces the release of cement into the water by 90%.

Biodegradable Plastic Celgreen

Daicel Chemical's Celgreen biodegradable plastic is broken down into carbon dioxide and water* by microbes that exist naturally in the environment. Thus, this useful plastic is recycled naturally, substantially reducing the amount of refuse created.

*A biodegradability test (JIS K6950) using activated sludge confirmed about 70% biodegradability after 25 days.



Typical application

Introduction to the Development of Safe and Eco-friendly Products & Technologies

CELPURGE Cleaning Agent for Molding Machines

The vast majority of diverse plastic products used in our daily lives are manufactured with injection-molding machines or extruders. The worksites using such machinery have been seeking ways of reducing the industrial waste generated during product changeovers.

CELPURGE, a product of Daicel Polymer Ltd., a member of the Daicel Group, effectively reduces the electric power and waste generated during product changeovers.

Moreover, the amount of super-engineering plastics in use has been increasing in recent years. As this entails washing difficulties, demand has increased for an effective purging agent. Therefore, in the fall of 2005, we developed and marketed a new grade for use with super-engineering plastics.



Example: Industrial waste and power consumption of an injection-molding machine

	Waste (kg)	Power consumption (kW)
Without CELPURGE	82	116
With CELPURGE	14	20

Measured during single product changeover with a 550-ton injection-molding machine

CELBLEN Cellulose Fiber Reinforced Plastic

Fiber reinforced plastics are used in a large number of familiar products such as automobiles, home appliances, and sundry items. Nonflammable components such as glass fiber are mixed into the plastic to give it increased strength. Therefore, treating large quantities of glass-fiber after incineration has become a problem.

In response, Daicel Polymer Ltd. has developed CELBLEN, a reinforced plastic made with high-purity cellulose fiber. CELBLEN was developed not only to significantly reduce* the quantity of nonflammables remaining after incineration, but also to increase colorability and printability. It is expected to find wide application in injection molding and production of sheets, foamed products, and extrusions.



*Results of Daicel Polymer's combustion test (100% weight before combustion):
 Combustion residue rate of glass-fiber (30%) reinforced plastic: 30%
 Combustion residue rate of cellulose fiber (30%) reinforced plastic: <0.5%

MC Green Series Water-related Products Made from Recycled PET

The Japan Environmental Management Association for Industry awarded Mikuni Plastics Co., Ltd., a Daicel Group company, EcoLeaf designations for two of its products. It has also published environmental data on the JEMAI website. The MC Green Series products are made of recycled PET (polyethylene terephthalate) and are eco-friendly because they contribute to reduced carbon dioxide emissions throughout the product lifecycle, which includes material manufacturing, disposal and recycling.

MC Green Meter Box (Water meter box)

The lid, body, and bottom sheet of the MC Green Meter Box is constructed of more than 80% recycled PET. Compared to conventional products, this product contributes to a reduction in CO₂ emissions of 15.08 kg-CO₂/unit.



MC Green Drainage Manhole Cover

The MC Green Drainage Manhole Cover is constructed of more than 90% recycled PET. Compared to recycled PP products, this product contributes to a reduction in CO₂ emissions of 2.74 kg-CO₂/unit.



Mikuni Plastics was presented with the 1st ATC Green Eco Plaza Environmental Business Award First Prize for the MC Green Meter Box.

ATC Green Eco Plaza created this prize as part of its 5th anniversary project celebrations. The prize recognizes the reduced environmental impact of the MC Green Meter Box and the contribution of this project to global environmental conservation while identifying the company as an excellent enterprise.



CELROOT, an Innovative Resin Ingredient for Plating

Daicel Polymer Ltd., in collaboration with Okuno Chemical Industries Co., Ltd., has developed a new and innovative plating technology that involves a chromic-acid-free etching process that uses no hexavalent chromium. Although not significantly different from conventional manufacturing process, this technology makes it possible to perform resin plating without the use of any hexavalent chromium.

Daicel Polymer Ltd. has placed this revolutionary resin plating product on the market as CELROOT (trademark pending).



A molded item with decorative plating made of revolutionary CELROOT material. Applying this excellent plating to the exterior adds outstanding heat resistance (200°C). Plated resin decorated components are used in a wide range of useful applications such as sports equipment; as parts for plumbing, bathrooms and kitchens; and as automobile parts such as emblems and radiator grilles and the like.

