## SEKISUI

Emphasizing the Environment, CS & Quality, and Human Resources, to Contribute to Society through Our Business Activities



SEKISUI CHEMICAL CO., LTD.

### **Our Philosophy for CSR**

We aim to contribute to sustainable society through its business with our Mission Statement "Create social value while fulfilling stakeholders' expectations".

Our desire is to make contributions toward building a better society with a recognition, at all times, of what society demands over the short and long terms.

As globalization of our businesses advances and the our stakeholders grow more diverse, we have prepared this CSR Report to communicate to all stakeholders around the world our lasting philosophy and efforts.

#### **Evaluations**

#### CSR in General

- Earned SAM "Gold Class," "Sector Leader," "Sector Mover" CSR rating
- Earned selection to Dow Jones Sustainability Indexes (DJSI)
- Earned selection to FTSE4Good Global Indexes
- Earned selection to the Morningstar Socially Responsible Investment Index
- Ranked 104th in Nikkei NICES ranking system
- Ranked 73rd in Toyo Keizai CSR Ranking
- CSR Report 2011 awarded the award for excellence in the Environmental Communication Awards sponsored by the Ministry of the Environment and the Global Environmental Forum

Sam () 2012 gold class Sam () 2012 sector leader Sam () 2012

#### Environment • Ranked 43rd in Nikkei Environmental Management Ranking

CS and Quality • Ranked 20th in Nikkei Quality Management Ranking

> ones nability Indexes

#### Human Resources

Ranked 21st in Nikkei Ranking of Best Companies to Work For



Company Profile (As of March 31, 2012)

Established: March 3, 1947 Capital: 100.002 billion yen Employees: 20,855 Domestic Subsidiaries: 115 Overseas Subsidiaries: 91 Affiliated Companies: 19 Net Sales: 965 billion yen Operating Income: 54.6 billion yen Net Income: 28.1 billion yen

About cover photo

A waterfall on the upper reaches of the Father Rhine, a river flowing through central Europe from its source in the Swiss Alps.

Sekisui Chemical Group's affiliate companies in Europe include 10 operating companies, sales companies, and other affiliates in the countries of the Rhine watershed. Sekisui Europe B.V. Sekisui Alveo A.G. Sekisui SPR Europe G.m.b.H. Sekisui Chemical G.m.b.H. Sekisui Virotech G.m.b.H. Sekisui Diagnostics (UK) Limited Eslon B.V. Sekisui Specialty Chemicals Europe, S.L.

Sekisui S-Lec B.V. American Diagnostica G.m.b.H.



#### **About Our Report**

- The pages of this Report are structured in line with Sekisui Chemical Group's concept of its Corporate Social Responsibility (CSR) in terms of Three Prominences — in the Environment, CS & Quality, and Human Resources — along with Three Attitudes of Sincerity: in Compliance, Risk Management, and Disclosure & Communication.
- This Report employs separate chapters reporting in greater detail on matters such as the relationship between business activities and CSR and the specific initiatives of each of the three division companies, whose business characteristics differ from each other.
- We have decided on the information that should be covered in this Report through consideration of its importance both to society and to Sekisui Chemical Group, based on inputs including surveys conducted within and outside the Group and independent review.
- A separate Data Book has been established to ensure that the report is both comprehensive and easy to read.
- Continuing efforts for which there was not enough room in the Report are covered on the Sekisui Chemical Group website.
- Information about Sekisui Chemical Group's business is disclosed publicly through this report and the Annual Report, which reports financial information concerning the Group.
- To ensure the reliability of this report, its environmental and social reporting have been subjected to independent practitioner's review.

#### Guidelines Complied with or Referred to

- This report complies with the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines ver.3.1 (G3.1), at the B+ application level as defined in those guidelines. A GRI Guidelines comparison table is available on the Sekisui Chemical Group website.
- In preparing this report, we also have referred to the Ministry of the Environment's Environmental Reporting Guidelines (2012 Edition).

#### **Scope of This Report**

Entities Encompassed by this Report: The basic function of this report is to comment on the activities of Sekisui Chemical Group, focusing chiefly on the business facilities that play key roles in those activities.

**Timeframe Encompassed by this Report:** April 2011 - March 2012 (including examples of activities through May 2012)

#### Scope of Independent Practitioner's Review

The environmental and social information in this report has been subjected to the independent practitioner's review for the appropriateness of calculation methods and the accuracy of the results of calculation. The "Verified" logo is used to indicate that each item of such subject information has been reviewed.

#### Disclaimer

Readers are requested to note the following: The information in this report includes not only past and present facts concerning Sekisui Chemical Co., Ltd, and its affiliates but also future forecasts based on current plans and projections and management plans and management policies as of the time of publication. Changes in various factors could cause the results of business activities in the future and other circumstances to differ from these forecasts. Also, since the figures in the tables and graphs contained in this report have been adjusted through rounding off and other means, in some cases total figures may not be equal to the sums of their parts. In addition, for some items data for past fiscal years has been revised in connection with expansions in scope, revision of calculation methods, and changes to environmental load coefficients.

#### CONTENTS

- 3 Top Message
- 5 Our Company
- 7 CSR Management

#### Three Prominences

#### 11 Environment

Our Philosophy / Environment-Contributing Products / Climate Change / Resource Efficiency / Air, Water & Soil / Biodiversity

#### 19 CS & Quality

Our Philosophy / Customer Satisfaction / Quality

#### 25 Human Resources

Our Philosophy / Global Talents / Career Development and Evaluation / Decent Work and Diversity / Safety

## 35 Business and CSR: Efforts of Division Companies 37 Housing Company 43 Urban Infrastructure & Environmental Products Company

49 High Performance Plastics Company

55	Bases of CSR
55	Compliance
57	Risk Management
58	Disclosure & Communication
59	Nature Conservation & Social Contribution

- 63 Independent Practitioner's Review Report
- 64 History
- 64 Editors' notes

#### Top Message

## Growing Our Businesses and Contributing to Society, to be a Company Sustainable for the next 100 years



## Demonstrating Our Presence Under the Tough Business Conditions

The preceding year saw continued tough business conditions as nationwide power shortages resulting from the effects of the Great East Japan Earthquake forced a reconsideration of how to ensure business continuity and developments overseas included the flooding in Thailand and the debt crisis in Europe.

Fortunately, Sekisui Chemical Group was not greatly impacted by the effects of the earthquake and flooding, so that it could cooperate fully toward recovery and restoration of the affected areas in aspects such as infrastructure and housing, for example through urgent production and supply of PVC pipes and responding swiftly to the need for temporary housing. It also strived to ensure stable supplies of intermediate materials as well as parts and other materials. Through responding to needs for infrastructure renovations to achieve earthquake readiness and developing town strong against earthquakes such as highly earthquake-resistant and durable housing, water supply, sewerage, and other structures, our domestic housing and water-infrastructure businesses demonstrated their presence. Despite some difficulties in realizing growth overseas, for the second year in a row we were able to realize our highest level of profit since the year 2000, when we introduced the division-company system.

While a full-fledged recovery from the Great East Japan Earthquake still is yet to come, in the future as well the Group will dedicate its combined abilities, not just in Japan but on a global basis, toward building safe and secure residences and communities as well as a sustainable society.

#### **Reviewing Fiscal 2011**

Sekisui Chemical Group's CSR management efforts are based on the principles of the Three Prominences in the Environment, CS & Quality, and Human Resources and the Three Attitudes of Sincerity of Compliance, Risk Management, and Disclosure & Communication. As was the case in the preceding year, the greatest result in fiscal 2011 was the expansion and growth of Environment-Contributing Products. We define Environment-Contributing Products as those that can contribute to reducing society's environmental load instead of just incorporating the perspectives of consideration for the environment. Our target for fiscal 2013 is to increase sales of Environment-Contributing Products to a share of 40% of net sales, and already in fiscal 2011 we have grown this share to the 37% level. We believe that the concept of demonstrating prominence in the environment and achieving growth has begun steadily generating results. At the same time, the year also showed that some issues still need to be addressed, as for example major quality issues unfortunately continued to arise and occupational accidents increased overseas. We intend to improve our efforts to address such issues through continued thorough implementation of activities to eliminate them completely.

#### **Groupwide CSR Efforts**

In fiscal 2011, five years after the start of the current CSR management system in January 2007, we established a Safety Subcommittee under the CSR Committee, aiming to strengthen the system further in the area of safety, on a global basis. We now address CSR through deployment of the business policy of having each division company and department establish and address its own CSR topics and priorities, all based on discussion and consideration in the CSR Committee and individual subcommittees.

Overseas, we continue to hold area-specific company presidents' conferences and staff meetings for purposes including sharing of thinking and values within the Group and cooperating to address topics common to individual areas overseas. These meetings are generating steady results.

In the future as well, we will continue working to deploy and achieve permeation of CSR management throughout Sekisui Chemical Group as a whole, reflecting matters such as the business characteristics of each division company and the characteristics of each area overseas.

In addition, we will continue supporting the United Nations Global Compact as a platform for deploying CSR management on a global basis.

## To be a Company Sustainable for the Next 100 years, Based on Business Growth and CSR

It is expected that the external business environment will continue to undergo massive changes in the future as well.

I would like us to be a company that can continue contributing to society by reforming itself in response to environmental changes and growing in its prominent businesses.

The midterm management plan identifies seven areas including the housing stock, pipe rehabilitation, water infrastructure, automotive, and electronic materials fields as areas for future growth and expansion, and segments such as the environment, energy, and building stock are expected to experience future growth. I believe that solving the issues faced in people's lives and society – environmental problems and the need to improve the quality of social infrastructure and ways of life (by making them more comfortable, more convenient, and healthier) while at the same time achieving business growth in these areas will necessarily constitute contribution to society through our businesses, and as such business growth truly can be said to be on the same axle as CSR.

By reforming our business model through being sensitive to changes in the external environment and energizing the internal organization, so that we in Sekisui Chemical Group will execute SHINKA ("evolution") ourselves, we can achieve both sustainable business growth and evolution of CSR.

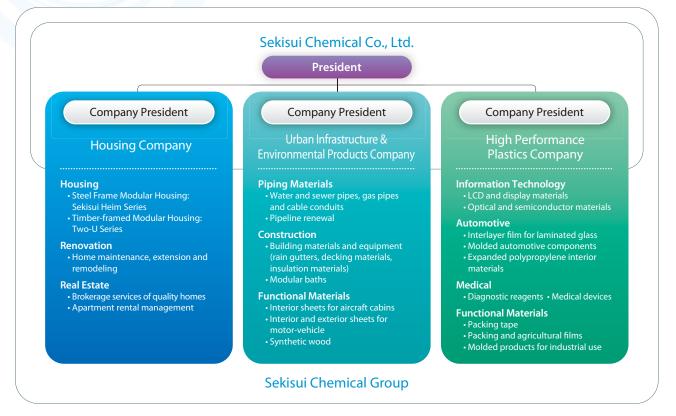
For this reason, we will continue encouraging each Sekisui Chemical Group employee to take an active role. We will aim to make Sekisui Chemical Group a sustainable organization that can continue demonstrating its presence even 100 years in the future, by continuing to evolve the Group's CSR management within its business activities through achieving an environment in which individual employees can grow through their work, seeing themselves as leaders and constantly taking on challenges, while at the same time growing our businesses with a focus on the environment and contributing to society by expanding and creating Environment-Contributing Products as well as supplying truly satisfying products and services that reflect customer feedback.

Nacfumi Negisti

President

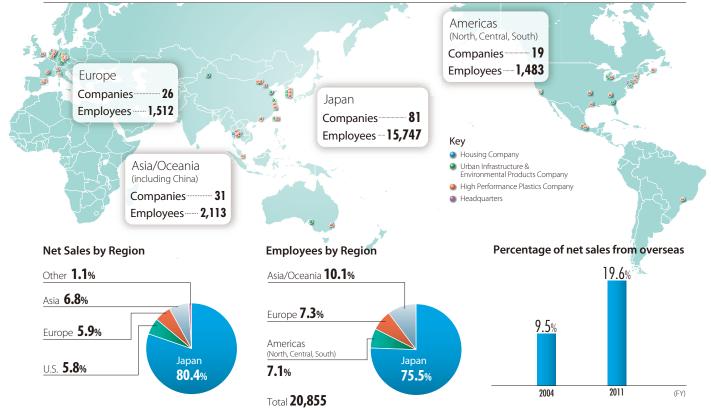
#### Our Company

#### **The Division Company System and Business Areas**



#### Sekisui Chemical Group Worldwide

Note: Figures current as of March 31, 2012 (consolidated basis)



#### Sekisui Chemical Group's Company Creed and Company Principle

#### The "3S Principle"

Sekisui Chemical Group does business in line with the "3S Principle" describing its fundamental principles of service to society; originality, ingenuity, and the pioneer spirit; and quality improvements.

#### Service

We enhance the well-being of the world community through our global business network



We surge ever forward into new fields of development with the power and vitality of a mighty waterfall

#### Superiority

We obtain the trust of our customers through superior operational performance and the highest quality standard

#### The Company Badge:

Our company badge comprises the three S's of the company's original name, adopted at the time of its foundation, "SEKISUI SANGYO" enclosed in a hexagonal shape resembling a tortoise shell (the chemical symbol for benzene), symbolizing the Chinese character meaning "water."

#### **Mission Statement**

"Create social value while fulfilling stakeholders' expectations" Sekisui Chemical Group will provide new value to society through a variety of aspects of our business activities, seeing as our key stakeholders our "Customers," "Shareholders," "Employees," "Business Partners," and "Local Communities and the Environment."



#### **Our CSR**

#### **CSR: The Foundation of Management**

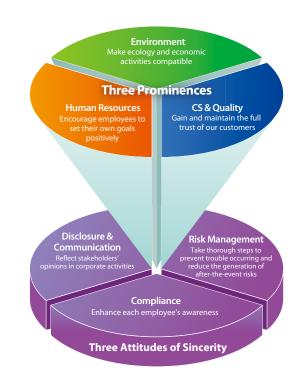
Sekisui Chemical Group considers CSR to refer to contributing to sustainable society through its businesses: in essence, making the Mission Statement reality. We believe that promoting CSR management increases the quality of corporate management.

Based on this understanding, it is our philosophy that sustained business growth and business innovation require the continuation of serious efforts at CSR management without regard for conditions of the business environment and continuation of reform and SHINKA ("evolution").

#### **Three Prominences and Three Attitudes of Sincerity**

Sekisui Chemical Group has identified as key themes of CSR management Three Prominences — in the Environment, CS & Quality, and Human Resources — and the Three Attitudes of Sincerity — in Compliance, Risk Management, and Disclosure & Communication. The Three Prominences in particular have been chosen because efforts in the areas of the Environment and CS & Quality are the natural responsibilities of a manufacturer and it is human resources who advance such efforts.

Efforts under the midterm management plan also have a focus on CSR, and we believe that issues to address in the future are those of achieving further permeation of CSR within the organization and deployment of CSR management on a global basis.



#### **Corporate Governance**

To maximize corporate value, Sekisui Chemical Group has built its management structure based on a system of three division companies. Believing that increasing the transparency and fairness of management and pursuing swift decision-making are important to continually increasing corporate value amid a changing business environment, it implements a variety of efforts related to corporate governance.

#### **Strengthening the Business Execution Function**

Together with assigning operating officers specializing in business execution to each division company, an Executive Committee has been established to serve as the top decisionmaking body in each division company. As such, a broad range of authority has been transferred from the Board of Directors to the Executive Committee. The Board of Directors strives to achieve continual improvements in corporate value as an organization responsible for decision on basic policies of Sekisui Chemical Group's management as well as high-level decision-making and supervision of business execution.

#### **Compliance Surpassing the Requirements of Japanese Law**

- Appointment of external directors
- Operating officer system (term: one year)
- Early issue of notices of general meetings of shareholders
- Exercise of voting rights electronically in general meetings of shareholders
- Formulation of rules on corporate information disclosure

#### **R&D**, Intellectual Property, Procurement

We strive to increase the value of our products and services through addressing from a CSR perspective the various aspects of activities such as R&D, which is a foundation for revenues and growth, intellectual property, which is one of the outcomes of R&D, and procurement of the raw materials, parts, and other materials needed in manufacturing development.

#### R&D

Each division company, Headquarters, and each key affiliate has an R&D section that handles a broad range of R&D such as basic research through product development and production technologies, working to increase the speed of technological development in growth areas and create outstanding technologies.

#### Intellectual Property

Under the basic policy of securing business competitive strength through obtaining strong patents, we are striving to improve quality and raise awareness in development through efforts including introduction of a system of "P Badges" awarded to employees who have obtained a certain number of patents and providing training on intellectual property.

#### Corporate Governance System



Note: See the Corporate Governance Report for details.

#### Procurement

Sekisui Chemical Group procures materials based on the fundamental concepts of openness, fairness and equity, legal compliance, mutual trust, and consideration for the environment. In addition to quality and delivery times, suppliers are requested to give consideration to the environment, comply with laws, regulations, and societal norms, and ensure health and safety in their own companies.

#### Sekisui Chemical Group's Procurement Policy

http://www.sekisuichemical.com/suggestion/index.html

#### Lumber Procurement

For structural lumber materials, which account for the bulk of lumber used in homes, we use certified lumber (for example, lumber certified by the Forest Stewardship Council, or FSC). Such certified lumber is procured lawfully from properly managed forests.



#### **CSR Management**

**Three Prominences** 

#### The CSR Committee, with Participation by Top Management and Employee Representatives

As venues for deliberation on CSR management, we have set up the CSR Committee and five subcommittees: the Environmental Subcommittee, the CS & Quality Subcommittee, the Human Resources Subcommittee, the Compliance Subcommittee, and the Safety Subcommittee. (The Safety Subcommittee was established during 2011.) (See the "Data Book," p. 20, for more information on the CSR management system.)

Chaired by the President, the CSR Committee's membership also includes the president of each division company and three representatives of employees — one key group of stakeholders — to help improve deliberation and policies. Each Subcommittee promotes groupwide efforts for Sekisui Chemical Group while ascertaining and deliberating on companywide topics as they relate to matters such as issues involved in the themes of which each subcommittee is in charge and the state of activities in each division company. Under this system, operating officers must take part in the subcommittees concerned with their areas of responsibility.

The CSR Committee and each subcommittee meet at least once every half-year, to establish midterm CSR plans and key indicators in each field as well as deliberating on the state of progress on each of these.

#### **Promoting CSR in Unity with Management Planning**

CSR is put into practice within daily business activities by breaking it down to its appropriate places in the management plans of each division company and Headquarters based on deliberation in the CSR Committee and in each subcommittee.

Theme	Main Activities	FY2011 Results Verified	FY2013 Targets
	Increase Environment-Contributing     Products	• 37% of net sales (target: 35%)	Over 40% of net sales
Environment	Reduce greenhouse gas emissions	• 21% reduction from FY1990 level (domestic) (target: 21% reduction)	Maintain reductions of 20% or more from FY1990 level (domestic)
			Reduce by 5% or more from FY2008     level (overseas)
CS & Quality	External failure costs	Reduced by ¥3 billion     (from FY2004 level)	Reduce by ¥5.0 billion (from FY2004 level)
cs a quanty	Major quality issues	• 2 cases (target: 0 cases)	• 0 cases
	• Global talents	Increased "Global Talents" employees to 271 people     Expanded international recruiting	• 300 people
Human Resources	Career development & evaluation	13 cases of using the Intra-group Job Posting System for post-hiring transfers	• 20 cases/year
	Decent work & diversity	27% of new graduate recruits     were women (target: 30%)	• 30%

#### Main Areas of Progress in the CSR Midterm Plan

#### **Three Attitudes of Sincerity**

Theme	Main Activities	FY2011 Results	FY2013 Targets
Compliance	Continue raising awareness     Develop overseas compliance	<ul> <li>Education and instruction catered to staff level and specific groups</li> <li>Overseas compliance system constructed</li> </ul>	<ul> <li>Continue raising awareness</li> <li>Cultivate key individuals for overseas compliance</li> </ul>
Risk Management	Deploy risk-management activities	Implemented risk-management activities in subject sections     Reconstructed crisis-management system	<ul> <li>Continue risk management activities</li> <li>Continue overseas development</li> </ul>
Disclosure & Communication	<ul> <li>Enhance external recognition and perception of the Company</li> <li>Continue open dialogue with employees</li> </ul>	<ul> <li>Earned Sustainable Asset Management (SAM) "Gold Class" CSR rating</li> <li>Earned selection for FTSE4Good Global Indexes</li> <li>Earned selection to the Morningstar Socially Responsible Investment Index (MS-SRI)</li> </ul>	Increase communication efforts in each region

#### **CSR Efforts in Japan and Overseas**

Reflecting its global business development, since 2007 Sekisui Chemical Group has held annual Global Presidents' Meetings in Japan for presidents of affiliated companies overseas to discuss CSR.

Since fiscal 2010, in light of the fact that topics of concern vary by area, we have held area-specific Presidents' Meetings crossing the boundaries between division companies in addition to the Presidents' Meetings in Japan. These meetings take place in the individual territories of Europe, the Americas, Asia/Oceania, China, and South Korea.

These Presidents' Meetings aim to fulfill our social responsibilities in each area and evolve Group management, by having presidents of companies taking part in different lines of business work together, identify topics of concern in each area, and discuss solutions.

For example, in Europe, the Presidents' Meeting discussed on what kind of topics were involved in responding to the need to take some steps to enhance Sekisui Chemical Group's reputation in that territory. To resolve the issues that became clear through this process, a pamphlet was prepared with staff in public relation section, marketing section or similar sections playing a central role, to introduce Sekisui Chemical Group's thinking on CSR and the CSR initiatives of each company in Europe.



In addition, the Presidents' Meeting in the Americas addressed the common theme of human resources policies, deciding to introduce joint hiring and an intra-group job posting system for post-hiring transfers. At the same time, staff from HR sections also met to study, through introducing the CSR efforts of each company, whether there were any opportunities for cooperation.

At the same time, since fiscal 2010 CSR Staff Meetings have been held in order to further spread CSR efforts across and throughout the organizations of business facilities and affiliated companies in Japan. In fiscal 2011, with the cooperation of the TOTO LTD., participants toured a TOTO LTD. plant and exchanged opinions with personnel from TOTO's department promoting CSR.

Plans call for holding this meeting periodically in the future as well.

#### VOICE

The brochure "SEKISUI in Europe" displays for the first time the wide range of technologies, services and products including CSR Activities by presenting all companies of SEKISUI Chemical Goupe in Europe. Used as information tool for all employees as well as for external stakeholders, our target is to establish a closer link and intensified communication on all levels.

Together with the European group it is my target to further enhance SEKISUI brand reputation in Europe and to demonstrate its strong philosophy in every day's activity.



Lena Zemke Group Marketing Sekisui SPR Europe G.m.b.H.

#### **Respect for International Norms**

Sekisui Chemical Group respects international norms and standards regarding CSR. It announced its support for the United Nations Global Compact<sup>1</sup> in March 2009, and since then it has been advancing CSR efforts on a global basis.

We also refer to ISO 26000, an international social-responsibility guideline issued in November 2010, in enhancing internal efforts and in the editing of this CSR Report.

## WE SUPPORT

#### 1 United Nations Global Compact

A voluntary program in which top management of firms around the world pledge to comply with 10 principles on subjects such as human rights, labor standards, the environment, and anti-corruption efforts within the scopes of influence of their firms and participate in building a global framework for realizing sustainable growth.

#### **Recovering from the Great East Japan Earthquake**

Sekisui Chemical Group's business is to provide housing and the infrastructure essential to support living. Utilizing the characteristics of these businesses, it is carrying out a variety of activities to support recovery from the Great East Japan Earthquake.

## Support for the Restoration of Water and Sewer Infrastructure in Affected Areas

In March 2011, immediately after the earthquake, the Urban Infrastructure & Environmental Products Company established an earthquake recovery project with its own full-time staff. This project started by making the rounds of local governments and local disaster task forces in the affected areas to make a study of what kinds of materials and construction were needed, to carry out surveying and diagnostics of sewer and other pipes, and to support damage surveys, among other activities.

In April, construction began to install water pipes at temporary housing for evacuees in the city of Kamaishi, lwate Prefecture. Utilizing lightweight, highly flexible, easy-to-install polyethylene water pipes, this project was able to lay 1.6 kilometers of pipe in seven days in effect. Other construction projects conducted in the same city included extension of water pipes to temporary housing and installation of temporary piping to restore services previously provided by cast-iron piping that was washed away in the tsunami.

In addition, the city of Kesennuma in Miyagi Prefecture was experiencing continued water-supply cutoffs after water pipes that had been installed on bridges were washed away in the tsunami. Sekisui Chemical worked to restore the services provided by these pipes by taking advantage of the strengths of polyethylene pipes, which are lightweight and easy to transport and also can be joined quickly.

Successively, the Group carried out a number of fast-paced construction projects including laying of water-supply pipes to temporary housing and evacuation shelters, restoration of water pipes in residential districts, restoration of damaged sewer pipes, and supply of electricity through underground cable pipes, all utilizing the strengths of plastic pipes: their outstanding flexibility, light weight, and ease of installation. Further work conducted included emergency repairs to retaining walls which had almost collapsed, using highly durable retaining wall panels.

In addition, Sekisui Chemical, which marks the 60th anniversary in 2012 of the introduction of Eslon HI PVC pipes, will donate part of the proceeds from sales of these and related products to local governments in affected areas.





#### Supporting Customers' Homes and Supplying Temporary Housing to Affected Areas

The Tohoku and Kanto regions of Japan damaged by the Great East Japan Earthquake include approximately 180,000 Sekisui Heim residences. Even when it could not yet check actual sites due to severance of the road network, the Housing Company estimated the impact of the earthquake and tsunami based on information it had on customers' homes and readied a system for responding to related damage. At the same time, it established emergency customer centers not just at Sekisui Heim sales facilities in the Tohoku region but in Tokyo as well. These centers received nearly 50,000 inquiries in total, including reports on damage and requests for emergency repairs.

In areas where the damage was said to be severe, it prepared an emergency inspection and diagnostics manual with a focus on the degree of damage from the earthquake and tsunami and on the near-term livability of residences, and then it conducted surveys in the affected areas. In addition to housing repairs, it also systematically addressed damage to fixtures, equipment, and interiors.

To realize swift responses to customer needs for repairs in light of the geographically widespread nature of the damage and the large number of damaged homes, it strengthened its repair structure in the Tohoku region through means including bringing together repair personnel from Sekisui Heim and Fami S (renovation section) facilities across Japan. Furthermore, it also cooperated in construction of temporary housing in response to a request made by the Japanese government to the Japan Federation of Housing Organization (Judanren), supplying temporary homes to areas including lwate, Miyagi, and Fukushima prefectures. Even after the completion of construction, it provides continual support such as additional construction to make the housing warmer during cold weather and construction of meeting places and lounges inside complexes of

temporary housing.





## Environment

We aim to be an environmental leader, pursuing both ecological and economic goals Pioneering a New Future with Balance between Ecology and the Economy



Our Philosophy

Based on its environmental philosophy of aiming to be a Global Environmental Top Runner that contributes to the realization of a sustainable society by enabling the continuous growth and co-existence of ecology<sup>1</sup> and the economy<sup>2</sup>, Sekisui Chemical Group aims to be a

company whose growth is built around the axle of the environment, by developing products and providing services that will facilitate environmental contributions by society in addition to lessening the environmental load of its business activities.

In addition, we will contribute to the prevention of global warming, the preservation of biological diversity and the construction of a sound material-cycle society in all countries and regions where we operate, in order to leave this beautiful earth for our children in the future. We also will aggressively work on social contribution activities such as nature conservation activities in each region.

```
The Environmental Management Policy and System See "Data Book" p. 20, 21
```

1 Ecology Caring for and contributing to the global environment, and living in symbiosis with the local environment

2 Economy

Ensuring economic benefits for both customers and businesses

#### Environmental Management Vision for 2030

In fiscal 2009, Sekisui Chemical Group established the "Sekisui Eco-Frontier 2030" as a vision to make clear the courses of action and achievement levels of environmental management and serve as a guidepost to sustainable growth. This vision depicts the type of society that Sekisui Chemical Group aims to achieve as a society on the environmental frontier. This refers to a society in which environmental awareness and environment-friendly lifestyles become broadly and firmly established among people and both businesses and governments recognize the environment to be one of their most important values.

To realize this vision, we have identified three areas of focus and two targets.

#### 3 Negative Carbon

Exceeding greenhouse-gas emissions attributable to business activities such as raw materials and production with offsetting reductions in greenhouse-gas emissions during product use



Two

targets

Efficient Utilization of Resources

Three areas

of focus

Preventing

Global Warming

> Achieving negative carbon<sup>3</sup>

Preservation of biodiversity

#### Environmental Management System

In an effort to carry out environmental management effectively, we have developed our environmental

management system (EMS) in accordance with the ISO 14001 standard and are working to expand application

of this system throughout the entire Sekisui Chemical

Group. As of March 2012, 62 business sites in Japan and

25 sites overseas had obtained certifications such as ISO

14001. The number of employees at these business

sites represents 68% of all Sekisui Chemical Group

#### **Environmental Midterm Plan**

Sekisui Chemical Group is promoting the Midterm Environmental Plan: Environmental Top Runner Plan SHINKA! (FY 2009 – 2013), based on back-casting<sup>1</sup> from the Sekisui Eco-Frontier 2030 goals.

This plan establishes four key themes. In fiscal 2011, sales of Environment-Contributing Products surpassed targets. While reducing greenhouse-gas emissions went as planned, the targets for reducing volumes of wastes generated were not achieved.

1 Back-casting

A method of considering steps that should be taken at present by envisioning a goal for the future and working backward to the present state.



Greenhouse-gas emissions (Japan) Verified 433 433 342 Thousand tons-CO2

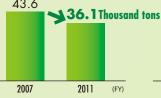
2011

(FY)

1990

Volumes of waste generated (Japan)





An office

ith the lights turned off



Overseas Sites NM Cee

employees.

We have developed a structure for collecting data on environmental load at overseas sites and are implementing efforts to minimize environmental load at each of these sites. In addition, all 44 main sites have established targets of acquiring ISO 14001 certification and achieving the goal of zero waste emissions. In fiscal 2011 Sekisui Specialty Chemicals America's two plants and Changzhou Zhongji Precision Molding Plastic Co., Ltd. attained ISO 14001 certification and activities also are underway toward achieving the goal of zero waste emissions.

We ask suppliers to obtain certifications such as ISO 14001 and Eco Action 21<sup>2</sup> and support them in these efforts.

#### 2 Eco Action 21

Certification of environmental management systems, established by the Ministry of the Environment of Japan



The 2007 Global Children's Eco Summit

## Turning out the lights during lunchtime at all sites

In response to a proposal from children made at the Global Children's Eco Summit<sup>3</sup> held in Japan in 2007, Sekisui Chemical Group has turned out the lights during lunchtime at all of its business sites both in Japan and worldwide. Through efforts such as this one that involves conducting the same activity worldwide, we will contribute to raising employees' environmental awareness and to lessening the load on the environment.

#### 3 Global Children's Eco Summit

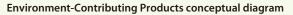
An international forum in which children of employees from around the world gather together to discuss the environment and make proposals to Sekisui Chemical Group management



### **Environment-Contributing Products**

## Contributing to Minimizing the Environmental Load of Our Stakeholders and Society Through our Products and Businesses

Sekisui Chemical Group's CSR is to contribute to sustainable society through business. To contribute to minimizing the environmental load of society, it is essential that businesses create and promote widespread use of products that will make active contributions to the environment. In fiscal 2006 Sekisui Chemical Group established Environment-Contributing Product Standards calling for an even higher level of contribution to the environment than before, and since then it has managed such products through a certification system. (See "Data Book," p. 8)





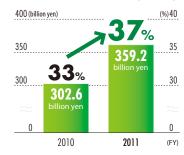
#### **Expansion of Environment-Contributing Products**

One of the targets of Sekisui Chemical Group's Midterm Environmental Plan is that of growing the ratio of sales of Environment-Contributing Products to total consolidated net sales to 40% or higher in fiscal 2013. (See "Data Book," p. 8)

In fiscal 2011, strong sales of houses with solar energy generation systems and an increase in the lineup of Environment-Contributing Products led to growth in net sales of them to 359.2 billion yen. This is a ratio of 37% of total net sales, more than achieving the target of 35% for the fiscal year. When converting their results to carbon-dioxide emissions reductions, these Environment-Contributing Products have resulted in a reduction in carbon-dioxide emissions more than offsetting the amount of carbon dioxide emissions generated in Sekisui Chemical Group production activities in Japan (according to Sekisui Chemical estimates).

We also have prepared a pamphlet providing an easy-to-understand introduction to Sekisui Chemical Group's Environment-Contributing Products and their results.

Net Sales of Environment-Contributing Products and their ratio to total net sales (vs. FY 2010)



<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><image><complex-block><complex-block><complex-block><complex-block><complex-block><complex-block><complex-block><complex-block><complex-block><complex-block><complex-block><complex-block>

#### **External Advisory Board**

To increase the reliability and transparency of the Environment-Contributing Product certification system, in fiscal 2010 Sekisui Chemical Group established the External Advisory Board, a third party organization, from which it receives advice and recommendations on the certification system as a whole.

During fiscal 2011, the External Advisory Board met in September 2011 and February 2012, providing opinions on individual Environment-Contributing Products. Advisors also provided a variety of opinions and recommendations concerning this system as well as Sekisui Chemical Group's environmental management. Attendees from Sekisui Chemical included responsible Directors down to the environmental personnel of each division company and Headquarters. We are utilizing the opinions received in our environmental management.

Flow of Certification of **Environment-Contributing Product** 

system



#### **System for Environmental Consideration in Products**

Advisory Board

Sekisui Chemical Group is advancing the Three Greening Steps intended to incorporate consideration for the environment in three stages of its value chain: development, procurement, and manufacturing. For this purpose, we are implementing systems including Product Assessments for Environmental Impact, Green Procurement, and Prior Assessment of Capital Expenditure. (See "Data Book," p. 8)

Forms related to green procurement and other materials are available on the Sekisui Chemical website.

http://www.sekisui.co.jp/company/suggestion/



**Plastics** Company **High Performance** 

Three Prominences

Environment

CS & Qualit

Resources Human

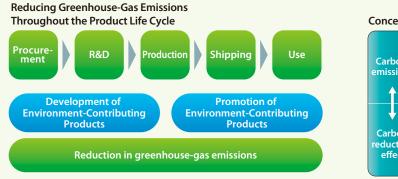
Business and CSR

Urban Infrastructure & Environmental

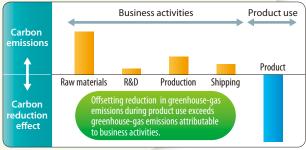
### **Climate Change**

## Efforts to Achieve Carbon Negative Throughout the Product Life Cycle

Achieving carbon negative (see p. 11) requires both development and promotion of Environment-Contributing Products and controlling greenhouse-gas emissions from business. Sekisui Chemical Group continues related efforts throughout the entire product life cycle.



#### Conceptual Diagram of Carbon Negative



#### **GHG Emissions**

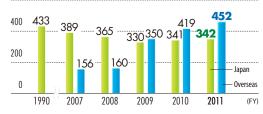
Environment

#### Activities at the Production Stage (in Japan and Worldwide)

We have established the target for fiscal 2013 of reducing greenhouse-gas emissions generated at the production stage in Japan by at least 20% compared to the fiscal 1990 level. In fiscal 2011 we realized a reduction of 21% compared to the fiscal 1990 level, thanks in part to the results of measures to promote investing in the environment<sup>1</sup>. Since Sekisui Chemical Group's production sites overseas are subject to considerable changes in areas such as product lineups as the overseas business grows, the Group has established guidelines calling for achieving in fiscal 2013 reduction of at least 5% from fiscal 2008 in energy consumption per unit of output. Each site is setting targets based on its own circumstances.

