# **SUMITOMO CHEMICAL**

# CSR REPORT 2008









# Sustainable Chemistry





# Providing a Wide Variety of Products Contributing to a Range of Industries and also to People's Lives

Focusing its efforts within six business areas, Sumitomo Chemical promotes Sustainable Chemistry through CSR management, and is currently working to boost profitability by continuously developing and supplying products and services that enhance people's lives.

### Business Sectors

#### **Basic Chemicals Sector**

Inorganic chemicals, raw materials for synthetic fibers, organic chemicals, methyl methacrylate (MMA), alumina products, aluminum, etc



MMA resin exhibiting outstanding transparency and weather resistance



Caprolactam, the raw material for nylon fiber

### Petrochemicals & Plastics Sector

Petrochemical products, synthetic resins, synthetic rubber, synthetic resin processed products, etc.



Polyethylene for containers and wrapping films



Polypropylene for automobile parts and household products

### Fine Chemicals Sector

Functional materials, additives, dyes, pharmaceutical chemicals, etc.



Resorcinol, the raw material for adhesives for tires and flame retardants



Antigen 6C, an antioxidant for rubber products, including tires

### **IT-Related Chemicals Sector**

Optical products, color filters, semiconductor processing materials, electronic materials, compound semiconductor materials, etc.



Polarizing film indispensable for LCD



Photoresist, used during production of semiconductors

### Agricultural Chemicals Sector

Agricultural chemicals, household insecticides, insecticides for epidemic prevention, feed additives, chemical fertilizers, materials for prevention of tropical infections, agricultural materials, etc.



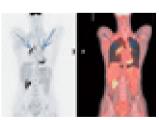
Household insecticides contributing to improvement of the living environment



Agricultural pesticides for various

### **Pharmaceuticals Sector**

Ethical pharmaceuticals, diagnostic radiopharmaceuticals, etc.



Usage example of a PET diagnostic agent, effective for early diagnosis of malignant tumors



Ethical pharmaceuticals manufactured by Dainippon Sumitomo Pharma Co., I td

### Company Profile

Inauguration
Initiation of business operation
Establishment

September 22, 1913 October 4, 1915 June 1, 1925 Business Performance in Fiscal 2007 (consolidated) Net sales ¥1.8965 brillion
Operating income Y102.4 billion
Ordinary income Y92.8 billion
Net income Y63.1 billion

Capital expenditures ¥142.5 billion R&D expenses ¥105.4 billion Number of employees 25,588 Subsidiaries and affiliates (as of March 31, 2008)

### **CSR Report 2008**

Since fiscal 1998, Sumitomo Chemical Company, Limited has issued an annual "Environment, Health and Safety Report" focusing on the Company's Responsible Care (RC) activities, in particular those involving occupational health and safety, environmental protection, safety and disaster prevention, chemical safety, and product quality assurance.

This title was changed to "CSR Report" in fiscal 2004 to reflect broader coverage of corporate social responsibility (CSR) initiatives, which include social and economic activities.

As well as making the report more concise and easier to understand we have included "TOPICS" (news and topical initiatives) and "VOICE" (employees' opinions and ideas) columns introducing the wide range of unique activities we are involved in to ensure that readers across a broad spectrum can gain a solid understanding of Sumitomo Chemical's CSR activities. In addition, we have compiled detailed numerical data in a separate booklet for easy reference.

This report was prepared in accordance with the Japanese Ministry of the Environment's "Environmental Reporting Guidelines" (2007 edition) and the "Environmental Accounting Guidelines" (2005 edition), and Global Reporting Initiative's (GRI) "Sustainability Reporting Guidelines" (third edition). KPMG AZSA Sustainability Co., Ltd. conducted an independent review of this report to ensure reliability and transparency of its content.

We welcome your feedback on this report.

### Scope of this report

• Environmental performance (excluding environmental accounting and environmental efficiency)

The environmental performance data included in this report cover Group companies that have production divisions and also sales above a certain level or whose environmental impact is relatively large, namely Sumitomo Chemical and 16 Group companies in Japan, and 9 Group companies overseas (environmental performance data for overseas companies are also available in the Data Book included with this Report).

### · Environmental accounting

The environmental accounting data included in this report cover Group companies that have production divisions and also sales above a certain level, namely Sumitomo Chemical and 17 Group companies (12 domestic, 5 overseas).

### · Environmental efficiency

The environmental efficiency data included in this report cover Group companies with production divisions, namely Sumitomo Chemical and 11 domestic Group companies.

In this report, "Sumitomo Chemical" and "Sumitomo Chemical Group" are distinguished as follows.

Sumitomo Chemical: Sumitomo Chemical Co., Ltd. Sumitomo Chemical Group: Sumitomo Chemical and Group companies

(When "Group companies" are referred to, this does not include Sumitomo Chemical. The applicable scope of Group companies is indicated as necessary.)

Period covered by this report: April 1, 2007 – March 31, 2008 Date of publication: December 2008

(The next issue is scheduled for publication in November 2009)

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# Toward the Development of a Sustainable Society

# The Essential Role of Chemistry in the Solution of Global Problems

The world currently faces many environmental problems such as global warming, as well as soaring prices for energy, resources and food, and also poverty. Finding solutions to these problems will require global initiatives. These problems were the top priorities in discussions this year at the Tokyo International Conference on African Development (TICAD), held in May in Yokohama, and the G8 Summit, held in Toyako, Hokkaido in July. For the future both of the planet and humanity, this year could be called a pivotal year in which international society has reaffirmed the need to work together as one in efforts to solve these problems. Japan, which hosted these international conferences, has many outstanding technologies that can contribute to solving environmental problems, and therefore has a vital role to play going forward. International society has many great expectations that it looks to Japan to fulfill.

The chemical industry has contributed to the enhancement of people's lives and the development of industry through ceaseless technological innovation and creativity. Now, however, I believe it is becoming ever more essential to harness the power of chemistry to create novel technologies and spur innovation for developing groundbreaking high-tech materials and advanced manufacturing processes in order to help solve the many serious global problems we face.

# **Initiatives Toward Preventing Global Warming**

The International Council of Chemistry Associations (ICCA), the key organization allying the chemical industry worldwide, is currently promoting more intensive dialogue about "Climate Change and Energy" as one of the issues for priority initiatives throughout the global chemical industry. Sumitomo Chemical has been participating in the ICCA, as-

suming a role of leadership in various areas such as setting policy for initiatives and pursuing greater energy efficiency in the chemical industry through benchmarking. Also, the Company is conducting comprehensive studies specifically for initiatives such as quantitatively assessing to what extent the chemical industry can contribute to energy efficiency with products for the automotive, electronics and housing industries.

In addition, we at Sumitomo Chemical are working to develop and supply products that contribute to increased energy efficiency as well as improving our industrial processes to reduce emissions of greenhouse gasses. At the same time, we are working hard to promote partnerships among organizations such as the Japan Chemical Industry Association and Japan Petrochemical Industry Association, other industries as well as universities in order to realize energy savings that extend well beyond the bounds of a single corporation. Needless to say, we actively encourage CO<sub>2</sub> reductions both in the office and in the home.

# **Sumitomo Chemical's Responsible Care Activities**

Sumitomo Chemical has long conducted numerous voluntary Responsible Care (RC) activities aimed at preserving the environment and assuring safety, health and product quality throughout the lifecycles of its products. In recent years, worldwide awareness about the importance of proper chemical substance management is on the increase. Our Environmental Health Science Laboratory (EHSL) specializes in the assessment of industrial hazards and hazardous substances, utilizing its wealth of



expertise and cutting-edge technologies accumulated over many years. The EHSL engages in advanced activities including risk assessments and management of chemical substances at all stages from development through to manufacture, sales, use and disposal. In addition, we are steadily working to meet the requirements of internationally adopted standards, such as the Globally Harmonized System of Classification and Labeling of Chemicals and Europe's REACH legislation for the restriction of chemical substances in order to minimize adverse impacts on the environment and human health, which went into effect in June of this year.

### For the Future of Africa

Solving the problem of poverty in Africa is one of the greatest challenges facing global society today. Part of this problem is the tremendous toll exacted by malaria on people and society, making malaria prevention one of the prerequisites for Africa's sustainable development.

Sumitomo Chemical developed the Olyset Net, which is effective in protecting people from infection by the mosquitoes that transmit malaria, and we are supplying these nets widely across Africa. We currently operate local production facilities in Tanzania, and are presently studying plans for the construction of a new production plant in Nigeria. Local production of the nets not only helps protect the people of Africa from malaria by making the nets more readily available but also creates local employment opportunities, and we hope thereby to contribute to the continent's economic vitalization and autonomous development.

### **Promoting Sustainable Chemistry**

Sumitomo Chemical will continue to conduct its business activities on the basis of CSR management in order to achieve a balance among the three areas of Responsible Care activities, economic pursuits and social actions for the sustainable development of society, providing products and technologies that help support the lives of people worldwide in a socially and environmentally friendly manner through the pursuit of Sustainable Chemistry. I would very much appreciate your continued understanding and support.

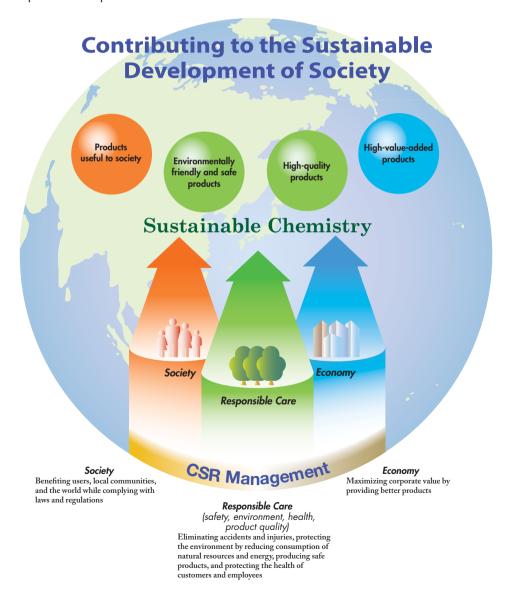
**Hiromasa Yonekura**President of Sumitomo Chemical



# Sumitomo Chemical contributes to the sustainable development of society through "Sustainable Chemistry" built on its CSR-based management.

"Sustainable Chemistry" represents the concept of continuously providing useful products and services in an environmentally and socially friendly manner by exploiting the full potential of chemistry. In practice, this involves the development of chemical technologies that neither use nor generate chemicals harmful to humans or the environment, while employing processes that achieve reductions in consumption of energy and natural resources.

Sumitomo Chemical is promoting CSR-based management that contributes to society with the products and services created through its practice of Sustainable Chemistry, while giving due consideration to Responsible Care, the needs of society, and economic requirements in all aspects of its operations.



# Realizing Sustainable Chemistry

The chemical industry has so far supported a wide range of industries, including manufacturing, by providing useful technologies and products while simultaneously working to deepen cooperation with various industries. In practice, the industry has achieved ceaseless innovation (the creation of new value through unprecedented creativity), supporting a wide range of fields—from products related to clothing, food and housing, to automobiles, home appliances and cutting-edge areas like IT and electronics—while realizing for itself high efficiencies in production and economy.

Today, we face a host of challenging issues, especially with regard to energy, resources and the environment.

Sumitomo Chemical, as a member of the chemical industry, has defined as our corporate mission the realization of Sustainable Chemistry, whereby we help people live more fulfilling, comfortable lives by providing highperformance, high-quality and highly reliable products in an environmentally responsible manner while also contributing to economic growth and the sustainable development of society.

Precious energy and resources are required for the manufacture of chemical products. Processes sometimes produce unwanted byproducts and may also generate waste. Sumitomo Chemical aims to further develop Sustainable Chemistry by reducing its environmental impact through the use of Green Processes, which minimize environmental impact or eliminate it entirely, and the production of Clean Products, which are safer, more environmentally friendly and kinder to the health.

# Reliable Technology Development Capabilities to Realize Sustainable Chemistry

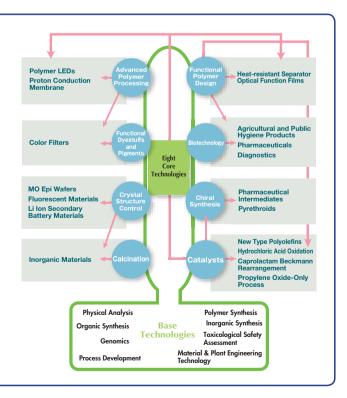
To conserve resources and energy, and reduce our environmental impact, reliable, scientifically based technical capabilities are essential.

Sumitomo Chemical is working to reinforce and expand its operations through continuous pursuit of its strategy—"Creative Hybrid Chemistry"—founded on the Company's long-accumulated "base technologies" cultivated through a wide range of research activities and various "core technologies" acquired through the development of a diverse variety of products.

### **Creative Hybrid Chemistry**

Building on its base technologies in organic synthesis, inorganic synthesis, polymer synthesis, physical analysis, toxicological safety assessment, genomic development, materials and plant engineering technology, and others, Sumitomo Chemical has defined advanced polymer processing technology, functional dyestuff and pigment technology, crystal structure control technology, calcination technology, functional polymer design technology, biotechnology, chiral synthesis, and catalyst technology as its eight core technologies.

Creative Hybrid Chemistry refers to a technical system that has acquired profound depth and extensive breadth by combining technologies from different fields. In the course of achieving further advances in its base technologies and deepening its existing core technologies, Sumitomo Chemical is pursuing "Creative Hybrid Chemistry" to create new value by working to link and integrate disparate technologies from both inside and outside the Company. This serves to further drive the sustainable development of society and reinforce our international competitiveness as a global chemical company.



### Sumitomo Chemical's Green Processes and Clean Products

### **Green Processes**

### **OVAPOR-Phase Caprolactam Process**

In the conventional manufacturing process for caprolactam, a raw material for nylon, a large amount of ammonium sulfate is produced as a by-product.

This new vapor-phase process, however, produces no ammonium sulfate and allows for a significant reduction in the amount of raw materials used as well

as a shortened manufacturing process. In addition, it uses a safer catalyst.



### Hydrochloric Acid Oxidation Process

Chlorine is generated as a by-product in the production of caustic soda (sodium hydroxide). The amount of chlorine produced has therefore been conventionally tied to the demand for caustic soda. Sumitomo Chemical's hydrochloric acid oxidation process enables low-cost production of chlorine from excess hydrochloric acid generated in the manufac-

turing process of other products. This makes possible not only the effective use of waste products, but also the stable supply of chlorine. In addition, this process is considerably more energy-efficient than conventional processes.



### Proprietary Propylene Oxide-Only Process (PO-Only Process)

Our proprietary PO-Only process developed inhouse is a compact and energy-efficient process that enables the production of propylene oxide without by-products. In addition to being highly economical, it does not generate the chlorinated waste or wastewater co-produced using the conventional process.