Novadan W, a Shock-absorbing Material for Use in Automatic Fruit Sorters

Daicel Novafoam Ltd., a Daicel Group company, has used its long years of experience with foaming technologies to develop and market cushioning materials for agricultural and industrial applications. The company has recently developed Novadan W, an innovative agricultural cushioning material for fruit packaging. Conventional cushioning materials are manufactured by gluing together cardboard and cushioning materials, but these were difficult to recycle. Thanks to our proprietary technology, we have been able to develop complex shapes for unique applications while enabling recycling of the plastic and reducing the weight by 66%.



Typical application

Eco-friendly OA Floor Made from Recycled PET

Mikuni Plastics Co., Ltd. is now producing OA Floor to order. This green product is made of 100% recycled PET. Compared to recycled PVC products, it contributes to reduced CO₂ emissions of 10.96 kg-CO₂/unit throughout the product lifecycle, which includes material manufacturing, disposal, and recycling.



Environmentally Friendly Tray Celcompact

Celcompact is a low-volume, lightweight tray product manufactured and marketed by our group company Daicel Pack Systems, Ltd.

Once used, the Celcompact tray can be easily and safely compacted for disposal, helping to reduce the volume of domestic waste. Since the material of this tray is resistant to cracking, the sheet material thickness can be 20% to 30% less than conventional PP or PS trays. The resultant smaller volume and lighter weight help tray users reduce their recycling costs and environmental impacts.



Thin Planting Base Celgrass Mat

Daicel FineChem Ltd., a Daicel Group company, has developed and sold Celgrass Mat, a planting base for rooftop gardens. Comprising about 80% recycled cellulose acetate and recycled urethane foam, it serves as a replacement for lightweight soil. This lightweight base exhibits optimal effective moisture-retaining capacity for plant cultivation and has excellent adiabatic and sound-absorption properties.

This product is an ideal base material for establishing gardens on rooftops and greenery on walls. Moreover, by promoting urban vegetation, it is effective at reducing the build-up of heat in large cities and alleviating the heat island phenomenon that has become an issue in recent years.



Typical application

Groundwater Treatment System for Hospitals

The Groundwater Treatment System for Hospitals is manufactured and marketed by Daicen Membrane-Systems Ltd., a Daicel Group company. The system uses membrane filtration of groundwater to produce water of a quality* exceeding that of tapwater. By effectively removing fungi and viruses and the like from the water, this system is ideal for medical institutions, which require water whose safety can be assured. This system is capable of supplying clean, safe water for medical uses even if the conventional water supply should fail during a disaster.



Groundwater Treatment System for Hospitals

* Measured values of water from this system vs. tapwater standards

	Tapwater Standards	Water from This System
General bacteria	Less than 100/mL	Not detectable
Nitric acid & nitrite-nitrogen	Less than 10 mg/L	4.7 mg/L

Recycling System for Water Contaminated with Die-casting Oil

Car parts contain a large quantity of die-cast parts. The manufacturing process produces a large quantity of oil-contaminated wastewater. Daicen Membrane-Systems Ltd. produces and sells a Recycling System for Water Contaminated with Die-casting Oil. This system is capable of processing wastewater contaminated with a high concentration of oil into water that exceeds the standard for discharge into rivers (for example, the system can process water with 39 ppm BOD and 120 ppm n-hexane to water with 11 ppm BOD and less than 2 ppm n-hexane).