Since fiscal 2010, Sekisui Chemical Group has been implementing the "Energy 50% Process" intended to cut energy costs by one-half through production innovations. The number of facilities implementing the process is undergoing steady expansion, reaching the level of 16 facilities as of the end of fiscal 2011.

Greenhouse gas (Emissions from the Production Stage) (Verified ) 600 (1.000 tons-C0)



Notes:

Overseas data cover carbon-dioxide emissions only. Overseas figures have increased since fiscal 2009 in connection with an increase in the number of overseas sites due to acquisitions, etc. Fiscal 2009 figures have been revised beginning with CSR Report 2010 in connection with a change in rules for collection of data on overseas sites.

1 Measures to promote investing in the environment Measures under which Headquarters helps division companies cover the costs of investment for the purpose of controlling greenhouse-gas emissions in accordance with the resulting reductions. In fiscal 2009 investment in making energy use visible so its actual conditions could be ascertained was added to the subject of these measures, which originally were adopted in fiscal 2007.

Total greenhouse-gas emissions in fiscal 2011		Typical efforts	Resulting reductions
R&D	13,000 tons-CO <sub>2</sub>	Continued thorough energy management	32% reduction vs. fiscal 2007
Shipping	43,000 tons-CO <sub>2</sub>	Reduced emissions through use of joint shipping and modal shifts	17% reduction vs. fiscal 2007
Offices	16,000 tons-CO <sub>2</sub>	Energy-conservation activities including regularly turning off lights and using restraint in air-conditioner settings	15% reduction vs. fiscal 2007

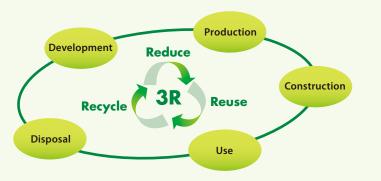
#### Efforts in Stages Other Than Production Verified



### **Resource Efficiency**

## Pursuing to Reduce, Reuse, and Recycle Throughout the Product Life Cycle

Sekisui Chemical Group pursues reduction, reuse, and recycle throughout the product life cycle. In addition to Zero Waste Emissions Activities intended to reuse as resources all the waste it generates from its business activities, it also is striving to preserve water resources.



#### **Waste Emissions**

#### **Reducing Wastes Generated**

To utilize resources efficiently, Sekisui Chemical Group is focusing in particular on restraining waste generation and reusing wastes. In fiscal 2011, production sites in Japan achieved a 17% reduction in total waste generated vs. fiscal 2007 through efforts to improve the stability and efficiency of production, such as zero-defect activities. They also reduced waste per unit of output by 8.5 percent.

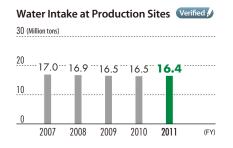
While new housing construction sites originally have generated low volumes of waste, our goal for fiscal 2013 is to reduce this amount further by 45% vs. the fiscal 2000 level for steel frame modular housing and 62% vs. the fiscal 2000 level for timber-framed modular housing. In fiscal 2011, efforts such as measuring wastes on a per-unit basis, reducing excess material use through activities including adoption of a system of authorization of waste transportation covering broader areas, and activities to reduce scrap and packaging materials succeeded in reducing total waste generated per home by 32% vs. fiscal 2000 for steel frame modular housing and 49% over the same period for timber-framed modular housing.

#### Zero Waste Emissions

Since 1998, Sekisui Chemical Group has promoted Zero Waste Emissions Activities toward restraining waste generation and reusing wastes. We have achieved zero waste emissions at main production facilities and housing construction and remodeling sites. We are carrying out activities toward our goal under the Midterm Environmental Plan (see "Data Book," p. 3) of achieving zero waste emissions at all subject facilities by fiscal 2013. In fiscal 2011, the percentages of facilities that had achieved this goal were 95% in Japan and 17% overseas.

#### **Conservation of Water Resources**

Sekisui Chemical Group is striving to reduce water use through means including cyclic use of cooling water. Water intake for the entire Group in fiscal 2011 fell by 3.4% in comparison with the fiscal 2007 level.



**Total Waste Generated** 

39.3

2008

60 (1,000 tons)

40

0

43.6

2007

(Production Facilities in Japan) Verified

2009

2010

2011

(FY)

## Ca

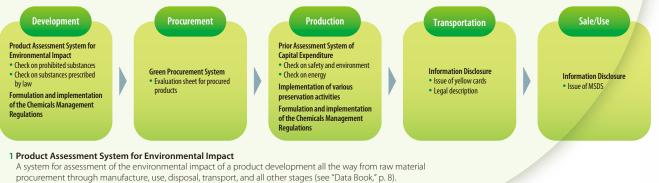
Resources

CS & Qualit

## Air, Water, & Soil Minimizing Environmental Impact through Proper Control of Chemical Substances

While chemical substances make people's lives more convenient, they also could have harmful effects on the environment or on human beings. Therefore, we believe that consideration of product safety, occupational safety and health, and environmental impact through proper management of chemical substances is an important responsibility of a manufacturer. Sekisui Chemical Group is implementing efforts such as the Product Assessment System for Environmental Impact<sup>1</sup> and the Green Procurement System<sup>2</sup> as well as setting our own targets for reducing discharge and transfer of chemicals. We also review periodically chemical substances that are candidates for control or regulation of use, in accordance with the establishment and amendment of relevant laws and regulations.

#### System for Control of Chemical Substances throughout the Product Life Cycle



2 Green Procurement System

Environment

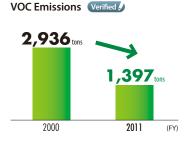
A system of giving priority to choosing raw materials, parts, etc. with lower levels of environmental impact when procuring them.

### **VOC & HCFCs**

Since fiscal 1999, Sekisui Chemical Group has been working to reduce discharge of pollutants into the environment. Since fiscal 2006, we have

aimed for the target of at least 60% reduction in discharge of VOCs into the atmosphere in fiscal 2013 compared to fiscal 2000. In fiscal 2011 we achieved a 52% reduction compared to fiscal 2000.

In fiscal 2008 we ended all use of HCFCs. (See "Data Book," p. 13)



#### **Soil Surveying**

In fiscal 2011, we conducted surveys compliant with relevant laws at four sites. Results of these surveys showed values exceeding standards for soil pollution on parts of the sites of the Sekisui Chemical Shiga-Ritto and Tokyo plants, the Sekisui Aqua Systems Co., Ltd. Shizuoka Plant, and the Toto Sekisui Co., Ltd. Ota Plant (see "Data Book," p. 12).

Plans call for addressing the areas with excess values in accordance with the law.

#### Air and Water

Sekisui Chemical Group complies with the regulatory values under laws and ordinances for the various types of equipment it uses in connection with exhaust gases and drain water. We also strive to control discharge of pollutants through appropriate maintenance and management including periodic inspections.

#### PCBs

Stored transformers and condensers that contain PCBs are being disposed of steadily, beginning with sites for which acceptance at PCB treatment facilities is available.

Machines and equipment in storage that contain PCBs are managed strictly and thoroughly, through means including locked storage and periodic inspection.



### **Biodiversity**

## Striving to Preserve Biodiversity through Both Business Activities and Social Contributions

In April 2008, Sekisui Chemical Group incorporated items on biodiversity to its Environmental Management Policy. Since then it has strived to preserve biodiversity through both environmentally conscious business and deploying nature conservation activities around the world.

Approach to Biodiversity Preservation



#### **Biodiversity Assessment**

Sekisui Chemical Group identifies biodiversity as a priority area in its Long-Term Environmental Management Vision (see p. 11), and in March 2011 we established guidelines for related efforts. In accordance with these guidelines, in fiscal 2011 we began at three business sites in Japan assessment of activities such as production processes and land use from the perspective of their impacts on ecosystems. The results confirmed that the loads these sites placed on ecosystems generally were low at the present time. They also showed that through revision of methods such as those for management of flood retarding basins on business sites and periodic management of flora such as trees and reeds in the vicinity, it would be possible to create an environment rich with biodiversity and to provide habitat for a diverse range of creatures. In the future as well we will continue assessment at individual sites and link these to practical Kurohama Marsh A place expected to be capable of providing habitat to a diverse range of creatures through proper management

by Keidanren

#### Nature Conservation Activities at All Sites

Sekisui Chemical Group believes that continual nature conservation activities conducted at business sites are important as one means of preserving biodiversity. Based on the goal in the Midterm Environmental Plan (see "Data Book," p. 3) of conducting nature conservation activities at all business sites in Japan by fiscal 2013, we have deployed forest development activities in seven blocks in Japan. To promote these activities, in December 2011 we concluded a basic agreement with the National Land Afforestation Promotion Organization affirming comprehensive cooperation on development of "Sekisui Chemical Forests." In addition, five overseas facilities in the four areas of Europe, the Americas, China, and Asia will advance biodiversity preservation efforts as well. Flood retarding basins on business sites Places expected to be capable of providing habitat to a diverse range of creatures through proper management of water

volumes and flora

Three Prominences

Environment

CS & Qualit

Urban Infrastructure & Environmental Products Company

High Performance Plastics Company

Bases of CSF

## CS & Quality

Pursuing quality always specified by customers, through maximizing the quality of human resources, products, and systems Customers & Society Quality always specified by customers Use of Customer's Feedback Creating Attractive Qualities Enhancing Basic Qualities Collecting Information Product planning Product design

Maximizing the quality of

human resources, products,

and systems

Production

Storage, shipping

Productionmethod design

Mass production

Procurement.

outsourcing

Our Philosophy Since 1999, Sekisui Chemical Group has employed CS management focused on customer satisfaction (CS). In 2004 we began CS & Quality Management focusing on products and services quality innovations in all of our businesses. The aim is to progress and grow together with customers, by constantly delivering value so that they will choose our

Resolving complaints

and claims

Construction, sales, service

products and services repeatedly. Based on the motto "We consider customer's feedback as the beginning of our manufacturing," we are improving the "Basic Qualities" and "Attractive Qualities" provided to customers through improving the "Quality of Products and Services," the "Quality of People," and the "Quality of Systems," utilizing a variety of feedback and other information received from customers.

Sekisui Chemical Group is working together to pursue quality that will always be specified by customers.

The CS & Quality Management Policy and System, see "Data Book," p. 20, 21

#### **CS & Quality Midterm Plan**

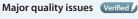
Sekisui Chemical Group has identified two key performance indicators for CS & Quality Management. One of these is external failure costs<sup>1</sup> and the other is the number of major quality issues<sup>2</sup>. The Midterm Plan (fiscal 2009 – 2013) sets as goals for fiscal 2013 eliminating major quality issues and cutting external failure costs by 5 billion yen vs. fiscal 2004.

In fiscal 2011, two major quality issues arose and we decreased external failure costs by 3 billion yen from fiscal 2004. We aim to further cut external failure costs through enhancing group-wide quality-assurance systems and deploying activities to reduce quality-related risks. We also will employ design review thoroughly and make improvements as needed to prevent major quality issues so they will not occur in the future.

#### 1 External failure costs

- Costs arising from responding to product-related complaints and claims. 2 Major quality issues
- Problems related to product and service quality that could cause significant damage to customers, society, or Sekisui Chemical Group if not thoroughly resolved on an urgent basis.







## Group KAIZEN Activities Around the World

Group KAIZEN activities<sup>1</sup> are an initiative in which employees in each workplace form small groups to make improvements in production and operational efficiency and product quality improvements. These activities are underway at business sites in Japan and around the world, centered on production companies. They address QC stories<sup>2</sup> and themes for which policies have been developed, and once each year presentations are held in each area to share information on results in each workplace and improve each other.

These activities are becoming firmly established globally, and in fiscal 2011 KAIZEN activities presentations were held in each of the following areas: Japan, the Americas, China, and Europe. The Sekisui Chemical Group KAIZEN Activities Presentation, in which teams chosen from each area announce results to each other, was held in Japan.

#### **1** Group KAIZEN activities

Activities that began in 1966 as Quality Control (QC) groups and later evolved into small group activities before taking the form they have today. 2 QC story

Improvement procedures advanced step by step to ascertain problems accurately and resolve them with certainty.

#### Japan

Almost all employees, including temporary and part-time workers, take part in these activities at 60 business sites, both manufacturing and non-manufacturing. Autonomous activities such as study meetings on QC methods and QC leader training are expanding in the workplace. A system

is in place under which multiple presentation meetings are held at each business site and sites that have conducted particularly outstanding activities advance through the division company presentations to the Sekisui Chemical Group KAIZEN Activities Presentation.



#### Americas

Business sites with long histories of carrying out KAIZEN activities have reached the stage of further improving their KAIZEN levels. Sites newly added to Sekisui Chemical Group

are proactively conducting these activities too. Presentation

Meetings began in the Americas in fiscal 1992, and in fiscal 2011 10 business sites presented the result of 11 themes. Since fiscal 2010 Manufacturing Assemblies have been held as well, sharing information on the fundamentals of manufacturing, such as safety and information systems.



### China

Activities are underway on themes centered on quality and productivity. Japan's style of KAIZEN activities is being adopted actively, and postings in the

workplace make the content activities visible. Employees also learn from outstanding case studies, for example through touring the plants of superior local firms. Presentation Meetings began in fiscal 2009 and was participated in fiscal 2011 by six business sites



### Europe

Activities are advancing on themes centered on safety and quality. Theme guidance meetings also are held, and theme activities are being deployed in

accordance with QC stories. The first Presentation Meetings was held in fiscal 2011, which was participated by six business sites on nine themes. Manufacturing Assemblies have been held as well, sharing information on strengths and issues in manufacturing through touring each other's plants.



#### Sekisui Chemical Group KAIZEN Activities Presentation Meeting

The 46th Sekisui Chemical Group KAIZEN Activities Presentation Meeting was held in Kyoto in January 2012. This event welcomed participants from 20 groups (16 from Japan and four from overseas) chosen from individual areas. Okayama Sekisui Industry Co., Ltd. won the gold prize for its theme on quality KAIZEN activities for high-performance thermal insulation materials (see p. 47), while among overseas sites, Wuxi SSS-Diamond Plastics Co., Ltd. from China took the bronze prize for its theme on packaging-material cost savings.



Wuxi

SSS-Diamond

Plastics

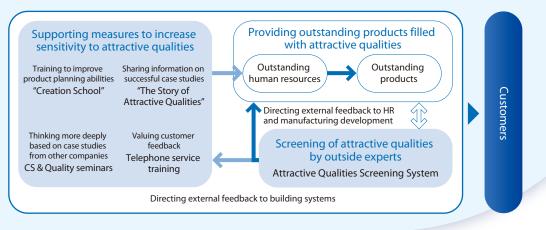
Co., Ltd

# CS & Quality

### Customer Satisfaction (CS)

## Advancing development of systems, human resources, and a culture enabling creation of attractive qualities

In order to generate a succession of products with attractive qualities providing value for customers, Sekisui Chemical Group is working on building systems for proper assessment of outcomes and sharing such outcomes broadly inside the organization to increase motivation and developing human resources and a culture having high levels of sensitivity to the customer's point of view.



### **Attractive Qualities Screening System**

In fiscal 2008 Sekisui Chemical Group created the Attractive Qualities Screening System, intended to have outsiders assess the attractive qualities of the Group's products<sup>1</sup>. Under this system, the Attractive Qualities Screening Committee, consisting of four outside experts (chosen from the fields of product planning, consumers, environmental nonprofit organizations, and quality control) and two Directors of Sekisui Chemical, meets every three years to assess Sekisui Chemical Group products and choose those outstanding in terms of attractive qualities.

In fiscal 2011, the second time the committee met, it assessed a total of 10 entries from each division company and Headquarters on the five criteria of value to customers, value to society, individual ability, contributions to business performance, and appeal, choosing one grand prize winner and two gold prize winners.

> Attractive lities Screening Committee

#### 1 Products

The Attractive Qualities Screening System defines products to refer in general to products, services, and related systems.

VOICE

Participating in this committee gave me a strong feel for Sekisui Chemical Group's advantages in R&D and product development technologies. It provides a very wide variety of products, ranging from films, adhesives, and pharmaceuticals through housing, and many of its products incorporate unique, revolutionary technologies. I admire the outstanding technological abilities it has built up in a wide range of fields over many years. I believe that these themselves are truly valuable assets that form the underpinnings of Sekisui Chemical Group.

I think in the future it will be able to produce even better products by deepening its study of customers' potential needs.



Prof. Noriaki Kanda Department of Business Administration, Faculty of Economics, Seijo University Chairperson, Attractive Qualities Screening Committee

Winner, Grand Prize, Second Attractive Qualities Screening System KAITEKI AIRY year-round air-conditioning/ventilation system

Gold Prize (Division Company Prize) Winners NORUDIA N HbA1c diabetes diagnostic reagent CALMMOON high-performance, nonflammable, easy-to-install noise-proofing material

#### HR Development for Attractive Qualities

Sekisui Chemical Group has developed four HR development systems intended to improve sensitivity to creating attractive qualities.

CS

&

Quality

seminars

## Training to improve product planning abilities

From its start in fiscal 2008 through the end of fiscal 2011, this training, intended to improve product planning abilities, has welcomed a total of 42 trainees.

## Thinking more deeply based on case studies from other companies

"Creation

School

Begun in fiscal 2001, these seminars, intended to raise awareness of CS & Quality, invite people from a variety of fields outside the company to give a lecture. A total of 26 seminars had been held from the start of the program through the end of fiscal 2011.

#### Sharing information on successful case studies

'The Story of Attractive Qualities"

"Creation

School"

The goals of this intranet content on products include increasing the motivation of product planning and development personnel. It provides introductions to the key points on development of prize-winning products in the Attractive Qualities Screening System and the value they provide to customers and society, centered on conversations with the developers.



#### We are conducting telephone service training, intended to improve the service level of contact points for inquiries. continuously since fiscal 2008. In fiscal 2011

Valuing customer feedback

inquiries, continuously since fiscal 2008. In fiscal 2011 this training, aimed at teaching skills for listening and speaking from the customer's point of view, was conducted a total of 17 times at nine business sites, with a total of 159 employees taking part.

#### Foster a CS Culture Program "STAR 55"

Sekisui Chemical Group developed the program called STAR 55, intended to foster a customer-oriented corporate culture, in fiscal 2002, and since then it has strived to raise awareness among all employees while also enhancing this program. In fiscal 2011, 190 new managers in Sekisui Chemical Group underwent the training program for leaders. The permeation of awareness of CS & Quality was confirmed through an attitude survey of trainees.

#### **Customer Feedback for Attractive Qualities**

Sekisui Chemical Group has established Customer Information & Consulting Services in the CSR Department within Sekisui Chemical Co., Ltd. and contact points for inquiries in each division company and in each sales company. In this way, we respond swiftly to inquiries, wishes, and guidance from customers. Information from customers is collected in the in-house database, Hayamimi Network, for sharing among related parties and is utilized in improving manufacturing and services. (For a flowchart on "Utilizing Customer Feedback in Management," see "Data Book," p. 15)

To accelerate these efforts, Customer Information & Consulting Services analyzes the information in the Hayamimi Network and proposes a variety of improvements to each division company in areas including products and the descriptions in catalogs and on websites. In fiscal 2011 it made 422 proposals, which resulted in improvements such as the preparation in the Housing Company of a guide for preventing basic customer-service errors that could result in complaints.

CS & Quality seminar

FY 2011 number of trainees

59

Telephone servic

training

Quality

CS & Quality

## Pursuing the "three zeros" of Complaints, Accidents and Wastes

Recognizing that it is the fields of manufacturing development that supports quality, since fiscal 2006 Sekisui Chemical Group has focused its efforts on innovation in production. Based on its belief that quality defects lead to costs, or losses and waste arising from handling complaints and increased wastes, we are trying to reduce costs by targeting the "three zeros" of complaints, accidents, and wastes.



#### **Quality Management**

Sekisui Chemical Group has developed quality-control systems covering every process from production through product use by customers. Each section has developed a quality-assurance system, and in each process we promote controls on a daily basis following the PDCA<sup>1</sup> management cycle. In developing products and making improvements to quality, we conduct screening from a variety of perspectives, such as those of quality assurance and safety. In fiscal 2011, we developed screening standards and check sheets. Our business sites also made progress on becoming certified under the ISO 9001 standard, as the total number of Sekisui Chemical Group business sites and departments certified under this standard rose to 95. The number of employees at these ISO 9001-certified business sites and departments represents 59% of all Sekisui Chemical Group employees.

In fiscal 2012, we will focus on development of quality-assurance systems suited to the globalization of business.

#### 1 PDCA

P = Plan (planning), D = Do (implementation, operation), C = Check (checkup, corrective action), A = Action (improvement, review)

#### Seminars on Day-to-day Management

In production sections, we hold seminars on everyday management for manager-class personnel in charge of production and quality control, to raise awareness among managers in each production workplace and encourage thorough controls on everyday management.

seminar on day-to-day hanagement aise ge

In fiscal 2011 we held a seminar lectured by an outside auditor for Sekisui Chemical. A total of 46 persons took part in this seminar. We also received advice and proposals on thinking regarding the PDCA cycle, how to use the implementation procedures for QC stories and cause-and-effect diagrams<sup>2</sup> in everyday business activities, and the ideal forms that Sekisui Chemical Group management and quality control should take in light of audit results at each division company and plant.

#### 2 Cause-and-effect diagrams

Diagrams showing the conceivable causes of an effect, giving consideration to the hierarchical structure of causes



#### **MONOZUKURI Workplace Leader**

Since fiscal 2008 we have held "MONOZUKURI Workplace Leader Development/Training Courses" on the subject of the current state of everyday management at production sites. These are events in which manufacturing-site leader level personnel visit production sites and then, following a site tour, discuss the themes of 5S<sup>1</sup> and visualization. Through observing other business sites and products, and speaking with participants who work in other sites, attendees can gain insights and knowledge on practical operations. In fiscal 2011, four sessions were held, with 63 personnel from 26 sites taking part.

#### 1 The "5S" process

A slogan used in maintenance and improvement of the workplace environment. The five "S's" are organization (seiri), orderliness (seiton), cleaning (seiso), cleanliness (seiketsu), and discipline (shitsuke).

#### Activity of the Manufacturing Development **Innovation Center**

Aiming to decrease loss costs by raising the standard of manufacturing in the workplace, the Manufacturing Development Innovation Center, a cross-functional organization charged with promotion of enhancement of manufacturing development throughout Sekisui Chemical Group as a whole, has set the target of contributing 20 billion yen to profits in fiscal 2013 (vs. fiscal 2010) and the three priority themes of zero defects and doubled productivity, halving energy use, and renewing manufacturing development overseas.





Priority Theme

#### **Building the Zero-Defect Line: Zero Defects and Doubled Productivity**

Sekisui Chemical Group is striving to reduce product defects and increase productivity through its own methods combining quality engineering with automated controls, based on quality maintenance.

For example, in fiscal 2011 Ritto Sekisui Industry Co., Ltd. began the new initiative of organizing information on past construction-related defects in its rehabilitation pipe production lines and assessing quality risks. Based on the results of this initiative, it advanced (i) revision of standards, (ii) equipment improvements, (iii) optimization of manufacturing conditions, and (iv) automated controls. This has enabled it to cut the volume of defective products disposed of as waste by 19 tons vs. last year.

#### Advancing awareness and production innovations in overseas

Sekisui Chemical Group began activities to renew manufacturing development overseas in fiscal 2009, with the goal of strengthening the manufacturing-development foundation and production capacity at production sites overseas. Through these efforts, it has advanced production innovations at such sites.

In fiscal 2011, it conducted these activities with a focus on improvement abilities and safety abilities. As an example, in the area of improvement abilities it held local plant manager meetings and, in Europe, KAIZEN Activities Presentation.



A plant manager

meeting in Europ

#### **Energy Saving Activity: Halving Energy Use**

Since fiscal 2009, Sekisui Chemical Group has carried out activities to make improvements based on identifying losses from the two perspectives of the functions its equipment has and the timing of energy inputs. The goal is to further decrease energy consumption in production. Five business sites began these activities during fiscal 2011, bringing the total to 16 sites. A future goal is to deploy the activities to all business sites in Japan.

In addition, in responding to the need to conserve electricity during the summer of 2011 a study meeting was held focusing on cutting electricity used in lighting, as an effort that could be implemented

group-wide with immediate effects. Activities carried out included turning off some lights while leaving on only enough for the amount of lighting needed and introducing LEDs and solar concentrators.

Products Company **Urban Infrastructure &** 

Three Prominences

CS & Quality

Resources Human

Business and CSR

Solar concentrators installed in a plant

## Human Resources

Encouraging Individual Prominence and Self-Realization, and Contributing to Society through Business Raise corporate value by stimulating diverse human resources

Prominence in Business and CSR

Prominent Human Resources Self-realization



Workplaces where diverse human resources can thrive Rewarding workplaces

Employees are "precious assets bestowed on us by society"



As the globalization of its businesses accelerates, the employees who work at Sekisui Chemical Group are growing more diverse as well. We are advancing efforts to increase opportunities for more people to thrive on the global stage and to promote creation of

various working styles and safe and secure work environments, respecting the diversity, personalities, and individuality of our employees in each region. We will put even more effort into human-resources development in order to realize a strong Sekisui Chemical Group that can continue growing and demonstrating its presence even 100 years in the future, by addressing head-on the environmental changes that will occur in the future, such as various changes to the business environments in Japan and worldwide along with further intensification of competition in global markets.

For the Human Resources and Human Rights Policy and System, see the "Data Book," p. 20, 22

#### **Our Concept of Human Resources Development**

Based on our concept of enabling human resources to perform and grow, Sekisui Chemical Group strives to develop human resources who can think and act independently. In addition, based on the idea that "employees are precious assets bestowed on us by society," Sekisui Chemical Group strives to create environments where employees can do their jobs with a sense of safety and security and that help them aim for self-fulfillment by growing as professionals while developing their own skills (strengths).

Furthermore, based on our belief that support for employees who have can-do spirit will lead to the growth of the organization and our businesses, we provide our employees with opportunities to take on challenges on their own.

#### Human Resources Development Midterm Plan

Together with the sustainable growth of its business, Sekisui Chemical Group also aims to achieve conditions in which each member of its diverse human resources can thrive on the global stage, whether working in Japan or overseas. Toward realization of these conditions, we are formulating a plan in fiscal 2013 to develop opportunities and systems for individual growth.

In fiscal 2011, together with making progress on developing an environment where human resources can thrive on the global stage, chiefly in the U.S., we also reformed our HR system in light of the need to move toward sustainable growth in both business and human resources.

In the future as well, we will make progress toward realizing the conditions we are aiming for, by deploying globally the current efforts to develop such an environment.

Key theme Main measures in fiscal 2011		Efforts	
	Group-wide human-resources development	HR management system reforms	
	Training of domestic employees for globalization	<ul> <li>Global Trainee Program</li> <li>Global employee program: 271 "Global Talents" employees</li> </ul>	
Global talents	International recruiting	<ul> <li>Recruited people at the Boston Career Forum (one of America's largest recruiting events for international students)</li> <li>Expanded international hiring by 27%</li> </ul>	
	Training of local managers	<ul> <li>Advanced HR measures targeting the U.S. in particular (held training programs for specific employee ranks, internal job posting)</li> <li>Held training for candidates for the next genera- tion of managers of Group companies in China</li> </ul>	
Consulation	Internal job posting	• 13 transfers out of 13 job postings	
Career development & evaluation	Career training	<ul> <li>Deployed to Group companies</li> <li>Trained career advisors</li> </ul>	
	Work-life balance	<ul> <li>Held seminars (total of 20 times/three-year period, with 1,400 attendees in total)</li> </ul>	
Diversity	Women's empowerment, supporting raising the next generation children	<ul> <li>Expanded hiring</li> <li>Held training for Group companies (for employees and their supervisors)</li> <li>Expanded programs in support of raising the next-generation children</li> </ul>	
	Mental-healthcare	<ul> <li>Implemented care for disaster victims (300 people)</li> <li>Held training for business sites (five times)</li> <li>Implemented care for business sites</li> </ul>	



## Global Talents Aiming to improve the HR power of the Group

In preparation for the changing times ahead, to ensure that each and every employee sees his or her work from a global perspective at all times and has a sense of mission and responsibility for the company's future, and to pass along and *shinka* (evolve) our traditional strengths, it is important to draw and make the most of the self-growth potential of each individual. Based on this concept, each company in Sekisui Chemical Group, including those outside Japan, is working to improve the strength of its human resources toward realizing an enterprise characterized by sustained growth.

#### Human Resources Development

The business conditions in which Sekisui Chemical Group operates continue to undergo changes including the maturing of the Japanese market, growing demand in emerging countries, advancing manufacturing abilities in foreign countries, and rapidly aging population and decreasing birth rates in Japan. In response, in fiscal 2011 we developed a system intended to create a strong Sekisui Chemical Group that can continue demonstrating its presence even 100 years in the future. This new HR system will start in July 2012, first targeting full-time employees of Sekisui Chemical.

## Clarifying the Human Resources Required in Two Separate Courses

The new HR system consists of two courses: the Business Career Course focusing on generating human resources who can shoulder core business responsibilities and the Expert Course focusing on generating professionals in practical fields.

The Business Career Course will facilitate significant growth on the part of participating employees through familiarizing themselves with high perspective business execution skills from an early stage. The Expert Career Course will enable employees to generate results, skills, and influence in specific fields by familiarizing themselves with advanced practical abilities through deepening their knowledge and skills over the long term. Employees also can choose to switch courses as their careers develop.

### <mark>Globa</mark>l Talents

Since 2000, Sekisui Chemical Group has been expanding its businesses overseas, by opening production facilities mainly in China and chiefly through mergers and acquisitions. The current midterm management plan includes the target of roughly doubling the percentage of sales overseas from the fiscal 2011 figure, to 30%. In fiscal 2011, the number of overseas employees in the group as a whole totaled approximately 5,100 – about 24% of all employees.

Therefore, Sekisui Chemical Group needs to secure and train "Global Talents" employees<sup>1</sup> to ensure the group's sustained growth. Based on this concept, we are advancing the following HR strategies for "Global Talents" employees:

(i) Training of domestic employees for globalization(ii) International recruiting(iii) Training of local managers

#### 1 "Global Talents" employees:

Employees capable of thriving on a global stage with not only language and communication skills and specialization but also the ability to support and grow business overseas.



#### **HR Activities and Future Developments**

#### Training of Domestic Employees for Globalization

VOICE

A total of 1,558 Group employees in Japan have signed up for the Global Employee System intended to train "Global Talents" employees. These employees underwent training on different cultures and specialized training as needed for overseas assignment.

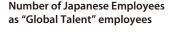
Sekisui Chemical Group also has established the Global Trainee Program, which enables participants to build up real-world experience overseas. This program provides employees with experience in doing business overseas by sending applicants with sufficient levels of experience from specific positions such as sales, accounting, and development to positions at overseas affiliates.

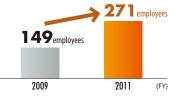
Through these activities, we aim to increase the number of Japanese employees immediately ready to serve in overseas to 300 by fiscal 2013 (from a number of 271 in fiscal 2011).

Using the Global Trainee Program, I was assigned to Kydex, LLC. in the U.S., where I worked on validation, using actual large production equipment, of fire-resistant plastic sheets developed in Japan. While this was a tough environment in which I needed to overcome not just technical but also cultural and communication hurdles, I was able to acquire the skills needed to work overseas, such as a spirit of enterprise and bargaining ability.

.....

I think a benefit of the trainee program is the way it improves both language and practical abilities. Just learning a language overseas simply provides the student with a tool to use, but putting the tool of language to full use in practice to build relations of trust with staff overseas gave me considerable self-confidence.







#### Kyoto Research & Development Laboratories Technology & Development Division Urban Infrastructure & Environmental Products Company Sekisui Chemical Co., Ltd.

#### International Recruiting

The effort of Sekisui Chemical Group in addition to global training of Japanese employees is aggressive hiring of human resources with experience living overseas, such as foreign exchange students and non-Japanese candidates. In particular, we continue to hire large numbers of international students from Japan at the Boston Career Forum<sup>1</sup>, the largest Japanese-English bilingual job fair in the United States, where we have taken part since fiscal 2008. In hiring of new university graduates in Japan as well, we are providing introductions to the globalization of our businesses and clearly identifying "Global Talents" employees as one of the ideal types of human resources we seek to hire.

As a result, the percentage of new graduates joining the company in fiscal 2012 with experience living overseas was 27%, and we plan to advance activities to hire foreign exchange students and non-Japanese candidates as we aim to increase this percentage to 40% in fiscal 2013.

#### 1 Boston Career Forum

A Japanese-English bilingual job fair begun in 1987. More than 5,000 people take part in this event each year.

Three Prominences

CS & Quality

Human Resources

Business and CSR

#### **Training of Local Managers**

In fiscal 2011, Sekisui Chemical Group conducted training of local managers in China and the United States.

In China, we held management innovation training intended to further raise the levels of managers' knowledge and skills. Twelve managers took part in this training. In this training, managers analyze the gaps between self-recognition and multifaceted evaluations and learn insights for future reforms.

In addition, in the U.S. we established a new HR function at Sekisui America Corporation, the area headquarters company, and held training on management by objectives (MBO) for local managers, to share information on the policy management of Sekisui Chemical Group (62 persons underwent this training) and training on cross-cultural communication intended to enable smooth organizational management through understanding the histories and backgrounds of different cultures (41 persons underwent this training). Furthermore, in addition to introducing job posting system that shares information on HR needs among Group companies so that employees can apply for jobs they would like to try as part of its career development efforts, it also has begun training sessions for employees stationed in the U.S. to enable them to practice proper management based on a correct understanding of U.S. law.



In the future, we will focus our efforts on leadership education for managers and initiatives toward strengthening local hiring.

VOICE

Over the past year, the 14 North American Sekisui companies have worked together closely to discuss and develop common HR programs, which have generated considerable results. The common programs include inter-company job posting, leadership training, a recruiting website, relocation guidelines, a global ID badge system, and CSR activities. The leadership training included both MBO and intercultural communication training, and it has received very good feedback from managers who appreciated its benefit. The inter-company job postings have already been implemented and have been very well received by employees.

As we look forward, we are excited about continuing common programs and starting operations of new programs within North America. These programs help to create synergies and opportunities that are difficult to establish within the individual businesses.



Joel V. Anderson Human Resources Department Sekisui Specialty Chemicals America, LLC

#### **Supporting Employees Stationed Overseas**

In deciding on the timing of assigning employees overseas and bringing them back, it is very important that the company properly understand the taxation systems of individual countries. At the same time, we also consider it to be very important when deploying business globally, that employees stationed overseas properly submit tax returns and carry out various procedures related to their assignment and return.

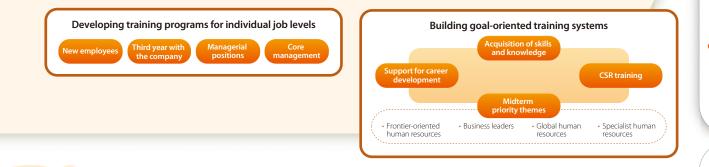
For these reasons, in fiscal 2011 Sekisui Chemical Group surveyed the taxation systems of the 14 countries where it has assigned personnel and prepared a handbook for understanding taxation systems for personnel on overseas assignment, distributing it to the employees and their supervisors.

## Human Resources

#### **Career Development & Evaluation**

## Fostering a Culture in which Employees Learn and Grow on Their Own through Support for Career Plans

Sekisui Chemical Group carries out training for specific employee ranks, providing a variety of options corresponding to employees' positions and skills, based on the following four pillars: acquisition of skills and knowledge, which helps improve communication, technical skills, business literacy, and other aptitudes; support for career development, which supports employees taking a positive approach to developing their own careers; efforts to address midterm priority themes, such as development of frontier-oriented human resources, business leaders, global human resources, and specialist human resources; and CSR training to ensure thorough adherence to CSR management policies.