### **Clean Products**

### **Foamed Polypropylene Resin**

Polypropylene resin is used widely for automotive parts, and demand is increasing for even lighter products in the quest for greater fuel efficiency. While foaming of polypropylene was an extremely difficult process using conventional technology, Sumitomo Chemical has succeeded not only in enhancing functionality,

but also in saving weight by foaming resin without compromising its strength through the development of a proprietary forming process. This resin can also be recycled in the same way as ordinary polypropylene.



### Sumitomo S-SBR (Solution Polymerization Styrene Butadiene Rubber)

In terms of fuel efficiency and safety, the role of road-gripping tire treads is significant and enhanced performance is essential.

Sumitomo S-SBR is a synthetic rubber material used for tire treads. It can simultaneously improve the two oftenopposing characteristics of low fuel consumption (energy conservation) and brake performance (safety).



### Photocatalysts

Photocatalysts use light energy to decompose harmful substances in a safe and clean manner. They absorb ultraviolet light and visible light to demonstrate such effects as breaking down surrounding volatile organic compounds (VOCs), eliminating odors and preventing dirt deposition. There are two types of photocatalysts: one is an ultraviolet light-responsive photocatalyst, effective

outdoors, and the other is a visible light-responsive photocatalyst, also effective indoors. These are used for exterior building materials as well as curtains and blinds. Sumitomo Chemical offers three types of photocatalyst products in the form of a powder, a hydrosol and a coating agent with an inorganic binder.



### Pesticide Derived from Natural Product "Nenchaku-kun Wettable Powder"

"Nenchaku-kun Wettable Powder" is a unique pesticide whose only active ingredient is starch. Used to control red mites and

aphids, it has been verified as non-harmful to beneficial insects like bumblebees that combat natural enemy insects to ensure pollination. It is suitable for organic cultivation, cultivation using reduced agricultural chemicals, and Integrated Pest Management (IPM)\* because it is: (1) safer to humans and animals; (2) eliminates concerns about residue in crops; and (3) bio-decomposes rapidly compared to conventional agricultural chemicals



\*For details on IPM, please refer to p7.

### Sumifix HF Environmentally Friendly Dye

Reactive dyes are used widely for cellulosic fibers. However, they pose a variety of problems in that: (1) they use a large amount of inorganic salts in the dyeing process; (2) because of their low staining rates, the impact of the water discharged from the dyes on the environment is significant; and (3) removing unstained dyes (unfixed residual dyes) requires washing at high temperatures for extended periods of time, consuming a large amount of energy. With its high level of fixation and good dyeing responsiveness, Sumifix HF enables us to achieve high fixing rates with less inorganic salt, and to significantly reduce the impact of discharged water on the environment. It has been designed so that, on a molecular basis, the functionality of unstained dyes of Sumifix HF is reduced after dyeing, simplifying the washing process and reducing energy consumption.



### Super Engineering Plastics

Super Engineering Plastics are plastics with considerably greater heat resistance than typical engineering plastics. Sumitomo Chemical has been progressing toward expanding applications for two types of characteristic Super Engineering Plastics: liquid crystal polymer "Sumika Super LCP" and polyethersulphone (PES) "Sumika Excel." These are used in various fields—from electronics and electric parts to automobiles and aircraft. Sumitomo Chemical's Super

Engineering Plastics, which contain no flame retardants, have cleared top-level fire-retardant standards. They have also been evaluated as an excellent material in terms of environmental protection, since They can also be used for lead-free soldering.



### **Integrated Pest/Weed Management (IPM)**

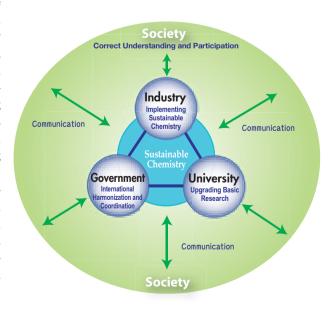
In recent years, the concept of Integrated Pest/Weed Management (IPM) has gained a much higher profile. IPM has been adopted with a view to integrally controlling the occurrence of pests and weeds by systematically combined methods such as: (1) fertility management<sup>1</sup> for pest and weed control using preventive cultivation2; (2) biological control using natural enemy insects, etc.; (3) chemical control using selective agricultural chemicals for beneficial organisms; and (4) physical control using an adhesive board or a light to control moths. To date, Sumitomo Chemical has greatly contributed to the production of safe, reliable and environmentally friendly agricultural products by educating producers about the IPM system, which uses coated fertilizers and other materials in combination, while at the same time developing and marketing the natural enemy pesticide "Oristar A" and chemical pesticide PLEO FLOWABLE as products suitable for IPM.

- 1. Human labor required for growing crops, such as tilling, grading, sowing, irrigation, fertilizing, disease control and weeding
- 2. Methods to control disease and pests through effective cultivation and farmland management, for example, using resistant species

### Industry-Government-University Collaboration and Communication with Society

We at Sumitomo Chemical believe that close industry-government-university collaboration is vital to more effective realization of our Sustainable Chemistry. Within this framework, industries, administrative organizations taking charge of policy planning and public affairs from an international perspective, and universities both in Japan and overseas conducting basic research play their own distinct roles and take advantage of their respective areas of expertise. Sumitomo Chemical is actively promoting initiatives undertaken in cooperation with outside organizations based on the recognition that deeper cooperation among industry, government, and university is an important factor in enhancing and accelerating Sustainable Chemistry.

Sumitomo Chemical is fully aware of the importance of reporting our efforts for realizing Sustainable Chemistry through industry-government-university collaboration to society at large, as well as the results of these efforts and challenges arising from the collaboration. At the same time, we listen attentively to feedback from all stakeholders. We consider it vital to engage in such two-way communication in order to continue our business.



# Sumitomo Chemical's CSR



Sumitomo Chemical dates back to the "House of Sumitomo," a business with a history spanning more than three centuries. The fundamental principles the business was founded on are upheld to this day.

### **Sumitomo's Business Principles**

### **Sumitomo's Business Principles**

### Pledae 1

Valuing above all the trust placed in it by society, Sumitomo shall conform to the highest standards of integrity in achieving strength and prosperity.

### Pledge 2

Responsive to changing times, Sumitomo shall set its business course boldly yet judiciously, never rashly pursuing easy gains, regardless of whether its business is flourishing or not.

### **CSR Milestones**

Sumitomo Chemical's business dates back to 1913, when the Company sought to solve the problem of sulfur dioxide emissions from smelting operations at the Besshi Copper Mine in the Shikoku region of Japan. The Company got its start producing sulfuric acid and calcium super phosphate fertilizers using the emitted sulfur dioxide. This not only solved environmental problems by curbing the emission of pollutants, but also helped increase crop yields through the provision of useful fertilizers.

From the 1990s onward, a number of corporate scandals focused particular attention on corporate governance. This period also saw increasing demand for measures to address corporate social responsibilities, from tackling environmental issues such as global warming to seeking ways to combat disparities accompanying economic globalization.

Sumitomo Chemical approaches these issues by establishing policies governing safety, the environment, product quality, risk management and the conduct of business.

In 2004, the Company established its Basic CSR Policy and in 2005 announced its participation in the Global Compact.

The first pledge in Sumitomo's Business Principles, advocating integrity and sound management, reflects the importance of maintaining the trust of the Company's business partners and of society as a whole. The second pledge calls for refraining from the pursuit of easy gains—conducting thorough investigations and giving serious thought to business decisions so as not to be blinded by the prospect of immediate gains.

While not expressly stated, another traditional concept applies: harmony between the individual, the nation and society. Sumitomo manifests this concept by seeking to benefit not only its own business, but also to benefit both the nation and society, and by the Company's emphasis on maintaining harmony between its interests and those of the public.

These principles are strictly applied to this day throughout the various Sumitomo Group companies, including Sumitomo Chemical.

1913	Company founded
1966 🔷	"Business Credo" established
1974	Pricing committee formed
1979	Environment and safety committee formed
1994	"Corporate Policy on Product Quality, Safety and the Environment" established
1995 🔷	"Policy for Responsible Care Activities" established
1997 🔷	"Our Code of Conduct" established
1998 🔷	Environment, Health and Safety Report published
1999 🔷	Improved compliance with Antitrust Law
2002 🔷	Risk crisis management committee formed
2003	"Sumitomo Chemical Charter for Business Conduct" established; compliance system enhanced
2004	CSR Report published (July); Basic CSR Policy established (November)
2005 🔷	Participation in Global Compact
2007	Internal Control Committee established

### **Basic CSR Policy to Specify the Basic Concepts of CSR**

Sumitomo Chemical established its Basic CSR Policy in November 2004 based on Sumitomo's Business Principles and Corporate Charter for Business Conduct. Under this Policy, specific goals are set and CSR activities are implemented to achieve them.

### **Basic CSR Policy**

By continuously creating and providing useful new technologies and products that have never before existed, Sumitomo Chemical will increase corporate value while contributing to both the solution of problems facing our environment and society, and the enrichment of people's lives.

In order to achieve this, the Company will work to achieve a balance between profitable business operations, safety, preservation of the environment, and product quality as well as social activity. In addition, we will actively pursue and promote our CSR activities with consideration for the interests of all our stakeholders, including our stockholders, employees, business partners and the local residents of all regions in which we conduct business. Through our endeavors in these areas, we hope to play a significant role in building a sustainable society, while continuing to grow to realize our goal of becoming a truly global chemical company in the 21st century.

### **CSR Promotion Coordinating Board**

Sumitomo Chemical has established a company-wide CSR Promotion Coordinating Board to promote CSR activities. This Board includes representatives from each department and division. It oversees the liaison and coordination of relevant activities and also compiles company-wide CSR implementation plans. The Coordinating Board is operated jointly by the General Affairs Department, the Corporate Communications Department (CC Department) and the Responsible Care Office (RC Office).

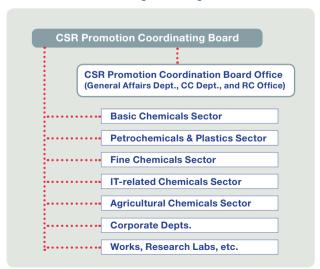
At the meeting held in March 2008, the Board drew up key initiatives for fiscal 2008 and confirmed and approved their content to promote CSR activities of the Sumitomo Chemical Group based on the Basic CSR Policy. Based on the key initiatives for fiscal 2008, individual departments were asked to set specific targets, and are implementing their CSR activities accordingly.

The CSR Promotion Coordinating Board is informed of and summarizes from time to time the status of implementation in individual departments, and reports their activity status in an annual CSR Report for internal and external stakeholders.



CSR Promotion Coordinating Board meeting in March 2008

### **CSR Promotion Coordinating Board Organization**



## Enhancing Corporate Governance

### **Basic Policy**

Sumitomo Chemical realizes that assuring the observance of sound principles and practices in the conduct of business in a manner that serves the interests of shareholders and other stakeholders amid changing social and economic conditions is the very foundation of corporate governance, and has endeavored to improve its approaches to this end.

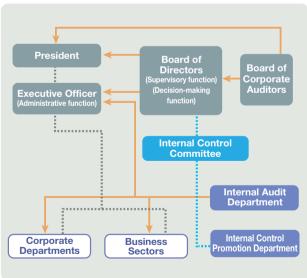
To further bolster these efforts, the Company will expedite important decision-making, define more clearly executive officers' responsibilities pertaining to the execution of duties, enhance and strengthen the compliance system and internal audits, and promote timely disclosure of information.

### **Management Structure**

The Company's management structure currently consists of 12 board members and 31 executive officers, 12 of whom serve in a dual capacity as board members. The Board of Directors makes decisions regarding important managerial matters in accordance with the law and the articles of incorporation as well as regulations concerning the Board, and also oversees and supervises the discharge of duties by each individual director. The executive officers carry out business operations in accordance with the management strategy determined by the Board.

There are five corporate auditors, three of whom are from outside the Company (as of July 2008).

### **Corporate Governance Organization**



### **Timely Disclosure**

The Company's Corporate Communications Department promotes and strengthens investor relations (IR) and public relations (PR) activities by continually providing shareholders, institutional investors and media organizations with fair and honest information in a timely manner for their investment decisions and other purposes.

### Defining the Basic Policy to Enhance Our Internal Control System

The May 2006 meeting of the Board of Directors determined basic policy in compliance with regulations under the Companies Act to define our Internal Control System and enhance mechanisms for ensuring that business is conducted in a proper and appropriate manner. In accordance with this basic policy, the Internal Control Committee was established in May 2007 to develop internal control systems for Sumitomo Chemical and Group companies, ensure that duties are executed in an appropriate manner and continually review and update the system in response to the changing business environment. This committee is administered by the secretariat in the Internal Control Promotion Department established in April 2007. The purpose of establishing this department was to propose and promote various measures to enhance the Company's internal control structure.

We consider the development of our Internal Control system a necessary process in maintaining a sound organization, and believe this system should be actively utilized for the achievement of business objectives. We will continue our efforts to maintain and improve the system.

### **Internal Auditing Structure**

Internal auditing is conducted by an Internal Audit Department that functions independent of the Company's operating departments. The Internal Audit Department audits the Sumitomo Chemical Group to ensure that internal controls are functioning effectively in the conduct of business by executive officers and employees, and that business is conducted in a proper and appropriate manner. Furthermore, a Group Internal Auditing Committee has been established to improve the effectiveness and efficiency of internal auditing of Group companies.

The Responsible Care Office conducts Responsible Care auditing for all matters concerning safety, the environment and product liability (PL).

# Compliance

We conduct our business with the strong belief that compliance should constitute the most important cornerstone of corporate management and that we must not violate ethics or the rules of society in any aspect of operations. In order to ensure lawful and ethical conduct of business throughout our Company, we have created the "Sumitomo Chemical Charter of Business Conduct," which codifies the basic criteria for business conduct, and the "Sumitomo Chemical Business Conduct Manual," commonly called "Compliance Manual", which sets forth concrete guidelines for all our employees, officers and Board members to follow. Sumitomo Chemical's overall compliance management is supported by the Compliance Committee, under which special committees such as the Responsible Care Committee, the Antitrust Law Compliance Committee and the Internal Audit Working Group are working to promote day-to-day compliance activities.

Our firm commitment to compliance also extends to the consolidated companies of the Sumitomo Chemical Group operating in Japan and overseas, in line with our corporate policy to strengthen consolidated management of the Group companies as well as our intensified efforts to enhance internal control systems throughout the entire Group. We will continue to work jointly and closely with each of our Group companies to further promote compliance-based management so that we will be able to gain greater trust and confidence from our stakeholders worldwide as a global company.