Recycling System for Water Contaminated with Die-casting Oil

History of Daicel's Responsible Care and Commitment to Society and Its Employees

1969	The Safety Management Department is established.
1983	The annual Daicel Safety Convention is inaugurated.
1986	Official GLP certification is awarded to the Himeji Research Center under the Law Concerning the Examination and Regulation of Manufacture, Etc. of Chemical Substances (Chemical Substances Control Law).
1988	The Safety Management Department is reorganized as the Environment and Safety Division.
1991	The Global Environment Preservation Promotion Committee is established.
1992	The Daicel Safety Convention is enlarged as the Daicel Group Safety Convention.
1993	The voluntary environment and safety plan is established. The "Manufacturer of Excellence" Commendation of the Minister of International Trade and Industry is awarded to the Arai Plant for high-pressure gas security.
1994	The "Excellent Workplace that Handles Hazardous Materials" Prize of the Director-General of the Fire and Disaster Management Agency is awarded to the Sakai Plant.
1995	The Global Environment Department replaces the Global Environment Preservation Promotion Committee. The Company joins the Japan Responsible Care Council. The Company establishes the Basic Policies of Responsible Care (RC) and Responsible Care activities begin.
1998	ISO 14001 compliance activities are begun.
1999	Executive officers are appointed. The Environment and Safety Division is reorganized as the Safety Department.
2000	The Minister of Labor's Commendation—the Safety Promotion Prize—is awarded to the Otake Plant. The first annual Environment and Safety Report is published. Outside directors are elected. Nomination and Compensation Committee is established. The Corporate Compliance Program Division is founded and the director is appointed.
2001	The Daicel Policy for Ethical Conduct and Guidelines for Business Activities are established. The Safety Department and Global Environment Department merge to form the Responsible Care Office. The Daicel Group Safety and Environment Convention is superseded by the Daicel Group Responsible Care Promotion Convention. All Daicel plants and research centers acquire certification of ISO 14001 registration. Environmental accounting system is introduced.
2002	Internal Company System is introduced. Management Advisory Committee is established. Data reporting is initiated for amounts of substances released and transferred under the PRTR Law.
2003	The Corporate Ethics Help Line is established. The Health Care Committee is established. Term of office of company directors is reduced from two years to one year. Operating Standards for Group Enterprise Management are established. The Medium-term Responsible Care plan is established.
2004	Daicel is presented with the 53rd CSJ Technical Development Award for the Novel Environmentally Benign Aerobic Oxidation Technology using NHPI catalyst. The improved wastewater treatment facility at the Aboshi Plant begins operation to satisfy the 5th total water quality regulation of the Law Concerning Special Measures for Conservation of the Environment of the Seto Inland Sea. The Inflator Recycling Center begins operation at the Harima Plant. The entire company records zero accidents leading to suspension of operations. No executives with special title are elected. This initiative is intended to further clarify the separation from the administration of corporate business and to strengthen the decision-making and supervisory functions of the board of directors.

Opinions of Third Parties

This document appearing below contains the opinions (in Japanese) of third parties regarding the 2006 edition of this report.



2006 環境・安全報告書
レスポンシブル・ケア活動/社会活動

第三者検証 意見書

2006年6月1日

日本レスポンシブル・ケア協議会
検証評議会議長
山本 明夫
レスポンシブル・ケア検証センター長
田中 康夫

■ 検証の目的
 レスポンシブル・ケア報告書検証は、ダイセル化学工業株式会社が作成した「2006 環境・安全報告書—レスポンシブル・ケア活動/社会活動」(以後、報告書と略す)を対象として、下記の事項について、化学業界の専門家としての意見を表明することを目的としています。

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性
- 2) パフォーマンス指標(数値)以外の記載情報と証拠資料・証拠物件との整合性
- 3) レスポンシブル・ケア活動の評価
- 4) 報告書の特徴

■ 検証の手順

- ・本社において、各サイト(事業所、工場)から報告されるパフォーマンス指標の集計・集計方法の合理性に関する調査及び報告書記載情報と証拠資料との整合性の確認を各業務責任者及び作成責任者に質問すること並びに資料提示・説明を受けることにより実施。
- ・網干工場において、本社に報告するパフォーマンス指標の算出・集計方法の合理性、数値の正確性に関する調査及び報告書記載情報と証拠資料・証拠物件との整合性の確認を各業務責任者及び作成責任者に質問すること並びに資料提示・説明を受けることにより実施。
- ・パフォーマンス指標及び記載情報の検証についてはサンプリング手法を使用。

■ 意見

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性
 - ・パフォーマンス指標の算出・集計方法は、本社及び網干工場において、合理的な方法を採用しています。具体的には、全社共通の「環境・安全/パフォーマンス指標作成手順」及び集計表(エクセル)を基に、本社が全社のデータを集計しています。
 - ・調査した範囲において、パフォーマンスの数値は正確に算出・集計されています。
- 2) 記載情報と証拠資料・証拠物件との整合性
 - ・報告書に記載された情報は、調査した証拠資料・証拠物件と整合性があることを確認しました。
 - ・原本段階では表現の適切性あるいは文章の分かり易さに関し、若干指摘事項が認められましたが、現報告書では修正されており、現在修正すべき重要な事項は認められません。
- 3) レスポンシブル・ケア(以後、RCと略す)活動の評価
 - ・経営トップによる「トップオーディット」、専門家による「専門オーディット」、工場における「自主監査」とRC監査がていねいに実施されている点を評価します。今後、グループ会社への展開を期待します。
 - ・網干工場では、事故原因分析が非常にうまく行われています。他の模範となるでしょう。
 - ・前年度の課題であった、各種パフォーマンス指標算出方法のマニュアル化が全社的にきちんと行われた点を評価します。今後、報酬に関し各工場で更に整備されることを期待します。
- 4) 報告書の特徴
 - ・今年度、「社会活動報告」を大きな項目として取り上げ、その中で「お客様との関わり」、「社会との関わり」、「従業員との関わり」について詳しく説明され、サステイナビリティ報告書を目指し、着実に前進されている点を評価します。

以上



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