#### **Activities and Future Developments**

Sekisui Chemical Group holds Sekisui Innovation School led by Sekisui Chemical operating officers as the headmaster to train leaders who will be responsible for the Group's future. In fiscal 2011, 67 young employees took part diligently in this training, led by eight headmasters.

In addition, in order for each individual employee to think about his or her own medium- to long-term career plan, the Age-wise Career Plan Training is provided according to the career stages of each employee (up to three years after joining the company and the ages of 30, 40, 50, and 55 years). In fiscal 2011 this training was expanded to cover employees of

#### VOICE

The theme of the Innovation School I attended was "Next MONOZUKURI SHINKA." In this class, we made clear what makes up Sekisui Chemical's prominence and what should be the subject of *shinka* (evolution). I think that the way we were able to give form to our ideas on these subjects, reflecting the thoughts of those in the school, was a very valuable experience. In the future as well, I would like to advance my own practice of "MONOZUKURI SHINKA."

Group companies as well, providing support for independent career planning by employees. Furthermore, 103 career advisors at 54 business sites play an important role in human-resources development in Sekisui Chemical Group. To support and promote their activities, we also provide support for career advisors themselves, through means such as training by outside experts and establishing opportunities for interaction with key persons providing career support at other companies. Beginning in fiscal 2012, we will expand these activities to Group companies.

#### **Example of Employee Education Program**

Since fiscal 2010 Sekisui S-LEC (Suzhou) Co., Ltd. has supported employee education using a training program held at the Suzhou city library. Its goal is to improve employee retention. The program employs a system under which employees can take part voluntarily, and its curriculum covers a broad range of areas, from basic knowledge such as business etiquette through specialized fields. It makes it possible for employees to undergo training freely, during working hours, on any subject that they think would facilitate their own growth. In fiscal 2011 a total of 80 employees took part in this training.

## Seller

Masahiro Nishii

Building Materials Production Department, Tokyo Plant Urban Infrastructure & Environmental Products Company Sekisui Chemical Co., Ltd.

Corporate Social Responsibility Report 2012

Urban Infrastructure & Environmental Products Company

> High Performance Plastics Company

> > Bases of CSF

30

Human Resources

Business and CSR



#### **Decent Work and Diversity**

## Advancing a variety of initiatives to build workplaces where employees can thrive with vitality

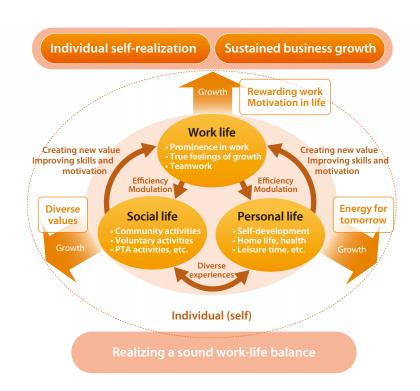
As diversification of values advances rapidly in connection with economic and social globalization, Sekisui Chemical Group is advancing a variety of efforts aimed at building workplaces where diverse human resources can work with peace of mind. This is intended to respond to changes in the business environment and to achieve the further growth of the group itself.

In addition, we have established "respect for diversity" as the clear motto of our "Human Resources and Human Rights Policy," aiming to build workplaces where everybody can thrive with vitality while doing rewarding work, regardless of factors such as gender, nationality, age, or type of employment. We continue building an understanding and raising awareness of these values among employees, through training, various seminars, and other activities.

#### Work-Life Balance

Sekisui Chemical Group believes that a work-life balance is realized through self-improvement outside working hours in addition to fulfilling work, and that by utilizing the new experiences, knowledge and values employees have gained outside the workplaces, company can further grow and develop. Based on this concept, we actively promote the realization of a sound work-life balance.

In fiscal 2011, for the understanding and raising awareness of Sekisui Chemical Group's concept of work-life balance, seminars at individual business sites were held in addition to regular training and seminars.



#### **Women's Empowerment**

Sekisui Chemical Group is working on empowerment of women throughout the group, so that highly motivated women can continue to work with vitality. This is intended to cultivate a more flexible corporate culture in response to diversifying market needs as well as the decreasing population of the workforce as a result of low birth rates and the aging population.

The main activity in fiscal 2011 was career-planning training for young employees, provided to younger employees in their first through fourth years with the company, regardless of gender. A management seminar on working with younger subordinates was held as well, for these employees' superiors. In this way, we strived proactively to support the development of younger employees, including men. At the same time, we also held management seminars on women subordinates, in which supervisors of women employees learned about HR development and guidance including balancing women's work and life events, and career design seminars for women housing-sales personnel.

CS & Quality

Human Resources

Kinki Public Sector Sales Office Public Sector Value Chain Sales

Nishinihon Sales Headquarters Urban Infrastructure & Environmental Products Company Sekisui Chemical Co., Ltd.

Department

Business and CSR

## Urban Infrastructure & Environmental Products Company

## High Performance Plastics Company

## Bases of CSF

#### **Supporting Raising the Next-Generation Children**

To ensure that the careers of highly motivated women employees will not be cut short by life events and to enhance systems in support of raising children and create a culture in which such systems are easy to use, so that men too can use them actively, Sekisui Chemical Group has carried out efforts including opening up a special-purpose intranet site, making superiors aware of the system, and

producing a guidebook.

In fiscal 2011, lunch meetings were held at three sites for young women employees who want to continue fulfilling careers after childbirth and women employees currently caring for children. These meetings succeeded in providing tips on balancing a career and raising children and in lessening feelings of uncertainty. VOICE

This meeting was very helpful in the way I was able to learn from my seniors, who are working mothers, about the concept behind the systems in support of raising children, expertise about using these systems effectively, actual examples of balancing a career and raising children, and tips and hints for balancing them well. In addition, participants interacted broadly with each other as well, and even now I find these contacts helpful in sharing information and forming networks.

#### Healthcare of Employees

Under the subject heading "Creating Safe and Secure Work Environments," Sekisui Chemical Group's Basic Policy on Human Resources (see "Data Book," p. 22) states, "We promote employees' health enhancement and mental health care." In addition, in fiscal 2011 we established a policy on mental and physical health management, enhanced follow-up activities after health checkups at each business site, and provided mental-health education.

In addition, in fiscal 2010 we established the Sekisui Support Center, whose main activities include providing Group employees with consultation and support on career and mental-health matters. This includes providing individual counseling on subjects including responses to the Great East Japan Earthquake, conducting e-learning, holding group training, and holding seminars for senior executives. The center also has a consulting contract with a clinic of psychosomatic medicine and promotes development of healthy, comfortable workplaces in cooperation with the Japan Industrial Counselors Association.

#### Policy on mental and physical health management

- Employees shall consciously take steps to protect their own health, and the company shall support such health enhancement efforts
- Health enhancement efforts shall be made in the areas of both mental healthcare and physical healthcare (follow-up on health checkups)
- These efforts shall be incorporated into the occupational health and safety management system (OHSMS) and advanced by business sites themselves.

#### **Human Rights**

Sekisui Chemical Group's "Human Resources and Human Rights Policy" prohibits harassment. One example of efforts taken under this prohibition is the harassment training session conducted at Sekisui Polymatech Co., Ltd. in February 2012 for all employees, including all temporary employees, with a focus on everyday business activities. This session was based on the Compliance Manual and the Guidelines on Preventing Harassment. In this session, instead of employing lectures alone, efforts were made to enrich the content through means including exchange of opinions among participants, based on check lists, and providing opportunities for women to exchange opinions freely.



## Aiming to build a global culture of zero workplace accidents

Constructing a work environment in which employees can work with safety and security is one of the most important subjects for management. Sekisui Chemical Group is implementing total safety (i.e., zero occupational injuries, zero equipment-related accidents, zero commuting-related accidents, and zero extended sick leave) activities based on five themes<sup>1</sup>.

#### 1 Five themes

Safety

Intrinsic safety of equipment, management using OHSMS, safety education of employees, risk prevention through KY activities and other initiatives, and auditing of health, safety, and accident prevention.

### Five Pillars of Occupational Health, Safety, and Accident-prevention Activities



#### Safety Midterm Plan

#### Japan

In fiscal 2011, the number of occupational accidents at sites in Japan fell by 10% from the previous year, thanks to the contributions of efforts to strengthen safety management at some production sites. In addition, a Safety Subcommittee was set up under the CSR Committee to ensure safety activities are conducted thoroughly throughout the Sekisui Chemical Group and promote such activities. Efforts to raise employees' safety awareness will continue toward the goal of building a structure for zero work-related accidents in fiscal 2012.

#### Safety Audits

At sites in Japan, second-party certification of OHSMS<sup>2</sup> is being conducted, with 41 sites having been certified as of the end of March 2012. Also, results of the periodic self-auditing that began in fiscal 2010 showed that the number of sites that had not reached the base level (70 points) had halved from 17 sites in fiscal 2010 to eight in fiscal 2011. Furthermore, results of safety audits of 33 sites in Japan showed that in general the state of safety management was a good one.

The safety investigations that began in fiscal 2010 at overseas sites had been conducted at 30 sites through fiscal 2011.

#### 2 OHSMS (Occupational Health and Safety Management System)

Activities to manage occupational health and safety and reduce risks through implementing risk assessment for the workplace as a whole and running through the plan-do-check-act (PDCA) management cycle, based on occupational health and safety policies.

#### **Activities of Production Sites in Japan**

#### Safety Conference

In July 2011, the Sekisui Chemical Group Safety Conference was held at the Kyoto Research & Development Laboratories. A total of 188 employees and members of management took part in activities including the annual safety awards and introductions to

examples of safety activities by sites with superior safety performance, resolving as a group to building a culture of zero workplace accidents. Plans call for holding Safety Conferences in four areas overseas



(Europe, the Americas, Asia/Pacific, and China) beginning in fiscal 2012.

#### **Accident-prevention Risk Assessments**

Risk assessments to lessen the risk of fire or explosion, which could cause significant damage, have been underway since the second half of fiscal 2009. At production sites, institutes, and laboratories in Japan, these assessments had identified 820 risks by August 2011, and plans call for completion of improvements to these risks by fiscal 2013.

#### **Activities of Construction Sites in Japan**

#### Safety Efforts in Accordance with Business Characteristics

Construction supervisors, who take leadership at Sekisui Heim erection sites, need communication skills to advance construction while coordinating with numerous partner companies as well as a high sensitivity to risk. For this reason, since fiscal 2010 the Housing Company has implemented Site Leaders Training for Construction Sections, with 114 persons from eight sites taking part during fiscal 2011.

In addition, the Urban Infrastructure & Environmental Products Company, which is involved in a wide range of businesses from large scale construction projects such as culvert rehabilitation and construction of water-processing facilities to small scale construction of modular bath installation, is advancing efforts to create safe working environments through sharing information on good and bad examples from construction site safety investigation and related improvements.

## Activities of Production Sites Overseas

#### **Global Safety Enhancement Program**

As of March 2011, the number of overseas production sites of Sekisui Chemical Group totaled 52, more than the number of production sites, institutes, and laboratories in Japan (49 sites), and their number is expected to grow in the future as well. Securing safety at these sites is an important topic in management, and safety investigation conducted at 17 sites showed that there were some overlooking of sources of risks that could lead to accidents and delays in making improvements. Improvement activities will advance in the future to prevent serious accidents before they occur.

In addition, to raise the level of safety management, safety training is being held in China and training is underway for top management and personnel with responsibility for safety at business sites.

#### **Developing Human Resources with Strong Safety Skills**

Site Leaders Training has been underway since fiscal 2010 to train leaders capable of identifying and improving risks. This training is provided for personnel in leadership positions on the front lines of worksites, and helps them recognize the importance of their roles, through confirmation of laws, regulations, and other requirements, understanding the causes of workplace accidents, and exercises in patrols and improvements. In fiscal 2011, 269 persons underwent this training at 13 sites.

#### **Achieving Intrinsic Safety of Equipment**

To make the Equipment Safety Design Standard that went into effect in fiscal 2005 more effective, in fiscal 2011 we developed an operation manual to aid in understanding the intents and objectives of the standards. In addition, Basic Safety Standard Check Sheets were adopted for efficient checking of compliance with the standards.

## Sekisui Heim Kinki Co., Ltd. Won the Japan Industrial Safety and Health Association Chairman's Award

Sekisui Heim Kinki Co., Ltd. won the Japan Industrial Safety and Health Association Chairman's Award at the 70<sup>th</sup> National Industrial Safety and Health Convention held in October 2011. It won this award for its "outstanding results serving as a model for other firms, through in-house deployment of activities toward zero injuries in which all employees took part and endeavored to build safe, comfortable workplaces with vitality, under the strong resolve of top management."

We have prepared and distributed to every site, a DVD for use in

information on examples of workplace accidents and measures to

prevent their reoccurrence. These are being used to further raise

employees of overseas sites but to non-Japanese employees at

safety education, communicating in 13 languages practical

awareness on safety efforts, by showing them not just to

Safety Education DVD

sites in Japan as well.

Human Resources

Three Prominences

CS & Quality



#### **Efforts of Division Companies**

## Based on the midterm management plan, each division company strives to realize the Three Prominences

#### **Group Vision**

**Business** 

and CSR

In 2009, Sekisui Chemical Group formulated its group vision, identifying the ideal form the group would aim to achieve over the medium to long term.

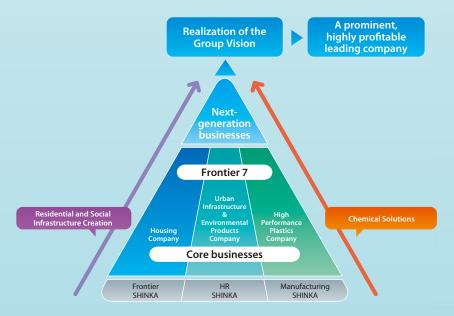
To realize this group vision, it develops management strategies centered on midterm management plans.

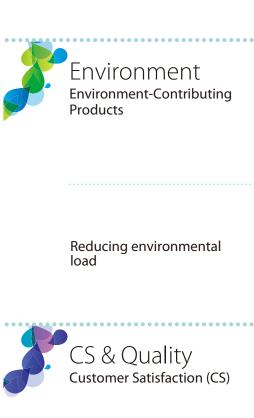
Through prominence in technology and quality, Sekisui Chemical Group will contribute to improving the lives of the people of the world and the earth's environment, by continuing to open up new frontiers in residential and social infrastructure creation and chemical solutions.

#### Midterm Management Plan GS21-SHINKA!

In fiscal 2009, Sekisui Chemical Group formulated the midterm management plan GS21-SHINKA! covering the period through the 2013 fiscal year. Under this plan, with the goal of being a prominent, highly profitable leading company, we will implement our Frontier SHINKA efforts through global deployment and deployment across the value chain and developing new growth segments, along with innovations in production (Manufacturing SHINKA) and human resources (HR SHINKA).

Our business strategies call for establishing what we call the Frontier 7 – seven high-growth fields including the IT, automotive, and medical fields and the pipe rehabilitation and residential environment businesses – and focusing our efforts on these as leading businesses of the future.





Quality

Human Resources Human Resources Development

Safety

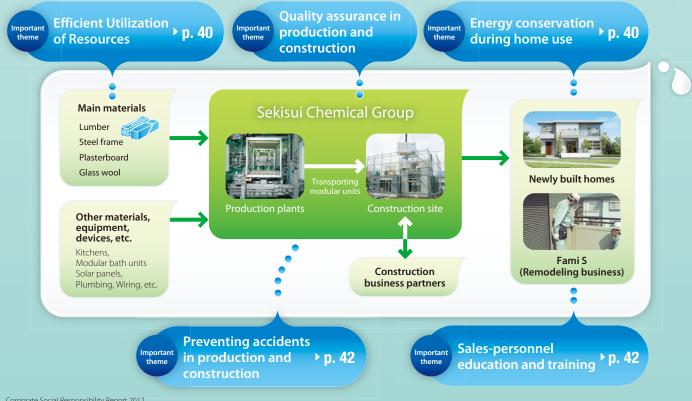
Housing Company         * 37	Urban Infrastructure & Environmental Products Company > 43	High Performance Plastics Company
<ul> <li>Zero Energy Cost House, Smart Heim (p. 38, 40)</li> <li>Installing solar power genera- tion systems on existing Sekisui Heim homes</li> </ul>	<ul> <li>Pipeline renewal method</li> <li>Ground thermal energy system (p. 46)</li> <li>Wastewater thermal energy system (p. 46)</li> </ul>	<ul> <li>High-performance solar-control and noise-control interlayer films</li> <li>Advancell EM thermally expandable microsphere (p. 52)</li> <li>Eco paper core kraft tape (p. 52)</li> <li>Recycled plastic products</li> </ul>
<ul> <li>Reducing wastes at new construction sites</li> <li>Use of recovered cement as vibration control weight (p. 40)</li> <li>Reducing energy consumption through efficiency of production equipment</li> </ul>	<ul> <li>Reducing wastes at production sites</li> <li>Reducing energy consumption through efficiency of production equipment (p. 46)</li> </ul>	<ul> <li>Reducing energy consumption through efficiency of produc- tion equipment (p. 52)</li> <li>Environment-friendly equip- ment renovations (p. 53)</li> </ul>
<ul> <li>Dialogue with Customers (p. 41)</li> <li>Customer Centers (p. 41)</li> <li>Resident surveys</li> <li>Sekisui Heim with advanced air-conditioning/ventilation system (p. 41)</li> </ul>	<ul> <li>Water environmental improvements (p. 44)</li> <li>Expanding pipeline renewal system globally (p. 45)</li> <li>Full automated pipeline renewal system (p. 47)</li> </ul>	<ul> <li>High-performance UV-blocking interlayer films</li> <li>NORUDIA N HbA1 diabetes diagnostic reagent (p. 21)</li> <li>Hot-melt adhesive for hygienic products</li> </ul>
<ul> <li>Organizing records of homes</li> <li>Quality-assurance system</li> </ul>	<ul> <li>Improving quality assurance in the value chain</li> <li>Reducing running defects at production site (p. 47)</li> </ul>	<ul> <li>Group KAIZEN activities (p. 53)</li> <li>Promotion of QC qualification test</li> </ul>
<ul> <li>Sales personnel training (p. 42)</li> <li>Expanding hiring of women employees</li> </ul>	• HR training for the value chain business (p. 48)	• HR training (p. 54)
<ul> <li>Safety awareness-raising activities at production plants (p. 42)</li> <li>Safety education at construc- tion sites</li> </ul>	<ul> <li>Conducting Safety Training (p. 48)</li> <li>Safety investigations and safe work environments at construc- tion sites</li> </ul>	<ul> <li>Safety training</li> <li>Safety of chemical substances (p. 54)</li> </ul>

# Housing Company

**Providing environment-friendly** homes that can be lived in safely and comfortably for more than 60 years.

#### To Realize Customers' Ideal Homes

With high performance and reliable quality produced at plants, Sekisui Heim responds to the changing times and diverse needs that vary in areas such as family structure, locale, and living environment - for those seeking budget-conscious homes that keep down utilities and repair costs, homes in which they can live in comfort year long with little change in temperature, homes that will protect their families and property from threats such as typhoons, earthquakes, fire, and crime, homes that will help resolve the uncertainties and burdens of raising children, homes in which they can live in peace of mind even in old age, and homes that give consideration to the future of the environment - by providing homes in which anybody can continue to live with peace of mind for years to come.



Safety

**Main issues** 

concerning homes

Comfort

Environmental

performance

Economic

performance

Disaster-

prevention

features

# Supplying Heim with comfort, safety and security through plant production and empirical testing



The basic need that people seek to fill in a home, as the foundation of everyday living, is that of enabling each member of the family to live each day in comfort and peace of mind.

Through a strong structure called "Box-Rahmen Structure,"<sup>1</sup> realized through modular construction, and use of exterior wall materials and roofing materials with outstanding fireproofing and waterproofing performance, Sekisui Heim's homes demonstrate their strengths in the event of emergencies such as earthquakes, typhoons, and fires. In addition, by combining together efficient air-conditioning and ventilation systems based on high levels of thermal insulation and airtightness, they realize comfortable spaces with little differences in temperature throughout the house.

It is Sekisui Heim's unique home-building methods that support such outstanding fundamental home performance. In the development stage, Sekisui Heim verifies performance through tests including various testing of materials and full-scale testing. In the erection stage, it ensures quality meets planned levels through producing the majority of the building at plants.

#### 1 "Box-Rahmen Structure"

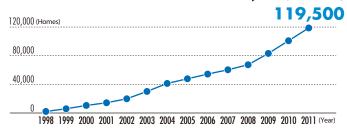
A modular structure in which steel pillars and beams are joined together in a box shape, so that even a single unit can demonstrate strength like that of a shelter against massive earthquakes.



Aseismic empirical testing

Bases of CSF

Number of Homes Sold with Solar Power Generation Systems (Cumulative)



# **Proposing Balance** Between Ecology and Economy

As prevention of global warming becomes a topic of concern around the world, there is a need for environmental considerations, including reducing CO<sub>2</sub> emissions in homes as well. A look at the entire life cycle of a home from procurement of materials through construction, living in the home, demolition, and disposal or recycling, shows that CO<sub>2</sub> emissions during living in the home account for a share of 60 - 80%<sup>2</sup> of total emissions, and as such there is a strong need to reduce these emissions.

Together with its customers, Sekisui Heim has strived to reduce use of electricity in the home, for example by being prompt at working on installing solar power generation systems that put natural energy to use. The Zero-Utility-Cost House, which greatly reduces CO<sub>2</sub> emissions from energy used for living, and keeps down annual utility costs, can be described as a home that achieves balance between ecology and economy.

2 Source

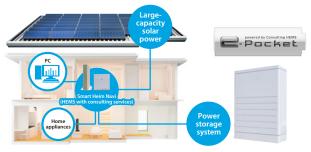
Sekisui Chemical estimate

Three Prominences

# From Ecology to Sustainability

In today's Japan, where reviewing the supply of and demand for electricity is an issue of concern along with the need to counter global warming, controlling the volume of electricity used in living activities is growing in importance. However, it is not easy to continue energy-conservation activities to the level that they lower the quality of life. What homebuilders need to do is to provide sustainable<sup>1</sup> homes that balance comfort with energy conservation.

To respond to such demands of society, Sekisui Heim has further advanced the Zero-Utility-Cost House concept to increase customer awareness of the environment and economics through



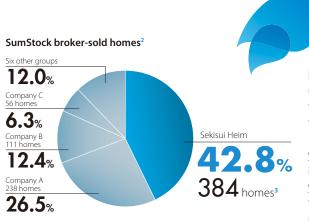
Smart Heim conceptual diagram

standard installation of the Smart Heim Navi, which uses advanced information technology to make home energy use visible. The buildup of energy-conservation activities in individual customers' homes (in fiscal 2011 the ratio of zero utilities costs was 80%) will make considerable contributions to conservation of electricity throughout society as a whole.

Furthermore, in 2012 we began proposing Shin Smart Heim houses that combine Smart Heim with large-capacity solar power generation and storage cells, to generate and store a full supply of electricity. These will contribute to realizing a sustainable society through leveling use of electricity over the year and throughout society as a whole.

#### 1 Sustainable

Able to continue perpetually while maintaining current conditions, without destroying the environment



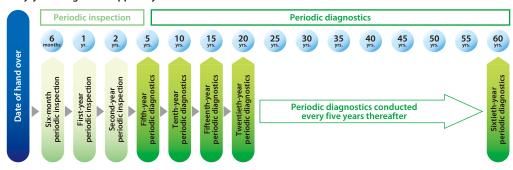
**2** Graph figures are for the period August 2008 – February 2012.

3 Of the 897 homes sold by the 10 groups that are SumStock members, 384 were sold by the Sekisui Heim real estate group. (As of February 2012, according to Sekisui Chemical research)

# Supporting Customers

Homes need to be able to maintain their functions and performance unchanging over time so that their residents can continue to live in them in comfort and peace of mind for a long time and leave them to the next generation as assets to society.

Sekisui Heim supports residents in living in their homes for 60 years from when they first move in, through detailed periodic inspections and diagnostics conducted six months, one year, two years, and five years after moving in and then every five years thereafter. In addition, through keeping records of home use including maintenance as needed based on the resident database system distinctive of industrialized houses and of renovation to meet changes in family structure and lifestyle, it can increase the asset value of homes as residential stock.



#### Sixty-year Long-term Support System

Housing Company

#### **Examples of Activities**

#### Smart Heim Navi



In 2011, the Housing Company began sale of Smart Heim homes installed with Smart Heim Navi, which represents further progress on balancing ecology and economy. It sold approximately 10,000 of these homes through April 2012. Smart Heim Navi measures the state of energy use in the home in detail and makes it visible, as well as using data on energy use accumulated through supplying homes with solar-power generation to provide advice on the optimal ways of using equipment and on methods of reducing utilities costs. This makes it possible to eliminate wasteful use of electricity without sacrificing comfort.

Through this series of activities, we realize energy savings of approximately 10% and 15-20% reductions in utilities costs (according to empirical testing by Sekisui Chemical).



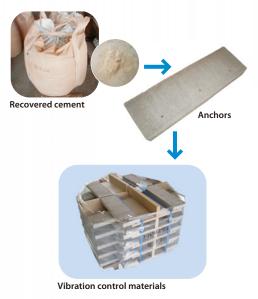
The most important characteristics of Smart Heim homes are visualization and consulting services. After starting development from a clean slate in 2007, we faced difficulties day after day as things did not go as planned. With the cooperation and advice of many people both inside and outside the company, we finally were able to complete the project in April 2011. While the road was a long one, I believe that these homes combine together the expertise we have built up through now in homes installed with solar power generation systems and the resourcefulness of Sekisui Chemical Group.

We will continue to evolve the Smart Heim homes in the future as well, to provide homes that balance environmental concerns with comfort.



A Smart Heim Navi screen

#### Use of Recovered as Vibration Control Weight 📟



The Gunma site of Sekisui Board Co., Ltd., which produces exterior panels made of cement and wood chips, is promoting recycling of remnants generated in the manufacturing process, as one part of its efforts toward zero waste emissions. After breaking down and sorting the remnants on site, wood chips are reused as raw materials, while recycling of cement was outsourced to an off-site recycling processor.

After studying reuse of this cement with Tokyo Sekisui Heim Industry Co., Ltd., the decision was made to use it as raw materials for vibration control anchors, used to control floor vibration. Traditionally, these anchors have been produced by cutting and gluing plasterboard, but the two companies were able to realize the high specific gravity needed for the anchors through combining the recovered cement with other materials and pressing them. This results in not just reducing wastes transported off company premises, but also leads to cost benefits in areas such as raw material costs.

We will strive to put resources to effective use through efforts such as these in the future as well.

Masato Oota

Technology Department Housing Company

Sekisui Chemical Co., Ltd.

Compan

#### Sekisui Heim with Advanced Air-Conditioning and Ventilation Systems

Sekisui Heim's KAITEKI AIRY air-conditioning and ventilation systems for use year-long supply high-quality air to the entire home year-long and realize a stable air environment, through combining heating, cooling, and dehumidification units in the space beneath the floor with ventilation systems.

KAITEKI AIRY has won the grand prize in the Attractive Qualities Screening System, a system in which outsiders assess the attractive qualities of the Group's products (see p. 21). In the selection and judging process, it was evaluated to be "highly unique on points such as its focus on not just comfortable temperature and humidity but the quality of air as well, and the way it avoids impacting room layout or building structure by making use of the considerable space under the floor that is a characteristic of modular construction." Comparison of Annual Utilities Costs and CO<sub>2</sub> Emissions (Tokyo) (Based on Sekisui Chemical Research)

#### **4.0** (Topr 20 200 100 0 u ousand ven) Heater floor heating (Class 1 ventilation) Approx. 3.2 tons Approx. 157 thousand yer Heat-pump floor heating (Class 1 ventilation) Approx. 86 thousand ver Approx. 1.7 tons **KAITFKI AIRY** (Class 1 ventilation) Approx. 71 Approx. 1.4 tons thousand yen

#### VOICE

We worked on this system with the high goal of realizing both energy conservation and comfort all year long, not just during winter, by putting to use the benefits of Sekisui Heim. For this reason, it was a very difficult development process, involving tasks such as testing new functions and efforts to achieve thorough cost savings.

Still, after introducing Kaiteki Airy, the system was used in many more homes than we had targeted starting in its first fiscal year, that the difficulty was worth it. In the future we would like to make it an even more comfortable product through reflecting customer and sales feedback in even greater detail. **Toru Suzuki** Sales Department, Housing Division, Housing Company Sekisui Chemical Co., Ltd.

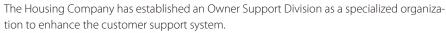
#### Dialogue with Customers



1 CAT

The term comes from the first letters of the words "Customer And Top management."

#### Expanding the Number of Customer Centers



The Owner Support Division set up Customer Centers across Japan to enable customers living in Sekisui Heim to continue living with further comfort and peace of mind, and to provide them with a place where they can consult freely on any subject. It completed the process of setting up these centers in fiscal 2011.



# CS & Quality

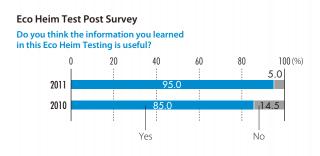
# High Performance Plastics Company

### Sales Personnel Training

In the housing sales business, the quality of the human resources of sales personnel who interact directly with customers is very important. Not only do they need the abilities to communicate and to propose solutions, but they are also required to have a broad range of specialized knowledge in areas such as products, laws, taxes, and funding. Also essential are efforts to absorb the latest information at all times, since laws, taxes, and other related matters are amended constantly.

In the Housing Company, as numbers of younger sales personnel increase along with business growth, improving this quality of human resources is becoming a pressing need. For this reason, since fiscal 2009 we have continued to conduct each year a unique education program called Eco Heim Testing.

This testing teaches general knowledge needed in sales, such as basic knowledge of housing sales and



knowledge of our products, in the format of a test of 100 or more questions. In principle, all sales personnel take part. These efforts support activities to receive orders by maintaining the level of knowledge of sales personnel.

#### Safety Awareness-raising Activities at Production Plants

At production plants, which shoulder the bulk of housing construction, workers need to be able to handle each of a large number of diverse parts and materials based on accurate knowledge. In addition, since versatile work is required as well, the scope of activities at a production site is broad ranging, and ensuring safety is an important issue.

Based on this recognition, Tokyo Sekisui Heim Industry Co., Ltd. has strived to increase sensitivity to safety and to develop a culture in which people place importance on safety, through activities including Morale Improvement Training and Site Leaders Training.

In fiscal 2011, the company enlivened voluntary improvement activities through reforms to safety awareness, with manufacturing site leaders playing a central role. These efforts established 12 specific points over the year on subjects such as whether lessons from similar accidents at Sekisui or other firms are deployed horizontally and whether the hand positions are made clear when working with tools such as riveters, tackers, and nailers. Improvements were advanced with the participation of all employees in all workplaces. Thanks to such activities, the company achieved a level of zero injuries in fiscal 2011.

#### Main Efforts

- Making clear the operation methods of risky acts identified from day to day
- Preparing procedures and key points for similar tasks for which rules are in place but are not clearly defined
- Setting up places for storage of surplus materials; improvements in conditions such as materials protruding from their designated spaces and those stored directly on the floor
- Raising awareness through KY (risk-detection) using "one-point sheets"
- Implementing KY using "one-point sheets" in morning KY
- Holding weekly practical training sessions on pointing and calling activities, on a per-team basis

Instructions and guidance to protect subordinates from accidents are essential in the workplace. Site Leaders Training, which ensures safety awareness to take firm root in actual site leaders, has been intended to improve the abilities to communicate, act, and move quickly in the actual workplace as topics for subordinates and to create a culture in which rules are followed. Future training will promote development of human resources who can speak freely about anything, by designating a person in charge of safety out of ordinary team members.

VOICE



Hiroyuki Sekine Production Department Tokyo Sekisui Heim Industry Co., Ltd.

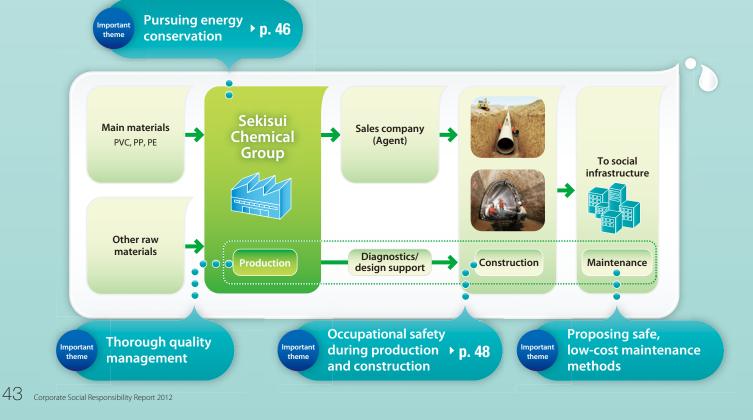
# Urban Infrastructure & Environmental Products Company

"Lifeline Innovation for Our Future" Contributing to building safe, comfortable infrastructure and water environments as an environment solutions company

# Meeting Infrastructure Needs that Vary by Region, on a Global Scale

The demands placed on infrastructure are of infinite variety, as for example developing countries require securing stable water resources, developed countries need to address ageing of infrastructure, and earthquake-prone regions require development of infrastructure resistant to disaster. The Urban Infrastructure & Environmental Products Company uses the wealth of technologies and expertise it has accumulated centered on pipe systems to meet, on a global basis, infrastructure needs that are growing in both diversity and complexity. It contributes to development of safe, secure social environments through supplying a broad range of products, including plastic Eslon pipes characterized by light weight, high durability, and ease of construction, pipe rehabilitation systems with low levels of impact on the environment and society, and residential building materials that help create comfortable spaces for living.



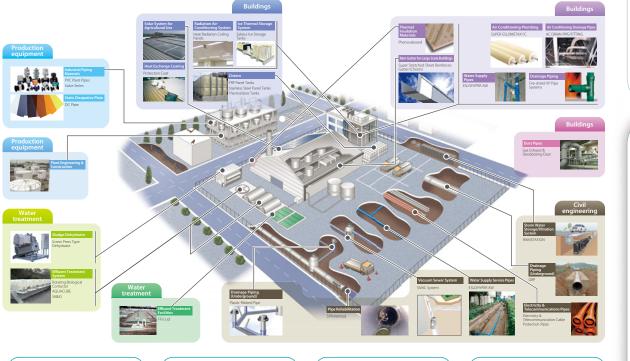




# Deploying Value-Chain Businesses that Meet the Needs of Society

In addition to the collective strength to handle a diverse range of parts and materials, deploying business in connection with the water environment and infrastructure requires the expertise to control quality and costs in total, including not just the quality and costs of parts and materials themselves but also those of diagnostics services and construction.

The Urban Infrastructure & Environmental Products Company meets society's needs from a variety of aspects from increasing the reliability of infrastructure through cutting costs using overall optimization, consideration for the environment in areas such as reducing wastes, and consideration for the surrounding environment in terms of factors such as traffic congestion, noise, and vibration. It does so by using the strengths of its value chain from research and diagnostics through construction methods, system design, production of parts and materials, construction, and facility maintenance.



Research/Diagnostics) $\bigcirc$  $\bigcirc$ 

We carry out research and diagnostics on plant piping and underground pipes, and when renovation is needed we propose solutions in accordance with the degree of wear and building properties. We propose the optimal designs for new construction, expansion, and renovation of factory facilities such as plant equipment, utility equipment, sewage and sludge treatment facilities, and water supply and drainade facilities. Based on our thorough environmental and safety measures, our highly experienced experts manage quality and processes. They also provide support for on-site adjustments and test runs after completion of construction. We also develop flawless maintenance systems after beginning full operation. In addition to periodic inspections required under laws and regulations, we conduct thorough maintenance and inspections employing a diverse range of technologies. In these ways, we continue to provide responsible, long-term support for safe operation.