# **Sumitomo Chemical Charter for Business Conduct and Business Conduct Manual**

We believe it is our social responsibility to conduct busi-

### **Sumitomo Chemical Charter for Business Conduct**

- 1. We will respect Sumitomo's business philosophy and act as highly esteemed good citizens.
- 2. We will observe laws and regulations, both at home and abroad, and will carry out activities in accordance with our corporate rules
- 3. We will develop and supply useful and safe products and technologies that will contribute significantly to the progress of society.
- We will engage in voluntary and active initiatives to achieve zeroaccident and zero-injury operations and preserve the global environment.
- We will conduct business transactions based on fair and free competition.
- petition.

  6. We will endeavor to make our workplaces sound and energetic.
- 7. Every one of us will strive to become a professional and achieve advanced skills and expertise in our field of responsibility.
- 8. We will actively communicate with our various stakeholders, including shareholders, customers, and local communities.
- As a corporate member of an international society, we will respect
  the culture and customs of every region of the world and contribute to the development of those regions.
- 10. We will strive for the continued development of our Company through business activities conducted in accordance with the guiding principles described herein.

ness to the highest ethical standards and act on our own responsibility. The "Sumitomo Chemical Charter for Business Conduct" spells out the basic guiding principles on which our compliance system is built. And the "Sumitomo Chemical Business Conduct Manual," or the Compliance Manual, has been developed on the basis of the Charter to provide specific rules for all our Board members, officers and employees to abide by in the performance of their respective activities, with a focus on our relations with society, customers, business partners, competitors, shareholders and investors, and employees.

### **Organizations for Compliance Management**

The Compliance Committee monitors and supports the activities of the Company in ensuring that compliance-based management is always promoted in all operations throughout the Company. The Committee has the mission and authority to investigate and supervise legal and ethical compliance across the Company and recommend improvements as necessary.

### **Compliance Committee Organization**



### Speak-Up System

We have in place a "Speak-Up System" for our compliance program that enables employees and others working at our Company to report to the Compliance Committee or designated outside lawyers any violations or suspected violations of laws, regulations or Company rules when their immediate resolution through the ordinary channel of reporting to superiors appears difficult or impractical. All information provided by an informant is kept strictly confidential, and the informant does not risk unfair treatment, such as dismissal, transfer or discrimination, for reporting incidents. The Speak-Up System is expected to serve as an effective tool for restraining illegal or unethical behavior as well as stimulating self-regulation against such behavior.

### **Compliance of Sumitomo Chemical Group**

We require consolidated Group companies to adopt compliance systems comparable to those of the Company, including the Compliance Manual and the Speak-Up System, in order to promote compliance-based management throughout the Group. With respect to overseas Group companies, we request each of them to create and adopt a Code of Ethics, in place of the Company's Compliance Manual, which reflects relevant laws, regulations and business practices legitimately followed in the countries in which they operate, and to build and establish an effective compliance system based on the Code.

### **Recent Initiatives**

In April this year, we updated the Company's Compliance Manual to reflect legislative and other changes such as amendments to or new enactment of Japan's various laws, revisions of our Company rules, and society's greater emphasis on compliance. The Manual has been provided to all our Board members, officers, employees and others working at our Company. To help them fully understand the latest update and raise their level of awareness about compliance, we intend to implement a series of companywide educational programs about compliance.

In parallel, we have conducted comprehensive surveys about the status of compliance systems in operation at each of our consolidated Group companies both in Japan and overseas. The surveys were intended to determine how effectively the Group companies are operating their compliance systems and what improvements are desired. Based on the results of these surveys, we will provide better support and guidance to enable each of our Group companies to further enhance their compliance-based management.

## Corporate Activities Based on the U.N. Global Compact Principles

In January 2005, Sumitomo Chemical became the first Japanese chemical company to announce its participation in the Global Compact advocated by then U.N. Secretary-General Kofi Annan. As it expands its business globally, Sumitomo Chemical is complying with the ten principles of the Global Compact, and will augment its activities while networking with the United Nations and other institutions, and report on the status of its efforts through this CSR Report.

### The Global Compact's Ten Principles

### **Human Rights**

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses.

### **Labour Standards**

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labour;

Principle 5: the effective abolition of child labour; and Principle 6: the elimination of discrimination in respect

of employment and occupation.

### **Environment**

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility; and

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

### **Anti-Corruption**

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

### **Contributing to Society through our Business**

Participation in the U.N. Global Compact reaffirms our commitment to building a broad, global network with international institutions in our active efforts to promote CSR based on the fundamental business principles of Sumitomo on which the Company was founded.

The spirit of the Global Compact is fully consistent with the fundamental business principles of Sumitomo Chemical. That is, participation in the Global Compact does not represent a new undertaking for the Company, but rather an opportunity for every employee to deepen his or her commitment to working for the benefit of society and not merely for that of the Company.

Sumitomo Chemical will continue to give due consideration to the principles regarding human rights, labor, the environment, and ethics embodied in the Global Compact while expanding and strengthening its business.

### **U.N. Global Compact**

The U.N. Global Compact is a program through which participating corporations around the world aim to be better global citizens by espousing and practicing the ten principles established in the four areas of human rights, labor, the environment and anti-corruption.



WE SUPPORT

Businesses play a part in solving various problems caused by economic globalization through their voluntary efforts as global citizens together with international institutions, labor organizations, and nongovernmental organizations (NGOs).

## **Looking Back on the CSR Activities for Fiscal 2007**

Sumitomo Chemical implemented its CSR activities based on the key CSR initiatives for fiscal 2007 determined at a meeting of the CSR Promotion Coordinating Board in April 2007.



### **Key CSR Initiatives for Fiscal 2007 and Achievements**

Expanding and enhancing CSR activities	The CSR Promotion Coordinating Board, which works to promote CSR activities throughout the Company, convened twice, and representatives from the Company's Business Sectors, Corporate Departments, Works and Research Laboratories heard reports on the implementation status of Sumitomo Chemical's CSR activities.
Aiming to achieve performance targets based on the new Three-Year Corporate Business Plan	Regrettably, we were not able to achieve performance targets in spite of efforts at rationalization that included thorough cost reductions and selling price increases amid the severe business environment, in which prices for key feedstocks such as naphtha and benzene increased substantially and the yen strengthened sharply.
Achieving the primary targets of RC activities for fiscal 2007	We implemented measures in accordance with the primary targets for RC activities determined at the RC Committee. (Please refer to p.28 and p.29.)
Enhancing CSR procurement	We started several initiatives after the trial period for CSR procurement the previous year.
Strengthening internal control	We established the Internal Control Committee and Internal Control Promotion Department to build and enhance the internal control systems in order to fully meet the requirements of the Financial Instruments and Exchange Law (J-SOX) and cope with other regulatory issues.
Promoting dialogue with internal and external stakeholders	We promoted dialogue with various stakeholders by disseminating information through such reports as the CSR report and reports for shareholders such as the annual report in addition to providing factory tours, public meetings and seminars as well as other get-togethers.
Continuing to promote balanced social contribution activities	We worked to improve our social contribution activities by introducing "Matching Gift," an employee-based social contribution activity, in addition to the implementation of school science visits to nearby elementary schools, sponsorship of community sporting events, support for the eradication of malaria through our Olyset Net, and assistance in the construction of schools in Africa in cooperation with nonprofit organizations (NPOs).

# **Targets for CSR Activities for Fiscal 2008**

Sumitomo Chemical determined the key initiatives for fiscal 2008 at a meeting of the CSR Promotion Coordinating Board held in March 2008. Based on these new initiatives, we will implement the CSR activities for this year according to specific objectives to be developed by individual departments.

### **Key Initiatives for CSR Activities for Fiscal 2008**

•	
Instilling and enhancing the "CSR Mindset"	The CSR Promotion Coordinating Board and similar committees seek to achieve a unified company-wide awareness of CSR activities, and each department implements and promotes CSR activities individually.
Steadily implementing the Three-Year Corporate Business Plan aiming to achieve performance targets	We aim to achieve the performance targets under our Three-Year Corporate Business Plan (fiscal 2007 to fiscal 2009) to reach new heights as a global company.
Aiming to achieve the RC annual targets for fiscal 2008	We achieve the primary targets for RC activities set for every fiscal year.
Strengthening internal control	In accordance with our Basic Policy for Enhancement of the Internal Control System, we are strengthening the internal control systems for Sumitomo Chemical and Group companies to ensure that business is conducted in a proper and appropriate manner.
Enhancing CSR procurement	We are further enhancing CSR procurement focusing on the development of this practice within domestic Group companies.
Promoting dialogue with internal and external stakeholders	We promote dialogue with all of our stakeholders, including customers, consumers, business partners, shareholders employees, community residents, NGOs, governments, and the media by providing our CSR Report, factory tours, and public meetings as well as seminars.
Strengthening initiatives against global warming	Global warming is one of the most urgent issues we face today, and in our efforts to combat this global problem we are promoting initiatives for the reduction of greenhouse gases at factories, offices and households.
Continuing to promote balanced social contribution activities	We continuously promote social contribution activities unique to the Sumitomo Chemical Group based on our global perspective as a company that operates worldwide.

### Dialogue on CSR



+

Yoshimasa Takao

Director & Managing
Executive Officer



Freelance newscaster Mitsuyo Kusano, who has significant experience reporting on African issues, spoke with Director & Managing Executive Officer Yoshimasa Takao about Sumitomo Chemical's CSR activities, including its support for Africa.

# Olyset Net, which has taken firm root in Africa, now manufactured locally

**Takao:** I hear you had the chance to visit the Olyset Net plant in Tanzania.

**Kusano:** Yes, I made a short visit to the plant in March 2008 during a visit to Tanzania with the Japan International Cooperation Agency (JICA). I was surprised to find it to be a really modern plant and was equally impressed that workers—who were all hard at work—were even wearing t-shirts categorized by color for each manufacturing process.

I guess you had a tough time launching this plant. What led to the plant's being built in the first place?

**Takao:** In order to achieve the goals of combating mosquitoes that transmit malaria to provide African people with an environment where they can live with peace of mind and creating employment opportunities in Africa to contribute to the development of the local economy,



Ms. Kusano at the Olyset Net Plant in Tanzania

we supplied a local corporation—free of charge—with the manufacturing technology for Olyset Net, and manufacture started in September 2003. In Tanzania, two plants have been established; the local company's plant and a joint venture plant between the local company and Sumitomo Chemical, which is the plant that you visited. In constructing this plant, we received a great deal of support from the Tanzanian Government for the creation of infrastructure, including water supply, electric power facilities and roads, in addition to a tax break. In February this year, we held the opening ceremony, which was attended by officials including Vice President Shein of the United Republic of Tanzania, representatives from the Japan Bank for International Cooperation, which financed the plant construction, and others from international organizations that support development in Africa. We succeeded in building the plant with the help and support of a considerable number of people.

Kusano: I felt very proud to be Japanese knowing that a Japanese corporation is contributing to the prevention of malaria and the creation of local employment. I hear the local people deeply appreciate the work of your company. Takao: In Tanzania, we have created employment with Olyset Net for about 3,200 people. During a recent visit to Tanzania and Zambia, I heard people saying that they no longer suffer from malaria since they started to use the Olyset Net and that their lives have improved because they are able to earn a regular income. I was really glad that we have played a role in improving the livelihoods of people in Africa.

# Durable, high-tech mosquito nets with superior ventilation and insecticidal efficacy that lasts more than five years

**Kusano:** So how was the technology for Olyset Net developed?

**Takao:** A technique to knead insecticide into plastic is used for the Olyset Net. First we developed an insect-repellent screen window for factories, and the Olyset Net came about after we made repeated improvements to see if we could make it into a mosquito net. It has received considerable praise, and is endorsed by major international institutions like the WHO, and demand is increasing.

**Kusano:** What are the main features of the Olyset Net? **Takao:** First, the effect of the insecticide kneaded into the net's fibers lasts more than five years. It remains effective even after washing, since the insect repellent contained in the fiber comes to the surface gradually. Second, it is made from polyethylene, so it is tougher than polyester nets. Third, the size of the mesh is as large as 4 mm, which provides good ventilation.

**Kusano:** You would think that 4 mm mesh would allow mosquitoes to pass through easily.

**Takao:** As a result of extensive research, we have found that 4 mm is the optimum size for preventing mosquitoes from passing through the mesh without touching the net while still providing sufficient ventilation.

**Kusano:** Has the efficacy of the Olyset Net been proven? **Takao:** The findings were published of a blood study that covered all residents in a single African village where households had each been given an Olyset Net about 18 months earlier. According to the findings, the rate of infection decreased from 55% of the population to only 13%, so the net definitely helps prevent malaria.

# Sustaining social contribution activities as a viable business

**Kusano:** Other than Tanzania, where are the other production facilities for the Olyset Net?

**Takao:** We also produce the net in China and Vietnam. **Kusano:** Are you planning to build more plants in Africa?

**Takao:** The number of mosquito nets now required in Africa is estimated at between 60 million and 80 million nets per year. The current world production capacity for Olyset Net stands at 30 million nets annually. This is clearly far short of demand, and so we need to increase production. We are currently studying the possibility of constructing a plant in Nigeria with a production capacity of 20 million nets per year. We predict that this will create employment for more than 5,000 people.

Kusano: I also hear that you are providing educational



In the spring of 2008, we cooperated in the Zambezi Expedition, a malaria prevention campaign, and donated Olyset Nets for distribution as part of the campaign. The photo on the left was taken at the Olyset Net presentation ceremony in Zambia (Princess Astrid of Belgium is shown presenting the net)



Children in a school building constructed with the support of Sumitomo Chemical

support using part of the revenues from your Olyset Net business.

**Takao:** We have provided support for the construction of school buildings at a total of seven elementary and junior high schools—four of which were conducted jointly with other corporations—in five countries: Kenya, Uganda, Tanzania, Zambia and Ethiopia. We also assist with school fees and supply educational materials.

**Kusano:** How is international society responding to the Company's presence in Africa via social contributions?

**Takao:** What is being said at various international conferences is that it is important for the autonomous development of Africa that an activity be conducted not as a temporary charity project but as a continuing productive business run by local people.

**Kusano:** The fact that the project is doing well as a business must be the main reason for the good reception internationally.

**Takao:** Yes, it is. Sumitomo's Business Principles are based on the concept of "harmony between the individual, the nation and society as a whole," meaning "a company must not only obtain profit for itself but must also bring profit to society." The Olyset Net project is one that truly embodies this concept. The project survives because it is a business, not a charity.

# Helping to Prevent Global Warming through a Matching Gift Project

**Kusano:** What social contribution activities other than the Olyset Net project does the Company undertake?

**Takao:** We are engaging in activities based on the three key concepts of local contribution, future contribution and global contribution. To be more specific, local contributions include cleaning activities around facilities and providing support for community events. Future contributions include our continued school science visits to show children how much fun it is to create things or how fascinating chemistry is. Global contributions other than the ones in Africa include scholarship systems in China and Hungary, support for clinic renovation projects in Vietnam, and relief fund activities for natural disasters such as hurricanes and earthquakes.

**Kusano:** What are you focusing on at present?

**Takao:** In order to fulfill our responsibilities as a chemical company, we are actively working on measures to prevent global warming, and last year we launched related efforts targeting individual households. Our activities are unique in that they are conducted in cooperation with the labor union and are coupled with support for tree planting activities in the Matching Gift project.

In addition, from May 2008, we started the TABLE FOR TWO project. This aims to eliminate the imbalances in people's diets worldwide and establish sound eating habits. Healthy dishes are offered at the company cafeteria, and when you choose this option, 20 yen per meal is donated and used to provide a school meal for one child in a developing country. This is conducted in the form of a Matching Gift, in which the Company donates the same amount as employees.



Mitsuyo Kusano

Joined Japan Broadcasting Corporation (NHK) in 1989. After serving as the newscaster on programs like Morning Wide and Sunday Sports, she became a freelance newscaster in 1997 and hosted such programs as Tetsuya Tsukushi's NEWS 23. She is currently a well-known and much sought-after newscaster.

Developing a "Corporate Slogan Statement" for instilling and enhancing the "CSR Mindset"

**Kusano:** Could you please outline when and how the Company became active in its social contribution activities?

**Takao:** Sumitomo Chemical dates back to 1913, when the Company produced fertilizer from sulfur dioxide to help solve the problem of air pollution caused by sulfur dioxide emissions from smelting operations at the Besshi Copper Mine in the Shikoku region of Japan. Thus, it could be said that we are a company that started working to solve environmental problems while simultaneously contributing to agricultural development.

**Kusano:** So you had a high level of awareness about the need for making social contributions long before the term "CSR" became widespread.

**Takao:** We actually started to use the term CSR in 2004 with the establishment of our Basic CSR Policy and the publication of the CSR Report, but the essence of the concept can be found in our business credo, which is the legacy of a predecessor, that still guides our business activities today.

**Kusano:** Finally, what ideas do you have for promoting CSR into the future?

**Takao:** "To contribute to the sustainable development of society through business activities." This is our basic concept for CSR. As a chemical company, we aim to provide useful products in an environmentally and socially friendly manner utilizing the power of chemistry while concentrating on the three areas of "Responsible Care,"

"pursuit of profits" and "social activities."

In addition, we expect all employees to develop the perspective that they are part of Sumitomo Chemical as a whole rather than merely belonging to its various departments, and have developed a "Corporate Slogan Statement" that embraces our history



Yoshimasa Takao

and business principles, initiatives we have tackled to date, and our vision of the company we want Sumitomo Chemical to become in the future—a view that should be shared by all employees. Through this, we would like to properly communicate Sumitomo's Business Principles to the next generation to further instill and enhance the "CSR Mindset," while ensuring that each individual employee performs his or her duties with confidence and pride in our business activities.

# **Support for Africa**

Today, between 350 and 500 million people around the world develop malaria every year and more than 1 million people die from it. Ninety percent of cases of the disease occur in the Sub-Saharan region of Africa (south of the Sahara desert), with most of the victims being children under the age of five. Furthermore, the economic loss caused by malaria is said to be around \$12 billion annually. Considering these stark facts, it is essential to prevent malaria not only for saving lives, but also for the economic development of Africa.

Amid these circumstances, the Olyset Net, an insecticidal mosquito net developed by Sumitomo Chemical, has proven effective in preventing the spread of malaria. The Olyset Net is unique because it is not only extremely durable but also retains its insecticidal efficacy for more than five years, even with repeated washing. Because it helps protect people from the mosquitoes that transmit malaria and is also both economical and highly effective, it has been recognized and endorsed by the World Health Organization (WHO) and other major global organizations.

# Opening Ceremony for Olyset Net Plant in Tanzania

On February 8, 2008, an opening ceremony was held for the Olyset Net manufacturing plant of Vector Health International Limited, a joint venture of Sumitomo Chemical in the city of Arusha, Tanzania. There was a good turnout for the ceremony, with attendees including Vice President Shein of the United Republic of Tanzania, representatives of the Japan Bank for International Cooperation, which financed the plant construction, and representatives of key international organizations that support the development of Africa.

Sumitomo Chemical started local production in 2003, when it provided A to Z Textile Mills Limited, a mosquito net manufacturer in Tanzania, with the Olyset Net technology free of charge. Since then, the Company has established production capabilities in key locations around the world in order to meet the growing demand, and the operation of the Vector Health International Limited

plant has increased production capacity worldwide to approximately 30 million nets annually. Furthermore, with the number of employees working in the Olyset Net operations in Tanzania now totaling as many as 3,200, the plant is contributing to local economic development and the creation of employment.

### President George W. Bush and the First Lady Visit the New Olyset Net Plant in Tanzania

On February 18, 2008, U.S. President George W. Bush and his wife Laura visited the new Olyset Net plant of Vector Health International Limited during their official tour of five African nations.



President Bush and First Lady Laura Bush at the new Olyset Net plant

### For the Children, Bearers of the Next Generation

In order to rid Africa of poverty and achieve autonomous economic development, it is essential to improve the environment for elementary education.

In most African nations, schools are severely lacking, with many children studying outdoors in the dust, under the scorching sun, or in small, cramped classrooms. With a view to improving these conditions, we have been building



Children attending a class in the new school building (Ethiopia)



Opening ceremony for the new Olyset Net plant in Tanzania

schools using part of the revenues from our Olyset Net business. In addition to completing construction of the Wofargif Elementary and Junior High School in Ethiopia in December 2007, we have completed seven projects, including the construction of school buildings at elementary and junior high schools, school dining facilities, and teachers' residences in Kenya, Tanzania, Uganda, Zambia, and Ethiopia as of July 2008. Four companies came together to take part in the implementation of these projects.

Sumitomo Chemical will continue its long-term educational support in Africa by providing school with funding and supplies as well as other assistance.



Community residents at the transfer ceremony of the new school building (Ethiopia)

### Major support for Africa in fiscal 2007

### **Educational support**

Ethiopia: Wolfargif Elementary and Junior High School Construction Project (incomplete as of December 2007)

Continuing support for schools we have constructed (for the next five years: approx. ¥11 million in total)

### Free provision of Olyset Nets

110,000 Olyset Nets (corresponding to ¥56 million) donated to the U.S. NPO Malaria No More

## **Team Minus 6% Declaration**

Sumitomo Chemical declared its participation in the Team Minus 6% in July 2007.

Japan has set a target to reduce the emission of greenhouse gases by 6%, based on the Kyoto Protocol, as a major measure to prevent global warming. A national project called Team Minus 6% has been established in order to achieve this target. The annual targets for reducing CO<sub>2</sub> are approximately 73 million tons annually for offices and approximately 37 million tons for homes.

At Sumitomo Chemical, in addition to its all-out efforts in the workplace to reduce CO<sub>2</sub>, we are also promoting measures to prevent global warming at the homes of employees in cooperation with the labor union.

In February 2008, employees and their family members were invited to submit ideas for global warming prevention posters, and since April, these have been exhibited at a variety of places, including the Head Office, branch offices and Works. In April 2008, we also prepared an original household environmental accounting book and distributed it to all employees.



Global warming prevention poster

In addition, we are planning to promote the following initiatives going forward:

- 1. Preparing and distributing pamphlets, guidebooks, etc.
- Encouraging Sumitomo Chemical Group companies to participate in the initiatives
- 3. Establishing the PDCA cycle\* and introducing an awards system
- Conducting volunteer overseas treeplanting activities



Household environmental accounting

# Launch of the Matching Gift Project

In November 2007, Sumitomo Chemical launched the Matching Gift project as an employees-based social contribution activity in cooperation with the labor union. The Matching Gift project is a social contribution activity in which employees work together with the Company where donations are solicited from Board members, executives and employees, and the Company matches the amount collected. The total is then donated to support designated causes.

The first period of solicitation (from November 2007 to March 2008) generated donations from Board member, officers, and employees of Sumitomo



Presentation of collected funds to OISCA

Chemical, including 29 Group companies in Japan and overseas, for a total of ¥11,053,472 (including the amount contributed by the Company). This was donated to the Organization for Industrial, Spiritual and Cultural Advancement-International (OISCA) in March 2008 and will be used toward overseas tree planting and other projects.

In addition to tree planting, in April 2008, the Company began donating to ASHINAGA, a private NPO, as part of its support for children's upbringing and education. The Company will also engage in volunteer tree-planting activities.



Thai children taking part in a tree-planting activity in the Children's Forest Program undertaken by OISCA

# **Supporting Tree-Planting Activities** (OISCA)

OISCA is a global NGO founded in 1969 with the aim of creating a "world where all people live side-by-side and overcome various differences to protect and nurture all foundations of life on Farth."

We will continue to promote treeplanting activities as part of our CO<sub>2</sub> reduction initiatives for the prevention of global warming. In addition to the Children's Forest Program undertaken by OISCA, funding will also be used for forestation projects, including planting of mangroves, which are a hardy species capable of storing large amounts of CO<sub>2</sub>.

# Support for the Upbringing and Education of children (Private NPO, ASHINAGA)

ASHINAGA is a private NPO established to physically and spiritually support children who have lost one or both parents in traffic accidents, illness, or disaster.

The funds collected in the second Matching Gift project will go toward a children's scholarship run by ASHI-NAGA.

### NOTE

<sup>\*</sup>PDCA cycle: A process to Plan, Do, Check, Act, and utilize the outcome in the next plan

# **Corporate Slogan and Statement**

—Initiatives for the Enhancement of Corporate Values

In February 2007, Sumitomo Chemical selected people from all departments of the Company to launch the Corporate Brand Project to enhance corporate value. Background factors to this included that: (1) corporate value had not been fully appreciated in view of the growth in performance in recent years; and (2) the general public's evaluation of us had not been as high as that formulated by financial analysts.

We thus conducted surveys and analyses of our corporate images targeting employees, customers, students and general business people to identify the current status of the visibility and image of Sumitomo Chemical as perceived by the general public and ascertain the gap between these and the "ideal Company" as recognized and envisaged by our employees. We started by grasping the actual status and extracting issues to be solved. Also, based on the outcome of the survey, we held intensive discussions on matters such as "pride" and "commitment" to be further nurtured as employees of Sumitomo Chemical, and "what should newly be developed and nurtured as we move into the future" was given careful consideration. After exchanging opinions with top management, we compiled the results as the Corporate Slogan and Statement.

The Corporate Statement represents

what we desire to be both as a company and as individuals and aims to foster common values among employees in the hope that those outside the Company will gain a better understanding of Sumitomo Chemical. The Corporate Slogan we formulated that embraces this intent is "Creative Hybrid Chemistry For a Better Tomorrow—Sumitomo Chemical Co., Ltd."

From now on, every one of our employees will share this Corporate Slogan and Statement, and strive enthusiastically to undertake business activities with confidence and pride.

### **Corporate Slogan and Statement**

Sumitomo Chemical started business in 1913 as a producer of fertilizers from sulfur dioxide gas emitted by copper smelters. This business, which solved the environmental problem of air pollution while meeting the social demand for more agricultural production, embodied the business philosophy of the Sumitomo family handed down from the 17th century.

"Our business must benefit society, not just our interests." Throughout our history of almost a century, we at Sumitomo Chemical have lived by this credo. We have worked to build better lives by developing various businesses that meet people's evolving needs. At the same time, we have continuously delivered technological innovation while taking special care of safety, the environment and product quality.

Looking to the future, we will create new value beyond the boundaries of chemistry by combining a variety of ideas, views and technologies. We will also continue to take up the challenges facing the globe, from meeting basic needs, to protecting the environment, to addressing the issues of adequate supplies of food, energy, and other resources.

In this endeavor, each of us at Sumitomo Chemical will work together to enhance our capabilities, explore new possibilities everyday, and overcome the challenges lying ahead with enthusiasm and a strong sense of mission.

Sumitomo Chemical will seek to continue to build trust and bring joy to people across the world through constant innovation.

**Creative Hybrid Chemistry For a Better Tomorrow Sumitomo Chemical Co., Ltd.** 



# Commitment of project members

Rei Nishimoto General Manager of the Planning & Coordination Office, Agricultural Chemicals Sector



During the initial period of the project, we had a hard time making progress in our discussions and, to tell the truth, we were frustrated. However, the findings of the survey on the awareness of general consumers, students, our employees and customers we conducted with the cooperation of Professor Ito's laboratory at Hitotsubashi University were very interesting and had a great impact. We had heated discussions in every meeting in the latter half of the project period when we started to talk about "pride." "commitment" and "what needs to be reinforced"-principles that should be shared by all employees.

This Corporate Slogan and Statement may appear simple and obvious at a glance, but the words represent the ardent desire of Sumitomo Chemical employees to enhance the corporate value from the past through to the present ... and into the future.

# Forging Ahead on the Rabigh Project

—At last, commercial operation due to start in the first quarter of fiscal 2009



Sumitomo Chemical is forging ahead on the Rabigh Project, a world scale integrated petroleum refining and petrochemical complex, through the Rabigh Refining and Petrochemical Company (Petro Rabigh), a joint venture between Sumitomo Chemical and Saudi Arabian Oil Company (Saudi Aramco).

The Rabigh Project is constructing new secondary refining units, including a fluid catalytic cracker to newly produce gasoline and propylene at Saudi Aramco's oil refinery (with a crude oil processing capacity of 400,000 barrels per day) located in Rabigh on Saudi Arabia 's Red Sea coast. The Project will also produce ethylene in an ethane cracker, and in addition, will construct new derivatives production plants using the ethylene and propylene produced on-site. The Project will receive a stable supply of feedstock from our partner,

Saudi Aramco, while at the same time fully leveraging economies of scale with the aim of establishing an integrated oil refining and petrochemical complex.

Sumitomo Chemical has positioned the Rabigh Project as the top priority of its new Three-Year Corporate Business Plan (fiscal 2007 to fiscal 2009), and the entire Company, together with Saudi Aramco, is putting forth its concerted efforts toward the start of commercial operations in the first quarter of fiscal 2009.

In addition, the Company's subsidiary, Sumitomo Chemical Asia, has established sales capabilities and begun premarketing the petrochemical products that will be produced by Petro Rabigh.

Petro Rabigh held its initial public offering (IPO) and was listed on the Saudi Arabian stock exchange in Janu-

ary 2008. As a result, both Sumitomo Chemical and Saudi Aramco decreased their respective ownership in Petro Rabigh from 50% to 37.5% following the IPO. Petro Rabigh's IPO is expected to contribute to the enhancement of the Saudi Arabian stock market.