# Contributing to Improvements in the Water Environment on a Global Scale

Together with global economic development, shortages have arisen in water needed for living and for agricultural use around the world. To resolve such maldistribution of water, need is growing for water environment-related infrastructure around the world, including long-distance transportation of water from water sources to areas where it is needed and desalination of seawater.

The Urban Infrastructure & Environmental Products Company works proactively to meet infrastructure needs around the world, not just developing infrastructure in Japan. It contributes to improving the world's water environment by putting to use the technologies and expertise it has built up in Japan in areas such as supply of high-quality plastic pipes with outstanding durability and corrosion resistance.



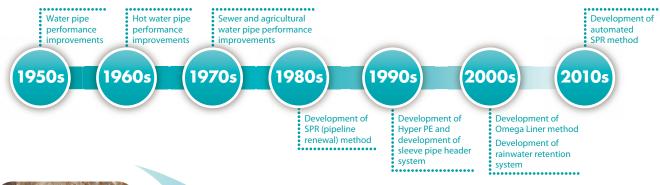
# Contributing to Development of Social Infrastructure through Evolution of Eslon Pipes



Eslon Pipes, plastic pipes boasting superior performance in areas such as quality, cost, suitability to mass production, and safety, maintain top-class performance in the Japanese market in terms of deliveries for water and sewer systems, remaining active on the front lines more than half a century after production began.

Eslon Pipes are used in a wide range of applications, including those of water and sewer systems, agricultural water pipes, and industrial water pipes. They have evolved to be able to withstand use in a variety of environments, including long-term use both indoors and outdoors as well as construction amid sweltering heat or in the middle of winter.

For example, through improving their resistance to impact and heat and expanding their lineup to include products such as large-diameter, high-strength reinforced plastic pipes combined with metals, fiberglass, and other materials, the company has responded to a wide range of piping material needs, thus contributing to development of social infrastructure.





# Expanding pipeline renewal system globally

In developed countries including Japan, many sewer pipes are seeing the ends of their durable lives, and the increase in pipe rehabilitation construction to replace them has become an issue of concern in society.

Traditional pipe rehabilitation construction requires excavating on roads and the ground surface to dig up the buried sewer pipes, leading to problems such as traffic congestion and generation of large volumes of wastes. The SPR non-excavating method, developed by the Urban Infrastructure & Environmental Products Company, contributes to the rehabilitation construction of sewer pipes. From its introduction in 1986 through the end of fiscal 2011, it has contributed in a reduction of a cumulative total of 3.8 million tons in wastes in comparison with excavation methods.

In recent years, in order to deploy this method in countries around the world, it has promoted management of different pipe diameters and cross-sectional forms as well as expansion of construction zones. Furthermore, we also are advancing pipe rehabilitation method from a variety of perspectives, including development of new methods and developing applications in the water supply and agricultural-water fields.



# Aiming to Building a Society with a Safe and Reliable Water Supply

In the future, through means such as public and private sector cooperation in infrastructure development, we will contribute to delivering infrastructure that is best suited to the needs of each region and each project and is strong against earthquakes, floods, droughts, and other disasters and to safe, reliable water supply, through efforts including supply of highly earthquake-resistant flexible polyethylene water and sewer pipes and supplying technologies and systems related to water supply, such as those for water storage and purification.

By meeting needs in social infrastructure development with a wide range of lineup, we boast a top-class share in Japan

Water and sewer pipes made of rigid polyvinyl chloride
Non-excavation sewer pipe rehabilitation method

#### **Examples of Activities**

#### **Reducing Environmental Load through Putting Unutilized Energy to Use**

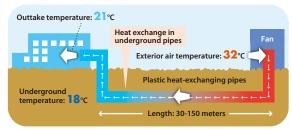
#### Ground thermal energy system

Urban Infrastructure

& Environmental Products Company

> This system helps reduce heating load through intake of exterior air through building ventilation, by passing air through plastic heat-exchanging pipes buried 1–3 meters deep of shallow underground where temperatures are stable year-round. For example, during summer in Hokkaido, it can be covered mostly with cold energy from underground instead of air-conditioning, consuming only enough energy to run the fans.

#### Example of Use During Summer in Hokkaido



#### VOIC

We developed this system as part of our efforts to exploit markets for renewable energy. This product developed from our experience doing construction work and other activities in greenhouses during midsummer and during seasons where PVC pipes would freeze. Many customers have also commented that they have been able to lower the costs of the heating they use to prevent freezing in winter. In the future, we plan to advance development in accordance with regional characteristics and needs, for example through using exhaust to melt snow or using this technology together with natural energy.

> Water-sourced heat Pump unit

Masakazu Abiko (left) Shohei Sugano (right) Sales Departmen Sekisui Chemical Hokkaido

**Resource**:

CS & Quality

Prominences Three

Business and CSR

**Products Company** Urban Infrastructure & Environmental



#### Wastewater thermal energy system

The wastewater flowing through sewer pipes maintains temperatures more stable than those of exterior air, at roughly 15–20°C year-round. It is understood that use of this as a source of heat for melting snow, air-conditioning, water heating, and other applications can conserve energy and effect higher levels of energy efficiency than traditional methods.

For example, when used in air-conditioning, it can realize reductions of approximately 30% or more in CO<sub>2</sub> emissions compared to traditional methods that use exterior air as a heat source (according to Sekisui Chemical estimates). By installing heat exchangers (heat recovery pipes) at the same time as pipe rehabilitation by utilizing the SPR technology used to renovate and rehabilitate aged sewer pipes, it is possible to efficiently recover and use the heat of untreated wastewater flowing through the pipes. This will be the system used for the first time in Japan.

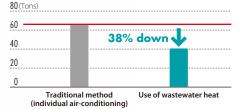
The numerous sewer pipes installed during Japan's postwar period of rapid economic growth are meeting the age at which they require rehabilitation. Combination with the pipe rehabilitation method, which sees expanded use as a measure for addressing this state of affairs, will contribute to conserving energy, reducing CO<sub>2</sub> emissions, and cutting costs at the same time it reduces wastes and resolves the blocking of roads.

**Conceptual Diagram of an Air-Conditioning System Using Wastewater Heat** 

> Installation of a wastewater heat recovery system at the same time as pipeline renewal construction

Rehabilitated pipe and wastewater heat recovery system

#### Comparison of CO2 emissions<sup>1</sup>



#### **1**Assumptions

Number of housing complex: 48 (total floor area: 1,400 m<sup>2</sup>) Heater use in the city of Sendai 0.429 kg-CO2/kWh

#### **Reducing Energy Consumption Through Efficiency of Production Equipment**

Sekisui Chemical Group's production sites are advancing ECO-JIT activities<sup>2</sup> seeking to balance economy and ecology through conserving energy. As the first model plant in these activities, Sekisui Chemical's Tokyo Plant is striving to reduce energy use on the model production line by 50% by fiscal 2013.

#### 2 ECO-JIT activities

An initiative intended to cut energy costs through identifying energy loss within production processes and carrying out production improvements (reforms).



Urban Infrastructure & Environmental Products Company

#### Reducing Running Defects at Production Site

**Examples of Activities** 

Sekisui Chemical Group periodically holds Sekisui Chemical Group KAIZEN Activities Presentation, in which participants from throughout the Group meet to present on outstanding achievements, with the goal of promoting improvements in CS & quality.

In the 46<sup>th</sup> Sekisui Chemical Group KAIZEN Activities Presentation (see p. 20), held in January 2012, Okayama Sekisui Industry Co., Ltd. won the gold prize. Aimed at improving the manufacturing process for Phenovaboard high-performance insulating material, its activities clearly identified the main cause of the defect as peeling defect and achieved in eliminating this cause completely. Some of the reasons it won the award included its approach of looking honestly at the actual products and actual phenomena and its devotion to eliminating defects.



Phenovaboard high-performance insulating material

VOICE

Since Okayama Sekisui Industry Co., Ltd. had won the silver prize in the KAIZEN Activities Presentation for two years in a row – in fiscal 2009 and fiscal 2010 – we felt considerable pressure going in to this year's presentations. It made us very happy to be able to have our own achievements recognized and win this gold prize. I was so moved and nervous at the awards ceremony that I do not even remember what I said. Since these efforts involved process improvement in production equipment, they were very difficult because we could not see the subject with our own eyes. As all technical staff, including manufacturing team members, worked together as one discussing a variety of ideas with each other, we were able to put a stop to the root cause and eliminate defects completely. Winning this prize has encouraged us to carry out further KAIZEN (improvement) activities in the future.

Mitsuhiro Kasue Functional Building-Materials Manufacture Department Okayama Sekisui Industry Co., Ltd.

#### Full Automated Pipeline Renewal System

The SPR non-excavating pipeline renewal method is regarded highly for the way it does not require any excavation of roads or ground surfaces. For example, it won the Ministry of Economy, Trade and Industry Award in the first Monozukuri Nippon Grand Award.

The Urban Infrastructure & Environmental Products Company has realized automation of this method in order to increase its Attractive Qualities even more. In March 2012, this automated method was chosen for the first time by the Hokuriku Regional Agricultural Administration Office of the Ministry of Agriculture, Forestry and Fisheries in an experimental construction to counter siphon water leaks. Construction was conducted on agricultural canals in Yomegane in the city of Nanto, Toyama Prefecture.



28]

Full automated SPR method

The automated SPR method combines into a single system a newly developed highly stable pipe winding machine, profile transportation equipment, and pumps for transporting backfill materials. Since it makes it possible to automate completely work inside the pipes through remote control and operation using operation monitors aboveground, it greatly improves safety during construction.

In the field of pipeline renewal, where further market growth is expected as existing infrastructure ages, we will continue providing reliable quality and safe, secure construction environments through delivering these new technologies.

#### HR Training for the Value Chain Business 🤬



The value-chain business, which provides total support from research and diagnostics through design of construction methods and systems, production of parts and materials, construction, and facility maintenance, requires broad-ranging knowledge surpassing the boundaries of job positions and business domains.

For example, sales personnel need to have deep knowledge of products and related laws, regulations, and other matters in each of several fields including

single-family residences, housing complexes, and the public sector. Since technical personnel serve as managers and supervisors on infrastructure construction and research, in addition to knowledge and experience, they also need official qualifications such as those of plumbing supervisors, civil engineering supervisors, and architecture and architectural supervisors.

To advance the value-chain business, which in this way requires diverse knowledge and qualifications, the Urban Infrastructure & Environmental Products Company helps its employees improve their skills through sales-engineer training and support for earning official national qualifications. In addition, the company has begun a system of certifying employees who satisfy its requirements in the areas of safety, quality, and compliance. This system started in construction sections, and future plans call for expanding it to production and sales sections. Through efforts such as these, it will train, with even higher levels, sales and construction management engineers.



Construction section training



A safety drill on pointing and calling

#### Conducting Safety Training 🔮



In safety activities, the thinking, roles, and actions of top site management and of safety managers with regard to safety are important factors affecting the degree to which safety awareness spreads to each individual employee. The Urban Infrastructure & Environmental Products Company established Safety Training in fiscal 2006 as opportunities for site top management to check and experience safety with their own eyes and ears. Since then, it has intensified its safety efforts. As its businesses expand overseas, in fiscal 2011 it held a Safety Training for presidents and safety managers of overseas affiliates, with activities including getting a feel for risks at Sekisui Chemical's Tokyo Plant and Shiga-Ritto Plant. In this way, it is deploying its safety activities at local affiliates as well.



The safety training at Sekisui Chemical's Tokyo Plant was very meaningful. We learned that while of course equipment safety inspections and activities to eliminate risks are important, it is even more effective for managers themselves to take the lead in demonstrating a "Safety First" approach to employees. Sensing a need to change our activities right away in order to reduce the sources of risk, I have decided to start all meetings with the subject of safety. In order to make a plant safe, it is essential that all personnel, from the top down, continue to think about "Safety First" at all times.



CS & Quality

High Performance Plastics Company

# High Performance Plastics Company

"Chemistry for your win" Contributing to Realizing a Rich Society With Advanced Technologies, Centered on the IT, Automotive, Medical, and Building Materials Fields

#### **Pursuing the Limitless Possibilities of Plastics**

Unlike other materials like metals, wood, and ceramics, plastics are capable of meeting a wide range of needs through transforming the material properties and processing it into various forms, such as sheets, foam, and fine particles. The High Performance Plastics Company utilizes its own unique precision molding and fine particle technologies to supply high-performance materials and intermediate materials globally, targeting a wide range of business areas including the automotive (AT), electronics materials (IT), and medical (MD) fields. It will continue contributing to the realization of a more convenient, rich society through further expanding the business fields in which it operates together with advancing technological innovations and new-product development that meet with the needs of society.

AT Field

 Safety, comfortability

Environmental performance

Chemistry

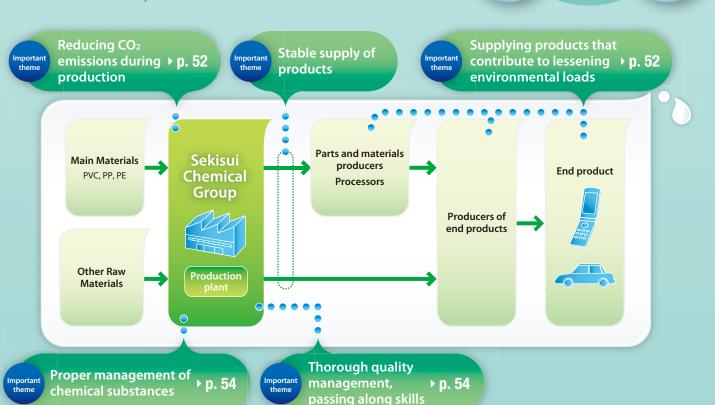
for your

 MD Field
 Simplicity, speediness

IT Field

 Realizing compact, lightweight products

 Functional improvements



#### Parts and materials used in the automotive field

Three Prominences

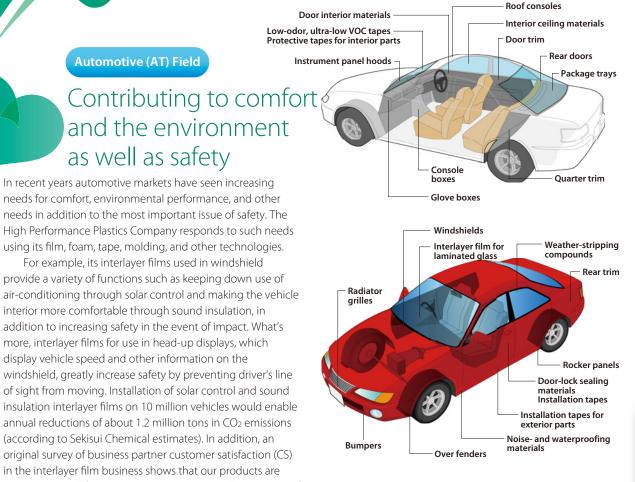
CS & Qualit

Business and CSR

Products Company

High Performance Plastics Company

Bases of CSF



highly regarded, for example earning the overall top position for nine years in a row.

We globally supply a variety of other parts and materials as well. These include vehicle interior materials that combine design elements, such as the feel of materials, with strength and heat resistance along with energy-conservation effects from their light weight and safety and comfort thanks to their cushioning effects. They also include exterior materials that contribute to energy conservation through lighter weights by realizing thinner materials while maintaining the quality feel of standard materials.

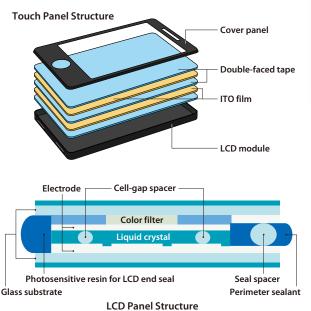
#### **Electronics Materials (IT) Field**

## Supplying a Broad Range of High-Performance Parts and Materials

In the electronics materials (IT) field, which is seeing performance improvements together with decreases in product sizes and weights, functionality of materials are even more important. To respond to such needs, the High Performance Plastics Company supplies a wide variety of high-performance materials, employing technologies such as those for precision molding, fine particles, and tapes.

We have secured a high market share in the field of LCD display panels through supplying products including spacers that keep uniform the space between the two glass panels that make up a display panel, sealing materials that prevent leaks of liquid crystal material and keep it pure, and conductive fine particles that transmit signals between narrow electrodes.

We also contribute to high performance and miniaturization through supplying other parts and materials essential to IT devices, including thin films which make up the touch panel, and tapes used to attach LCD panels to the main units of IT devices while also providing light-shielding and reflective performance. Furthermore, we also supply photosensitive materials, tapes, films, and other materials essential to the semiconductor manufacturing process.



High Performance Plastics Company



Medical (MD) Field

### Contributing to Blood test reagents the Health of People the World Over from a Preventive Medicine Perspective

In recent years, together with improvements in the quality of life conditions, lifestyle-related illnesses and metabolic syndrome, etc. have become new issues of concern in society in developed countries. Early detection and treatment is important for lifestyle-related illnesses, and as interest in preventive medicine has increased, the roles of diagnostic reagents and testing



Cholesterol diagnostic reagents



Vacuum blood collection tubes

methods have grown. Against this background, the High Performance Plastics Company is developing businesses focused on preventive medicine, with the goal of contributing to the realization of healthy, enriched lives for human beings.

For example, in the area of diagnostic reagents used in cholesterol testing, it has realized the speediness and simplicity of testing which previously had required complex preprocessing, making it possible to conduct measurement directly in the medical facility. In the area of diabetes testing as well, we are making considerable contributions to prevention and treatment of lifestyle-related illnesses through means including supplying simplified reagents and equipment, which enable simple, quick measurement.

In addition, we also contribute to building healthy societies around the world through efforts that include supplying influenza diagnostic reagents and sets of serum separating media and blood clotting accelerants of strong plastic vacuum blood collection tubes.

#### High Performance Materials Field

# Supplying Advanced Resin Processing Technologies for a Wide Range of Uses

Resin processing technologies that improve the functions of plastics is the technology that marks the origin of Sekisui Chemical Group. Advancing these technologies in accordance with the changing times, the High Performance Plastics Company meets the diverse needs of customers by supplying products suited to a broad range of uses, including adhesives, packaging tape, packaging films, agricultural films, and plastic containers.

Producing Products that Have the World's Top

The High Performance Plastics Company has the top market share in the world

in a large number of high value-added products, such as high-performance

and LCD spacers and conductive fine particles in the IT field. Based on this

interlayer films and cross linked polyolefin foam for interior use in the AT field

performance, the company will continue responding to needs in state-of-the-art

**Market Shares in Various Fields** 

fields, which continue to advance and diversify.





#### Major leading products in which the High Performance Plastics Company has the

- world's top market share:
- Interlayer film for automotive laminated glass
- Spacers for LCD use
- Conductive fine particles for LCD use
- Polyvinyl butyral resin
- Cross linked polyolefin foam
- Cholesterol diagnostic reagents

#### **Examples of Activities**

# Developing products that contribute to reducing CO<sub>2</sub> emissions and wastes

#### Advancell EM thermal expandable microsphere

Advancell EM is a thermal expandable microsphere whose volume expands by foaming 50-100 times when heated. Including this material when molding automotive components greatly reduces weight and contributes to improving fuel consumption and reducing CO<sub>2</sub> emissions. In addition, since closed-cell foam has a uniform cell structure, it makes it possible to produce lightweight parts and materials that look good on the outside.



Thickness of paper core Standard Eco Paper Core Fco Paper Core Standard Eco Paper

core Core

#### Kraft tape adopting Eco Paper Core

The Eco Paper Core helps conserve paper resources and reduce customers' waste generation by decreasing the thickness of the paper core of a roll of kraft tape by one-half. This also reduces the volume of waste, since it can be crushed easily by hand for disposal. It contributes to reducing space requirements for storage of wastes and cutting CO<sub>2</sub> emissions from transporting them as well.



With this product, we tried to reduce the amount of paper core disposed of as waste as an attempt to help customers contribute to the environment through their use of kraft tape. As their name implies, paper cores are made of paper. For this reason, this project involved the difficult challenge of how paper changes like a living creature as it warps or breaks down depending on the surrounding environment, particularly moisture and humidity. However, we were able to resolve this difficulty by sharing practical ideas with each other and improving production lines.



Chikara Matsuki Packaging Tape Production Department, Musashi Plant, High Performance Plastics Company, Sekisui Chemical Co., Ltd.

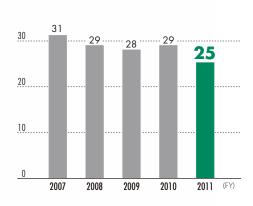
#### Energy Conservation Activities through Visualizing Energy

The High Performance Plastics Company, which accounts for about one-half of Sekisui Chemical Group's volume of greenhouse-gas emissions, is making progress on reducing energy use by using visualization systems that make energy use visible at each production facility.

Sekisui Chemical's Musashi Plant has advanced improvements to its operation methods and equipment aimed at conserving energy by identifying waste and irregularity in energy use since introducing a visualization system in 2010. In addition, under the restrictions on electricity use implemented during the summer of 2011 it was able to meet reduction targets set even higher than regulatory values by allocating use of electricity to each production department in advance and monitoring actual usage.

Thanks to these achievements, the plant was able to reduce CO<sub>2</sub> emissions from energy-consumption sources in fiscal 2011 by approximately 20% vs. fiscal 2007.

CO<sub>2</sub> emissions from energy consumption sources at the Musashi Plant 40(Thousand tons-CO<sub>2</sub>)



Business and CSR

Three Prominences

CS & Qualit

#### High Performance Examples of Activities Plastics Company

#### Group KAIZEN Activities



As part of these activities, Sekisui Medical Co., Ltd. deploys activities at six sites in Japan and around the world and holds its own KAIZEN presentation meetings.

In November 2011, 61 staff members in 10 teams, chosen from the four sites in Japan, took part in a presentation meeting. This presentation meeting, the first held since the period for KAIZEN activities had shifted to six months, featured



A KAIZEN presentation meeting at Sekisui Medical Co., Ltd.

presentations on themes reflecting the unique characteristics of individual sites, such as amino-acid efficiency improvements and diagnostic reagents.

In the future we will share and improve our efforts through continuing activities such as these.

#### VOICE

KAIZEN activities at Sekisui Medical Co., Ltd. now demand greater speed as their focus has shifted from one theme per year to one theme per term.

As part of these efforts, we carry out activities on themes leading to improvements in profitability.

Our team has presented in Sekisui Chemical Group KAIZEN presentation meetings twice. While we were unable to secure one of the top prizes, this was a very good experience because we learned from the presentations and activities of other teams. In the future we will raise the level of our activities through improving our speed and KAIZEN ability even more.



Masashi Fujiwara Production Section I, Iwate Plant Pharmaceuticals and Fine Chemicals Division Pharma & Research Business Sekisui Medical Co., Ltd.

#### **Environment-friendly Equipment Renovations**



Sekisui Chemical's Shiga-Minakuchi Plant incorporated consideration for the environment from a variety of perspectives in the renovation of the equipment in its main building, which includes offices, meeting rooms, a showroom, and other facilities, in October 2011.

First of all, as efforts toward proactive use of natural energy, the plant installed solar power generation equipment and implemented efforts such as use of geothermal heat for preheating in air-conditioning equipment and use of rainwater with water storage tanks it built itself.

In addition, to encourage energy conservation, it implemented a variety of efforts including use of laminated glass with sound insulation/solar control interlayer films to control solar radiation, green rooftop landscaping, natural ventilation through eco shafts, installing energy-saving, long-life lights, controlling lighting using motion and light sensors, and energy monitoring.

Through these efforts, the plant has realized a building incorporating consideration for the environment with high levels of efficiency.

Three Prominences

**Products** Company Urban Infrastructure &

# **Plastics Company** High Performance

f CSR



Leak risk list

Leak risk assess-

ment table

To respond to the globalization of its business activities, the High Performance Plastics Company is striving to develop global human resources through activities, including the Global Employee System (see p. 28), intended to train "Global Talents" employees actively, and the Global Trainee Program (see p. 28), which enables participants to build up real-world

At the same time, important issues faced by production sites are those of achieving technological innovation toward producing products with higher levels of value added and

Production section training

## HR Training 🔛

experience overseas, and other various international training activities.

VOICE

This training program, instead of just using one-directional lectures, incorporated many practical examples and experiences of the instructors and was easy to understand. It was a good opportunity to look at my own work.

Through residential training and exchanging opinions with participants from other sites, instead of just learning to understand Sekisui's way of doing things from lectures and textbooks alone, I was able to familiarize myself with the content of the training and to deepen my understanding of it. In addition to having an understanding of the concepts, I want to practice them in my own workplace and use them in training younger employees.



Masajiro Nakai Industrial Tape Production Group Taga Office ekisui Taga Chemical Industry Co., Ltd.

of passing along site skills. For this reason, in fiscal 2011 we revised the training system at production plants in Japan, evolving the system from the previous one of training focused on learning operating methods through on-the-job training (OJT<sup>1</sup>) to training on subjects such as working in collaboration with colleagues and developing problem-solving abilities throughout the organization as a whole. Through these training, improvements in the productivity at manufacturing sites are promoted by familiarizing young manager-class personnel with Sekisui-style manufacturing development.

1 OJT An abbreviation of On the Job Training

**Risk Assessment Flowchart** 

Identifying

leak risks

#### Safety of Chemical Substances

The High Performance Plastics Company's production facilities handle a diverse range of chemical substances. If these were to leak from their storage facilities or production equipment, they could have significant impacts on safety and the environment. Each facility takes the necessary steps to prevent such situations, and to minimize the impact in the event of a leak.

Designating December 2010 as leak

risk-management enhancement month, Sekisui Chemical's Shiga-Minakuchi Plant employed activities to identify related risks. It assessed risks in five levels, by the severity of response in the event of a chemical leak, the likelihood of a leak occurring, and the combination of severity and likelihood. Already it has identified more than 300 risks, and through fiscal 2011 it had implemented corrective measures for more than 50 factors behind risks of level 2 or higher. Through these and other measures, it is striving to reduce the risk of leakage of chemical substances.



Installation of gutters to prevent leakage of chemical substances

#### Compliance

# Aiming to be a company trusted by society globally

#### Policy

While compliance generally tends to be interpreted to refer to following laws and regulations, Sekisui Chemical Group requires that all Group employees address compliance earnestly as a personal issue and take action, based on our understanding that the concept of compliance refers to acting in sincerity in accordance with the ethical viewpoints demanded of members of a company and professionals, as active members of society.

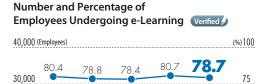
#### Activities

**Bases of CSR** 

As part of our efforts in fiscal 2011, we continued compliance education for employees.

In addition to periodic compliance training for new employees, new managers, and other personnel, we also focused on educational activities targeting Group member companies. At the same time, we enhanced training on individual areas including the Antimonopoly Law, the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors, the Product Liability Law, and harassment.

Moreover the e-learning program conducted each year continued, looking at selected topics centered on information management and insider-trading regulations. Furthermore, we prepared new paper-based training materials to encourage employees in manufacturing sections, where personal computers are not used frequently, to undergo training.





#### **Revision of Compliance Cards**

In fiscal 2011, we revised our Compliance Cards and redistributed them to all employees. Through this effort we aim to increase awareness of compliance by providing opportunities for employees to think about their own behavior.



Compliance Card

#### **Compliance Systems at Group Companies Overseas**

Together with its global business expansion, Sekisui Chemical Group has enhanced its compliance system through a network of specialists in Japan and around the world, for example by assigning an in-house attorney in China in fiscal 2007 and one in North America in fiscal 2011.

In the future, we will strengthen compliance in regions including Europe and Asia as well, grounded in the properties of each region such as its laws, regulations, and cultural climate, in order to implement Sekisui Chemical Group's concept of compliance on a global scale.

#### VOICE

When the Labor Contract Law was enacted in China in 2008, a network was formed among human-resources and legal personnel in Sekisui Chemical's China Office and nine Chinese subsidiaries.

Through this network, we provide support for business activities and problem-solving in the China market by handling 100 or more requests for practical consultation per year from each company while also sharing information on the constantly changing laws and regulations in China.

Development of this system has made it possible to ascertain local conditions and needs more accurately. In the future as well, we will make progress on strengthening compliance while sharing the Sekisui Chemical Group's thinking on compliance management.



Lirong Wang China Office Business Planning Department Sekisui Chemical Co., Ltd.

#### **Compliance Systems in North America**

At Sekisui America Corporation, the area headquarters company for North America, an in-house attorney was hired in fiscal 2011 to further strengthen the compliance system at each Group company. This makes the compliance system one that can receive prior consultations from each company and work out thoughtful, timely measures in accordance with the actual conditions of each company.

Currently, we are striving to prevent the occurrence of the risks companies face through efforts including various types of legal consultation, while also handling more than 40 contracts per month.

#### VOICE

Since Fiscal 2011, as In-House Legal Counsel I have provided support to ensure that we can respond to the legal issues faced by the 13 Group companies in North America in appropriate, timely, and effective ways. We also employ outside attorneys to help reduce legal risks. I supervise and manage these outside law firms to help reduce legal expenses.

Since we have a variety of businesses in North America that occasionally require specialized attorneys, such as production of synthetic resins and the medical and civil-engineering businesses, I feel that this job is a challenging one.

In the future, together with continuing activities already underway, we will work to build an internal compliance reporting system as well.



Grant Elliot Smith HR, Legal & Admin Department Sekisui America Corporation

> Human Resources

Business and CSR

CS & Qualit

Three Prominences

#### The S.C.A.N. Whistle-blowing Program

In 2002, Sekisui Chemical Group developed S.C.A.N. (Sekisui Compliance Assist Network), an intra-company whistle-blowing system, available for use by all Sekisui Chemical Group employees (including employees of subsidiaries of subsidiaries and temporary staffs from placement agencies).

In fiscal 2011, we enhanced this system further, based on the themes of understandability and peace of mind, both making it possible for employees to submit reports anonymously and revising the whistle-blowing site on the intranet. The new design is easier to understand, featuring information on what takes place after submitting a report as well as questions and answers.

In the future as well, we will respond in good faith to each individual report, recognizing it to be an important topic for the company to address.

#### FY 2011 Whistle-blowing Reports and Consultations

ltems	Number of items
Power harassments	9
Working conditions	1
Other	2
Total	12

#### Legal Violations, etc.

In February 2009 the Fair Trade Commission found Sekisui Chemical to have colluded with other firms in determination of sale prices of polyvinyl chloride pipes and fittings over the period 2004–2006 and ordered it to take measures to eliminate such collusion and to pay surcharges (hereinafter referred to as the "order"). Since Sekisui Chemical's determination of facts of this case differs from that on which the order was based, in April 2009 the company asked the Fair Trade Commission to cancel the order. Appeal procedures are still underway.

In the future as well, Sekisui Chemical will continue its efforts to raise awareness of compliance, always keeping in mind the fact that compliance is an important foundation of CSR management.

Since fiscal 2008 no new cases of violations of laws or regulations or similar incidents having significant impact on society have been discovered.

### **Risk Management**

# Aiming to manage risk and crisis and to increase sensitivity to risks

#### Policy

**Bases of CSR** 

Sekisui Chemical Group is advancing development of a risk management system to unify risk management, which strives to prevent risks from occurring, and crisis management, which involves responding to major risks that have occurred.

#### **Risk Management Program**

In contemporary corporate activities, which are growing in complexity, it is impossible to ascertain accurately all risks that could be realized in the future. For this reason, Sekisui Chemical Group continues to run through the plan-do-check-action (PDCA) cycle of risk management, considering increasing all employees' sensitivity to risks to be essential to addressing such risks.

Although in fiscal 2010 only divisions under Company organizations ran through this cycle, in fiscal 2011 operating companies were added to bring the total number to 42 organizations. Among these, formulations of risk response plans were conducted overseas at model companies in Europe, the U.S., South Korea, and China. In the future we will establish PDCA cycles for these model companies and link them to deployment of similar activities in each region.

#### Restructuring the Crisis Management System

In fiscal 2011, Sekisui Chemical Group conducted a comprehensive inspection of its crisis management system and worked to reconstruct the system, in order to utilize its experience with the Great East Japan Earthquake to prepare for future crises.

When encountering a crisis, the first responses of individuals and organizations determine the success or failure of subsequent responses. For this reason, the Group thoroughly revised crisis management documents and systematically improved tools such as procedure manuals, to enable the necessary people to take the necessary actions at the necessary times. We also surveyed the current state of the disaster-prevention systems at approximately 800 sites in Japan and decided on courses of action for future responses.

In fiscal 2012, based on these experiences we will run through the crisis management PDCA cycle and implement continual improvements at all sites. In addition, we will expand these domestic efforts to overseas sites as well, preparing for restructuring of systems in fiscal 2013 and later.

#### VOICE

Upon carrying out improvements to the crisis management manual in the China territory, SEKISUI (SHANGHAI) INTERNATIONAL TRADING was placed in charge of preparing a template for individual offices' manuals.

First of all, we prepared a general framework through confirming buildingmanagement rules and relevant laws and regulations. Next, we identified possible crises and drafted countermeasures for them. Finally, we also incorporated the views of employees.

Through this experience, we were able to develop a new appreciation for the responsibility to protect the company and its employees. In the future as well, we will work to enhance crisis management systems keeping in mind the saying from the Han Feizi, "A little leak will sink a great ship."



**Yuan Gao** Shanghai Branch Sekisui (Shanghai) International Trading Co., Ltd.

# Bases of CSR

#### **Disclosure & Communication**

Advancing CSR Management through Dialogue with Stakeholders

#### Policy

Sekisui Chemical Group recognizes the importance of adequate and proactive disclosure, and two-way communication based on such disclosure, for developing relationships built on trust with our stakeholders. To this end, in 2005 we established our Disclosure Principles.

Sekisui Chemical Group is working to advance communication with all stakeholders and to reflect as appropriate in our business the evaluations and comments we receive. We are doing so through efforts including CAT Meetings where top management in housing sales companies meet customers to receive feedback directly (see p. 41), the External Advisory Board on Environment-Contributing Products (see p. 14), the Attractive Qualities Screening System, in which the Attractive Qualities Screening Committee evaluates and screens products and services (see p. 21), and opportunities for direct dialogue between management and employees.

#### **Dialogues with Overseas Socially Responsible Investment (SRI) Rating Agencies**

In Europe and North America, there is considerable interest in socially responsible investment (SRI), in which companies addressing CSR issues are chosen proactively as targets of investment, and much research has been conducted by rating agencies. In light of the broad range of businesses it conducts, each year the Sekisui Chemical Group visits SRI ratings agencies in Europe and elsewhere to ensure that they have adequate and accurate understandings of its lines of business and its CSR efforts.

In fiscal 2011, we strived to ascertain the latest CSR-related information by meeting with U.S. experts, on the subjects of human rights and the environment.

#### **Communication Between Management** and **Employees**

Since fiscal 2002, Sekisui Chemical Group has provided opportunities for employees to communicate with top management proactively, based on its belief that it is essential to resolve problems faced by the company as well as work-related issues through direct communication between top management and employees, who are important stakeholders.

In fiscal 2011, continuing efforts begun in the preceding year, the President of Sekisui Chemical visited six business sites across

Japan, including those of affiliate companies, to discuss the current state of company management, ideas, and other matters with approximately 400 participants.

In addition, the Urban Infrastructure & Environmental Products Company also provided opportunities for direct discussion of business strategies and ideas along with lively exchange of opinions between the President and employees.



#### VOICE

This dialogue was a valuable opportunity to hear the President directly explain the midterm management plan, the concept of "collective strength," and the necessity of deploying a value chain across all businesses. The President's easy-to-understand explanations, using practical examples, were very persuasive.

In addition, the President's enthusiasm to "change the Company" was obvious and was quite moving as he thoroughly answered individual questions from participants.