### Hiromasa Yonekura Awarded Hungarian Order of Merit



President László Sólyom of Hungary (right) presents Hiromasa Yonekura, President of Sumitomo Chemical (left), with the Commander's Cross Order of Merit of the Republic of Hungary

In November 2007, Sumitomo Chemical's President, Mr. Yonekura, was awarded the Commander's Cross Order of Merit of the Republic of Hungary from President of Hungary László Sólyom in a ceremony in the Hungarian capital of Budapest.

Mr. Yonekura received the award on the merit of his proposal for promoting exchange between Japan and Hungary over a broad sphere including politics, the economy, culture, and science & technology, which was submitted to the leaders of both countries at the Japan-Hungary Cooperation Forum\*.

Hungary has become an important

country for Japanese companies in Europe, since it has been growing economically at an annual rate of over 4% since 1997, and in 2007, Sumitomo Chemical Agro Europe S.A.S, a Sumitomo Chemical Group company, established a representative office in Hungary.

### \*Japan-Hungary Cooperation Forum

In October 2004, then Japanese Prime Minister Junichiro Koizumi and Hungarian President Gyurcsany held talks, and as a result, the forum was founded as a venue for experts from the two countries to discuss and cooperate in various fields of expertise. (Mr. Yonekura, President of Sumitomo Chemical, chaired the Japanese delegation and Dr. Vizi, President of the Hungarian Academy of Sciences, chaired the Hungarian delegation.)

### Ministry of Health, Labour and Welfare Encouragement Prize Awarded



Sumitomo Chemical's Agricultural Chemicals Research Laboratory was awarded the Ministry of Health, Labour and Welfare Encouragement Prize for 2007, and the awards ceremony was held at the Hyogo Labour Bureau on July 5, 2007.

This award is conferred by the Ministry of Health, Labour and Welfare to recognize the accomplishments of offices, plants and laboratories or corporations that have actively promoted industrial health and safety activities through the cooperation of labor and management

and have upheld excellent standards in terms of health and safety, and whose initiatives for improvement can be regarded as a model for others.

The Laboratory intends to take the opportunity offered by this award to reinforce its Responsible Care activities by maintaining and improving the Zero-Accident Initiative currently underway (as of the end of June, 2008, it has maintained a record of achieving 264 straight months with no accidents resulting in lost workdays

## Accepting Eco-Interns from the Ministry of the Environment



Eco-interns at the Osaka Works



Venue for the Eco-internship Symposium

The Eco-internship program was established by the Ministry of the Environment in 2007 to dispatch university and graduate students to the environmental management departments of businesses as interns to enable them to gain work experience in the field of environmental management.

Sumitomo Chemical cooperates in this program, and accepted two students at the Environment & Safety Department of the Osaka Works and the Responsible Care Office of the Tokyo Head Office for a ten-day period from October 22 to November 2, 2007. The Company participated in this program according to its own original eco-internship program prepared in advance

The program was extensive in terms of its content and included the RC activities, risk assessment based on the environmental risks involved in the PRTR system and environmental preservation activities at the Company's Works. With "chemical substance management" as the main theme, the program also provided hands-on training and occasional site tours.

Comments from participating students included: "I came to understand

the various measures, worries and problems that a corporation faces when it comes to environmental preservation. I also learned that, from the perspective of corporate responsibility, the difficulty of carrying out environmental measures is commensurate with the size of the corporation." Another noted, "I found that the image I had of the company was very different from what I actually experienced there. I was able to understand the environmental preservation initiatives and was quite impressed to learn that according to Sumitomo Chemical's vision, 'environmental measures and business operations can go hand in hand."

On February 13, the Ministry of the Environment hosted the Eco-internship Symposium at the National Museum of Emerging Science and Innovation (Koto Ward, Tokyo) to summarize the achievements of the new program. The students who participated presented internship reports and took part in a panel discussion titled "Working with the Environment in Mind." Personnel from Sumitomo Chemical attended as panelists along with representatives of other companies participating in the program.

# Responsible Care Activities



The term Responsible Care (RC) refers to voluntary corporate activities aimed at preserving safety, the environment, health and product quality in all phases of the product life cycle, while at the same time earning the trust of society through continuous dialogue.

### Discussion: Current Status of RC Activities and Future Issues

How do we promote RC activities while at the same time further developing corporate activities globally? In the following discussion, Noriyuki Yoshihara, Director of the Japan Responsible Care Council (JRCC), and Yasumi Shiozaki, Executive Officer of Sumitomo Chemical, consider the current status of Sumitomo Chemical's RC activities and share their views on related icensec

### **Promoting RC Activities** throughout the Company under Top-Down Leadership

Yoshihara: As a leading member of the Japanese chemical industry, Sumitomo Chemical was deeply involved in establishing the Japan Responsible Care Council (JRCC) and has promoted RC activities from an early stage. Shiozaki: Yes, Sumitomo Chemical took the lead in developing its Corporate Policy on Product Quality, Safety, and the Environment in 1994, and the Policy for Responsible Care Activities in 1995 when the JRCC was established. That same year, we also established the Responsible Care (RC) Office and started to seriously engage in RC activities. Then, we reviewed and revised our Corporate Policy and the Policy for RC Activities in 2005 and 2006, respectively.

Yoshihara: Because RC activities are somehow linked to all business processes, including research & development, manufacturing, logistics, consumption and disposal, a company needs to make concerted efforts to ensure that RC activities are well understood throughout the company. I imagine this must have been quite a difficult challenge and I wonder what kind of a management system you have developed.

Shiozaki: The Responsible Care Committee (RC Committee) is our top-tier committee, while the RC Office is the corporate department that implements the specifics.

The RC Committee consists of an executive vice president as chairperson as along with Board members and Executive Officers in charge of the Company's Business Sectors and corporate departments (general affairs, legal, human resources, corporate communications, corporate planning & coordination, finance & accounting, procurement, logistics, Responsible Care), and the General Managers of the Company's Works. It convenes once a year to hear reports about activities conducted during the past

year and formulate RC objectives for the coming year. RC Subcommittees established at our Works and Research Laboratories implement the policies determined by the RC Committee.

In order to increase the effectiveness of our RC activities, the RC Subcommittees emphasize the importance of repeating the PDCA cycle. The Subcommittee formulates a plan for each activity and this is executed at our Works and Research Laboratories. Then, an RC audit is carried out to check the results, and the Subcommittee takes the necessary action to make sure the activities are on track. In the process of formulating related plans for each activity, we not only consider what is happening on the global stage but also bear in mind Sumitomo's Business Principles.

Yoshihara: How do you audit RC activities?

Shiozaki: We have adopted a twostep system consisting of a specialized audit and a management audit. A team of experts drawn from various fields conducts the specialized audit, spending about two days at each of our Works or Laboratories. The results of the audit are reported to the chairperson of the RC Committee, which then conducts a management audit from a managerial perspective.

**Steadily Building Up Achievements Including CO<sub>2</sub> Emission Reductions** 

Yoshihara: Could you please outline what your RC activities—conducted over more than a decade—have achieved?



Noriyuki Yoshihara, Director of the JRCC (right), and Sumitomo Chemical Executive Officer Yasumi Shiozaki

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**Shiozaki**: One of our achievements is acquisition of ISO14001 and ISO9001 certification as well as OSHMS standards. Of these, OSHMS in particular attracted a great deal of attention in Japan, since not only our Works but also our two stand-alone research laboratories operating independently from the Works, the Tsukuba Research Laboratory and Agricultural Chemicals Research Laboratory, acquired this certification. We have divided our RC activities into the six categories of occupational health and safety. environmental protection, safety and disaster prevention, chemical safety, product quality assurance, and logistics safety, and are making consistent efforts to achieve the targets set for each category.

**Yoshihara:** Could you please outline your environmental programs, such as those related to reducing CO2 emissions to prevent global warming?

Shiozaki: Where the environment is concerned, we establish reduction targets for emissions of greenhouse gases, including CO2, SOx, NOx, and soot and dust as well as the discharge of COD, nitrogen and phosphorus into water sources, and strive to control such discharge. Furthermore, we work actively to reduce the substances subject to the PRTR\* Act, volatile organic compounds (VOCs) and other wastes,



to use water effectively and save energy, and have achieved steady results in each area. In particular, we succeeded in achieving the 2010 targets for unit CO2 emissions and energy savings, allowing us to set even higher targets.

# How Can We Convey the Achievements of RC Activities to the Public?

**Yoshihara:** JRCC recognizes that the RC activities undertaken collectively by the Japanese chemical industry

have produced definite results. However, their projects and achievements are hardly known outside the industry. We should not only confirm the safety of chemical products within the chemical industry, but, going forward, we should also properly inform downstream manufacturers (customers) as well as end users about their safety.

Shiozaki: In addition to chemical manufacturers' efforts to inform people, I think the Japan Chemical Industry Association (JCIA) and the JRCC, as representatives of this industry, probably need to provide information throughout the entire industrial sector. Yoshihara: Yes, the most difficult issue we face now is how to approach end users. According to the results of a magazine survey mainly targeting homemakers in their 30s and 40s, only 3.7% of respondents knew what "Responsible Care" was.

Shiozaki: Sumitomo Chemical actively participates in the Community Dialogue sessions hosted by the JRCC and each Works independently promotes Responsible Care PR activities using inserts in local newspapers targeting local residents. We recognize the difficulty in assuring adequate public understanding of our activities, but we continually endeavor to do so. Yoshihara: At the Responsible Care Leadership Group (RCLG) conference held in Miami, Florida in the United States in 2008, one of the main issues was how to go about increasing recognition of the RC symbol. The issue of needing to raise awareness about RC is not confined to Japan.

### A Leading Company Reports its Successes to the World

Shiozaki: Looking at trends overseas, the rapid progress of globalization is clear from the increase in the number of countries—now totaling 53—that participate in the RCLG, which is the main organization in the International Council of Chemical Associations (ICCA) that promotes RC activities. Nevertheless, we have begun to see a growing gap in the level of activity from one country or region to another. In this sense, the achievements of RC activities are being put to the test and



these activities are likely at a turning point.

Yoshihara: The Japanese chemical industry has been making sincere efforts and achieving appreciable results. and Japan's RC activities truly deserve praise for their world-class achievements. We really need to continue to achieve solid results and report these successes overseas. Unless chemical corporations all over the world put serious effort into RC activities, there is little hope for the future of our planet. Wouldn't you agree that members of the chemical industry should adopt this kind of long-term, global perspective? Shiozaki: The corporations that are branching out globally should lead local corporations by example. We believe we should make greater efforts to promote RC activities, not only within the parent company of Sumitomo Chemical and its domestic Group companies, but also among overseas Group companies. As a part of these efforts, in 2007 and 2008, we gathered RC personnel from overseas Group companies in Tokyo for our RC Global Meeting to exchange information and ideas. We intend to further promote these global RC efforts and improve the performance of the entire Sumitomo Chemical Group, including its overseas Group companies.

Yoshihara: We hope that Sumitomo Chemical will remain at the forefront of RC activities as a leading company in this area. What's more, we are looking to Sumitomo Chemical to meet the challenges of living up to the requirements of the global arena in cooperation with the JRCC.

**Shiozaki:** Yes, we intend to continue improving our RC activities to an even higher caliber in order to fulfill the expectations others have of us.

In closing, I would like to thank you for joining me in this discussion today.

### NOTE

<sup>\*</sup>Pollutant release and transfer register (PRTR): A system for registering emissions and movement of environmental pollutants. This system enables collection, tabulation and reporting of data from each source of emissions and also allows us to measure to what extent a toxic chemical substance is emitted into the environment or transferred from the site as waste.

### Responsible Care (RC) Management

In its aim of realizing Sustainable Chemistry, Sumitomo Chemical is actively engaged in RC activities to ensure safety, preserve the environment, ensure human health, and maintain and improve product quality throughout all phases of the life cycle of its chemical products. These voluntary activities have been developed globally, not only in the Company's Works and Research Laboratories in Japan, but also in its Group companies both in Japan and overseas. Sumitomo Chemical classifies its RC activities into several categories, such as environmental protection and chemical safety, for which it sets targets, and by working to achieve thise targets, aims to earn the further trust of society.

Currently, the ICCA\* has established working groups for climate change and energy policies, chemical product policies and health and Responsible Care to further promote its activities in these areas. Sumitomo Chemical plays a leading role in the working group for "climate change and energy policies," and was appointed as vice-chair of the working group for "Responsible Care." Thus, Sumitomo Chemical actively participates in studies on specific policies and strategies for each related topic.

### Promoting RC Activities in Full Coordination with Group Companies

### Corporate Policy on Safety, the Environment and Product Ouality

Sumitomo Chemical has set forth safety, the environment, and product quality as top priorities for all its business activities in its Corporate Policy on Safety, the Environment and Product Quality. This policy has been communicated to all employees in all the Company's Business Sectors and throughout the entire Sumitomo Chemical Group to ensure that each and every employee is fully aware of it.

### **Policy on Responsible Care Activities**

Sumitomo Chemical has formulated the "Policy on Responsible Care Activities" based on the Corporate Policy on Safety, the Environment and Product Quality in order to define key initiatives for RC activities.

This Policy has also been communicated to all Group companies. The companies have stipulated their own policies for RC in line with Sumitomo Chemical's efforts. This ensures consistent and coherent RC activities throughout the Group.

# Organizational of Responsible Care Activities

The Responsible Care Committee (RC Committee) was established to promote comprehensive, efficient RC initiatives from a long-term perspective. The RC Committee consists of

the chairperson, and top executives in charge of the Company's Business Sectors, corporate departments and Works.

### Corporate Policy on Safety, the Environment and Product Quality

Revised: November 1, 2005 (Established April 1, 1994)

In conformity with Sumitomo's Business Principles, our Company fulfills its responsibility to develop, manufacture and supply a variety of products that satisfy the fundamental necessities of human life and contribute to the growth of society. Under the concept of "Making Safety First Priority," which is fundamental to all the Company's operations, Sumitomo Chemical has based management of its activities on the principles of (i) maintaining "zero-accident and zero-injury operations"; (ii) ensuring "customer satisfaction"; and (iii) promoting "mutual prosperity with society."

Paying due respect to these principles, our Company is determined to conduct all activities, including production, R&D, marketing & sales and logistics, in accordance with the following policy related to safety, the environment and product quality.

- Maintain zero-accident and zero-injury operations and the safety of neighboring communities and our employees.
- Ascertain the safety of raw materials, intermediates and products, and prevent our employees, distributors, customers and consumers from being exposed to any possible hazard.
- 3. Supply high-quality products and services that satisfy customers' needs and ensure safety in their use.
- Assess and reduce our environmental impact at all operational stages, from product development to disposal, and undertake all practical environmental protection measures.

All sections and employees of our Company shall be made fully aware of the significance of this policy, and shall constantly strive to improve operational performance, while at the same time abiding by all relevant laws, regulations and standards.

### Hiromasa Yonekura

President, Sumitomo Chemical Company, Limited



NOTE

\*ICCA: International Council of Chemical Associations, established in 1990

### **Policy on Responsible Care Activities**

Revised: March 2, 2006 (Established: January 1995) Responsible Care Committee

In accordance with the Corporate Policy on Safety, the Environment and Product Quality, Sumitomo Chemical will strive to promote Responsible Care activities in developing its business, and will also do its utmost to achieve sustainable development and earn the trust of society.

- We will achieve our zero-accident, zero-injury targets to ensure stable operations.
- 2. We will conduct risk management throughout the life cycle of our products, throughout the stages of development, manufacturing, transport and disposal, and strive to conserve the environment, and ensure the safety and health of our employees as well as that of the local community.
- We will comply with all domestic and international laws and standards relating to safety and the environment, and strive to meet even stricter targets than those legally required.
- We will promote both risk reduction and accident prevention from the perspectives of product safety and quality.
- We will promote energy and resource conservation and seek to reduce our environmental impact.
- We will implement the requisite education and training for our employees relating to safety, the environment and product quality, and will promote effective Responsible Care activities.
- 7. We will be mindful of the interests of both local residents and regulatory authorities in connection to safety, the environment and product quality, and will fulfill our responsibility to provide related information through dialogue.
- 8. We will evaluate the content of our activities and seek to implement improvements through Responsible Care audits pertaining to occupational health and safety, security and disaster prevention, environmental protection, chemical safety, product safety and quality assurance.
- 9. We will support the Responsible Care activities of Group companies, contractors and other business partners, including those located overseas.

### PDCA for RC Activities

Sumitomo Chemical's RC activities can be broadly classified into five categories: occupational health and safety, environmental protection, safety and disaster prevention, product quality assurance, and chemical safety. By repeating the PDCA cycle for all the Company's RC activities (see the diagram below), we strive to continually improve performance. Sumitomo Chemical and its Group companies give due consideration to improving the quality of RC activities and ensuring their transparency through pre-scheduled inspections of our RC

activities under the RC verification system conducted by the Responsible Care Verification Center.

# **Sharing RC Information** with Group Companies

Sumitomo Chemical regularly holds RC meetings at which RC heads from each Group company in Japan and overseas meet to discuss various issues related to RC in order to raise the level of our RC activities. The RC meetings take place twice a year for companies in Japan, and once a year for overseas Group companies (RC Global Meeting).





# Second RC Global Meeting Held

In March 2008, the second RC Global Meeting was held at Sumitomo Chemical's Head Office in Tokyo. RC Global Meetings are held with the aim of exchanging information and ideas on RC activities with representatives from the Company and its Group companies from around the globe. and promoting common understanding and awareness of Sumitomo Chemical's RC activities.

The second meeting was attended by 23 RC managers from 18 overseas Group companies in Asia, Oceania, the United States and Europe as well as about 30 members from the Company's Responsible Care Office and planning & coordination offices from each Business Sector.

In addition to a keynote speech presented by a representative of the Japan Responsible Care Council (JRCC), representatives of Sumitomo Chemical's Environment & Safety, Quality Assurance, and RC Audit departments presented policies and plans for fiscal 2008 RC activities. The representatives of the participating overseas Group companies also reported on their RC activities, topics and issues.

Responsible Care is an important facet of our CSR-based management, and we will continue to convene regular RC Global Meetings in order to strengthen and enhance our RC-related work.





RC Global Meeting, Tokyo

### Verifying a Diverse Range of Items for More Effective RC Activities

# Responsible Care Audits (RC Audits) for Objectively Evaluating Activities

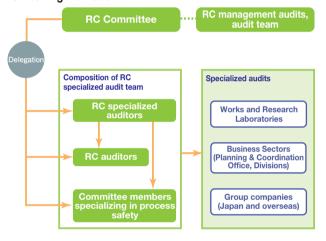
The Company endeavors to improve the effectiveness of its RC activities by repeating the plan-do-check-act (PDCA) cycle. RC audits are conducted to objectively evaluate RC activities and ensure that they are being carried out appropriately. Sumitomo Chemical's Works and Research Laboratories are subject to two types of RC audits:

(1) specialized audits, in which Works staff first conduct evaluations using checklists and then specialists conduct audits; and (2) management audits involving RC Committee members led by the Executive Vice President in charge of Responsible Care. Specialized audits are also conducted for the departments in each of Sumitomo Chemical's Business Sector as well as Group companies in Japan and overseas

### Fiscal 2007 RC Audit Results

RC specialized audits and RC management audits were conducted at the Works and Research Laboratories in Ehime, Chiba, Osaka, Oita, Misawa and Takarazuka. In addition, a total of 36 RC audits were conducted in five Business Sectors of Sumitomo Chemical and two logistics centers, and at 18 Group companies in Japan and overseas. The results turned up no major issues of non-compliance with regulations.

### **RC Auditing Framework**



### **RC Auditing Overview**



### RC Audit Helps to Raise Individual Awareness of RC and Improve the Level of RC Activities

Sumipex (Thailand) Co., Ltd. is one of the largest suppliers of cast acrylic sheets in Southeast Asia. It was knowledge and important advice provided by Sumitomo Chemical's RC audit team that enabled us to improve our RC activities. Compared with the RC activity standards normally adopted in Thailand, Sumitomo Chemical's standards are much higher and we became even more acutely aware





Auditing of working environment improvement activities



Nikom Wanwong Sumipex (Thailand) Co., Ltd. Asst.Technical & QA Division Manager Sumipex (Thailand) Co., Ltd.

of our social responsibility after undergoing an RC audit. All employees of Sumipex are involved in activities to keep their workplace neat, tidy and clean (working environment improvement activity) and make efforts to improve the levels of "safety, the environment, health and product quality." The audit team ranked our achievements highly, and we continue to promote these activities.

In the future, we will make use of the knowledge obtained through RC audits and RC Global Meetings in employee training programs and hold seminars and meetings to report the results of our working environment improvement activities on a regular basis. We also send staff to participate in Sumitomo Chemical's RC activities so that they can gain further knowledge and report on our activities.

### **Results of Fiscal 2007 RC Activities**

Sumitomo Chemical has set specific targets for its RC activities in all areas of environmental protection, occupational health and safety, safety and disaster prevention, chemical safety, product quality assurance, and auditing. The main initiatives among all Sumitomo Chemical's RC Activities for fiscal 2007 in environmental protection, safety, quality assurance, and auditing are presented below.

### Sharing Targets and Following Up on the Status of Activities throughout the Entire Group

The Sumitomo Chemical Group, while striving to raise productivity throughout the entire Group, aims to systematically reduce any major environmental impact from its business activities. To this end, the Group has set shared targets to be met by fiscal 2010 (the target year) for unit energy consumption and unit CO<sub>2</sub> emissions, the volume of PRTR emissions, and the amount of waste disposed of in landfills, and are implementing specific initiatives to meet these targets.

### **Sumitomo Chemical Group Reduction Targets and Actual Performance**

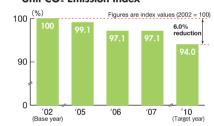
### **Unit Energy Consumption Index**



### PRTR Emissions (into the air and water)



### Unit CO<sub>2</sub> Emission Index



### **Landfill Disposal Volume**



An upward revision of the target values was considered, and the target values for unit energy consumption index and landfill disposal volume were revised.

Data for fiscal 2005 to 2007 have been revised to increase accuracy.

### VOICE

### Promoting Utilization of Biomass Fuel<sup>2</sup> Leading to a Reduction in CO<sub>2</sub> Emissions

Sumitomo Joint Electric Power Co., Ltd., which has three thermo-electric power plants in the Toyo region of Ehime Prefecture, supplies electric power to Sumitomo Group companies and Shikoku Electric Power Co., Inc. in the Toyo region and also to the wholesale electricity exchange (following the deregulation of the electric power industry). Sumitomo Joint Electric Power depends on fossil fuels such as coal for most of its fuel. At the beginning of the first commitment period specified by the Kyoto Protocol, Sumitomo Joint Electric Power recognizes that measures to combat global warming are pressing issues. Therefore, in fiscal 2005, we started utilizing woody biomass by mixing a small portion of woodchips with coal for combustion.

To achieve even better results, we have attempted to increase the amount of woodchips in the fuel mix. In fiscal 2007, a total of approximately 6,000 tons of woody biomass was used instead of coal at the Niihama Nishi Heat Power Plant and the Mibugawa Thermo-Electric Power Plant, which enabled us to achieve a 7,800-ton reduction in CO<sub>2</sub> emissions. In fiscal 2008, discarded wooden pallets, which had been incinerated as general waste at

### Tatsuhiro Arisawa

Technical Planning Department Sumitomo Joint Electric Power Co., Ltd.

public waste incineration plants, were newly designated as industrial waste. Sumikyo Clean Center Co., Ltd., a subsidiary of Sumitomo Joint Electric Power, obtained formal approval from the Ministry of the Environment to treat wood debris and launched a new business project, installed a chipper and began processing wood debris into woodchips. In the future, we will collect 3,000 tons of waste wood pallets to increase the utilization of woody biomass. This will enable us to achieve an approximate 4,500-ton reduction (CO<sub>2</sub> equivalent) annually.

The Niihama Higashi Thermo-Electric Power Plant obtains digestion gas (containing methane as a main constituent) from the Niihama City Sewage Treatment Plant, which is generated in the sewage treatment process and incinerated. The gas delivered from the sewage treatment plant has been effectively utilized as fuel to generate power since fiscal 2007. We will continue to play an active role in fighting global warming by promoting utilization of CO<sub>2</sub>-free biomass fuels such as woodchips derived from scrap wood and digestion gas.

### NOTE

- 1. Unit energy consumption and unit CO<sub>2</sub> emissions: The amount of energy needed to produce a given quantity of a product and the amount of CO<sub>2</sub> emitted in that process. Smaller units indicate higher energy efficiency and a smaller environmental impact.
- Biomass fuel: Fuel made from biomass (biological resource) such as scrap wood, waste wood, sugarcane, raw garbage and effluent.

## Primary Responsible Care Initiatives: Targets and Progress

	Category			Target	Measures Taken	Object							
	Sustainable environmental management			Promotion of sustainable environmental management	Reducting environmental impact while also pursuing profit	Non-consolidated/ Group							
		Global environmental		environmental				environmental		environmental		Reduction in CO2 emissions	Non-consolidated
		prote	CTIC	on			Group						
					Prevention of ozone layer depletion	Reduction of CFC emissions	Non-consolidated/Group						
				ablishment recycling-	Energy savings	Improvement of unit energy consumption	Non-consolidated						
Env.				nted society			Group						
Environmental Protection					Waste reduction	Reduction in the amount of generated waste; promotion of recycling	Non-consolidated						
enta							Group						
P					Reduction in water use	Improvement in unit water usage	Non-consolidated						
otecti				Preservation of the living environment and prevention of	Appropriate chemical substances management Proper handling of PRTR substances	Promotion of risk management according to the environmental risk	Non-consolidated						
Ö				health hazards			Group						
					Reduction in VOC emissions	Reduction in VOC emissions	Non-consolidated						
					Prevention of soil and groundwater contamination	Promotion of soil and groundwater contamination risk management	Non-consolidated/ Group						
					PCB countermeasures	Proper storage and disposal of PCB waste	Non-consolidated/Group						
					Prevention of accidents causing environmental contamination	Reduction of environmental risks involving operating activities	Non-consolidated						
	Promotion of occupational health and safety  Promotion of disaster prevention activities  Promotion of chemical safety management			Prevention of occupational accidents	Elimination of accidents resulting in lost workdays for employees of Sumitomo Chemical and contractors/affiliate companies Use of Occupational Safety and Health Management System (OSHMS) to reduce potential occupational safety risks Prevention of problems caused by human factors	Non-consolidated							
					Non-consolidated								
Safety				Ensuring chemical safety	Enhancement of safety information and proper management of chemical substances	Non-consolidated							
		omotio logistic		f safety activities	Ensuring safety, environmental protection and maintaining product quality during logistics operations	Reducting risk of occupational accidents and injury in logistics Promotion of a transport system that exerts less of an impact on the environment Promotion of measures to prevent quality irregularities in logistics	Non-consolidated						
Auditing	RC St	Continuous improvement of RC activities Strengthening of corporate governance		RC activities prove RC activities audits throughout the Group Strengthening of corporate Strengthening of compliance Determination of priority areas for auditing: zero		Non-consolidated/ Group							
Quality Assurance		Promotion of quality assurance activities  Prevention of quality problems (including PL problems)  Enhancement of quality system by understanding and managing potential risks Promotion of TQM by improving awareness of quality assurance activities Response to new regulations in Japan and overseas			and managing potential risks Promotion of TQM by improving awareness of quality	Non-consolidated							
CSR Procurement		omotio ocurem			Encouraging CSR among suppliers to the Sumitomo Chemical Group	Promotion of preferential procurement of raw materials and packaging materials from suppliers that practice CSR	Non-consolidated/ Group						