In the future I would like to take the initiative in helping to power Company reforms, by acquiring such "collective strength" myself.



Takuhei Oohashi Tokyo Private Sector Sales office Private Sector Value Chain Sales Department Higashinihon Sales Headquarters Urban Infrastructure & Environmental Products Company

Sekisui Chemical Co., Ltd.

Prominences Three

#### **Nature Conservation and Social Contribution**

#### **Nature Conservation**

#### Policy

Since their full-fledged start in fiscal 1997, Sekisui Chemical Group's nature conservation activities began with the training of leaders to be responsible for promotion of such activities at each business site in Japan.

In recent years the stage of such activities has broadened as for example we have carried out activities at business sites not just in Japan but overseas as well and, in addition, have participated in nature conservation activities conducted by outside organizations. Furthermore, we are carrying out a broad range of natural and environmental conservation efforts such as continual support for research utilizing our knowledge of the natural sciences.

#### Sekisui Chemical Grant Program for Research on Manufacturing Based on Innovations Inspired by Nature

Sekisui Chemical Group began the Sekisui Chemical Grant Program for Research on Manufacturing Based on Innovations Inspired by Nature in fiscal 2002 to support the research activities of universities and research institutions utilizing knowledge of fundamental science learned from nature. Over the 10-year period through fiscal 2011, this program collected a cumulative total of 2,733 public placements, ultimately awarding grants to 138 research themes. Of these, the program awarded grants to 33 projects in the field of utilizing natural resources and learning from natural materials, 49 projects in the field of learning from the functions of living



creatures, 34 projects in the field of learning from living organism (about the activities of living), and 22 projects in the field of learning from ecology, the growth and development of living creatures, etc.

In the future as well, the program will provide continual support to research activities contributing to harmony between nature and human beings.

#### Sekisui Nature Study Course

Since fiscal 1997, Sekisui Chemical Group has carried out the Sekisui Nature Study Course as an opportunity to train leaders in nature conservation activities and to implement activities to contribute to the local community. Through fiscal 2010, these had been held 51 times, with a total of more than 800 people taking part.

Beginning in fiscal 2011, the existing leader training portion of this program was spun off to form a separate Leader Training program. The Sekisui Nature Study Course evolved into a

program aimed at independent nature conservation activities by business sites, with even deeper roots in the community, and it was conducted at the Izumo Plant of Sekisui Seikei Ltd. and at Chushikoku Sekisui Heim Industry Co., Ltd. It will continue in the future as well at various business sites in Japan, aiming to raise awareness of the environment and create opportu-

nities for nature conservation activities in partnership with local communities.

#### VOICE

Despite its name of "Children's Nature Study Course," this activity gave participating adults even more opportunity to get in touch with nature and experience its blessings, as we observed together with children the different living creatures that appear in the seasons of spring and fall, made catsup from tomatoes we planted and harvested ourselves, and ate lunch together using the catsup we made, among other activities.



**Masuo Komaki** Production Section, Izumo Plant Sekisui Seikei Ltd.

59 Corporate Social Responsibility Report 2012

#### **Biodiversity Activities at Mt. Fuji**

In advancing its consideration for biodiversity, Sekisui Chemical Group is carrying out activities intended to raise employee awareness of biodiversity. Since 2010, we have carried out activities to eliminate the lanceleaf tickseed, identified as an invasive alien species at the base of Mt. Fuji, in partnership with the NPO, FUJISAN CLUB, which works to protect the natural environment of Mt. Fuji.

It has been pointed out that propagation of the lanceleaf tickseed causes the problem of driving out diverse species native to the area. Thus eliminating the lanceleaf tickseed will help preserve the area's native biodiversity.

Conducted in June 2011, this activity welcomed approximately 30 participants including employees of Sekisui Chemical's headquarters in Tokyo, their family members, and retired employees. In about two hours, they eliminated enough lanceleaf tickseed to fill the beds of two light pickup trucks.

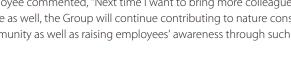
This activity provides a rare opportunity to think about the issue of invasive alien species among other Sekisui Chemical Group's nature conservation activities.

#### **Planting Mangrove Trees in Thailand**

Sekisui Chemical Group carries out nature conservation activities at five facilities overseas. Thailand, one of the Group's bases of operations in Asia, is home to business sites of the Housing Company and the High Performance Plastics Company. Employees of these sites take part in activities to plant mangrove trees.

While mangroves have been cut down to create culture ponds for edible shrimp, their value has been recognized anew for purposes such as maintenance of sustainable fishery resources, protecting the shoreline from tides and wind, and mitigating climate change.

Over 100 people, comprising of employees and local elementary-school students, took part in the planting activities conducted in July 2011. One employee commented, "Next time I want to bring more colleagues along." In the future as well, the Group will continue contributing to nature conservation in the community as well as raising employees' awareness through such activities.





Eliminating

#### Nature Conservation in Mexico

Sekisui S-Lec Mexico carries out nature conservation activities such as tree planting to offset the carbondioxide emissions of the plant and its employees. In fiscal 2011, these activities planted a total of 540 saplings, or seven trees per employees, on one hectare of land.

The activities started with planting seeds in February 2011, followed by watering during the dry season in March and a tree-planting study meeting held jointly in May with an organization working to revive forests in Mexico. The main event of planting saplings took place in July, with about 100 people, consisting of employees and their families, taking part.

By raising each employee's awareness of the environment and tree planting, we plan to help protect the beautiful planet and Mexico's natural environment in the future as well.



#### VOICE

We are confident that environmental conservation activities are a top priority for the future of the human race. Of these, reforestation

activities can have a variety of effects, such as the reduction of the CO<sub>2</sub> that is responsible of problems like the greenhouse effect. This also prevents the erosion of the soil, contributing to maintaining rivers and undercurrents and, of course, helps also to preserve the ecosystem, such as the fauna that live in the forests.

During fiscal 2011 I had the opportunity to participate in almost all the events of tree-planting activities done by Sekisui, from seed planting through planting trees, and for me this was really rewarding in the sense that you can really feel you are doing something for the planet. I think all of us should include this kind of activities in our agendas.



Ruben de los Reyes Sales Department Sekisui S-Lec Mexico S.A. de C.V.

Prominences Three

CS & Quality

Resources Human

Business and CSR

Products Company **Urban Infrastructure &** 

> Plastics Company **High Performance**

#### **Policy**

Sekisui Chemical Group advances social-contribution activities mainly in the fields of the environment, the next generation, and local communities

In addition to positioning such activities as initiatives made as a corporate citizen living together with society, we also provide support for activities to enable Group employees to play active roles in society.



#### **Collaboration with Local Communities**

Since fiscal 2007, Sekisui Chemical Group has carried out social contribution activities utilizing the distinguishing features of its businesses.

In the Housing Company, since fiscal 2009 housing sales companies across Japan have partnered with prefectural police departments to distribute leaflets on prevention of crimes such as fraudulent remittance requests. In addition, since fiscal 2007 the Housing Company has conducted the Houses and the Environment Learning Program in four areas, as a program putting employees' knowledge of housing and the environment to use in the classroom. More than 5,000 junior high school students have taken part in these classes through now.

In the High Performance Plastics Company, since fiscal 2008 the Chemical Classroom Project, an educational program that helps students experience the fun of chemistry, has been conducted for seventh through ninth graders in the area where the institute is located. Through now, a total of approximately 2,400 students have taken part in these classes. In addition, since fiscal 2008 events have been held,

mainly for elementary-school students, to help children get a feel for the fun of science, under the name of Science Class for Children.

In response to a request from a local junior high school, Shikoku Sekisui Co., Ltd. in the Urban Infrastructure & Environmental Products Company has since fiscal 2009 provided science classes for seventh graders. On the day of the class, students also tour the Shikoku Sekisui plant to get an understanding for how the familiar material of plastic is used to make a variety of products.

In the future as well, Sekisui Chemical Group will advance social-contribution activities utilizing its businesses.

#### **OICE**

When I was asked to serve as an instructor in the science class, I was very uncertain as to whether I was capable of it. I decided to take on the challenge of teaching the class thinking that it would be nice if I could, through this class, teach local junior high school students about the knowledge of manufacturing that I have built up in the manufacturing workplace until now and about how fun it is.

In the class, I had the enjoyment of working with students who listened enthusiastically to what I had to say, while I too wanted to help them as much as I could, and I felt that we were learning together. When the students commented that the class was "fun" and that they "could understand plastics thanks to the instructor's detailed explanations," I was truly glad that I had accepted the role of teacher.

I would like to cooperate as much as I can in future science classes as well.



Hitoshi Higaki Production Department Shikoku Sekisui Co., Ltd.

#### Social Contribution Activities that Make it Easy for Individual Employees to Participate

Since fiscal 2009 Sekisui Chemical Group has implemented Table for Two, a program in which 20 yen is added to the cost of a meal in employee cafeterias, with this amount donated to support providing lunches to children in developing countries. In fiscal 2011, a Table for Two photo exhibition was held at five facilities to publicize the program to numerous employees. This program already has donated a total amount of more than 1.4 million yen, assisting in providing lunches to a cumulative total of 70,000 children in developing countries.

In addition, since fiscal 2009 Sekisui Chemical Group has conducted the Book Magic program, in which participants sell unneeded books and CDs and contribute the proceeds to an NPO to assist programs supporting education in developing countries. The number of business sites hosting this program is increasing from year to year, and in fiscal 2011 numerous employees participated in the program at the 12 sites where it took place.

In the future as well, Sekisui Chemical Group will continue to deploy activities such as these that make it easy for individual employees to take part.

#### **Participation in the Community**

Taking advantage of the fact that it has sales companies and production sites across Japan, Sekisui Chemical Group actively participates in local communities.

For example, despite the fact that they belong to different division companies, Sekisui Chemical's Gunma Plant and Gunma Sekisui Heim Co., Ltd. have joined together since fiscal 2010 to hold the Sekisui Cup Girls' Eight Soccer Tournament for eight-person teams of elementary-school girls aged 12 and younger, in light of the fact that both companies do business in Gunma Prefecture.

Six teams from the prefecture took part in the tournament held in July 2011, cheered on by more than 100 people including staff, parents, and siblings.

Aside from this activity, Sekisui Chemical Group also continues other activities to contribute to its communities, including cleanup activities in the vicinity of business sites, accepting plant tours and work-training program participants, and permitting use of plant athletic grounds for community events.

#### Donations

For purposes including environmental conservation and support for raising the next generation, Sekisui Chemical Group provides economic support including donations to a variety of activities. Its donations in fiscal 2011 totaled approximately 228 million yen.

A typical example of such support is the matching gifts the company provides in amounts equal to or surpassing donations collected from employees in response to disasters and other needs.

In fiscal 2011, as aid for victims of the flooding in Thailand, Sekisui Chemical donated 10 million yen, and donated a matching gift of 1.2 million yen to the government of Thailand in recognition of approximately 1.1 million yen donated from employees.

In addition, since some employees of the Group member company Kydex, LLC. in North America were victims of the flooding that occurred near Bloomsburg, Pennsylvania, where Kydex, LLC. is located, Sekisui America Corporation donated a matching gift of \$3,200 to the American Red Cross in recognition of donations from employees of Group companies in North America.

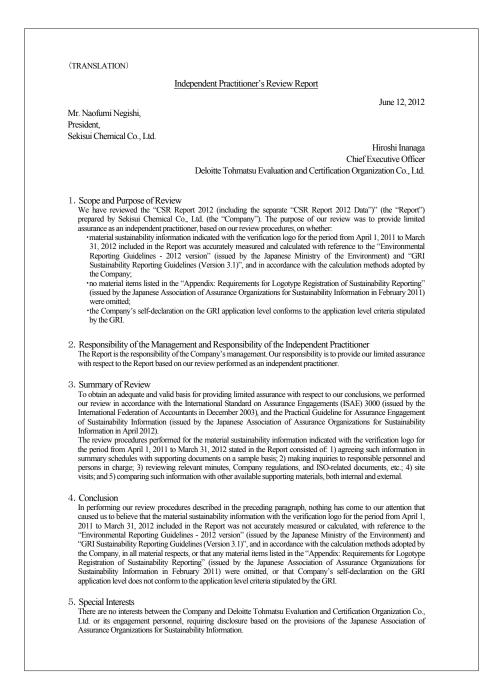


The Table for Two photo exhibition

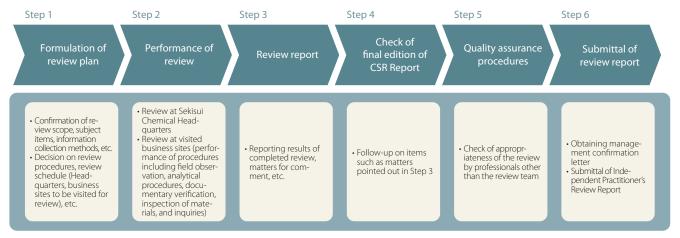
CS & Quality

Three Prominences

#### **Independent Practitioner's Review Report**



#### Summary of Independent Practitioner's Review Procedures



Sites visited: Sekisui Chemical Co., Ltd. Osaka Headquarters and Tokyo Headquarters, Chushikoku Sekisui Heim Industry Co., Ltd., Shikoku Sekisui Co., Ltd.

#### **History of Sekisui Chemical Group**

- 1947 Establishment of Sekisui Sangyo Co., Ltd. Started first injection molding business in Japan.
- 1948 Change of company name to Sekisui Chemical Co., Ltd.
- 1950 Began selling cellophane tape.
- 1952 Started full-scale production of PVC pipe (Eslon Pipe).
- 1953 Listed on Osaka Stock Exchange.
- 1956 Developed Japan's first plastic rain gutter (Eslon Rain Gutters).
- **1959** Established Sekisui Sponge Industries Co., Ltd. (now Sekisui Plastics Co., Ltd.) with co-financing from Shin-Nippon Chisso Hiryo Co., Ltd., Asahi Kasei Corporation and others, to commercialize plastic foam.
- **1960** Established Sekisui House Sangyo Co., Ltd. (now Sekisui House Co., Ltd.) and started the housing business.
- 1962 Launched Movement for Cleaner Towns featuring our plastic garbage bins (Poly-pail), as a campaign to mark the company's 15<sup>th</sup> Anniversary. Cleaning revolution subsequently spread nationwide.
- **1963** Started producing plastic bathtubs (first in Japan). Modular toilet tank commercialized, paving the way for production of modularstyle equipment.
- 1970 Exhibited modular house (Sekisui Heim) at the International Good Living Show in Tokyo.
- 1971 Started producing and selling Japan's first modular house, Heim M1.
- **1972** Established original Environmental Management Department. Launched company-wide commitment to pollution control.
- **1979** Awarded Deming Prize for quality management in recognition of results of aggressive TQC activities.
- 1981 Adopted twin-headquarters system (Osaka and Tokyo), and established Tokyo Headquarters at Toranomon, Tokyo. Began producing and selling timber-framed modular house, Two-U Home.
- 1991 Established Basic Policies on environmental issues
- 1993 Introduced divisional system, shifting to the seven divisions Pipe & Related Products, Building Materials, Chemicals, Techno-products, Molded Products, Medical Products, and Housing.
- **1994** Began activities to earn ISO 9000-series quality-management system certification.
- Paid-in capital surpassed 100 billion yen.
   Adopted new headquarters logo.
   Announced Top Management Policy for Environment and Safety.
   Began activities to earn ISO 14001 environmental-management system certification.
- 1997 50th Anniversary of company founding.Launched Sekisui Chemical Group nature protection activities.Created Women's Athletic Club.

- **1998** Instituted Corporate Activity Guidelines. Initiated zero waste emission activities.
- 1999 Midterm Management Vision: GS21 takes effect.
   Instituted Corporate Philosophy.
   Concentrated business into three domains: Housing, Urban Infrastructure & Environmental Products, and High Performance Plastics.
   Midterm Environmental Plan: STEP-21 takes effect.
   Began publishing Environmental Reports.
- 2001 Launched the division company system, establishing the three division companies the Housing Company, the Urban Infrastructure & Environmental Products Company, and the High Performance Plastics Company.

Achieved zero waste emissions in all house production plants and all plants of Sekisui Chemical Co., Ltd.

- 2003 Midterm Management Vision: GS21-Premium 600 takes effect. Established the Environmental Management Promotion Department (now CSR Department Environmental Management Group). Midterm Environmental Plan: STEP-2005 takes effect. Achieved zero waste emissions at all house construction sites.
- 2004 Established the CS & Quality Management Department (now CSR Department CS & Quality Group).
   Developed the CS & Quality Management Midterm Plan.
   Achieved zero waste emissions in all construction by house renovation companies.
   2005 Established the CSR Committee.
- 2005 Established the CSR Committee. Published the Environmental and Social Report.
- 2006 Midterm Management Vision: GS21-Go! Frontier takes effect. Midterm Environmental Plan: Environmental Top Runner Plan Part 1 takes effect.
- 2007 60th anniversary of Sekisui Chemical Co., Ltd. founding. Global Children's Eco Summit and Manufacturing Based on Learning from Nature—Junior Forum held. Conducted reviews of the CSR Committee and Headquarters organization.
   Published the CSR Report.
- 2008 CSR policies established and revised.
- 2009 Midterm Management Vision: GS21-SHINKA! takes effect. Midterm Environmental Plan: Environmental Top Runner Plan SHINKA! takes effect.
- 2010 Manufacturing Based on Innovations Inspired by Nature Forum held in Nagoya.
- 2011 Safety Subcommittee established.

#### Editor's Notes

Since Sekisui Chemical Group began full-fledged CSR efforts in fiscal 2005, it has published the CSR Report (titled the Environmental and Social Report in fiscal 2005 – 2006) with chapters organized around Sekisui Chemical Group's CSR concept, based on the Three Prominences of the Environment, CS & Quality, and Human Resources and its Three Attitudes of Sincerity in Compliance, Risk Management, and Disclosure & Communication, to communicate this concept to parties both inside and outside the Group and to promote its spread.

In recent years, as readership of the Report has grown, demands for disclosure of information have increased and the information in demand has grown more diverse. At the same time, in Sekisui Chemical Group the business characteristics and CSR efforts of each division company differ, and the necessity of clearly defining the characteristics of each division company in enhancing and promoting CSR efforts within the organization has become more important.

For these reasons, while maintaining the quality and quantity of information that have been so highly regarded by outside parties in past reports and making the thinking behind measures and their specific efforts easily understandable, this Report adds new pages on individual division companies and employs a chapter structure that reports specifically on the initiatives of each division company.

The introduction in the opening pages of the Report adopts a content structure that makes Sekisui Chemical Group's concepts and CSR philosophy understandable to ordinary readers. The chapter on each of the Three Prominences reports on policies, objectives, measures, and results for Sekisui Chemical Group as a whole. Reports on relations between business and society, priority CSR issues, and examples of efforts follow, for each of the three division companies. The second half of the Report reports on the Three Attitudes of Sincerity and on nature conservation and social contribution initiatives. The separate Data Book provides detailed information on efforts along with performance data.

In addition to disclosing as much information as possible on our CSR efforts through this Report and accepting opinions from both inside and outside the Group, efforts such as undergoing an independent practitioner's review to ensure the accuracy and objectivity of the information disclosed are intended to advance CSR management efforts and improve the content of this Report. We would very much appreciate hearing the frank opinions of our readers (csr@sekisui.com). Such opinions will serve as valuable references for Sekisui Chemical Group's future CSR efforts and in the preparation of future reports as well.

### SEKISUI CHEMICAL CO., LTD.

4-4 Nishitenma 2-chome, Kita-ku, Osaka 530-8565, Japan (Dojima Kanden Bldg.) URL: http://www.sekisuichemical.com

#### For further information contact:

CSR Planning Group, CSR Department 2-3-17 Toranomon, Minato-ku, Tokyo 105-8450, Japan (Toranomon 2-chome Tower) Email: csr@sekisui.com

- This report has been printed and bound with consideration for the environment in the following ways: (1) This report uses Forest Stewardship Council (FSC)-certified paper produced from carefully managed forests.
- from carefully managed forests.
  (2) The computer-to-plate (CTP) method of direct printing, which uses no film that later must be disposed of as waste, has been adopted in the plate-making process.
  (3) Vegetable-oil ink, which generates few volatile organic compounds (VOC) and has excellent biodegradability and de-inking performance, is used in the printing process. In addition, waterless printing, which generates no hazardous waste fluids, has been used as well.
  (4) Glue that does not hinder the recyclability of paper is used in the binding process.
- process.



CSR Report 2012 (including the separate data volume) has been reviewed by an independent third party and as a result has been granted the sustainability report review and registration logo. This demonstrates that this report satisfies the necessary criteria estabilished by the Japanese Association of Assurance Organizations for Sustainability Information (-USUs; http://www.j-sus.org/ for the use of this logo, intended to assure the reliability of sustainability information.



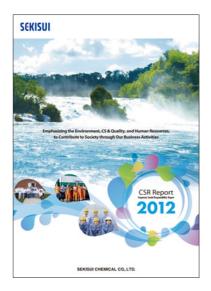
# SEKISUI

# CSR Report 2012 Data Book

Management Benchmarks (Consolidated)	1
Coverage of the Environmental Performance Data	2
Progress on the Midterm Environmental Plan	3
Sekisui Chemical Group's Environmental Accounting	5
Sekisui Eco Value Index	7
Material Balance (in Japan)	7
Environment-Contributing Products	8
Product Assessments System for Environmental Impact	8
Biodiversity	8
Global Warming Prevention	9
Resource Recycling and Saving	10
Environmental Performance of Domestic Offices	11
Atmospheric, Water, and Soil Related Emissions	12
Environmental Incidents and Complaints, and Emergency Responses	12
Chemical Substances	13
Environmental Management	14
CS & Quality	15
Human Resources	16
Safety	17
Compliance	18
Nature Conservation and Social Contribution	19
Sekisui Chemical Group's CSR Management System	20
Sekisui Chemical Group's CSR Management Policies	21

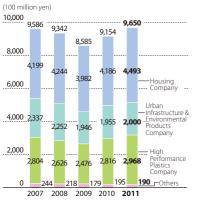
#### Scope of Independent Practitioner's Review Verified

The environmental and social information in this report has been subjected to the independent practitioner's review for the appropriateness of calculation methods and the accuracy of the results of calculation. The "Verified" logo is used to indicate that each item of such subject information has been reviewed.



#### SEKISUI CHEMICAL CO., LTD.

#### Management Benchmarks (Consolidated)



19.7

528

1,800

19.6

65

68 89

2010 **2011** 

1,895

**Overseas Sales and Sales Ratio** 

16.4

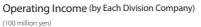
376

415

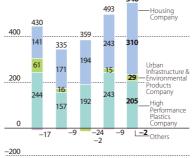
550

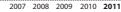
2009

Sales (by Each Division Company)



(100 million yen) 600 546







(100 million yen)

(%)

20

15

10 Europe

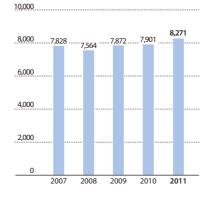
5

0

North America

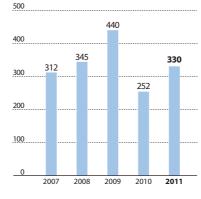
-Asia

104 Others

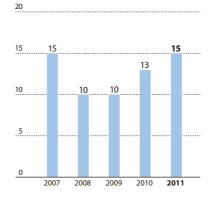


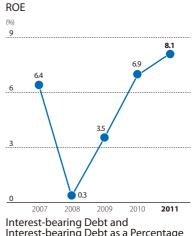
#### Capital Expenditures

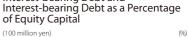
(100 million yen)

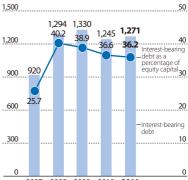


Annual Dividend Per Share





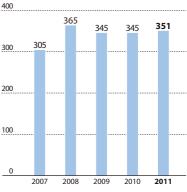




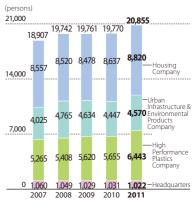
2007 2008 2009 2010 **2011** 

### Depreciation and Amortization (100 million yen)





#### Number of Employees



#### 2007 2008

47 59

(100 million yen)

16.2 16.2

385 389

.

476

2,000

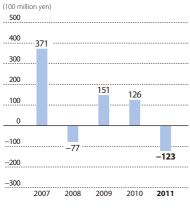
1,500

1,000

500

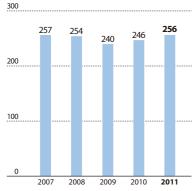
0







(100 million yen)



#### Japan

nousing Company	
R&D institutes	1 company and 1 business site
Sekisui Chemical Co., Ltd. Tsukuba R&	D Site
Production plants	11 companies and 10 business sites
Tokyo Sekisui Heim Industry Co., Ltd.	
Kinki Sekisui Heim Industry Co., Ltd.	
Sekisui Board Co., Ltd. etc.	
Sales and construction companies	28 companies and 97 business sites
Sekisui Heim Sales Companies	

Construction and Service Companies

40 companies and 108 business sites in total

Urban Infrastructure & Environmental Products Com	ipany
R&D institutes	1 company and 1 business site
Sekisui Chemical Co., Ltd.	
Kyoto Research & Development La	boratories
	20 companies and

**Production plants** 11 business sites Sekisui Chemical Co., Ltd. Shiga-Ritto Plant Sekisui Chemical Co., Ltd. Gunma Plant Sekisui Chemical Co., Ltd. Tokyo Plant Shikoku Sekisui Co., Ltd. / Ryuseki Jyubi Co., Ltd. Sekisui Aqua Systems Co., Ltd. Shizuoka Plant

#### 20 companies and 12 business sites in total

#### **High Performance Plastics Company**

R&D institutes	2 companies and 2 business sites
Sekisui Chemical Co., Ltd. Minase Site	2
Sekisui Medical Co., Ltd. ADME & Tox	
Production plants	11 companies and 14 business sites
Sekisui Chemical Co., Ltd. Amagasaki	i Plant
Sekisui Chemical Co., Ltd. Musashi Pla	ant
Sekisui Chemical Co., Ltd. Shiga-Mina	akuchi Plant
Sekisui Chemical Co., Ltd. Taga Plant	
Sekisui Techno Molding Co., Ltd. / Se	kisui Film Co., Ltd
Sekisui Medical Co., Ltd. / Sekisui Full	er Co., Ltd. etc.
11 companies and 16 busir	ness sites in total

Headquarters	
R&D institutes	1 company and 1 business site
Sekisui Chemical Co., Ltd. Developmen	t Center
Production Plants and Headquarters	8 companies and 10 business sites
Sekisui Seikei, Ltd.	
Hinomaru Co., Ltd.	
Tokuyama Sekisui Industry Co., Ltd.	
Sekisui Chemical Co., Ltd. Osaka Heado	juarters and
Tokyo Headquarters, etc.	
8 companies and 11 busine	ss sites in total

### Total: 77 companies and 147 business sites

The total number of companies and business sites do not match, since some companies have two or more business sites, and some business sites are shared by two or more companies.

#### Overseas<sup>1</sup>

#### Urban Infrastructure & Environmental Products Company

Kydex, LLC. Allen Extruders, LLC. Eslon B.V. Sekisui Industrial Piping Co., Ltd. Sekisui (Qingdao) Plastic Co., Ltd. Wuxi SSS-Diamond Plastics Co., Ltd. Yongchang Sekisui Composites Co., Ltd. 7 business sites in total

#### **High Performance Plastics Company**

Sekisui Voltek, LLC. Lawrence Plant Sekisui Voltek, LLC. Coldwater Plant Sekisui Alveo B.V. Sekisui Alveo Ltd. Thai Sekisui Foam Co., Ltd. Sekisui Pilon Pty. Ltd.

YoungBo Chemical Co., Ltd. Daejeon Plant YoungBo Chemical Co., Ltd. Cheongwon Plant YoungBo HPP (Langfang) Co. Ltd. Sekisui TA Industries, LLC. Brea Plant Sekisui TA Industries, LLC. Tennessee Plant Sekisui High Performance Packaging (Langfang) Co., Ltd. Sekisui S-Lec America, LLC. Sekisui S-Lec Mexico S.A. de C.V. Sekisui S-Lec B.V. Film Plant Sekisui S-Lec B.V. Resin Plant Sekisui S-Lec Thailand Co., Ltd. Sekisui S-Lec (Suzhou) Co., Ltd. Sekisui Specialty Chemicals America, LLC. Pasadena Plant Sekisui Specialty Chemicals America, LLC. Calvert City Plant Sekisui Specialty Chemicals Europe, S.L. Sekisui Medical Technology (China) Ltd. Xeno Tech, LLC. American Diagnostica Inc.2

24 business sites in total

1 Calculation period: January 1 - December 31, 2011 2 Data was collected only for wastes and CO<sub>2</sub> emissions.



### Progress on the Midterm Environmental Plan

#### Efforts and targets of the Midterm Environmental Plan: Environmental Top Runner Plan SHINKA! (FY 2009 – 2013)

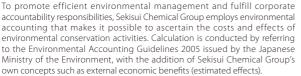
		-	Efforts	Targets for Fiscal 2013			
Improv	ing ove	rall environmental	management efficiency	Achieving a Sekisui Eco Value Index at least three times the fiscal 2007 value			
Improving Environment- Contributing	Increas	e selling of Enviror	nment-Contributing Products	Environment-Contributing Products at least 40% of consolidated net sales			
ing nment- puting	Promo	ting development	of Environment-Contributing Products	Number of products certified as Environment-Contributing Products: 30 (fiscal 2009 – 2013 5 years)			
	Redu gase		Domestic production sites	Reducing greenhouse-gas emissions by at least 10% compared to fiscal 2007 (at least 20% compared to fiscal 1990)			
	s (GH	Reducing	Laboratories	Reducing greenhouse-gas emissions by at least 20% compared to fiscal 2007			
	in in e	greenhouse-gas (GHG)	Domestic offices	Reducing CO <sub>2</sub> emissions by at least 10% compared to fiscal 2007			
	emissio	emissions	Overseas production sites	Reducing energy consumption per unit of output by at least 5% compared to fiscal 2008			
Fur	ns of		Overseas offices	Reducing energy use per capita by at least 10% compared to fiscal 2008			
ther rec	Reduction in emissions of greenhouse gases (GHG)	Promoting energy	Domestic production sites	Reducing energy used per unit of output by at least 7% compared to fiscal 2007, when converted into thermal units			
ducing	nouse	conservation	During shipment in Japan	Reducing energy consumption per unit of output by at least 5% compared to fiscal 2007			
the en			Domestic production sites	Reducing waste generated per unit of output by at least 40% compared to fiscal 2007			
vironm	m		Overseas production sites	Reducing waste generated per unit of output by at least 25% compared to fiscal 2008			
ental	ficie	Reducing	Domestic offices	Reducing copier-paper use by at least 20% compared to fiscal 2007			
limp	ntut	wastes	Overseas offices	Reducing copier-paper use by at least 20% compared to fiscal 2008			
acts of	ilizatior		Reducing wastes at new construction sites	Compared to fiscal 2000: Sekisui Heim: 45% reduction Two-U Home: 62% reduction			
Further reducing the environmental impacts of business activities	Efficient utilization of resources		Reducing costs derived from waste materials	Reducing loss costs by at least 5 billion yen compared to fiscal 2008 (accumulated amount from fiscal 2009 to 2013)			
is act	ource	Expanding zero waste emissions	Domestic production sites/laboratories	Rate of achievement at sites reviewed: 100%			
ivitie	8		Overseas production sites	Rate of achievement at sites reviewed: 100%			
S			Recycling of waste materials produced during dismantlement and expansion/renovation of houses	Implementing zero-emissions (i.e., recycling at least 98% of wastes) efforts in at least 50% of demolition projects			
	Reduc envi-ra impac	Efficient water us	<u>I</u>	Reducing water intake at domestic production sites by at least 10% compared to fiscal 2007			
	Reducing other envi-ronmental impacts	Reduction in VOC substances)	emissions (legal and voluntary controlled	Reducing atmospheric VOC emissions at domestic production sites and laboratories by at least 60% compared to fiscal 2000 (at least 25% compared to fiscal 2007)			
			Efforts to conserve biodiversity	Designing action plans for main production sites			
biodiv	Consid	Activities to	Support of nature conservation activities by NGOs	As Sekisui Chemical Group, providing aid to at least 10 nongovernmental organizations per year in support of nature conservation activities			
biodiversity	deration	improve environment (conservation of biodiversity)	Nature conservation activities in	Promoting nature conservation activities in at least five locations overseas			
	for	of blociversity)	collaboration with local communities	Implementing nature conservation activities at all business sites At least 80% of employees (cumulative) participating over the three-year period 2011-2013			
			Attaining external EMS certification at domestic production sites and laboratories	Attaining external EMS certification at 100% of sites reviewed			
			Attaining external EMS certification at domestic construction companies	Attaining external EMS certification at consolidated construction companies			
		Enhancing environmental	Attaining external EMS certification at overseas production sites	Attaining external EMS certification at 100% of sites reviewed			
mana	Enhar	management systems (EMS)	Expanding EMS development in supply chains	Attaining external EMS certification at 100% of suppliers of residential building materials supplying a fixed amount or more			
gem	ncino		Expanding green procurement	Achieving a green procurement rate of 98% or higher			
ient ir	1 the 6		Soil and groundwater surveys	Completion of surveys at nine subject sites			
ıfrast	envin			Reaching a total of at least 1,000 certified Environmental Specialists (Eco Test)			
management infrastructure	onment	Improvement of education and	Learning at least a certain degree of environmental knowledge	Conducting environmental education for employees and management overseas as well			
	<u>m</u>	enlightenment	Developing leaders for nature conservation activities	Holding the Sekisui Nature Study Course at main production sites (45 plants, five laboratories)			
		Communication with external	Publishing site reports	Continuing issuance at production sites, laboratories, and sales companies that have acquired EMS certification			
		organizations	Communication with local communities to improve environment	Continued implementation at eight domestic production sites			
				I			

#### Results of efforts conducted under the Midterm Environmental Plan: Environmental Top Runner Plan SHINKA! for fiscal 2011