● : Target Achieved or Satisfactory Progress ■ : To Be Achieved

Target	Performance in Fiscal 2007	Achievement Status
Meet the environmental protection and management targets for the Group Study the possibility of introducing environmental efficiency indicators within the Group	Conducted follow-ups to ensure targets will be achieved Evaluated the environmental impact assessment according to the JEPIX and LCA methods.	
Reduce the CO <sub>2</sub> emissions from fossil fuels for captive consumption by 15% relative to fiscal 1990 levels by fiscal 2010	Reduced the CO <sub>2</sub> emission rate by 5.3% relative to the previous fiscal year Reduced the CO <sub>2</sub> emission rate by 22.5% relative to fiscal 1990	•
Reduce the CO <sub>2</sub> emissions by 6 % relative to fiscal 2002 levels by fiscal 2010	Reduced the CO <sub>2</sub> emission rate by 2.9% relative to fiscal 2002	
Eliminate the use of refrigeration units that use specified CFCs as coolants by fiscal 2025	Promoted systematic replacement of refrigeration units No coolant leakages occurred (Sumitomo Chemical)	
Reduce unit energy consumption by 20% relative to fiscal 1990 levels by fiscal 2010	Reduced unit energy consumption by 0.1% relative to the previous fiscal year Reduced unit energy consumption by 19.9% relative to fiscal 1990	
Reduce unit energy consumption by 9.5% relative to fiscal 2002 levels by fiscal 2010	Reduced unit energy consumption by 5.5% relative to fiscal 2002	
Reduce landfill disposal volume by 90% relative to fiscal 1990 levels by fiscal 2010 Cease the disposal of red bauxite by sea dumping by fiscal 2015	Landfill: Landfill disposal volume reduced by 32.4% relative to the previous fiscal year (79.3% reduction from fiscal 1990) Sea dumping: Continued to study ways to promote sustainable development of the alumina products business and cease landfill disposal	•
Reduce landfill disposal volume by 48.9% relative to fiscal 2002 levels by fiscal 2010	Reduced landfill disposal volume by 33.9% relative to fiscal 2002	
Reduce unit water usage by 25% relative to fiscal 1990 levels by fiscal 2010	Improved unit water usage by 36.0% relative to fiscal 1990	
Reduce emissions (into the air and water) of substances subject to the PRTR Act by 50% relative to fiscal 2002 levels by fiscal 2010	Reduced total emissions by 47.7% relative to fiscal 2002	•
Reduce emissions (into the air and water) of substances subject to the PRTR Act by 60% relative to fiscal 2002 levels by fiscal 2010	Reduced total emissions by 35.7% relative to fiscal 2002	•
Reduce VOC emissions by 30% relative to fiscal 2000 levels by fiscal 2010	VOC emissions increased by 7.4% relative to fiscal 2000	
Keep hazardous materials strictly within Company premises. (Inspections and improvements needed for this purpose are to be conducted. Company premises are to be under continuous monitoring/supervision.)	Soil contamination surveys, evaluations and required remediation currently near completion Monitoring of groundwater near boundaries has confirmed levels of hazardous materials are below those stipulated by environmental standards. Continued monitoring of groundwater (Sumitomo Chemical)	•
Promote appropriate storage and recovery of PCB waste and complete PCB waste treatment by March 2014	Continued Company implementation of strict recovery and appropriate storage of PCB waste (treatment completed at some Works) (Sumitomo Chemical)	
Achieve complete elimination of accidents and major problems	Achieved target of zero accidents and major problems	•
Frequency rate of lost-workday injuries: ≤0.1; Severity rate of lost-workday injuries: ≤0.01 Frequency rate of lost-workday injuries = (number of lost-workday injuries/man hours) × 1,000,000 Severity rate of lost-workday injuries = (number of lost-workdays/man-hours) × 1,000	There were seven accidents resulting in lost workdays at Sumitomo Chemical and six in total at its contractors/affiliate companies, and thus the targets were not achieved. Sumitomo Chemical: Frequency rate of lost-workday injuries: 0.57; severity rate of lost-workday injuries: 0.019 Contractors/affiliate companies: Frequency rate of lost-workday injuries: 0.42; severity rate of lost-workday injuries: 0.015	-
Eliminate major accidents	Achieved target of zero major accidents Conducted process risk assessment and implemented safety measures Systematically implemented a long-term earthquake retrofitting plan	•
Conduct various studies and risk assessments and enhance safety information related to RC of chemical products	Conducted health and environmental risk assessments of gases before treatment and after emission into the atmosphere, environmental risk assessments for effluent and discharged water occupational safety risk assessments of chemical substances handled by the Company and consumer safety risk assessments of newly developed chemicals, and worked to improve the risk assessment levels	•
Promote advanced measures for management of chemical substances	Promoted voluntary programs to compile a database of existing findings and information, collect safety information and appropriately update it utilize the information effectively, and develop a next-generation comprehensive chemical product management system	•
Achieve zero accidents resulting in lost workdays at partner logistics companies Reduce annual unit energy consumption by 1% Achieve the management target for logistics quality irregularities (reduce major accidents to eight or fewer)	Two accidents resulting in lost workdays occurred at partner logistics companies Reduced annual unit energy consumption by 2.5% relative to the previous fiscal year Reduced the number of logistics quality irregularities below the target level (five serious accidents)	•
Reinforce RC audit system Reinforce RC audits at Sumitomo Chemical and its Group companies	Increased the number of RC auditors and strengthened audit functions Increased the frequency of RC audits at Group companies in Japan and overseas and increased the number of items to be audited Strengthened enhanced compliance audits to check compliance with relevant laws and regulations	•
Continue implementation of "Basic Measures to Prevent Major Product Quality Problems"	Re-formulated "Policy to Prevent Major Product Quality Problems" to be more useful as well as helpful in raising awareness of quality assurance by incorporating case studies (both failures and successes) from inside and outside the Company Implemented measures to improve product quality awareness [(1) solicited quality assurance slogans and displayed them at all Works, Laboratories and offices throughout the Company, and (2) continued to award "product quality prizes"]	•
Ensure all partners are informed of Sumitomo Chemical's basic concepts of CSR procurement Introduce concrete programs to realize CSR procurement	(1) Held CSR procurement seminars for suppliers and conducted surveys of current progress in implementation of CSR procurement (2) Held a meeting for Group companies to exchange information about CSR procurement	•

### **Group Company Initiatives**

The Sumitomo Chemical Group is making concerted efforts to further enhance and promote RC activities globally.

### Nihon Medi-Physics Co., Ltd.

Implementing Strict Controls as a Manufacturer of Radiopharmaceuticals



**Jun Takahashi**Director, Production Center
Nihon Medi-Physics Co., Ltd.

Nihon Medi-Physics is engaged not only in the research, development, manufacture and marketing of radio-pharmaceuticals<sup>1</sup>, but also in the import and marketing of therapeutic radiopharmaceuticals, radiological medical devices and related products. We manufacture products at 11 plants in Japan, producing very small batches of a large variety of pharmaceutical products containing a small amount of radioactive isotope as a tracer.

In the manufacturing department, staff respect the spirit of RC, strictly follow regulations and keep in mind the following in the course of their work:

- 1. Chemical substances and radioactive isotopes are strictly controlled throughout all processes from manufacturing to storage.
- 2. Our Chiba Facility is designated as a Type 1 Designated Energy Management Factory<sup>2</sup> and our Hyogo Facility as a Type 2 Designated Energy Management Factory, and we have been directing our efforts toward reducing energy consumption in these Facilities.
- 3. Employees voluntarily maintain strict control of radiation according to company-specific standards that are more rigorous than the legally specified standards.
- 4. The Hyogo and Chiba Facilities acquired ISO14001 environmental certification (environmental management system) in 2001. Under the ISO14001 standards, these Facilities determine

targets and engage in various activities every year while also playing an active role in environmental protection activities.

Thus Nihon Medi-Physics, as a manufacturer of radiopharmaceuticals, clearly recognizes the effect of its business activities on the environment and works continuously to reduce its environmental impact.



Chiba Facility, Nihon Medi-Physics Co., Ltd.

### **Sumitomo Dow Limited**

Upholding Highest Ethical Standards and Promoting Safety, Health and Preservation of the Environment



Hiroyuki Suzuki Sumitomo Dow Limited

Sumitomo Dow Limited is engaged in manufacture and marketing of polycarbonate resin, a plastic characterized by excellent impact resistance, transparency and flame resistance. Under our management policy, "At Sumitomo Dow, safety and health of people, and protecting the environment are fundamentals of our business," we actively promote RC activities.

We have promoted environmental conservation activities since December 2002, when the Ehime Plant, one of our manufacturing centers, obtained ISO14001 certification. We have also developed environmental management programs, which are being implement-

ed effectively throughout the company. In fiscal 2008, the plant will undergo a second review for certification renewal

No accidents resulting in lost workdays have occurred at Sumitomo Dow since the Ehime Plant began operations in 1995. Every department works to eliminate even the remote possibility of an accident by conducting risk assessments while also promoting occupational safety and health activities.

As part of our safety assurance and disaster prevention program, reporting/communication activities and evacuation drills as well as training in the use of the self-contained breathing apparatus (Life Gem) are held on a regular basis. In fiscal 2007, in cooperation with the city fire department and the joint disaster prevention team consisting of several neighboring companies, we simulated a plant fire caused by an earthquake and performed an emergency drill at our petroleum complex.

All employees also play an active role in creating a comfortable working environment and attempt to improve the environment through a small group activity known as the "Mighty-PC Activity." We make continuous efforts to complete Sumitomo Dow's mission, "Upholding the highest ethical standards and promoting safety, health and preservation of the environment, contribute to our customers, employees, shareholders and society by offering outstanding products and the most suitable services for our customers' needs."



Ehime Plant, Sumitomo Dow Limited

### NOTE

1. Radiopharmaceutical: Pharmaceutical agent containing a tiny amount of radioisotope as a tracer, which accumulates in various organs and tissues when injected into a patient's body. A special diagnostic imaging device is then used to diagnose malignant tumors or other diseases by taking an image of the agent accumulating in the targeted organ or lesion from outside the body.

2. Designated Energy Management Factories: According to the Law Concerning the Rationalization of Energy Use, factories and other business sites whose annual energy consumption exceeds specified levels are regulated as "Designated Energy Management Factories" and required to take various energy conservation measures. Depending on the amount of energy these factories use, they are classified as either Type 1 or Type 2 Designated Energy Management Factories with different requirements for each class.

### **Bara Chemical**

### Achieving Significant Reductions in Energy Costs and Industrial Water Usage



Shinji Nakai Manager, Plant (Thailand) Planning & Development Bara Chemical Co., Ltd.

Bara Chemical Co., Ltd. was established in 1973 by Bara Windsor & Co., Ltd., (then the sole agent for Sumitomo Chemical's products), Sumitomo Chemical Co., Ltd., and Sumitomo Corporation as a Thailandbased joint company engaged in the manufacture and marketing of textile finishing resins. As the Asian base for the Sumitomo Chemical Group in the field of fine chemicals, Bara Chemical currently manufactures and markets a large variety of fine chemical products such as adhesives for tires, super engineering plastics for electronics, and additives for resins.

At Bara Chemical, three teams, the "safety team," the "environment team," and the "quality team," promote RC activities. Each team establishes its own specific goals and develops its own RC activities.

In fiscal 2007, we achieved a significant reduction in energy costs. We purchased surplus steam at low cost from manufacturers operating in the same industrial estate, which helped reduce the operating rates of our boilers. Changing our refrigeration units also contributed to lowering energy costs greatly, while analyzing industrial water usage enabled us to cut wastefulness. We also managed to control the unpleasant odor emitted in the manufacturing process and succeeded in eliminating complaints about the environment.

Bara Chemical has been subject to Sumitomo Chemical's RC audits since fiscal 2005, and has participated in the RC Global Meeting consisting of Sumitomo Chemical and its Group companies since it began in fiscal 2007. Thus, we are playing an active role in RC activities.



Bara Chemical's plant in the Bangpoo Industrial Estate, Samut Prakan, Thailand

### **SC Enviro Agro India**

### Learning Japanese Methodology and Promoting Detailed RC Activities



Prakash Ramanlal Desai Tarapur Works Manager SC Enviro Agro India Private Ltd.

SC Enviro Angro India Private Ltd. was established in India in 2000 as an overseas manufacturing center for household insecticides for the Sumitomo Chemical Group. At its highly advanced factory in Tarapur, about 100 km north of Mumbai, a major city on the west coast of India, about 350 tons of insecticides are currently manufactured annually.

Indian workers are eager to learn the Japanese concepts that guide safety, health and the environment, and have been sent to Japan for training in cooperation with Sumitomo Chemical. In addition, SC Enviro Agro India has taken all the necessary measures stipulated under the Charter on Corporate Responsibility for Environmental Protection established by the Indian Ministry of Environment & Forests.

SC Enviro Agro India is working to control and minimize the impact of its

products and business activities on the environment and is also making active efforts to identify, assess and control risks that might compromise people's safety and health. We have acquired ISO9001 (quality management system) certification, ISO14001 certification and OHSAS18001 (an occupational health and safety management system) certification. We have also determined target values and formulated an action plan to ensure that these targets are achieved. For example, we aim to reduce the volume of toxic waste generated in the manufacturing process and energy consumption by 5%. In the waste liquid treatment plant, the quality of waste liquid sent to the shared treatment plant is also strictly controlled.

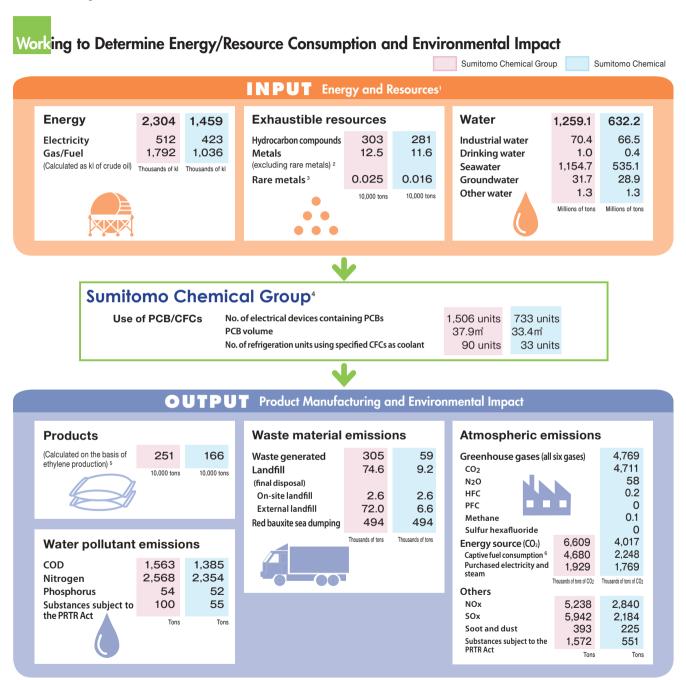
In order to cope with emergencies, we have developed a risk management plan and installed a facility that can effectively respond to any unexpected situation at the factory, and employees participate in regular emergency drills. In addition, inspections of the factory are conducted every month. These measures serve to prevent accidents and improve employee awareness. Furthermore, we promote cooperation with the Tarapur Industrial Manufacturers' Association (TIMA), and regularly participate in various programs for raising safety awareness. Related activities include a fire drill organized by the local fire brigade and factory safety assessments.



Safety slogan posted at the entrance of SC Enviro Agro India's factory

# **Environmental Performance of the Sumitomo Chemical Group** (Environmental Impact and Environmental Accounting)

Among its RC activities, Sumitomo Chemical places great importance on reducing its environmental impact, and collects basic impact data on a Group basis. The Company has also introduced environmental accounting to assist with the management of its environmental protection activities.