24 The Economic of Inicia 2007         2.8.4 times (compared to ficial 2007)         C         12.0 Eas 7           Percensage of considiated met shee 15%         Specer for proceed control of points: 359 2.000 (or points)         C         12.0 Eas 7           Ten new poolsts centhed in facial 2011         Harres grounds: compared to fixed 1980         C         15.0 Eas 8           Reaching perchassion of fixed 1980         Points of the 2004 (or points)         C         15.0 Eas 9           Reaching perchassion of fixed 1980         Percentage 2007 (or points)         C         15.0 Eas 9           Reaching perchassion of fixed 1980         Percentage 2004 (or points)         C         15.0 Eas 9           Reaching perchassion of fixed 2007         Percentage 2004 (or points)         C         15.0 Eas 9           Reaching perchassion of fixed 2007         Percentage 2007         C         15.0 Eas 9           Reaching perchassion of fixed 2007         X         Data 9         12.8 Eas 10           Collection of data from subject site:         Performance data 2007         X         Data 9           23% eduction percent of output to spect compared to fixed 2007         X         Data 10           Difference data from subject site:         Control 2002         Add Recense compared to fixed 2007         X         Data 10           Difference data from subject sit	Targets for Fiscal 2011	Results of Fiscal 2011 Verified	Evalu- ation	Page
Precentage of constitution (et al.e): 32%         Precentage of constit (et al.e): 32%         Precentage of constitu	2.4 times (compared to fiscal 2007)	2.62 times (compared to fiscal 2007)	0	12, Data 7
Internet products of the state of	Percentage of consolidated net sales: 35%		O	12, Data 8
2007 (edicated by 21% compared to fscal 1990)       15, Juliar 9         Reducing gene close systemation by Tyle compared to fscal 2007       0       15, Juliar 9         Reducing gene close systemation by Tyle compared to fscal 2007       Reducing endoced by 14% compared to fscal 2007       0       15, Juliar 9         Reducing endoced by 15% compared to fscal 2007       Reducing endoced by 14% compared to fscal 2008       ×       1         Collection of dua from subject sizes       Performance data collected from rule subject sizes       0       0         25% reduction per unit of output compared to fscal 2007       25% decrease compared to fscal 2007       ×       16, Data 10         12% reduction per unit of output compared to fscal 2007       25% decrease compared to fscal 2007       ×       16, Data 10         12% reduction per unit of output compared to fscal 2007       13% decrease compared to fscal 2007       ×       16, Data 10         12% reduction per unit of output compared to fscal 2007       13% decrease compared to fscal 2007       ×       16, Data 10         12% reduction per unit of output compared to fscal 2007       13% decrease compared to fscal 2007       ×       16, Data 10         12% reduction per unit of output compared to fscal 2007       13% decrease compared to fscal 2007       ×       16, Data 10         12% reduction per unit of output compared to fscal 2007       13% decrease compared to fscal 2	Ten new products certified in fiscal 2011		0	-
Beducing CO: emissions by 15% compared to fixed 2007       Is, Data 9         Reducing energy consumption per unit of output by 3% compared to fixed 2008       x       -         Collection dista from subject sites       Pedomance data collected from nine subject sites       -         24% reduction per unit of output compared to fixed 2007       X       Data 9         9% reduction in energy consumption per unit of output compared to fixed 2007       X       Data 9         12% reduction per unit of autput compared to fixed 2007       X       16, Data 10         12% reduction per unit of autput compared to fixed 2007       X       16, Data 10         15% reduction per unit of autput compared to fixed 2007       X       16, Data 10         15% reduction per unit of autput compared to fixed 2007       X       16, Data 10         15% reduction per unit of autput compared to fixed 2007       X       Data 11         Collecting data from subject sites       Collected performance data from neuroplect sites       X         Compared to fixed 2006       Fixed 2007       X       16, Data 10         Loss coss 30 million yen in fixed 2011       Reduced yet 70 million yen in fixed 2011       X         Reduced yet 70 million yen in fixed 2011       Reduced yet 70 million yen in fixed 2011       X         Loss coss 30 million yen in fixed 2011       Reduced yet 70 million yen in fixed 2	Reducing greenhouse-gas emissions by 12% compared to fiscal 2007 (reduced by 21% compared to fiscal 1990)		0	15, Data 9
Bedded generaty consumption per unit of output by 3% compared         Increased by 11.8% compared to fiscal 2008         K         -           Celection of dara from subject sites         Performance data collected from nine subject sites         -         -           42% reduction per unit of output compared to fiscal 2007         28% decrease compared to fiscal 2007         K         Data 9           3% reduction in energy consumption per unit of output compared to fiscal 2007         X         16, Data 10         Data 10           15% reduction per unit of output compared to fiscal 2007         1.9% decrease compared to fiscal 2007         X         Data 10           Copler-paper use 12% reduction compared to fiscal 2007         1.9% decrease compared to fiscal 2007         X         Data 10           Copler-paper use 12% reduction compared to fiscal 2007         1.9% decrease compared to fiscal 2007         X         16, Data 10           Copler-paper use 12% reduction         The SM decrease compared to fiscal 2007         X         16, Data 10           Consecres 80% miles were inford 2007         K         16, Data 10         16, Data 10           Consecres 80% miles were inford 2007         K         16, Data 10         16, Data 10           Consecres 80% miles were inford 2007         K         16, Data 10         16, Data 10           Fiscal 2011, tiththeme were stare to be certified, certification tat 995%	Reducing greenhouse-gas emissions by 12% compared to fiscal 2007	Reduced by 32.0% compared to fiscal 2007	0	15, Data 9
to fiscal 2008       Inclease of prime       Performance data collected from less subject sites       >       >         Callection of data from subject sites       Performance data collected from less subject sites       >       <	Reducing CO <sub>2</sub> emissions by 15% compared to fiscal 2007	Reduced by 14.9% compared to fiscal 2007	0	15, Data 9
4.2% reduction per unit of output compared to fiscal 2007       28% decrease compared to fiscal 2007       x       Date 9         3% reduction in energy consumption per unit of output compared to fiscal 2007       0       Date 9         12% reduction per unit of output compared to fiscal 2007       8.5% decrease compared to fiscal 2007       x       16, Data 10         15% reduction per unit of output compared to fiscal 2007       8.5% decrease compared to fiscal 2008       x       Date 10         15% reduction per unit of output compared to fiscal 2007       1.3% decrease compared to fiscal 2007       X       Data 10         Copier-spectrue: 12% reduction compared to fiscal 2007       1.3% decrease compared to fiscal 2007       X       Data 10         Copier-spectrue: 12% reduction from subject sites       Collected performance data from nine subject sites       O       -         Compared to fiscal 2001       Fiscal 2001-Difficient 2005       X       -       -         Execution 2007       Difficient 2007       X       16, Data 10         Loss costs 30 million yeen fiscal 2011       Fiscal 2001-Difficient 2006       X       -       -         Execution 2007       Part 10       Periodificient preveding rate: 96%       Demolition recycling rate: 96%       Demolition recycling rate: 96%       Demolition recycling rate: 96%       Demolition recycling rate: 96%       Data 10 <t< td=""><td></td><td>Increased by 11.8% compared to fiscal 2008</td><td>×</td><td>-</td></t<>		Increased by 11.8% compared to fiscal 2008	×	-
3b) reduction in energy consumption per unit of output compared         3.2% decrease compared to fiscal 2007         0         Data 9           12% reduction per unit of output compared to fiscal 2007         8.5% decrease compared to fiscal 2007         ×         16, Data 10           15% reduction per unit of output compared to fiscal 2008         2.4% finit crease compared to fiscal 2007         ×         Data 10           collecting data from subject sites         Callected performance data from nine subject sites         O         -           compared to fiscal 2000         Seksul Hem: 30% reduction         x         Data 10           compared to fiscal 2000         Seksul Hem: 30% reduction         x         16, Data 10           costs 30 million yeen fiscal 2011         Fiscal 2009-2011 (cumulative total fiscal 2009)         x         -           fiscal 2001-2011         Second 2007         X         Data 10         -           costs 30 million yeen fiscal 2011         Fiscal 2009-2011 (cumulative total fiscal 2009)         x         -         -           fiscal 2001-2011         Fiscal 2002-2011         Cumulative total fiscal 2007         X         16, Data 10           costs 30 million yeen fiscal 2014         Medice dat 17% of sites reviewed         X         -         -           Demolition recycling rate- 59%         OPP envison reviewed fiscal 2007	Collection of data from subject sites	Performance data collected from nine subject sites	0	-
to fiscal 2007       m       m       m       S28 declease compared to fiscal 2007       X       16, Data 10         12% reduction per unit of output compared to fiscal 2008       24.6% increase compared to fiscal 2008       X       Data 10         15% reduction per unit of output compared to fiscal 2008       24.6% increase compared to fiscal 2008       X       Data 11         15% reduction per unit of output compared to fiscal 2007       1.3% decrease compared to fiscal 2007       X       Data 11         15% reduction per unit of output compared to fiscal 2007       1.3% decrease compared to fiscal 2007       X       Data 11         16.0lecting data from subject sites       Collected performance data from nine subject sites       0       -         15scal 2011       Fiscal 2011       Reduced by 470 million yein in fiscal 2011       X       -         15scal 2011       Increment wistes to be certification rate by 9%       There new sites reviewed       X       -         15scal 2011       Increment wistes to be certification rate by 9%       There new sites reviewed       X       -         15scal 2011       Reduced by 34% compared to fiscal 2007       X       16, Data 11         Reducing water intake by 9% compared to fiscal 2007       Reduced by 34% compared to fiscal 2007       X       16, Data 11         Reducing water intake by 9% compared to fiscal 2007<	4.2% reduction per unit of output compared to fiscal 2007	2.8% decrease compared to fiscal 2007	×	Data 9
15% reduction per unit of output compared to fiscal 2008         24.6% increase compared to fiscal 2008         ×         Data 10           Copier paper use: 12% reduction compared to fiscal 2007         13% decrease compared to fiscal 2007         ×         Data 11           Contenting data from subject sites         Collected performance data from nine subject sites         0         -           Compared to fiscal 2000 Seksui Hem: 38% reduction Two U Home 49% fired 2011         ×         16, Data 10           Loss costs 830 million yen in fiscal 2011         Reduced by 470 million yen in fiscal 2010         ×         -           Fiscal 2009 Seksui Hem: 38% reduction Two U Home 49% fired calculation 2010 billion yen in fiscal 2008         ×         -         -           Fiscal 2011: theme wistes to be confided, catification rate by 94%         The new sites confided, catification rate by 94%         >         -           Demolition recycling rate: 94%         Demolition recycling rate: 94% (oppared to fiscal 2007)         ×         16, Data 10           Achieved at 50% of sites reviewed         Achieved at 17% of sites reviewed         ×         -           Demolition recycling rate: 94%         (99% recycling rate: 94% (oppared to fiscal 2007)         ×         16, Data 11           Reducing VCX atmospheric emissions by 55% compared to fiscal 2007         Reduced by 524% compared to fiscal 2007         ×         16, Data 11		3.2% decrease compared to fiscal 2007	0	Data 9
Copier-page use: 12% reduction compared to fiscal 2007       1.3% decrease compared to fiscal 2007       ×       Data 11         Collecting data from subject sites       Collected performance data from nine subject sites       -         Compared to fiscal 2000. Seksul Heim: 38% reduction Two: U Home: 57% reduction Two: U Home: 47% reduction Two: U Home: 47% reduction       ×       16, Data 10         Loss costs: 830 million yen in fiscal 2011       Compared to fiscal 2002. Seksul Heim: 32% reduction Two: U Home: 47% reduction       ×       1         Fiscal 2011: three new sites to be certification rate bys?       Three new sites certified, achieved at 95% of sites       O       Data 10         Achieved at 50% of sites reviewed       ×       -       -       -       -         Demolition recycling rate 96%       Demolition recycling rate 97% (95% or sites)       O       16, Data 11         Reducing Woater intake by 6% compared to fiscal 2007       Reduced by 52% compared to fiscal 2007       ×       16, Data 11         Reducing Woater intake by 6% compared to fiscal 2007       Reduced by 52% compared to fiscal 2007       ×       17, Data 13         Reduced by 52% compared to fiscal 2007       K       16, Data 11       18         Providing aid to ten organizations       Aid provided to five organizations       ×       -         Implementing activitis at two sites (Suzhou, China and Thailand, and Nurth America) <td>12% reduction per unit of output compared to fiscal 2007</td> <td>8.5% decrease compared to fiscal 2007</td> <td>×</td> <td>16, Data 10</td>	12% reduction per unit of output compared to fiscal 2007	8.5% decrease compared to fiscal 2007	×	16, Data 10
Collecting data from subject sites         Collected performance data from nine subject sites         O           Compared to fiscal 2000-sekisul Heim: 39% reduction Twoe U Home: 57% reduction Twoe U Home: 49% reduction Twoe U Home: 49% reduction         x         16, Data 10           Loss costs: 830 million yen in fiscal 2011         Reduced by 470 million yen in fiscal 2011; cumulative total divertor: 2.01 billion yen compared to fiscal 2008         x         -           Fiscal 2001: 1: time new sites to be certification rate by 95%         There new sites certified, achieved at 50% of sites         >         Data 10           Achieved at 50% of sites reviewed         x         -         -         -           Demolition recycling rate: 96%         Demolition recycling rate: 94% (95% recycling rate 94% (95% r	15% reduction per unit of output compared to fiscal 2008	24.6% increase compared to fiscal 2008	×	Data 10
Compared to fiscal 2000. Sekisul Heim: 39% reduction Invo.U Home: 59% reduction         X         16, Data 10           Compared to fiscal 2000. Sekisul Heim: 32% reduction Invo.U Home: 59% reduction         X         16, Data 10           Desc corts: 830 million yen in fiscal 2011 Fiscal 2009-2011: cumulative 227 billion yen compared to fiscal 2008         X         -           Fiscal 2011: three new sites to be certified, certification rate by 95%         Three new sites certified, achieved at 17% of sites reviewed         X         -           Achieved at 50% of sites reviewed         Achieved at 17% of sites reviewed         X         -           Demolition recycling rate: 96%         Demolition recycling rate: 94% (99% recycling rate 94% compared to fiscal 2007         X         16, Data 10           Reducing WOC atmospheric emissions by 55% compared to fiscal 2000 (reducing by 15% compared to fiscal 2007)         X         17, Data 13           Reserving two model sites and drafting action plans         Assessment of model 3 sites completed, planning efforts continue         18           Providing aid to ten organizations         Aid provided to five regarizations         X         -           North America and Europe         Nature conservation activities at 50 sites         Nature conservation activities conducted at 47 business sites         -           Implementing nature conserviewed         Consistes reviewed         -         -         -	Copier-paper use: 12% reduction compared to fiscal 2007	1.3% decrease compared to fiscal 2007	×	Data 11
Two-U Home: 57% reduction         Two-U Home: 47% reduction         X         16, Data 10           Loss costs 830 million yein in fiscal 2011         Reduced by 470 million yein (compared to fiscal 2003)         X         -           Fiscal 2005-2011, cumulative 221 billion yein compared to fiscal 2003         X         -         -           Fiscal 2005-111, cumulative 221 billion yein compared to fiscal 2003         X         -         -           Fiscal 2011: three new sites to be certified, certification rate by 95%         Three new sites certified, achieved at 55% of sites         O         Data 10           Achieved at 50% of sites reviewed         Achieved at 17% of sites reviewed         X         -           Bemolition recycling rate: 96%         Demolition recycling rate: 94%         O         -           OW (excling 10% effection emissions by 55% compared to fiscal 2007         X         16, Data 11           Reducing VCC atmospheric emissions by 55% compared to fiscal 2007         X         17, Data 13           Z000 (reducing by 15% compared to fiscal 2007         X         17, Data 13           Assessing two model sites and drafting action plans         Assessment of model 3 sites completed, planning efforts continue         O         18           Providing aid to ten organizations         X         -         -         -           Pubring compared to fiscal 2001	Collecting data from subject sites	Collected performance data from nine subject sites	0	-
LDS 2023 200 Initial Unit or magneted to fiscal 2008       reduction: 2.01 billion yein (compared to fiscal 2008)       ×       -         Fiscal 2008-2011: three new sites to be certified, certification rate by 95%       Three new sites reviewed       ×       -         Achieved at 50% of sites reviewed       Achieved at 17% of sites reviewed       ×       -         Demolition recycling rate: 96%       Demolition recycling rate: 94% (90% recycling rate: 94% (90% recycling rate or designated construction materials)       ○       -         Reducing water intake by 6% compared to fiscal 2007       Reduced by 3.4% compared to fiscal 2007       ×       16, Data 11         Reducing VOC atmospheric emissions by 55% compared to fiscal 2007       Reduced by 9.2% compared to fiscal 2007       ×       17, Data 13         Assessing two model sites and drafting action plans       Assessment of model 3 sites completed, planning efforts continue       0       18         Providing ald to ten organizations       Aid provided to five organizations       ×       -         North America and Europe       Attained at 98% of sites reviewed       0       18         Implementing nature conservation activities at 50 sites       Nature conservation activities conducted at 47 business sites       0       -         Materies enviewed       Subject comparies for situly of consolidation of production red 3 sites reviewed for sites reviewed fore sites newly certified in fiscal 2011 <td></td> <td></td> <td>×</td> <td>16, Data 10</td>			×	16, Data 10
Achieved at 50% of sites reviewed       Achieved at 17% of sites reviewed       ×       -         Demolition recycling rate: 96%       Demolition recycling rate of designated construction materials)       >       -         Reducing water intake by 6% compared to fiscal 2007       Reduced by 3.4% compared to fiscal 2007       ×       16, Data 11         Reducing VOC atmospheric emissions by 55% compared to fiscal 2007       Reduced by 5.2.4% compared to fiscal 2007       ×       17, Data 13         Assesing two model sites and drafting action plans       Assessment of model 3 sites completed, planning efforts continue       18         Providing aid to ten organizations       Aid provided to five organizations       ×       -         Implementing activities at two sites (Suzhou, China and Thailand)       Implemented at three sites (Suzhou, China, and Thailand)       0       18         Implementing nature conservation activities at two sites for study of consolidation of made on implementation in 2012       12       12       14         Implementing nature conservation activities at 75% of sites reviewed       Matiened at 98% of sites reviewed       12       12       12       12       12       12       14         Reduced by 76% of sites reviewed       Sites reviewed       Sites reviewed       12       12       14       12       14       12       14       14       14       14<		reduction: 2.01 billion yen (compared to fiscal 2008)	×	-
Demolition recycling rate: 96%         Demolition recycling rate of designated construction materials)         -           Reducing water intake by 6% compared to fiscal 2007         Reduced by 3.4% compared to fiscal 2007         X         16, Data 11           Reducing VOC atmospheric emissions by 55% compared to fiscal 2007         Reduced by 52.4% compared to fiscal 2007         X         16, Data 11           Reducing VOC atmospheric emissions by 55% compared to fiscal 2007         Reduced by 52.4% compared to fiscal 2007         X         17, Data 13           Assessing two model sites and drafting action plans         Assessment of model 3 sites completed, planning efforts continue         18           Providing ald to ten organizations         Aid provided to five organizations         X         -           Implementing patrivities at two sites (Suzhou, China and Thailand) North America and Europe, and decision made on implementation in 2012         18           Implementing nature conservation activities at 50 sites         Nature conservation activities conducted at 47 business sites         -           Implementing subject companies for study of consolidation of production and sites reviewed Two sites newly certified in fiscal 2011         12, Data 14           Reviewing subject companies in the Housing Company         Subject companies reviewed Attained at 66% of sites reviewed         -           Conducting Subject companies for study of consolidation of production and siales companies in the Housing Company         -	Fiscal 2011: three new sites to be certified, certification rate by 95%	Three new sites certified, achieved at 95% of sites	0	Data 10
Definition recycling rate for designated construction materials)       Image: construction materials)       Image: construction materials)         Reducing water intake by 6% compared to fiscal 2007       Reduced by 3.4% compared to fiscal 2000       Image: construction materials)       Image: construction materials)         Reducing vOC atmospheric emissions by 55% compared to fiscal 2007       Reduced by 52.4% compared to fiscal 2000       Image: construction materials)       Image: construction material	Achieved at 50% of sites reviewed	Achieved at 17% of sites reviewed	×	-
ActivitiesNetworkNetworkNetworkReducing VOC atmospheric emissions by 55% compared to fiscal 2007)Reduced by 52.4% compared to fiscal 2007)x17, Data 13Assesing two model sites and drafting action plansAssessment of model 3 sites completed, planning efforts continue18Providing aid to ten organizationsAid provided to five organizationsx-Implementing activities at two sites (Suzhou, China and Thailand)Implemented at three sites (Suzhou, China, Thailand, and North America)18North America and EuropePlanning completed on northern China and Europe, and decision made on implementation in 201218Implementing nature conservation activities at 50 sitesNature conservation activities conducted at 47 business sites1One site newly certified in fiscal 2011Attained at 98% of sites reviewed production and sales companies for study of consolidation of production and sales companies for study of consolidation of production and sales companies for study of consolidation of production and sales companies in the Housing CompanyEMS development rate: 72% Four sites newly certified in fiscal 2011-EXS certification attained: 93%EMS development rate: 94.9% (Sites reviewed Four sites newly certified in fiscal 2011)EXS certification attained: 93%Green procurement rate: 73%, independent EMS development: 22.1%)×-Green procurement rate: at least 95%Green procurement rate: 96.9%OData 11Four sites surveyedSurveys completed at four sites Surveys completed at four sites Surveys completed at four sites Surveys completed at four si	Demolition recycling rate: 96%		0	-
2000 (reducing by 15% compared to fiscal 2007)       In , Data 15         Assessing two model sites and drafting action plans       Assessment of model 3 sites completed, planning efforts continue       In 18         Providing aid to ten organizations       Aid provided to five organizations       X       -         Implementing activities at two sites (Suzhou, China and Thailand) Completing planning on northern China, completing surveys in North America and Europe       Implemented at three sites (Suzhou, China, Thailand, and North America) Planning completed on northern China and Europe, and decision made on implementation in 2012       Implementing activities at 50 sites         Attained at 96% of sites reviewed One site newly certified in fiscal 2011       O       12, Data 14         Reviewing subject companies for study of consolidation of production and sales companies in the Housing Company       EMS certification ratianment rate: 72% EMS certification attained at 75% of sites reviewed       O       -         EMS certification attained at 93%       EMS development rate: 94% (External certification: 67.3%), independent EMS development: 22.1%)       X       -         Green procurement rate: at least 95%       Green procurement rate: 96.9%       O       Data 11         Four sites surveyed       Surveys completed at four sites Surveys completed at four sites Surveys completed at a cumulative total of nine sites of surveys completed at a cumulative total of nine sites of surveys completed at a cumulative total of nine sites of surveys completed at a cumulative total of nine sites of surveys complete	Reducing water intake by 6% compared to fiscal 2007	Reduced by 3.4% compared to fiscal 2007	×	16, Data 11
Providing aid to ten organizations       Aid provided to five organizations       ×       -         Implementing activities at two sites (Suzhou, China and Thailand)       Implemented at three sites (Suzhou, China, Thailand, and North America)       Implemented at three sites (Suzhou, China, Thailand, and North America)       18         Implementing activities at two sites (Suzhou, China, completing surveys in North America and Europe       Implemented at three sites (Suzhou, China, Thailand, and North America)       18         Implementing nature conservation activities at 50 sites       Nature conservation activities conducted at 47 business sites       -         Attained at 96% of sites reviewed       Attained at 98% of sites reviewed       -       12, Data 14         Reviewing subject companies for study of consolidation of production and sales companies for study of consolidation of production and sales companies in the Housing Company       Subject companies reviewed; no sites newly certified in fiscal 2011       -         EMS certification attained at 75% of sites reviewed       EMS certification attainent rate: 72%       -       -         Four sites newly certified in fiscal 2011       C       -       -       -         EMS certification attained: 93%       EMS certification attaineed: 75% of sites reviewed       -       -       -         Four sites surveyed       Surveys completed at four sites surveys completed at four sites       O       12, Data 11       -			×	17, Data 13
Implementing activities at two sites (Suzhou, China and Thailand) Completing planning on northern China, completing surveys in North America and EuropeImplemented at three sites (Suzhou, China, Thailand, and North America) Planning completed on northern China and Europe, and decision made on implementation in 2012Implemented at three sites (Suzhou, China, Thailand, and North America) Planning completed on northern China and Europe, and decision made on implementation in 2012Implemented at three sites (Suzhou, China, Thailand, and North America) Planning completed on northern China and Europe, and decision made on implementation in 2012Implemented at three sites (Suzhou, China, Thailand, and North America) Planning completed on northern China and Europe, and decision made on implementation in 2012Implemented at three sites (Suzhou, China, Thailand, and North America) Planning completed on northern China, and EuropeImplemented at three sites (Suzhou, China, Thailand, and North America) Planning completed on northern China and Europe, and decision made on implementation in 2012Implemented at three sites (Suzhou, China, Thailand, and North America) Planning completed on northern China, and Europe, and decision made on implementation in 2012Implemented at three sitesItelImplementing nature conservation activities at 50 sitesNature conservation activities conducted at 47 business sitesItelItelItelImplementation attained at 96% of sites reviewed One sites newly certified in fiscal 2011Attained at 66% of sites reviewed, no sites newly certifiedItelItelEMS certification attained: 93%EMS certification attainement rate: 94% Four sites newly certified in fiscal 2011ItelItelItelExternal EMS cer	Assesing two model sites and drafting action plans	Assessment of model 3 sites completed, planning efforts continue	0	18
Completing planning on northern China, completing surveys in North America and EuropePlanning completed on northern China and Europe, and decision made on implementation in 2012Image on implementation in 2012Implementing nature conservation activities at 50 sitesNature conservation activities conducted at 47 business sitesImage on implementation in 2012Image on implementation in 2012Image on implementation in 2012Attained at 96% of sites reviewed Antained at 96% of sites reviewed Antained at 96% of sites reviewed Production and sales companies for study of consolidation of production and sales companies in the Housing CompanyAttained at 66% of sites reviewed; Attained at 66% of sites reviewed; Four sites newly certified in fiscal 2011Image on12, Data 14Reviewing subject companies for study of consolidation of production and sales companies in the Housing CompanySubject companies reviewed; Four sites newly certified in fiscal 2011Image on-EMS certification attained at 75% of sites reviewed Four sites newly certified in fiscal 2011Image onEMS certification attained: 93%EMS development rate: 89.4% (External certification: 67.3%, independent EMS development: 22.1%)X-Green procurement rate: at least 95%Green procurement rate: 96.9%Image on play are surveys of persons newly certified in fiscal 2011, for a cumulative total of site serves personsImage persons17, Data 12At least 200 persons26 persons newly certified in fiscal 2011, for a cumulative total of 81 personsX-Conducting CSR training Conducting Environmental e-learningImage energySite personsSite	Providing aid to ten organizations	Aid provided to five organizations	×	-
Attained at 96% of sites reviewed       Attained at 98% of sites reviewed       0       12, Data 14         One site newly certified in fiscal 2011       0       12, Data 14         Reviewing subject companies for study of consolidation of production and sales companies in the Housing Company       Subject companies reviewed       0       -         EMS certification attained at 75% of sites reviewed       EMS certification attainement rate: 72%       0       -         EMS certification attained at 75% of sites reviewed       EMS certification attainment rate: 73%       0       -         External EMS certification attained: 93%       EMS development rate: 89.4%       0       -         External EMS certification attained: 93%       Green procurement rate: 40.4%       0       -         Four sites surveyed       Surveys completed at four sites Surveys completed at a cumulative total of nine sites       0       17, Data 12         At least 200 persons       26 persons newly certified in fiscal 2011, for a cumulative total of 81 persons newly certified in fiscal 2011, for a cumulative total of 81 management) Conducting ENvironmental e-learning       -       -         Holding Sekisui Nature Study Course at three sites       Held at three sites, cumulative total of 28 sites       59, Data 19         Issuing at 42 subject sites       Issued at 42 subject sites       -       -	Completing planning on northern China, completing surveys in	Planning completed on northern China and Europe, and decision	0	18
One site newly certified in fiscal 2011Two sites newly certified in fiscal 201112, Data 14Reviewing subject companies for study of consolidation of production and sales companies in the Housing CompanySubject companies reviewed Attained at 66% of sites reviewed; no sites newly certified-EMS certification attained at 75% of sites reviewedEMS certification attained at 75% of sites reviewedExternal EMS certification attained: 93%EMS development rate: 89.4% (External certification: 67.3%, independent EMS development: 22.1%)×-Green procurement rate: at least 95%Green procurement rate: 96.9%OData 11Four sites surveyedSurveys completed at four sites Surveys completed at a cumulative total of nine sites017, Data 12At least 200 persons26 persons newly certified in fiscal 2011, for a cumulative total of 81 persons×-Conducting CSR training Conducting e-learning on environmentConducting CSR training (for new employees and new members of management) Conducting Environmental e-learning0-Holding Sekisui Nature Study Course at three sitesHeld at three sites, cumulative total of 28 sites59, Data 19Issuing at 42 subject sitesIssued at 42 subject sites0-	Implementing nature conservation activities at 50 sites	Nature conservation activities conducted at 47 business sites	0	-
production and sales companies in the Housing CompanyAttained at 66% of sites reviewed; no sites newly certifiedO-EMS certification attained at 75% of sites reviewedEMS certification attainment rate: 72% Four sites newly certified in fiscal 2011O-External EMS certification attained: 93%EMS development rate: 89.4% (External certification: 67.3%, independent EMS development: 22.1%)X-Green procurement rate: at least 95%Green procurement rate: 96.9%OData 11Four sites surveyedSurveys completed at four sites Surveys completed at a cumulative total of nine sitesO17, Data 12At least 200 persons26 persons newly certified in fiscal 2011, for a cumulative total of 81 personsX-Conducting CSR training Conducting e-learning on environmentConducting CSR training (for new employees and new members of management) Conducting Environmental e-learningO-Holding Sekisui Nature Study Course at three sitesHeld at three sites, cumulative total of 28 sites059, Data 19Issuing at 42 subject sitesIssued at 42 subject sitesO	One site newly certified in fiscal 2011	Two sites newly certified in fiscal 2011	0	12, Data 14
EMS certification attained at 75% of sites reviewedEMS certification attainment rate: 72% Four sites newly certified in fiscal 2011External EMS certification attained: 93%EMS development rate: 89.4% (External certification: 67.3%, independent EMS development: 22.1%)×-Green procurement rate: at least 95%Green procurement rate: 96.9%OData 11Four sites surveyedSurveys completed at four sites Surveys completed at a cumulative total of nine sitesO17, Data 12At least 200 persons26 persons newly certified in fiscal 2011, for a cumulative total of 81 maagement) Conducting CSR training Conducting e-learning on environment×-Holding Sekisui Nature Study Course at three sitesHeld at three sites, cumulative total of 28 sites59, Data 19Issuing at 42 subject sitesIssued at 42 subject sites	Reviewing subject companies for study of consolidation of production and sales companies in the Housing Company	Subject companies reviewed Attained at 66% of sites reviewed: no sites newly certified	0	-
External EMS Certification: 67.3%, independent EMS development: 22.1%)       X       -         Green procurement rate: at least 95%       Green procurement rate: 96.9%       O       Data 11         Four sites surveyed       Surveys completed at four sites Surveys completed at a cumulative total of nine sites       O       17, Data 12         At least 200 persons       26 persons newly certified in fiscal 2011, for a cumulative total of 81 persons       ×       -         Conducting CSR training Conducting e-learning on environment       Conducting Environmental e-learning       O       -         Holding Sekisui Nature Study Course at three sites       Held at three sites, cumulative total of 28 sites       O       59, Data 19         Issuing at 42 subject sites       Issued at 42 subject sites       O       -		EMS certification attainment rate: 72%	0	-
Four sites surveyed       Surveys completed at four sites Surveys completed at a cumulative total of nine sites       0       17, Data 12         At least 200 persons       26 persons newly certified in fiscal 2011, for a cumulative total of 81 persons       ×       -         Conducting CSR training Conducting e-learning on environment       Conducting ENVironmental e-learning       0       -         Holding Sekisui Nature Study Course at three sites       Held at three sites, cumulative total of 28 sites       0       59, Data 19         Issuing at 42 subject sites       Issued at 42 subject sites       0       -	External EMS certification attained: 93%	EMS development rate: 89.4%	×	-
Four sites surveys       Surveys completed at a cumulative total of nine sites       0       17, Data 12         At least 200 persons       26 persons newly certified in fiscal 2011, for a cumulative total of 81 persons       ×       -         Conducting CSR training Conducting e-learning on environment       Conducting Environmental e-learning       0       -         Holding Sekisui Nature Study Course at three sites       Held at three sites, cumulative total of 28 sites       0       59, Data 19         Issuing at 42 subject sites       0       -       -       -	Green procurement rate: at least 95%	Green procurement rate: 96.9%	0	Data 11
At least 200 persons       26 persons newly certified in fiscal 2011, for a cumulative total of 81 x       -         Conducting CSR training Conducting e-learning on environment       Conducting Environmental e-learning       -         Holding Sekisui Nature Study Course at three sites       Held at three sites, cumulative total of 28 sites       59, Data 19         Issuing at 42 subject sites       Issued at 42 subject sites       -	Four sites surveyed		0	17, Data 12
Conducting CSN training       management)       ·         Conducting CSN training on environment       ·       ·         Holding Sekisui Nature Study Course at three sites       Held at three sites, cumulative total of 28 sites       ·       59, Data 19         Issuing at 42 subject sites       Issued at 42 subject sites       ·       ·       ·	At least 200 persons	26 persons newly certified in fiscal 2011, for a cumulative total of 81	×	-
Issuing at 42 subject sites     O     -	Conducting CSR training Conducting e-learning on environment	management)	0	-
	Holding Sekisui Nature Study Course at three sites	Held at three sites, cumulative total of 28 sites	0	59, Data 19
Conducted at two or more sites Briefings for nearby residents or authorities held at four sites O	Issuing at 42 subject sites	Issued at 42 subject sites	0	-
	Conducted at two or more sites	Briefings for nearby residents or authorities held at four sites	0	-

"Evaluation" Column Key: 🔘 Outperformed target 🔿 Performed close to target (achievement rate of about 90% to 110%) × Failed to reach target

#### Sekisui Chemical Group's Environmental Accounting Verified



The costs of R&D increased in fiscal 2011 in connection with an increase in the number of themes concerning the environment.

Scope of environmental accounting

(1) Summation period: April 1, 2011 through March 31, 2012

The costs of recovery from environmental damage and similar situations decreased, while expenses rose from the previous fiscal year.

At the same time, the investment side showed increased investments in global warming prevention measures (energy conservation) in connection with responses to electric power issues. A look at economic effects shows that the amount of cost reductions from energy-conservation activities increased, as did the amount of cost savings from waste reduction and other activities. In addition, external economic effects from homes installed with solar power systems and other efforts are also increasing steadily.

(million yen)

(2) Scope of summation: 40 target production sites (as listed on Data p. 2) + 4 Laboratories + each department of Headquarters + back offices of division companies + 15 housing sales companies

(3) Principles of summation

Depreciation amounts are the same as those for financial accounting.

· Investment amounts are based on budget approvals during the summation period.

• Expenditures and investments that contain other than environmental conservation activities are distributed pro-rata in 10% increments.

(4) Note • The scope of summation in fiscal 2010 consisted of 38 target production sites + 4 Laboratories + each department of Headquarters + back offices of division

companies + 14 housing sales companies Due to the effects of the Great East Japan Earthquake, data could not be collected from the following sites in fiscal 2010:

Production sites: Tohoku Sekisui Heim Industry Co., Ltd. and the Sekisui Film Co., Ltd. Sendai Plant

Housing sales company: Sekisui Heim Tohoku Co., Ltd.

#### Environmental Conservation Costs (Sekisui Chemical Group)

							(minori yen)
	ltems	FY:	2009	FY2010		FY2011	
Category	Description of main activities	Costs Investments Costs		Investments	Costs	Investments	
	Prevention of air, water, and noise pollution, etc.	1,675	182	1,800	118	1,689	142
1) Costs within business areas	Countermeasures against global warming (energy saving), etc.	252	2 704	333	387	469	674
	Waste reduction, recycling, disposal, etc.	3,956	5 55	4,296	102	4,607	153
2) Upstream/downstream costs	Cost increases due to URU, switching to packaging/packing methods involving reduced environmental impact, greener purchasing, etc.	493	3 0	376	0	276	0
3) Administrative costs	Environmental education, EMS maintenance, running costs for green action organization, information disclosure, etc.	2,187	7 45	2,189	64	2,191	
4) Research & Development costs	Research and development on environmental conservation	2,561	14	1,506	16	3,301	15
5) Social activities costs	Social contributions, etc.	70	) 8	77	0	70	0
6) Environmental damage costs	Nature restoration, etc.	23	3 354	391	1	25	0
	Total	11,217	7 1,363	10,967	688	12,628	996
	FY	2009	FY2	2010	FY2	2011	
Category			Investments	Costs	Investments	Costs	Investments
Total amount of R&D costs <sup>1</sup> and investment in the fiscal period (million yen)			24,119	24,695	18,559	25,611	17,200
Ratio of amount related to en	vironmental conservation activities to total (%)	10.7	7 5.7	6.1	3.7	12.9	5.8

1 R&D cost is the total for all consolidated companies.

#### Environmental Conservation Benefits (Sekisui Chemical Group)

	Environmental Conservation Benefits Environmental performance criteria: per unit of output; Total Self-													
Descrip	tion of effects	ltem	1	Unit	FY2009	FY2010	FY2011	Effeact (11-10)	See page	ltem	Unit	FY2010		ation
Effects on in-	Effects on in-	Amount of energy	(1) Electricity	τJ	3,345	3,522	3,370	-151	Data 9	(1) Energy usage per unit of output	GJ/ton	1.84	1.76	
	vested resources	usage <sup>1</sup>	(2) Fuel	τJ	2,312	2,434	2,288	-146	Data 9	(electricity + fuel) <sup>1</sup>	CU/ LOTT	1.04	1.70	
		(3) CO <sub>2</sub> emissions <sup>2</sup>		Thousand tons	315.6	331.6	315.9	-15.6	Data 9	-	-	-	-	$\bigcirc$
Effects within busi-	Effects on envi-	(4) Volume of environ Iutants discharged <sup>3</sup>		Tons	659.3	810.8	617.8	-193.0	Data 13	-	-	-	-	0
	ronmental impact and wastes	onmental impact nd wastes (5) Wastes generated <sup>4</sup>		Thousand tons	36.0	39.5	36.1	-3.3		(2) Waste generated per unit of output	kg/ton	42.7	38.3	×
				Thousand tons	0.32	0.24	0.03	-0.21		(3) Outsourced disposal per unit of output	kg/ton	0.26	0.03	0
Upstream/ downstream effects	Effects related to products/services	CO <sub>2</sub> reduction by photovoltaic power generation, etc. (cumulative)		Thousand tons	162	196	233	37	-	-	-	-	-	0
Other benefits to environmen- tal conservation		Business sites attaining ISO 14001 and other certifications Renewals		Numbers	3	2	6	-	-	Business sites attaining ISO 14001 and other	Total number of business	81	87	
	Others <b>6</b>			Numbers	14	16	12	-	-	certifications <sup>7</sup>	sites	01	0/	
		Number of busines ing zero emissions <sup>8</sup>		Numbers	1	2	3	-		Number of business sites achieving zero emissions <sup>8</sup>	Total number of business sites	141	144	0

1 Conversion into thermal units uses the coefficient published by the Ministry of Economy, Trade and Industry. 2 Emissions at the time of manufacturing and conversion to CO<sub>2</sub> amounts use the coefficients used in the Environmental Top Runner Plan SHINKAI (see Data p. 9). 3 Applicable to Class I Designated Chemical Substances specified by PRTR Law. 4 Amount discharged + Amount disposed of at price + Amount incinerated within own premises. 5 Simple incineration + Landfill. 6 Including business sites not subject to environmental accounting summation, such as overseas business sites. 7 A cumulative total number of sites reviewed for factors such as consolidation and return of certifications for housing sales companies. 8 A business site affiliated to multiple companies is contred as one.

Economical Effects Related to Environme	ntal Conse	ervation N	leasures (	Sekisui Chemical Group)	(million yen)

Description of effects	FY2009	FY2010	FY2011	Remarks
Revenue (1) Profit on sales of v.aluable resources	204	206	267	Profit on sales of valuable resources from promotion of waste segregation and recycling
(2) Savings from simplified packaging	32	44	12	
Cost savings (3) Cost savings through energy-saving activities	725	274	451	
(4) Cost savings through waste-reduction activities, etc.	387	696	966	Including resource-saving activities
Sub-total (actual effects)	1,347	1,220	1,696	
(5) Contribution to environmental conservation activities <sup>9</sup>	6,228	7,603	8,420	Contribution of environmental conservation activities to added value at business sites <sup>10</sup>
(6) External Economic Effect	12,598	12,957	16,165	Monetary conversion of impact from photovoltaic generation systems and "No-Dig" pipe rehabilitation method
Sub-total (estimated effects)	18,827	20,560	24,585	
Total	20,174	21,779	26,281	

9 Excluding housing sales companies 10 (Added value from business sites) × {(Costs within business areas + Administrative costs)/(Total production costs excluding materials costs)}

#### Environmental Conservation Cost (by Each Division Company)

	ltems	Housing	Company <sup>1</sup>	Urban Infrastructure & Environmental Products Company		High Performance Plastics Company		Sekisui Chemical Group <sup>2</sup>	
Category	Description of main activities	Costs	Investments	Costs	Investments	Costs	Investments	Costs	Investments
	Prevention of air, water, and noise pollution, etc.	1,019	0	49	33	557	46	1,689	142
<ol> <li>Costs within business areas</li> </ol>	Countermeasures against global warming (energy saving), etc.	116	188	90	59	136	360	469	674
business areas	Waste reduction, recycling, disposal, etc.	3,934	1	311	132	322	20	4,607	153
2) Upstream/down- stream costs	Cost increases due to URU, switching to packaging/packing methods involving reduced environmental impact, greener purchasing, etc.	238	0	5	0	6	0	276	0
3) Administrative costs	Environmental education, EMS maintenance, running costs for green action organization, information disclosure, etc.	670	0	253	2	273	6	2,191	12
4) Research & Deve- lopment costs	Research and development on environmental conservation	128	0	1,618	15	981	0	3,301	15
5) Social activities costs	Social contributions, etc.	31	0	4	0	18	0	70	0
6) Environmental damage costs	Nature restoration, etc.	0	0	0	0	25	0	25	0
Total		6,136	189	2,329	240	2,318	433	12,628	996
Items		Housing (	Company <sup>1</sup>	Environme	astructure & ntal Products npany		formance Company		Chemical pup <sup>2</sup>
		Costs	Investments	Costs	Investments	Costs	Investments	Costs	Investments
Total amount of R&I	O costs <sup>3</sup> and investment in the fiscal period (million yen)	4,109	4,467	5,347	2,220	11,920	9,209	25,611	17,200
Ratio of amount related to environmental conservation activities to total (%)			4.2	30.3	10.8	8.2	4.7	12.9	5.8

1 Including 38 business sites of housing sales companies 2 Total of three division companies and departments of Headquarters 3 R&D cost is the total for all consolidated companies.

#### (million yen)

(million ven)

#### Environmental Conservation Cost (by Environmental Conservation Measures)

	Items			Urban Infrastructure & Environmental Products Company		High Performance Plastics Company		Sekisui Chemical Group <sup>2</sup>	
Category	Description of main activities	Costs	Investments	Costs	Investments	Costs	Investments	Costs	Investments
1. Prevention of global warming	Reduction of CO <sub>2</sub> emissions, etc.	112	188	111	58	142	359	493	672
2. Ozone layer protection	Reduction of Chlorofluorocarbon emissions, etc.	4	0	0	0	3	1	7	1
3. Conservation of air quality	Prevention of air pollution by reducing polluting substances	284	0	33	0	282	4	638	12
4. Prevention of noise and vibration	Prevention of noise and vibration pollution	6	0	3	0	7	2	18	50
<ol> <li>Conservation of water environment, soil environment, ground quality</li> </ol>	Preservation of water quality, prevention of subsidence	205	0	22	32	259	28	511	68
6. Waste reduction and recycling	Reduction and treatment of waste, recycling, etc.	4,207	1	334	132	325	20	4,909	153
7. Reduction of chemical substances	Risk management of chemical substances, etc.	596	0	3	0	50	11	650	11
8. Conservation of natural environment	Nature conservation, etc.	55	0	62	0	38	0	182	0
9. Others	Others	668	0	1,761	18	1,211	7	5,221	29
Total		6,136	189	2,329	240	2,318	433	12,628	996

1 Including 38 business sites of housing sales companies 2 Total of three division companies and departments of Headquarters

#### Environmental Conservation Benefits (by Each Division Company)

Environmental Conservation Benefits			Housing Company Environme						High Performance Plastics Company		Sekisui Chemical Group			See			
Descri	ption of effects	ltems		Unit	FY2010	FY2011	Effect (11-10)	FY2010	FY2011	Effect (11-10)	FY2010	FY2011	Effect (11-10)	FY2010	FY2011	Effect (11-10)	page
	Effects on invested	Amount of	(1) Electricity	τJ	435	422	-13	1,332	1,312	-20	1,137	1,033	-105	3,522	3,370	-151	Data 9
Effe	resources	energy usage <sup>4</sup>	(2) Fuel	TJ	118	117	-1	112	116	3	1,968	1,807	-161	2,434	2,288	-146	Data 9
Effects w business		(3) CO <sub>2</sub> emissions <sup>5</sup>		Thousand tons	32.0	31.2	-0.8	82.8	82.0	-0.8	167.2	153.1	-14.1	331.6	315.9	-15.6	Data 9
ithin; areas	environmen- pollutants dis	(4) Volume of enviro pollutants discha	onmental arged <b>6</b>	Tons	4.0	4.3	0.3	67.4	80.6	13.3	735.8	529.0	-206.8	810.8	617.8	-193.0	Data 13
<u> </u>		(5) Wastes generate	d <b>7</b>	Thousand tons	11.3	8.3	-2.9	6.4	6.2	-0.2	19.5	19.5	0.0	39.5	36.1	-3.3	Data 10
		(6) Outsourced disp	osal <b>8</b>	Thousand tons	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.02	-0.11	0.24	0.03	-0.21	-
Upstream/ downstream effects	to products /services	CO2 reduction by pl power generation, e		Thousand tons	196	233	37	-	-	-	-	-	-	196	233	37	
Othe envin prese	Othe	hers <sup>9</sup> ISO 14001	New acquisitions	Num- bers	0	0	-	2	1	-	0	4	-	2	6	-	
r bene onmer rvatio	Others9		Renewals	Num- bers	6	1	-	4	5	-	1	3	-	16	12	-	-
n tal	Other benefits to preservation	Number of business achieving zero emis	s sites sions 10	Num- bers	0	0	-	0	0	-	1	0	-	2	3	-	

<sup>4</sup> Conversion into thermal units uses the coefficient published by the Ministry of Economy, Trade and Industry. **5** Emissions at the time of manufacturing and conversion to CO<sub>2</sub> amounts use the coefficients used in the Environmental Top Runner Plan SHINKAI (see Data, p. 9). **6** Applicable to Class I Designated Chemical Substances specified by PRTR Law **7** Amount discharged + Amount disposed of at price + Amount incinerated within own premises **8** Simple incineration + landfill **9** Including business sites not subject to environmental accounting summation, such as overseas business sites **10** A business site affiliated to multiple companies is counted as one.

#### Economic Effects Related to Environmental Conservation Measures (by Each Division Company)

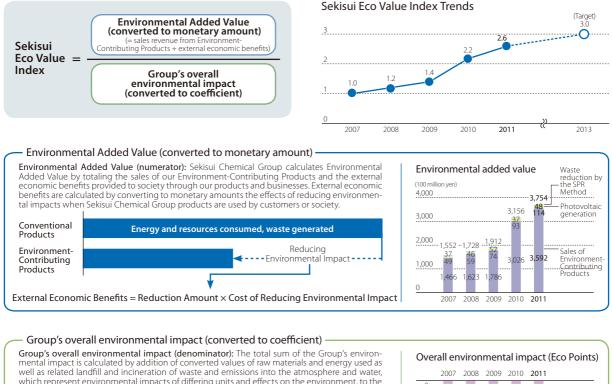
(million yen)

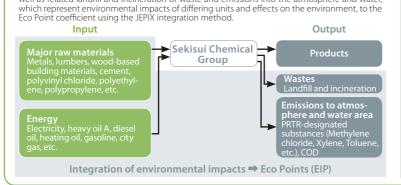
	Description of effects	Housing Company <sup>1</sup>	Urban Infra- structure & Environmental Products Company	High Performance Plastics Company	Sekisui Chemical Group <sup>2</sup>	Remarks
Rev- enue	(1) Profit on sales of valuable resources	37	11	196	267	Profit on sales of valuable resources from promotion of waste segregation and recycling
	(2) Savings from simplified packaging	0	5	7	12	
Cost savings	(3) Cost savings through energy-saving activities	25	25	379	451	
	<ul> <li>(4) Cost savings through waste-reduction activities, etc.</li> </ul>	19	149	773	966	Including resource-saving activities
Subtot	al (actual effects)	82	189	1,355	1,696	
	tribution to environmental conservation vities <sup>11</sup>	3,364	1,948	2,707	8,420	Contribution of environmental conservation activities to added value at business sites <sup>12</sup>
(6) External Economic Effect		11,364	4,801	-	16,165	Monetary conversion of impact from photovoltaic gene- ration systems and "No-Dig" pipe rehabilitation method
Sub-total (estimated effects)		14,728	6,748	2,707	24,585	
Total		14,810	6,937	4,063	26,281	

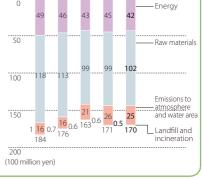
11 Excluding housing sales companies 12 (Added value from business sites) x {(Costs within business areas + Administrative costs)/(Total production costs excluding materials costs)}

### Sekisui Eco Value Index (P12) (Verified)

The Sekisui Eco Value Index is an independent index utilized by Sekisui Chemical Group for measuring the efficiency of our environmental management activities.







## Material Balance (in Japan) 🗺

Metals 81,000 tons     Wood, wooden     building materials 41,000 tons     Cement for     exterior walls 116,000 tons     Concrete for     foundations 249,000 tons     PVC 141,000 tons     Polyethylene 65,000 tons     Polyethylene 15,000 tons     Kraft paper 15,000 tons     PRTR-designated     substances 118,000 tons	Input Sekisui Chemical Group Output	To the atmosphere         • CO2 from energy consumption ······ 316 thousand tons-CO2         • NOx ······ 217 tons         • SOx ······ 15 tons         • Soot particles ····· 2 tons         • PRTR-designated substances ····· 614 tons         To water         • Water discharged ···· 15,218 thousand tons         • COD ····· 63 tons
Energy         5,659 TJ           • Purchased electricity         348,080 MWh           • Heavy oil A         5,155 kL           • City gas         44,419 thousand m <sup>3</sup> Industrial water         16,413 thousand tons		<ul> <li>PRTR-designated substances</li> <li>2.0 tons</li> <li>Wastes</li> <li>Total generated waste</li> </ul>

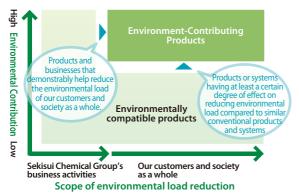
Note: Certain main raw materials are undisclosed for business strategy reasons.

### Environment-Contributing Products (P13)



## Environment-Contributing Products Sales (Verified) and Sales-Ratio Trends

#### Environment-Contributing Products conceptual diagram



#### Criteria for Environment-Contributing Products

#### Definitions

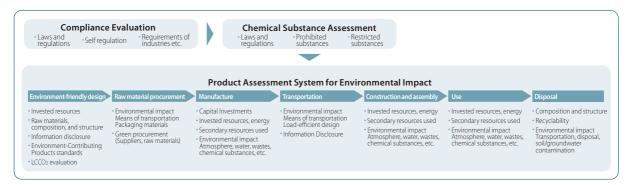
 Products and businesses that demonstrably help reduce the environmental load of our customers and society as a whole.
 Products or systems having at least a certain degree of effect on reducing environmental load compared to similar conventional products and systems

#### Scope of Application

- Reduction of environmental load and resource depletion related to the stages of customer use, disposal, and recycling (excluding the stages of production, home construction, and transportation within Sekisui Chemical Group)
- Reduction of impacts on the natural environment (e.g., reduction in greenhouse gases) and on the social environment (e.g. waste reduction, resource conservation, and water saving/recycling)

## Product Assessment System for Environmental Impact P14

Targets: products and processes Scope: all stages of the product lifecycle



### Biodiversity P18

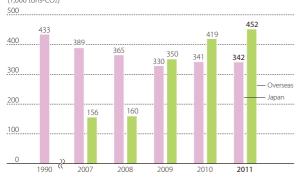
#### Initiatives Envisioned Under the Guidelines for Preservation of Biodiversity

1. Assessment and reduction of the impact of business activities on biodiversity	<ul> <li>Development of assessment methods, conducting assessment, lessening impacts</li> <li>Promoting biodiversity-conscious purchasing</li> <li>Greening of business sites (promoting landscaping and biotope development)</li> </ul>
2. Development and promotion of related technologies and products	<ul> <li>Incorporating biodiversity assessment in the product development stage</li> </ul>
3. Raising employees' awareness	<ul> <li>Conducting nature-conservation activities at all business sites</li> <li>Expanding the Sekisui Nature Study Course and nature-conservation activities</li> </ul>
4. Dialogue and cooperation with external stakeholders	<ul> <li>Support for nonprofit organization through the Keidanren (Japan Business Federation) and other organizations</li> </ul>
5. Transmittance of information	<ul> <li>Exhibiting at the Eco-Products Exhibition and other events</li> <li>Providing information in the CSR Report, Site Reports, and websites</li> <li>Providing education for the next generation (Children's Nature Study Course, school visits)</li> </ul>

## Global Warming Prevention P15 Verified

#### Greenhouse-gas (GHG) Emissions During Manufacturing

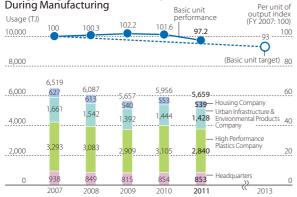
(1,000 tons-CO<sub>2</sub>)



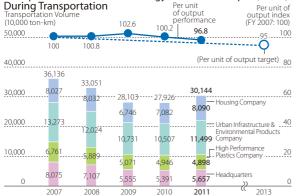
#### Greenhouse-gas (GHG) Emissions During Manufacturing



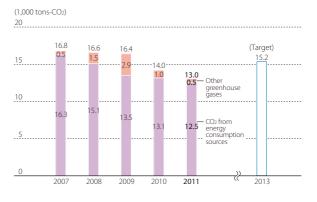
#### Energy Usage and Per Unit of Output (Index)



Transportation Volume and Energy Per Unit of Output (Index) **During Transportation** Per unit of output



#### Greenhouse-gas Emissions from Laboratories



#### **CO2 Emissions Coefficient** (Environmental Top Runner Plan: SHINKA!)

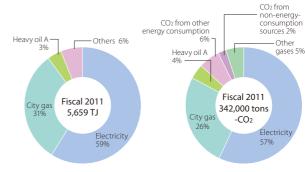
Under the New Midterm Environmental Plan: Environmental Top Runner Plan SHINKA!, progress is being made in reducing emissions of all green-house gases. The conversion coefficients for CO<sub>2</sub> emissions are the values specified (as of March 2009) under the greenhouse-gas emissions calculation, reporting, and disclosure system established by Japanese law, with uniform figures used for each fiscal vear.

Purchased electricity	0.555 tons CO <sub>2</sub> /MWh
Heavy oil A	2.71 tons CO <sub>2</sub> /kL
City gas	2.08 tons CO2/thousand Nm3
Heating oil	2.49 tons CO <sub>2</sub> /kL
Diesel oil	2.62 tons CO <sub>2</sub> /kL
Gasoline	2.32 tons CO <sub>2</sub> /kL
_PG	3.00 tons CO <sub>2</sub> /ton
Purchased steam	0.179 tons CO <sub>2</sub> /ton

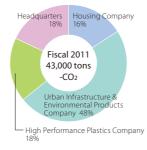
Source: Calculation and Reporting Manual for Greenhouse Gas Emissions (published in March 2009 by Japanese Ministry of the Environment and Ministry of Economy, Trade and Industry)

#### Breakdown of Energy Used

#### Breakdown of Greenhouse-Gas (GHG) Emissions



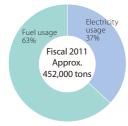
CO<sub>2</sub> Emissions in the Transportation Stage



Amount transported in fiscal 2011: 300 million ton

Aniomatic values of the improved ton-kilometer method, fuel consumption method, or fuel cost method, depending on the product and transportation method

#### Amount of CO<sub>2</sub> Emissions (Overseas)



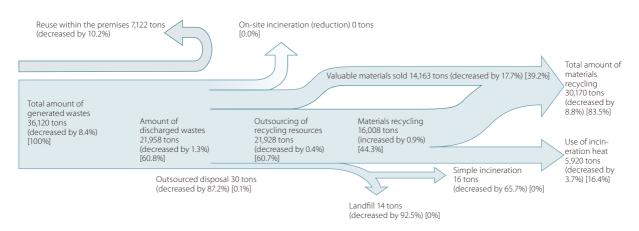
See Data, p. 2 for scope of summation

CO2 emissions have been calculated using the emissions coefficients of the greenhouse-gas protocol for electric power and the emissions coefficients of the Environmental Top Runner Plan SHINKA! for fuel.

## Resource Recycling and Saving (P16) (Verified)

Fiscal 2011 Annual Production-Site Waste Generation and Disposal Conditions

Change over the previous year is in () and proportion of the total generation is in [].



#### Zero Emissions Achievement Criteria and Accreditation System of Sekisui Chemical Group

- Not engaging in any outside incineration without thermal utilization (thermal recycling), or landfill outside or inside of facilities (recycling ratio: 100%)
- (2) If the waste quantity is small and it is a type of waste that has never been recycled before, recycling methods and relevant contractors must be identified and a service agreement must be executed. We also have established uniform evaluation criteria known as the Zero

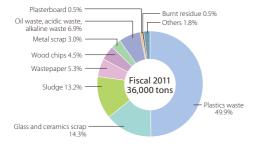
We also have established uniform evaluation criteria known as the Zero Emissions Achievement Evaluation List. We have established a system designed to conduct internal checks and issue approvals for the status of observance of the evaluation criteria as well as legal compliance, rules and signage for waste segregation and storage, management of related facilities, and waste reduction planning and management. The list obliges us to conduct inspection of outside contractors and to clarify treatment routes in order to enhance the management system through these activities.

## Waste Generated by New House Construction (per house)

(tons)



#### Breakdown of Generated Waste



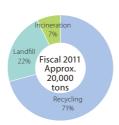
#### Status of Zero Emissions Achievement

Production sites	Achieved at 39 plants in Japan and three overseas plants, including those of affiliates. (Includes three plants in Japan that achieved zero emissions in fiscal 2011)
Laboratories	Achieved at four domestic laboratories as of fiscal 2005
New house construction sites	Achieved at all locations as of September 2003
House renovation sites	Achieved at all locations as of fiscal 2004
Osaka and Tokyo Headquarters buildings	Achieved as of fiscal 2005
Home demolition sites	As of end of fiscal 2011, 99% recycling rate for Designated Construction Materials (scrap concrete and wood)

#### Waste Generated by Production Sites and Per Unit of Output (Index) Per unit of output index

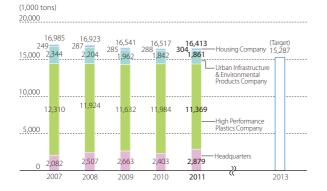


#### Waste Treatment Methods (Overseas)

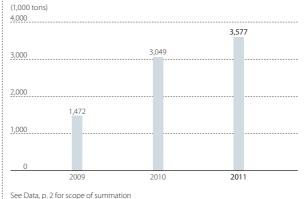


See Data, p. 2 for scope of summation

#### Amount of Water Extracted for Use at Production Site

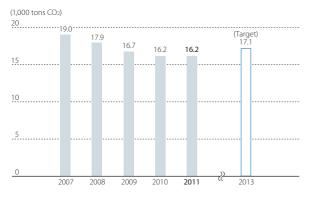


Amount of Water Extracted for Use (Overseas)



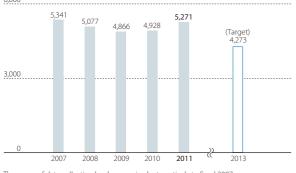
## Environmental Performance in Domestic Offices (P14, P15) (Verified)

#### CO<sub>2</sub> Emissions at Offices



#### Copier-paper Use at Offices

(10,000 sheets) 6,000



The scope of data collection has been revised retroactively to fiscal 2007.

#### Fiscal 2011 Green Purchases Performance

Sekisui Chemical Group is committed to green purchasing of office supplies for all its departments and branches.

	(10,000 yen)
	Amount purchased
Photocopying paper	9,954
Other pamphlets, catalogs, office supplies, etc.	13,603
Office automation equipment	11,794
Total	35,352

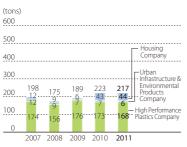
#### **Green Purchase Guidelines**

1) OA paper (photocopier paper), stationery, office supplies, office automation equipment	<ul> <li>Any of those listed under (1)-(4) below:</li> <li>(1) Those satisfying Eco Mark certification standards</li> <li>(2) Those in compliance with the Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities</li> <li>(3) Those covered in the Green Purchasing Network's database</li> <li>(4) Those covered in catalogs as environment-friendly products</li> </ul>
<ol> <li>Paper and paper products other than OA paper and toilet paper (forms, inkjet-printer paper, coated paper, notebooks, vouchers, business cards, paper used for publications such as pamphlets and catalogs, etc.)</li> </ol>	<ul> <li>Any of those listed under (1)-(5) below:</li> <li>(1) Those satisfying Eco Mark certification standards</li> <li>(2) Those in compliance with the Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities</li> <li>(3) Those covered in the Green Purchasing Network's database</li> <li>(4) Those covered in catalogs as environment-friendly products</li> <li>(5) Non-pulp paper or paper consisting of 70% or more recycled paper, or paper with the highest recycled content for the relevant type</li> </ul>
3) Toilet paper	100% recycled toilet paper

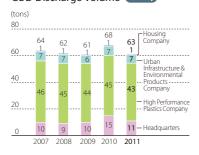
## Atmospheric, Water, and Soil-Related Emissions

Note: The Sekisui Film Co., Ltd. Sendai Plant is not included in the data below due to the effects of the Great East Japan Earthquake

#### NOx Emissions Volume Verified



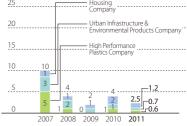
## COD Discharge Volume (Verified)



## SOx Emissions Volume Verified (tons) 25



# Soot and Dust Emission Volume Verified



#### Business Site Soil Surveys Verified

	,	
Business Site	Surveyed Substance	Site Survey Results (In Excess of Designated Standards)
Shiga-Ritto Plant	Lead, dichloromethane, 1,1,1-trichloroethane and one degradation product thereof, dioxins	Soil: Yes (lead) Groundwater: No
Tokyo Plant	Lead, cadmium, dichloromethane, trichloroethylene and two degradation products thereof, benzene, dioxins	Soil: Yes (lead, dioxins) Groundwater: No
Sekisui Aqua Systems Co., Ltd. Shizuoka Plant	Lead, dichloromethane	Soil: Yes (lead) Groundwater: No
Toto Sekisui Co., Ltd. Ota Plant	Lead, hexavalent chromium, dichloromethane, 1,2-dichloroethane, dioxins	Soil: Yes (lead, dioxins) Groundwater: No

In fiscal 2011, we conducted surveys compliant with the Soil Contamination Countermeasures Law at four business sites. Results of these surveys show levels in excess of soil-contamination standards in parts of the following sites: the Shiga-Ritto Plant, the Tokyo Plant, the Sekisui Aqua Systems Co, Ltd. Shizuoka Plant, and the Toto Sekisui Co, Ltd. Ota Plant. Plans call for conducting countermeasures in accordance with the law at the site with values in excess of soil-pollution standards.

#### **Preventing Pollution**

Sekisui Chemical Group is working to meet the targets of legal and regulatory restrictions and to reduce discharge of pollutants through appropriate maintenance and control and periodic inspection of the wide range of equipment it uses.

#### Preventing Air Pollution

The biomass boiler fueled by wood chips intended to replace the heavy-oil boiler at Sekisui Board Co., Ltd. Gunma Plant (installed August 2009) has begun full operation. As a result, discharge of NOx has increased from the previous fiscal year.

#### Preventing Water Pollution

Each Sekisui Chemical Group site conducts periodic emergency drills in preparation for the possibility of leaks of wastewater off the site and is implementing a system of thorough preventive and responsive measures for any accidents. Each site also implements integrated wastewater controls such as enhancing wastewater processing capacity and carrying out measures to eliminate piping problems.

## Disposal and Storage of Machines and Equipment that Contain PCBs

Stored transformers and condensers that contain PCBs are being disposed of steadily, beginning with sites for which acceptance at PCB treatment facilities is available.

In addition, at sites with machines and equipment that contain PCBs in storage, such devices are managed strictly and thoroughly, through means including locked storage and periodic inspection.

## Environmental Incidents, Complaints, and Emergency Responses

#### Environmental Incidents, Complaints, etc. Verified

In fiscal 2011, there were no incidents with off-site consequences. However, the authorities pointed out one deficiency and there were three complaints. We are steadily implementing recurrence prevention measures in response to the three environmental related complaints.

#### **Environmental Related Complaints**

	Description	Countermeasures
Noise	Complaint concerning noise generated from a corona treater exhaust blower	Noise generation restrained through attaching a cover to the exhaust outlet
Ot	Authorities pointed out that a container of a non-toxic adhesive was mislabeled as a "non-medical deleterious substance."	Labeling corrected, improvements implemented in response to instructions, such as retraining on relevant laws and regulations, and report submitted on the circumstances
Others	Complaint about possible damage to the parking space of a private home due to inclining trees within plant site	Trees requiring cutting identified and cut
	Request to cut trees on site property line	Trees cut. To be trimmed periodically from now on.

#### **Emergency Response**

In order to prevent the occurrence and spread of environmental contamination in the event of an emergency, at least once every year each of our business sites carries out emergency response and reporting drills, assuming a variety of hypothetical cases relevant to the nature of each business site.

#### **Emergency Response and Reporting Drills**

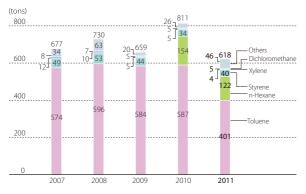
Simulated emergency situation	Drills performed
Leakage and outflow of oils	48
Atmospheric discharge of solvents	1
Fire	51
Earthquake	19
Emergency communication training	4
Comprehensive disaster preparedness drills	15
Responding to other equipment-related emergencies	8



## Summation Results Based on the PRTR Law (Calculations have been made for substances with handling volume of one ton or more at the individual business sites surveyed.)

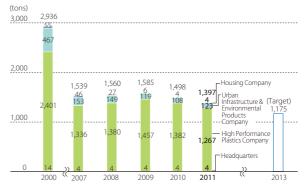
	Government	Transaction	E	mission volum	e	1	ransfer volum	e	
Substance	ordinance notification no.	Transaction volume	Atmospheric	Public water areas	In house soil	Sewage system	Transfer in waste disposal	Transfer in waste recycling	Detoxification
Acrylic acid and aqueous salt solutions thereof	[4]	12.8	0	0	0	0	0	1.3	12
n-Butyl acrylate	[7]	300.5	0.10	0	0	0	0	1.4	299
Acrylonitrile	[9]	371.5	1.6	0	0	0	0	0.0090	369
Acetaldehyde	[12]	348.5	0.25	0	0	0	0	0	348
Acetonitrile	[13]	42.9	3.3	0.45	0	0	0.33	38	0.86
2-Azobisisobutyronitrile	[16]	4.7	0	0	0	0	0	0	4.7
2-Aminoethanol	[20]	9.0	1.9	0	0	0	0	0	7.2
Antimony and its compounds	[31]	29.7	0	0	0	0	0	3.0	0
Isobutyraldehyde	[35]	263.1	7.1	0	0	0	0	0	256
Ethylbenzene	[53]	2.2	2.2	0	0	0	0	0	0
ε-Caprolactam	[76]	56.8	0.017	0	0	0	0	0	57
Xylene	[80]	23.2	4.0	0	0	0	0	1.4	18
Vinyl chloride	[Special 94]	110.282.0	3.9	0.13	0	0	0	0	110.278
Cobalt and its compounds	[132]	1.4	0	1.4	0	0	0	0	0
Vinyl acetate	[134]	2.2	0.011	0	0	0	0	0.0010	2.2
Inorganic cyanide compounds (not including complex salts and cyanate)	[144]	122.4	0	0	0	0	0	0	122
Cyclohexylamine	[154]	7.5	0.43	0	0	0	0	0	7.1
Dichloromethane	[186]	359.5	4.7	0	0	0	0	0.56	354
N,N-dimethylacetamide	[213]	4.0	0	0	0	1.8	0	2.1	0
N,N-dimenthylformamide	[232]	1.9	0.0001	0	0	0	0	0	1.9
Organic tin compounds	[239]	80.4	0	0	0	0	0.077	0.46	0
Styrene	[240]	1,768.9	40	0	0	0	0	1.9	818
Terephthalic acid	[270]	71.4	0	0	0	0	0	0	71
Toluene	[300]	1,516.8	401	0	0	0	0	74	793
Lead compounds	[Special 305]	507.3	0.0004	0.0034	0	0.021	0	3.5	0
Phenol	[349]	103.8	10	0	0	0	0	0	93
Bis- (2-ethylhexyl) phthalate	[355]	131.3	0	0	0	0	0.12	1.4	0
n-Hexane	[392]	171.8	122	0	0	0	0	4.3	46
Benzaldehyde	[399]	15.0	0	0	0	0	0	0	15
Formaldehyde	[Special 411]	80.7	4.8	0	0	0	0	0	76
Manganese and its compounds	[412]	9.9	0	0	0	0	0	9.9	0
Methacrylate	[415]	146.7	0.83	0	0	0	0	0.0040	146
Methyl methacrylate	[420]	86.5	0.81	0	0	0	0	0.012	86
Methylnaphthalene	[438]	4.8	0	0	0	0	0	0	4.8
Methylenebis (4,1-phenylene) = diisocyanate	[448]	949.4	4.3	0	0	0	0	0.43	0
		117,890.2	614	2.0	0	1.8	0.53	143	114,285

#### Emission and Transfer Volumes by Substance (PRTR Law)



Note: n-Hexane has been added to subject substances beginning with 2010 figures, due to amendment of the PRTR Law.

## Discharge of Volatile Organic Compounds (VOCs) into the Atmosphere



#### ISO 14001 Certified Business Sites

#### **Housing Company**

Sekisui Chemical Co., Ltd. Tsukuba R&D Site<sup>2</sup> Hokkaido Sekisui Heim Industry Co., Ltd. Tohoku Sekisui Heim Industry Co., Ltd. Kanto Sekisui Heim Industry Co., Ltd. Tokyo Sekisui Heim Industry Co., Ltd. Chubu Sekisui Heim Industry Co., Ltd. Kinki Sekisui Heim Industry Co., Ltd. Chushikoku Sekisui Heim Industry Co., Ltd. Kyushu Sekisui Heim Industry Co., Ltd. Sekisui Board Co., Ltd. Minakuchi Plant Sekisui Board Co., Ltd. Minakuchi Plant Sekisui Board Co., Ltd. Gunma Plant Hokkaido Sekisui Heim Co., Ltd. [Hokkaido Sekisui Fami S Co., Ltd.] Gunma Sekisui Heim Co., Ltd.

[Ibaraki Sekisui Fami S Co., Ltd.] Tochigi Sekisui Heim Co., Ltd. General Affairs Department Sekisui Heim Shinetsu Co. Ltd. [Sekisui Fami S Shinetsu Co., Ltd.] Tokvo Sekisui Heim Co., Ltd. [not including Yamanashi Sales Branch] Tokyo Sekisui Heim Co., Ltd. Yamanashi Sales Branch [Tokyo Sekisui Fami S Co. 1 td. Yamanashi Sales Branch] Sekisui Heim Chubu Co., Ltd. Sekisui Heim Kinki Co., Ltd. Sekisui Heim Sanvo Co., I td. Sekisui Heim Chushikoku Co., Ltd. [Sekisui Fami S Chushikoku Co., Ltd.] Sekisui Heim Kyushu Co., Ltd. [Sekisui Fami S Kyushu Co., Ltd.]

#### Urban Infrastructure & Environmental Products Company

Sekisui Chemical Co., Ltd. Shiga-Ritto Plant Sekisui Chemical Co., Ltd. Gunma Plant Sekisui Chemical Co., Ltd. Tokyo Plant Sekisui Chemical Co., Ltd. Kyoto R & D Laboratories Chiba Sekisui Industry Co., Ltd. Sekisui Chemical Hokkaido Co., Ltd. Toto Sekisui Co. Ltd. Ota Plant Okayama Sekisui Industry Co., Ltd. [Sekisui Roof Systems Co., Ltd. Manufacturing Division] Shikoku Sekisui Co., I td. Kyushu Sekisui Industry Co., Ltd. Rvuseki Jvubi Co., Ltd. Sekisui Aqua Systems Co., Ltd. Shizuoka Plant Sekisui Home Techno Co., Ltd. Nippon No-Dig Technology Co., Ltd. Kvdex, LLC Allen Extruders, LLC. Eslon BV Sekisui SPR Europe G.m.b.H. Sekisui NordiTube Technologies SE, Schieder Plant Sekisui NordiTube Technologies SE, Liege Plant Sekisui Rib Loc Australia Pty. Ltd. Sekisui Industrial Piping Co., Ltd. Wuxi SSS-Diamond Plastics Co., Ltd. Yongchang-Sekisui Composites Co., Ltd. Sekisui (Qingdao) Plastic Co., Ltd.

#### Headquarters

Sekisui Chemical Co., Ltd. Development Center<sup>2</sup> Tokuyama Sekisui Industry Co., Ltd. Hinomaru Co., Ltd. Tosu Plant Hinomaru Co., Ltd. Kanto Plant Sekisui Seikei, Ltd. Chiba Plant Sekisui Seikei, Ltd. Kanto Plant Sekisui Seikei, Ltd. Hyogo Plant Sekisui Seikei, Ltd. Hyogo-Takino Plant Sekisui Seikei, Ltd. Izumo Plant Changzhou Zhongji Precision Molding Plastic Co., Ltd.

#### **High Performance Plastics Company**

Sekisui Chemical Co., Ltd. Amagasaki Plant [Sekisui Medical Co., Ltd. Amagasaki Plant] Sekisui Chemical Co., Ltd. Musashi Plant Sekisui Chemical Co., Ltd. Shiga-Minakuchi Plant [Sekisui Fuller Co., Ltd. Shiga Plant] Sekisui Chemical Co., Ltd. Taga Plant Sekisui Chemical Co., Ltd. Minase Site Sekisui Techno Molding Co., Ltd. Nara Plant Sekisui Techno Molding Co., Ltd. Mie Plant Sekisui Film Co., Ltd. Sendai Plant Sekisui Film Co., Ltd. Nagoya Plant Sekisui Film Co., Ltd. Shinshu-Takato Plant Sekisui Film Co. Ltd. Kvushu-Izumi Plant Sekisui Fuller Co., Ltd. Hamamatsu Plant Sekisui Medical Co., Ltd. Iwate Plant Sekisui Medical Co., Ltd. Tsukuba Plant Sekisui Medical Co., Ltd. ADME & Tox. Research Institute<sup>1</sup> Sekisui Techno Shoji Higashi Nihon Co., Ltd. Sekisui TA Industries 11C Sekisui S-Lec B.V. Film Plant Sekisui Alveo B.V. Sekisui Alveo Ltd. Sekisui S-Lec America, LLC. Sekisui Specialty Chemicals America, LLC. Pasadena Plant Sekisui Specialty Chemicals America, LLC. Calvert City Plant Sekisui Specialty Chemicals Europe, S.L. Sekisui S-Lec Mexico S.A. de C.V. Sekisui S-Lec Thailand Co., Ltd. Thai Sekisui Foam Co., Ltd. YoungBo Chemical Co., Ltd. Daejeon Plant YoungBo Chemical Co., Ltd. Cheongwon Plant Sekisui High Performance Packaging (Langfang) Co., Ltd. Sekisui S-Lec (Suzhou) Co., Ltd.

- []: Organizations in parentheses are included in the scope of certification. Some sites not shown above may include related sections that have attained ISO 14001 certification.
- 1 Eco Action 21; others ISO 14001

**2** The Sekisui Chemical Co., Ltd. Tsukuba R&D Site and Development Center share a single certification.

#### Number of Issues of Concern in Environmental Auditing for Fiscal 2011 (Verified) (for Production sites and Laboratories, as of End of March 2012)

(ior i roduction sites and Eaboratories, as of End of Match 2012)					
			Number of cases	Correction completed	
		Issues of concern	54	41	13
	dquarters ronmental auditing	Issues to work on	111	76	35
	ousiness sites)	Proposals	11	8	3
		Total	176	125	51
Au		Nonconformity (major)	1	1	0
ditir	Giti Renewal	Nonconformity (minor)	1	0	1
(12 business sites)	Observations	71	43	28	
Auditing by certification body		Total	73	44	29
tific		Nonconformity (major)	0	0	0
atio	Surveillance	Nonconformity (minor)	10	5	5
n bo	(34 business sites)	Observations	140	68	72
ypd		Total	150	73	77
		Nonconformity (major)	2	0	2
	nal auditing of ness sites	Nonconformity (minor)	114	82	32
(44 business sites; 46 audits)		Observations	353	248	105
40 di	uuns)	Total	469	330	139

Categories of instructions for Headquarters environmental auditing: Issues of concern: Matters recommended for swift improvement Issues to work on: Matters recommended for planned improvement Proposals: Matters to be considered for improvement, advice

#### Numbers of Persons with Qualifications (Verified)

					(persons)
				Those who acquired qualifications during fiscal 2011	Aggregate total
Number of participants in Environmental	Number of interna	l traini	ng course participants	63	685
Management Systems (EMS) Internal auditor	Number of extern	al train	ing course participants	31	256
development/ training courses	Total			94	941
Number of participants in Occupational Health	Number of interna	l traini	ng course participants	15	415
and Safety Management Systems (OHSMS) internal	Number of extern	al train	ing course participants	10	188
auditor development/ training courses	Total	Total			603
	Registered examiner of the Center of Environmental Auditor Registration (CEAR)	Qua	Lead Auditor	0	1
		Qualifications	Auditor	0	1
			Provisional Auditor	0	9
		Qualifications	Air Classes 1-4	4	51
Number of persons	Pollution control		Water Classes 1-4	5	94
with major qualifications	manager		Noise/Vibration	0	42
quanneations			Dioxins	0	1
	Certified Envir	onm	ental Measurer	1	5
	Energy Managers			0	39
	Olfactory Mea	surer	ment Operators	0	1
	Environmenta	l Spe	cialists (Eco Test)	26	81

#### Business sites acquiring ISO 9000-series Certification

#### **Housing Company**

Sekisui Chemical Co., Ltd. Housing Company (integrated certification)

Research & Development Department CS Promotion & Quality Assurance Department Technology Department, Production and Construction Technology Department, Purchasing Sekisui Global Trading Co., Ltd. Hokkaido Sekisui Heim Industry Co., Ltd. Tohoku Sekisui Heim Industry Co., Ltd. Tokyo Sekisui Heim Industry Co., Ltd. Tokyo Sekisui Heim Industry Co., Ltd. Kinki Sekisui Heim Industry Co., Ltd. Chushikoku Sekisui Heim Industry Co., Ltd. Kinki Sekisui Heim Industry Co., Ltd. Chushikoku Sekisui Heim Industry Co., Ltd. Kyushu Sekisui Heim Industry Co., Ltd. Kyushu Sekisui Heim Industry Co., Ltd. Sekisui Board Co., Ltd. Gunma Plant Sekisui Board Co., Ltd. Minakuchi Plant

#### Headquarters

Sekisui Seikei, Ltd. (comprehensive certification) Chiba Plant Kanto Plant Hyogo Plant Izumo Plant Izumo Plant Tokuyama Sekisui Industry Co., Ltd. Sekisui Engineering Co., Ltd. Sekisui Insurance Service Co., Ltd.

#### Urban Infrastructure & Environmental Products Company

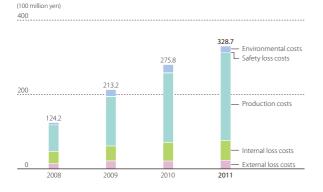
Sekisui Chemical Co., Ltd. Shiga-Ritto Plant Sekisui Chemical Co., Ltd. Tokyo Plant Sekisui Chemical Co., Ltd. Gunma Plant Okayama Sekisui Industry Co., Ltd. Sekisui Roof Systems Co., Ltd. Shikoku Sekisui Co., Ltd. Kyushu Sekisui Industry Co., Ltd. Sekisui Aqua Systems Co., Ltd. Mechanical Plant Division, Civil Engineering & Water Treatment Division Shizuoka Plant Chiba Sekisui Industry Co., Ltd. Sekisui Home Techno Co., Ltd. Sekisui Chemical Hokkaido Co., Ltd. Toto Sekisui Co., Ltd. Headquarters, Ota Plant Nippon No-Dig Technology Co., Ltd. Wuxi SSS-Diamond Plastics Co., Ltd. Eslon B.V. Sekisui NordiTube Technologies SE KMG Pipe Technologies G.m.b.H. KMG LinerTec G.m.b.H. KMG Pipe Rehabilitation Emirates, LLC. Sekisui Rib Loc Australia Pty. Ltd. Kydex, LLC. Allen Extruders, LLC. Sekisui (Qingdao) Plastic Co., Ltd. Sekisui Industrial Piping Co., Ltd. Yongchang-Sekisui Composites Co., Ltd. (Xinjiang) Sekisui Refresh Co., Ltd.

#### **High Performance Plastics Company**

Sekisui Chemical Co., Ltd. Shiga-Minakuchi Plant Sekisui Chemical Co., Ltd. Musashi Plant Sekisui Chemical Co., Ltd. Amagasaki Plant Sekisui Chemical Co., Ltd. Taga Plant Sekisui Fuller Co., Ltd. (comprehensive certification) Shiga Plant Hamamatsu Plant Osaka Office Tokyo Office Sekisúi Medical Co., Ltd. Tsukuba Plant Sekisui Techno Molding Co., Ltd. Nara Plant Sekisui Techno Molding Co., Ltd. Aichi Plant Sekisui Techno Molding Co., Ltd. Mie Plant Sekisui Film Co., Ltd. Nagoya Plant Sekisui Film Co., Ltd. Sendai Plant Sekisui Film Co., Ltd. Shinshu-Takato Plant Sekisui Film Co., Ltd. Kyushu-Izumi Plant Sekisui Polymatech Co., Ltd. Sekisui Medical Technology (China) Ltd. Sekisui S-Lec Mexico S.A. de CV. Sekisui S-Lec B.V. Sekisui S-Lec Thailand Co., Ltd. Sekisui S-Lec (Suzhou) Co., Ltd. Sekisui S-Lec America, LLC Sekisui-Alveo A.G. (six sites: G.m.b.H., A.G., S.a.r.L, SpA, S.A., [Benelux] BV) Sekisui Alveo Ltd. Sekisui Alveo B.V. Thai Sekisui Foam Co., Ltd. Sekisui Voltek, LLC. Lawrence Plant Sekisui Voltek, LLC. Coldwater Plant Sekisui Pilon Pty. Ltd. YoungBo Chemical Co., Ltd. YoungBo HPP (Langfang) Co., Ltd. Sekisui High Performance Packaging (Langfang) Co., Ltd. Sekisui Diagnostics, LLC (Framingham, San Diego, Stamford) Sekisui Diagnostics P.E.I. Inc. Sekisui Diagnostics (UK) Limited Sekisui Virotech G.m.b.H. Sekisui Specialty Chemicals America, LLC. (Calvert City, Pasadena, Dallas HQ)

Sekisui Specialty Chemicals Europe, S.L. Tarragona

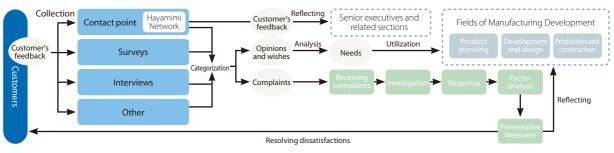
#### Manufacturing Development Innovation Indicators Verified/ Performance (improvements vs. fiscal 2005 performance)



#### Manufacturing Development Innovation Indicators:

External loss costs	: Costs of responding to product-related complaints and claims
Internal loss costs	: Costs associated with disposal of defective products generated during manufacturing processes
Production costs	: Costs necessary for manufacturing, such as raw-material and labor costs (decreased through productivity improvements such as saving of energy and other resources in manufacturing processes)
Safety loss costs Environmental costs	: Costs arising from equipment-related or labor accidents etc. : Costs for disposal of wastes generated at business sites, and energy costs

#### Flow of "Utilizing Customer Feedback in Management"



## Human Resources Verified

Number of Employees (Sekisui Chemical Group)

NUMBER OF EMPLOYEES (Sekisui Chemical Group)		
Number of employees		20,855
By region		
Ja	apan	15,747
No	orth America, Central and South America	1,483
Eu	urope	1,512
A	sia/Pacific (including China)	2,113

Number of New Graduates Hired and Their Separation Rate in the First Three Years of Employment (Sekisui Chemical)

	Fiscal 2009	Fiscal 2010	Fiscal 2011
Number of new graduates hired (persons)	59	30	58
Separation rate within the first 3 years (%)	6.8	3.3	3.4

Note: Separation rate within the first 3 years: Calculated as the total of separation rates for the first, second, and third years for employees hired in the relevant fiscal year, in accordance with the Japanese Ministry of Health, Labour and Welfare's calculation methods

#### Results of Intra-group Job Posting

5 1 5						
	Fiscal 2010	Fiscal 2011	Cumulative total since 2000			
Recruitments (cases)	22	13	207			
Employees recruited (persons)	44	18	440			
Applicants (persons)	58	72	1,026			
Employees transferred (persons)	19	13	225			

Percentage of Women Among New-graduate Hires



#### Usage of Main Systems Raising Next Generation (Sekisui Chemical) P32

_	System	Main content	Fiscal 2009	Fiscal 2010	Fiscal 2011
During childcare leave	Childcare leave	Leave which previously extended only until the child was a year and a half old now extends to the end of the month of the child's third birthday.	42	30 (including 11 males)	22 (including 8 males)
After returning to work	Shortened working hours	Payment period that previously extended until the child was three years old now extends until the child starts fourth grade.	18	17	21 (including 1 male)
Other support	Family leave	Three days of special paid leave per year granted until the child or grandchild starts high school (this leave can be taken for reasons such as childbirth-related events, parents day, athletic meets, and PTA meetings)	130	96	98
Tota	Total number of persons using these systems			143	141

#### Number of Employees (Sekisui Chemical Co., Ltd.)

	(persons)
Number of employees	2,154
Male	1,914
Female	240

Employees' Years of Continuous Service (Sekisui Chemical Co., Ltd.)

	(Years)
Average years of continuous service	18.4
Male	18.7
Female	16.3

#### Main Recruitment and Selective-type Training Programs

	Training	Details	Number of par- ticipants in fiscal 2011 (persons)
The Saijuku School Recruitment		This program combines intensive courses led by visiting university professors with practical themes so that participants can improve their skills and knowledge to become globally oriented leaders.	37
type Training	Sending Employees to Business Schools Outside the Company	Under this program, employees take courses for training business professionals at business schools outside of the company. The aim is to work together with human resources outside the company and to polish up business skills.	12 (gross total)
Selective- type Training Open Seminars		These intra-group seminars aim to improve employees' business skills. Employees can select freely seminars on skills that meet their needs, to acquire skills that can be applied immediately to their daily work.	144 (gross total)

#### Career Plan Training by Age (P30)

	30s	40s	50s	Total Number of Participants
Themes by Age Groups	Self- establishment	Market value	Continuing to work even after retirement	-
Training Contents	Recognition of abilities and interviews with superiors on career-related matters	Affirmation of specialization, values, and the meaning of work	A i m i n g t o keep working at age 65 and thinking about succession	-
Number of Participants in Fiscal 2010 (persons)	76	139	69	284
Total Number of Participants as of Fiscal 2011 (persons)	1,685	1,514	802	4,001

#### Overview of 3-Year Development Program for Young Employees

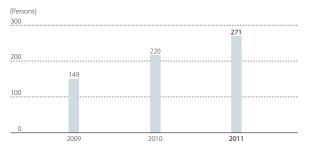
Programs available	Summary	
Annual career training	Career planning and interviews with superiors on career- related matters, both held at the end of each fiscal year (third year: interviews with HR career advisors)	
Business skills training	Learning from a choice of business English, administrative technologies, accounting, logical thinking, communication, etc.	
Training for superiors	Checking up on the basics of development of subordinates and on career interview methods	

#### Percentage of Challenged Persons Employed (Sekisui Chemical)





#### Number of Global Talents of Japanese Employees



## Safety P33 Verified

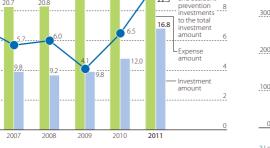
#### Health, Safety and Accident-prevention Costs

ltem			Sekisui Chemical Group <sup>1</sup>	
Classification	Details	Expense amount	Investment amount	
1) Costs within business-site areas	Health and safety measures, rescue and protective equipment, measurement of work environment, health management, workers' accident compensation insurance, etc.	799	1,680	
2) Administrative costs	Establishment and implementation of OHSMS, safety education, personnel costs, etc.		-	
3) Other	Safety awards etc.	3	-	
Total		2,228	1,680	

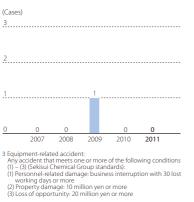
1 Data above include 46 production sites/4 laboratories + all departments of Headquarters + back offices of division companies

#### Investment and expense amounts (100 million yen) Rate (%) 9.8 Proportion of health, safety and accident-prevention 25 22.0 22.3 20.7 20.8 prevention 8 investments to the total 20 19.8 70 16.8 6.5 investment 15 -Expense 1 1 C 10 92 9.8 - Investment amount 5 0 2006

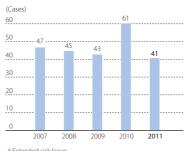
#### **Expenses and Investments**



Number of Equipment-related Accidents<sup>3</sup> (Calendar Year)



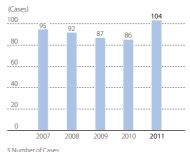
#### Number of Cases of Extended Sick Leave<sup>4</sup> (Calendar Year)



4 Extended sick leave: This refers to a new absence of 30 calendar days or longer due to illness or injury. Reoccurrences within six months of returning to work are not included in the above count. Absences due to occupational injury are not considered extended sick leave.

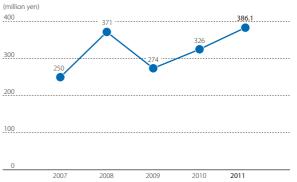
#### Number of Commuting Accidents<sup>5</sup> (Calendar Year)

(Million yen)



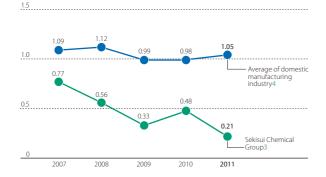
5 Number of Cases: Total number of cases with damages incurred and inflicted (including self-injury and property damage)

#### Loss Costs<sup>2</sup>



2 Loss costs: Expenses, including man-hours, required to respond to occupational accidents, equipment accidents, commuting accidents, and long-term illness absences

#### Frequency Rate<sup>1</sup> (Calendar Year)

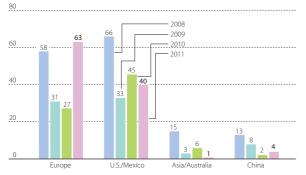


## Safety Performance at Housing Company Construction Sites (Calendar Year)

(Accidents) 30 23 21 20 10 13 16 14 12 13 10 8 6 0 2007 2008 2009 2010 2011 Number of non-loss time accidents in the New Construction sector Number of non-loss time accidents in the Fami S sector
 Number of loss time accidents in the New Construction sector Number of loss time accidents in the Fami S sector

#### Status of Work-related Accidents at Overseas Production Sites (Calendar Year)

(Accidents)



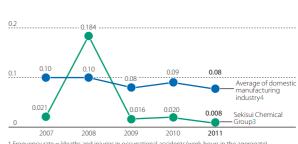
## Compliance P55 Verified

#### Major Training Programs Implemented in Fiscal 2011

	Training	Trainees	Number of Trainees
Periodic training	Training for new managers	New Sekisui Chemical Group managers	197
Fellodic training	Training for new employees	New Sekisui Chemical employees	53
	Basic compliance training	Group companies	Approx. 670
	Anti-monopoly Law training	Sekisui Chemical Group sales depertments	31
Area-specific training	Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors training	Sekisui Chemical Group managers, manufacturing depertments	64
	Consumer/Product Liability Law training	Group companies	46
	Harassment-prevention training	Group companies	44
	Basic contract training	Group companies	44
Rank-based training	Compliance training for leaders in manufacturing sections	Sekisui Chemical Group manufacturing depertments	43
Global training	Training on overseas bribery regulations	Sekisui Chemical Group managerial sections, business depertments	65
	Basic training for "Global Talents"	Personnel engaged in international business	14
	Training prior to overseas assignment	Personnel scheduled for overseas assignment	3

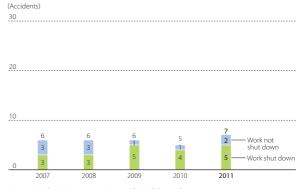
#### Severity Rate<sup>2</sup> (Calendar Year)

0.3



Frequency rate = (deaths and injuries in occupational accidents/work-hours in the aggregate) × 1,000,000
 Severity rate = (number of workdays lost/work-hours in the aggregate) × 1,000
 Seksiu Chemical Group data: 46 production sites and four R&D laboratories
 Source of information for Japanese manufacturing industry: Ministry of Health, Labour and Welfare
 "Survey on Industrial Accidents"

## Safety Performance at Urban Infrastructure & Environmental Products Company Construction Sites (Calendar Year)



The number of accidents represents the total for the following four companies: Sekisui Hometechno Co., Ltd., Nippon No-Dig Technology Co., Ltd., Sekisui Aqua Tec Co., Ltd., and Kyushu Sekisui kenzai Co., Ltd.



## Nature Conservation and Social Contribution (P59-62)

#### Recipients of Fiscal 2011 Sekisui Chemical Grants for Research on Manufacturing Based on Innvations Inspired by Nature

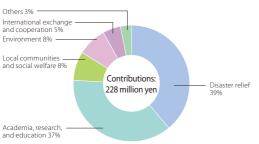
Researcher	Affiliation/University, Title	Supported Research Theme
Professor Kazuo Akagi	Graduate School of Engineering, Kyoto University	Development of Morphology-Retaining Carbonization method and creation of Nano- Structure Controlled helical graphite learning from flower charcoal
Professor Masatsugu Shimomura	Advanced Institute for Materials Research, Tohoku University	Production of friction-control surfaces through biomimetic design and self-organization
Professor Shuichi Hiraoka	Graduate School of Arts and Sciences, The University of Tokyo	Building artificial precision supramolecules using Van der Waals force
Professor Seiichi Taguchi	Graduate School of Engineering, Hokkaido University	Generation of high-performance biomass polymers with advanced chiral control learning from the microbial polyester synthesis mechanism
Associate Professor Chojiro Kojima	Institute for Protein Research, Osaka University	Molecular structures for promoting flowering, learning from plants
Professor Masami Ishibashi	Graduate School of Pharmaceutical Sciences, Chiba University	Signal-transmission mechanisms learning from plant components: seeking a natural substance to control wnt signaling
Associate Professor Mitsuhiro Ueda	Graduate School of Life and Environmental Sciences, Osaka Prefecture University	Efficient decomposition of plant biomass under cold-temperature conditions, learning from earthworms, and its applications
Professor Kingo Uchida	Faculty of Science and Technology, Ryukoku University	Producing a new light-reactive functional film by learning from the microscopic stereostructure of biosurfaces
Naoe Hosoda	Group Leader, Interconnection Design Group, Hybrid Materials Unit, Environment and Energy Materials Division, National Institute for Materials Science	Development of an underwater adhesive through insect mimetics

Note: University affiliations shown are current as of the time grant was provided.

#### Examples of Main Nature Conservation Activities Conducted in Fiscal 2011

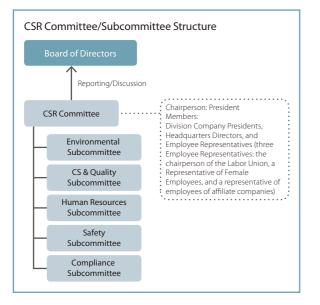
Activity	Site	Program	
Sekisui Nature Study Course	Sekisui Seikei, Ltd. Izumo Plant	Site nature-conservation activities with close connections to the community	
	Joint activity site by Kansai-area sites		
	Chushikoku Sekisui Heim Industry Co., Ltd.		
	Joint activity by Kansai-area sites	Kyoto Prefecture Sen Forest preservation activities	
	Sekisui Seikei, Ltd. Izumo Plant	Lake Shinji cleanup, Izumo Plant Children's Nature Study Course	
	Kanto Sekisui Heim Industry Co., Ltd.	Kanto Sekisui Children's Nature Study Course	
	Tokyo Headquarters	Biodiversity-preservation volunteer activities	
	Chubu Sekisui Heim Industry Co., Ltd.	Chubu Sekisui Heim Industry Nature Study Course	
	Tokyo Sekisui Heim Industry Co., Ltd.	Tokyo Sekisui Children's Nature Study Course	
	Tokuyama Sekisui Industry Co., Ltd.	Development of Sekisui Forest	
Business site activities	Gunma Plant	Gunma Children's Nature Study Course	
	Sekisui Chemical Hokkaido Co., Ltd.	Sekisui Chemical Hokkaido Group Children's Nature Study Course	
	Kyushu Sekisui Industry Co., Ltd.	Kyushu Sekisui biotope autumn-leaf tour	
	Tokyo Headquarters	Tree-planting activities at Umi-no-Mori (Sea Forest) in Tokyo	
	Tokyo Plant	Tokyo Plant Children's Nature Study Course	
	Kyoto Site	Katsuragawa nature tour	
	Sekisui Heim Kinki Co., Ltd.	Forest-preservation activities at Wakayama Prefecture Sekisui Chemical Forest	
	Shikoku Sekisui Co., Ltd.	Shikoku Sekisui Nature Study Course	

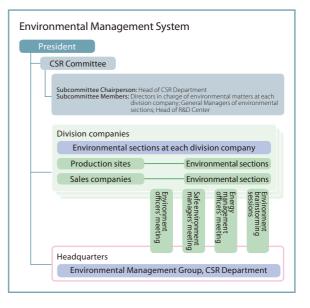
#### Charitable Contributions

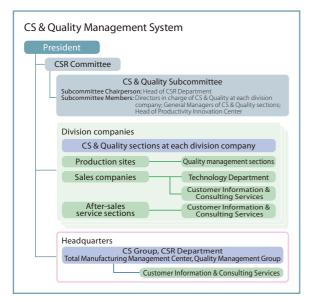


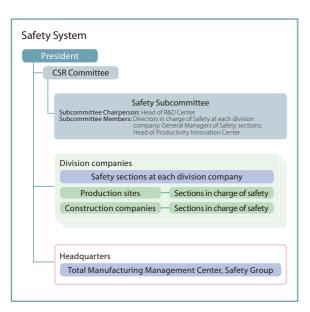
Verified

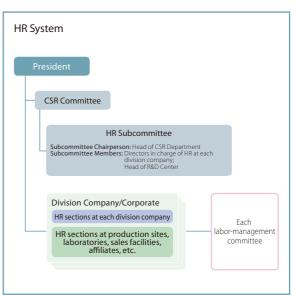
## Sekisui Chemical Group's CSR Management System

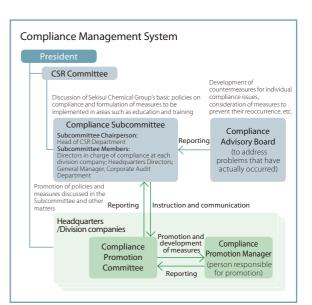












### Sekisui Chemical Group "Environmental Management Policy"

#### Mission

We, the Sekisui Chemical Group, aim to be a Global Environmental Top Runner that contributes to the realization of a sustainable society by enabling the continuous growth and co-existence of ecology and the economy.

#### **Basic Policy**

Each company in the Sekisui Chemical Group advances approaches that contribute to the prevention of global warming, the preservation of biological diversity and the construction of a recycling-based society in all countries and regions where they have operations, in order to leave this beautiful earth for our children in the future.

- 1. We contribute to the environment through our products and services, with consideration given to the environment in all stages of the product life cycle from research to procurement, production, sales, use, and disposal as waste.
- 2. We carry out environmentally conscious business activities in all our workplaces and offices, and promote our approach to the environment through cooperation with our customers and business partners.
- 3. We make efforts to reduce the environmental impact of greenhouse gas emissions and hazardous chemicals, etc., and to prevent pollution by promoting the effective use of limited resources and energy.
- 4. We observe the related laws, regulations, international rules, etc.
- 5. We make efforts to improve environmental consciousness through education, and advance continual improvements by setting our own objectives and targets.
- 6. We enhance confidence through close communications with society.
- 7. We aggressively work on social contribution activities such as nature conservation activities in each region.

### Sekisui Chemical Group "CS & Quality Management Policy"

#### Mission

We, the Sekisui Chemical Group, consider "CS & Quality" as our central concept of management and will consistently innovate to maintain the quality of products throughout all our activities, continuously provide values (products and services) that meet customer expectations, strive for selection by our customers on an ongoing basis, and develop and grow with the customer over the long time.

#### **Basic Policy**

We, the Sekisui Chemical Group, consider "Customer's Feedback" as precious resources for management and strive to innovate about "Quality of Products," "Quality of People" and "Quality of Systems" based on the motto "We consider customer's feedback as the beginning of our manufacturing." Furthermore, we contribute to the realization of a safe and affluent society by continuously providing our customers and their communities with new value.

#### 1. Ensuring Basic Qualities

To ensure the reliability and safety of our manufactured products, which form the basis of "Product Quality," we effectively leverage customer's feedback and dedicate ourselves with a strong belief in forestalling any potential trouble and preventing any future recurrence throughout our entire value chain.

#### 2. Creating Attractive Qualities

We aim to share the emotional values of our customers by thoroughly pursuing "what the customers value" and constantly creating attractive products and services that should realize such customer values.

#### 3. Upgrading Technological Capabilities

For the sake of ensuring Basic Qualities and for creating Attractive Qualities, we are upgrading our technological capabilities in all fields in order to achieve superb manufacturing development.

#### 4. Enhancing Communications

We value communication with our customers and the community and make sincere efforts when dealing with them as well as complying with the relevant laws and regulations in each country and region. We place special emphasis on resolving customer complaints or claims at an early stage by responding promptly and empathetically.

#### 5. Providing Thorough Employee Education

To gain and maintain the full trust and impression of our customers, we provide employees with continuous CS & Quality education as well as motivating our employees to achieve self-realization through customer satisfaction.

### Sekisui Chemical Group "Human Resources and Human Rights Policy"

#### Mission

Based on our belief that "employees are precious assets bestowed on us by society," we, the Sekisui Chemical Group, are committed to developing an environment where employees can work enthusiastically. We also offer various opportunities through which we help individual employees enhance their "specialties" and grow personally.

With the recognition that it is our social responsibility to protect individual human rights, we respect the diversity, personality and individuality of each person, and promote various working styles as well as creating safe and secure work environments in response to conditions in each country and region.

#### **Basic Policy on Human Resources**

- Creating opportunities to take on challenges
   We encourage employees to "positively set their own goals and
   aggressively to take on challenges"
- 2. Culture where employees learn and grow on their own We strive to enrich our education/training programs and develop a culture where employees learn and grow on their own.
- 3. Enhancement of the performance-based remuneration system We emphasize our employees' personal commitment and strive to constantly improve the fairness and acceptance of our assessment system regarding performance and processes.
- 4. Acceptance of various working styles We respect various values; develop workplaces where every employee can work with enthusiasm; and help employees achieve a balance between life and work.
- 5. Creating safe and secure work environments

We promote employees' health enhancement and mental health care.

#### **Basic Policy on Human Rights**

#### 1. Respect for human rights and the prohibition of discrimination

- Being aware of our position as a global corporate citizen, we respect individual human rights and never become involved in any conduct that might lead to discrimination.
- We never discriminate on the grounds of race, color, gender, language, religion, nationality or social origin, property, or other status or any similar irrational basis.
- We do not commit human rights abuses such as resorting to violence, profane outbursts, slander, defamation, intimidation, bullying or similar conduct.

#### 2. Prohibition of harassment

We never commit sexual harassment or other actions that stain personal character.

- 1) We do not commit sexual harassment or any conduct that might be misunderstood as sexual harassment.
- 2) We do not misuse the power of a superior position nor use any language or conduct that could sexually annoy any person. In addition, we prevent other employees from using such offensive language or conduct.

#### 3. Prohibition of forced labor and child labor

We shall never accept forced labor or child labor in any country or region.We comply with the laws for the minimum working age and other relevant regulations in each country and region and do not use child labor.We do not carry out any form of forced labor in any of our corporate activities.

#### 4. Respect for basic labor rights

We respect basic labor rights, including the right of workers to organize and to bargain, in accordance with the laws and customs of each country or region, and do not infringe on these rights.

### Sekisui Chemical Group "Safety Policy"

#### Mission

We, the Sekisui Chemical Group, recognize that employee safety is essential to achieving sustainable growth. We aim to be a "Safe and Secure" enterprise that establishes safe and secure work environments and has the full trust of its customers and the community as well as its employees.

#### **Basic Policy**

Based on the concept of human dignity that "everyone is invaluable," we "prioritize safety over anything else" as a basic rule in all of our business activities from development, production, construction to servicing. We are committed to promoting comprehensive safety activities with the aim of achieving zero industrial accidents, facility accidents, commuting accidents or long-term sick leave.

- 1. We strive to develop a safe and comfortable workplace where everyone is taken care of both mentally and physically, which should lead to good health for each of our employees whom we highly value.
- 2. We thoroughly disseminate the legal requirements concerning health and safety/disaster prevention to our employees to ensure compliance.
- 3. We carry out risk assessment and promote risk reduction measures in a systematic way to eliminate hazardous factors that compromise health and safety/disaster prevention.

4. We strive to raise awareness regarding health and safety/disaster prevention through employee education/training and promote continuous improvements by setting voluntary objectives/goals.

5. We proactively disclose any necessary information as well as gain a higher level of trust by having close communication with public administrations and local communities.

### Sekisui Chemical Group "Social Contribution Policy"

As a good corporate citizen, we, the Sekisui Chemical Group, engage in activities that focus on the "Environment," the "Next Generation," and "Local Communities," and contribute not only to business activities but also to society.

All employees working for the Sekisui Chemical Group are proactively involved in the society and act so that they can serve as prominent human resources in society as well. In addition, their activities are supported by each company of the Group in order to generate synergistic effects.

## SEKISUI CHEMICAL CO., LTD.

4-4 Nishitenma 2-chome, Kita-ku, Osaka 530-8565, Japan (Dojima Kanden Building) URL http://www.sekisui.co.jp

#### For further information contact:

CSR Planning Group, CSR Department 2-3-17 Toranomon, Minato-ku, Tokyo 105-8450, Japan (Toranomon 2-chome Tower) Email: csr@sekisui.com

- This report has been printed and bound with consideration for the environment in the following ways: (1) This report uses Forest Stewardship Council (FSC)-certified paper produced from carefully managed forests.
- (2) The computer-to-plate (CTP) method of direct printing, which uses no film that later must be disposed of as waste, has been adopted in the plate-making process.
- piate-making process. (3) Vegetable-oil ink, which generates few volatile organic compounds (VOC) and has excellent biodegradability and de-inking performance, is used in the printing process. In addition, waterless printing, which generates no hazardous waste fluids, has been used as well.

(4) Glue that does not hinder the recyclability of paper is used in the binding process.