- I. See p16 of the "CSR Report 2008 Data Book" for performance data for major overseas Group companies related to energy consumption, CO2 emissions, water usage and landfill disposal volume.
- 2. Metals: Calculations include the following 12 metals: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium and lithium.
- 3. Rare metals: Calculations include the following seven rare metals that are stockpiled by the Japanese government because the supply system is extremely vulnerable: nickel, chromium, tungsten, cobalt, molybdenum, manganese and vanadium.
- 4. Group companies consist of the following 16 domestic Group companies: Dainippon Sumitomo Pharma Co., Ltd.; Koei Chemical Co., Ltd.; Taoka Chemical Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.; Sumika Color Co., Ltd.; Nihon Medi-Physics Co., Ltd.; Nippon A&L Inc.; Thermo Co., Ltd.; SanTerra Co., Ltd.; Sumika Kakoushi Co., Ltd.; Asahi Chemical Co., Ltd.; Shinto Paint Co., Ltd.; Sumitomo Dow Ltd.; Sumika Bayer Urethane Co., Ltd.; Nihon Oxirane Co., Ltd.; and Sumitomo Chemical Takeda Agro Co., Ltd.; Sumika Co., Ltd.; Sumika
- 5. Certain assumptions were made in calculations due to the difficulty of obtaining weight-based figures for some products.
- 6. CO2 emissions originating from energy (electricity and steam) sold outside the Sumitomo Chemical Group are not included. However, emissions from Sumitomo Joint Electric Power Co., Ltd. are included, as sales of energy form its primary business.

### Evaluating Environmental Protection Costs and Economic Effects through Environmental Accounting

Sumitomo Chemical continuously gathers and evaluates data on environment-related expenses, investments and economic results in line with the Company's environmental accounting system introduced in fiscal 2000.

In fiscal 2007, the Company introduced material flow cost accounting\*, a type of environmental accounting, on a trial basis and is now in the process of evaluating the results.

# Items Pertaining to Environmental Accounting

- (1) Scope: Sumitomo Chemical and 17 domestic and overseas Group companies!
- (2) Period: Fiscal 2007 (April 1, 2007 to March 31, 2008)
- (3) Classification: Based on Ministry of the Environment guidelines
- (4) Independent review: Conducted by KPMG AZSA Sustainability Co., Ltd.
- (5) Consolidated totals: 17 principal consolidated affiliates (12 domestic, 5

overseas). In fiscal 2006, totals were calculated for 16 consolidated affiliates (12 domestic, 4 overseas)

I. Seventeen domestic and overseas Group companies: Dainippon Sumitomo Pharma Co., Ltd.; Koei Chemical Co., Ltd.; Taoka Chemical Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.; Sumika Color Co., Ltd.; Nihon Medi-Physics Co., Ltd.; Nippon A&L Inc.; Thermo Co., Ltd.; SanTerra Co., Ltd.; Sumika Kakoushi Co., Ltd.; Nihon Oxirane Co., Ltd.; Sumitomo Chemical Takeda Agro Co., Ltd.; Dongwoo Fine-Chem Co., Ltd.; Sumitomo Chemical Singapore Pte. Ltd.; The Polyolefin Company (Singapore) Pte. Ltd.; Sumika Technology Co., Ltd.; and Sumika Electronic Materials (Wuxi) Co., Ltd.; and Sumika Electronic Materials (Wuxi) Co., Ltd.

### **Environmental Protection Costs**

(Unit: 100 million yen)

				Fiscal 2006				Fiscal 2007			
	Classification	Main Implementation Details	Sumitomo Chemical Only		Consolidated		Sumitomo Chemical Only		Consolidated		
			Investment	Expenses	Investment	Expenses	Investment	Expenses	Investment	Expenses	
-	Businessplace Costs			147	23	213	11	153	50	227	
Bre	Pollution Prevention Costs	Prevention of air pollution, water pollution, soil contamination, noise pollution, odors, ground subsidence, etc.	(7)	(105)	(9)	(144)	(9)	(113)	(48)	(158)	
Breakdown	Global Environmental Protection Costs	Prevention of global warming, ozone layer depletion, etc.	(O)	(0)	(2)	(2)	(0)	(0)	(0)	(3)	
nwc	Resource Recycling Costs	Resource and energy conservation, water conservation and rainwater usage, waste reduction/disposal treatment, recycling, etc.	(11)	(42)	(12)	(67)	(2)	(40)	(2)	(66)	
U	pstream/Downstream Costs	Green purchasing, recycling, recovery, remanufacturing and appropriate treatment of products, recycling costs associated with containers and packaging, environmentally friendly products and services, etc.	0	0	0	2	0	0	0	2	
Α	dministrative Costs	Costs associated with environmental education, environmental management systems, the monitoring and measuring of the environmental impact of business activities and products, environmental organization operation, etc.	0	7	0	13	0	7	0	13	
R	&D Costs	Products developed with regard to environmental safety, research into energy-saving processes, etc.	4	33	4	35	1	30	1	31	
S	ocial Activity Costs	Protection of the natural environment and enhancement of its scenic beauty and greenery, support for community initiatives aimed at environmental protection, support for environmental preservation groups, environment-related paid contributions and surcharges, etc.	0	6	0	9	0	5	0	8	
Er	vironmental Remediation Costs	Environmental rehabilitation of contaminated environments and other environmental damage, reserve funds to cover environmental rehabilitation, etc.	0	1	0	1	0	1	0	1	
Т	otal		22	194	27	273	12	196	51	282	

### **Economic Effects** <sup>2</sup>

(Unit: 100 million yen)

Results	Fiscal	2006	Fiscal 2007			
Results	Sumitomo Chemical Only			Consolidated		
Expense reductions due to energy conservation	5	7	10	12		
Expense reductions due to resource conservation	10	11	11	13		
Expense reductions due to recycling activities	25	29	29	32		
Total	40	47	50	57		

Economic effects are limited to those achieved through energy conservation, resource conservation, and recycling activities, and are calculated on the basis of firm evidence.

## ТОРІС

# Introduction of Material Flow Cost Accounting on a Trial Basis

Since 2007, we began to use material flow cost accounting, which is becoming increasingly recognized as a key environmental management accounting method, and have been using this method for specific analyses and evaluations of the actual plants from the viewpoints of environmental impact and cost reduction, and are conducting various assessments of its practical utility.

Once its usefulness is confirmed, we will standardize or customize the assessment method so that it can serve for the further enhancement of our sustainable environmental management.

### Yoshihiko Oueh

Responsible Care Department, Oita Works

### NOTE

<sup>\*</sup> Material flow cost accounting: In this accounting system, materials and labor costs as well as other expenses associated with the generation of waste, which is defined as a resource lost in the manufacturing process, are treated as product costs. These costs are measured in terms of physical and monetary units.

### Environmental Performance at Works (Environmental Impact and Environmental Accounting)

All Sumitomo Chemical Works determine specific itemized activities to actualize their environmental policies and assess and reduce the environmental impact of their operations. The Works identify priority challenges based on company-wide reduction objectives for environmental performance. They then formulate specific improvement goals and implement measures systematically.

Initiatives that have achieved outstanding results are shared at regular corporate-level meetings attended by personnel in charge of environmental protection from the Head Office, Works and Research Laboratories. The information is shared to improve environmental performance across the Company.



Corporate Environmental Protection Team Leader Meeting (April 2008, Chiba Works)

### **Ehime Works**

#### Main products:

Inorganic and organic chemical products, feed additives, synthetic fiber materials, fertilizer, IT-related materials, aluminum hydroxide and alumina products, super engineering plastics, pharmaceutical and agrochemical intermediates, etc.

### No. of employees1: 1,609 Message from the General Manager:

Because the Ehime Works is a large-scale plant, the absolute quantity of our environ-

mental impact is correspondingly large. We are committed to reducing environmental impact as a top priority for the plant, determining numerical goals for reductions, and making concerted efforts to promote various initiatives that enable reductions from every perspective



Mino Uemura General Manager, Ehime Works

#### Fiscal 2007 Environmental Performance and Other Key Results

#### Energy<sup>2</sup> 621,000 kl Products<sup>3</sup> Exhaustible resources 630,000 tons

95 million tons

730,000 tons CO2<sup>4</sup> (atmosphere) 2.52 million tons NOx (atmosphere) 666 tons SOx (atmosphere) 1.436 tons COD (water) 891 tons 6,893 tons Landfill volume

#### **Environmental accounting**

450 million ven Investment 8.22 billion yen 2.51 billion yen **Economic effect** 

### **Chiba Works**

Propylene oxide, styrene monomer and other organic chemical products; polyethylene, polypropylene and other synthetic resins; synthetic rubber

No. of employees1: 1,277

Message from the General Manager:
The Chiba Works is the "mother" factory that

promotes the global development of the Petrochemicals & Plastics Sector. Currently, we are devoting our utmost efforts to reducing our environmental impact at the mother factory and utilizing related technologies to expand our business overseas



Tsutomu Konaka General Manager,

### Fiscal 2007 Environmental Performance and Other Key Results

Input						
Energy <sup>2</sup>	747,000 k					
Exhaustible resources	2.22 million tons					
Water	512 million tons					

Products 3 830,000 tons CO2<sup>4</sup> (atmosphere) 1.91 million tons NOx (atmosphere) 1,888 tons SOx (atmosphere) 538 tons COD (water) 130 tons Landfill volume 661 tons

### **Environmental accounting**

470 million yen Investment 4.11 billion yen Fconomic effect 0.9 billion ven

### Osaka Works

Water

Main products: Pharmaceutical bulk and intermediates, Sumiresist and other photoresists used in the manufacture of semiconductors and display materials. Sumilizer and other polymer additives. Sumifix and other dyestuffs, Sumilex and other fungicides for fruit trees and vegetables

No. of employees1: 874
Message from the General Manager:

At the Osaka Works, "continuous improvement," "daily renewal," and "limitless creativity" are our key phrases. and we pay particular attention to safe and stable daily operations. Because research laboratories are located adjacent to the Works, we make the most of their proximity to provide one another with feedback about safety and product quality of the plant and actively promote the introduction of new technologies and products.



Kazumune Yamamoto General Manager,

### Fiscal 2007 Environmental Performance and Other Key Results

Inpu	ut	Output				
Energy <sup>2</sup>	21,000 kl	Products <sup>3</sup>	30,000 tons			
Exhaustible resources	20,000 tons	CO2 <sup>4</sup> (atmosphere)	42,000 tons			
Water 1 million tons		NOx (atmosphere)	26 tons			
		SOx (atmosphere)	<1 ton			
		COD (water)	150 tons			
		Landfill volume	156 tons			

### **Environmental accounting**

70 million yen Investment Expenses 0.72 billion yen Fconomic effect 0.21 billion yen

- I. No. of employees is as of March 31, 2008
- 2. Energy values (1,000 kl) are crude oil equivalent.
- 3. Products values (10,000 tons) are ethylene equivalent.
- 4. CO2 values (10,000 tons) include emissions originating from energy use, environmental treatment, and processes.

#### **Oita Works**

#### Main products:

Main products: Sumithion, Danitol, Chlothmain products: Sumittion, Danitol, Chloth-ianidin (insecticides); Sumisoya (herbicide); Ferimzone (fungicide); cresol-related prod-ucts; Sumilizer GP (polymer additive) No. of employees1: 355

Message from the General Manager:
The Oita Works is located amid lush greenery with a leafy road leading up to the red brick gate. We work hard every day to ensure that safety, the environment and quality are the watchword in all operations. We aim to be a plant where all employees observe rules and offer one another candid advice. We want to deepen our interaction with local residents and contribute further to the local community.



Hideki Suematsu General Manager, Oita Works

#### Fiscal 2007 Environmental Performance and Other Key Results

Input					
Energy <sup>2</sup>	41,000 kl				
Exhaustible resources	50,000 tons				
Water	19 million tons				

40,000 tons CO2<sup>4</sup> (atmosphere) 160,000 tons NOx (atmosphere) 141 tons 192 tons SOx (atmosphere) 160 tons COD (water) Landfill volume 1,065 tons

#### **Environmental accounting**

60 million yen Investment Expenses 1.95 billion yen 0.48 billion yen **Economic effect** 

#### Misawa Works

#### Main products:

Main products: Pynamin, Vaporthrin, Gokilaht (household and public health insecticides); Sumi-Alpha, Admiral (agricultural insecticides)

No. of employees1: 125

Message from the General Manager: The year 2008 is the 30th anniversary of the start of operations at the Misawa Works. We are taking this opportunity to reaffirm the importance of safety, the environment and product quality, and would like to grow continually, not only as a safe and reliable plant but also as a plant that is closely involved in the life of the community.



Osamu Maruyama General Manager, Misawa Works

#### Fiscal 2007 Environmental Performance and Other Key Results

Input			
Energy <sup>2</sup>	14,000 kl		
Exhaustible resources	<10,000 tons		
Water	1 million tons		

Products<sup>3</sup> 10,000 tons CO2<sup>4</sup> (atmosphere) 38,000 tons NOx (atmosphere) 46 tons SOx (atmosphere) 9 tons COD (water) 15 tons Landfill volume 4 tons

#### **Environmental accounting**

10 million yen Investment Expenses 0.44 billion yen 40 million ven **Economic effect** 

### Gifu Plant

#### Main products:

Pharmaceutical bulk and intermediates No. of employees1: 164

Message from the General Manager:
We work hard every day so that this plant will be known as a "small but brilliant" plant. We keep the importance of safe and stable operations foremost in our minds and make efforts to provide high-quality pharmaceutical bulk for our customers. (The Gifu Plant is located in a town called Anpachi-cho, which is evolving under the motto of "creating a "small but brilliant town."



Shinji Kawamura General Manager,

#### Fiscal 2007 Environmental Performance and Other Key Results

Input				
Energy <sup>2</sup>	4,000 kl			
Exhaustible resources	10,000 tons			
Water	1 million tons			

Products <sup>3</sup> 1,000 tons CO2<sup>4</sup> (atmosphere) 14,000 tons NOx (atmosphere) 18 tons SOx (atmosphere) 5 tons COD (water) 8 tons Landfill volume 297 tons

#### **Environmental accounting**

10 million yen Investment **Expenses** 0.39 billion yen Fconomic effect 0.16 billion ven

### Okayama Plant

#### Main products:

Pharmaceutical bulk and intermediates No. of employees<sup>1</sup>: 160

Message from the General Manager:
As a member of chemical industry, we work to effectively achieve energy and resource savings by rationalizing manufacturing processes. These efforts enable us to improve our plant so that workers will be proud to tell their families and the local residents about the plant's environmental performance and inspire the greater trust of everybody in the



Tetsuhiko Watanabe General Manager, Okayama Plant

### Fiscal 2007 Environmental Performance and Other Key Results

Input				
Energy <sup>2</sup>	11,000 kl			
Exhaustible resources	10,000 tons			
Water	3 million tons			

Products<sup>3</sup> 20,000 tons CO2<sup>4</sup> (atmosphere) 38,000 tons NOx (atmosphere) 55 tons SOx (atmosphere) 4 tons COD (water) 31 tons Landfill volume 171 tons

## **Environmental accounting**

20 million yen Investment 0.44 billion yen Expenses Fconomic effect 0.65 billion yen

## **Introduction of Environmental Efficiency Indicators**

In order to reduce the environmental impact of our activities more effectively, the Sumitomo Chemical Group has been studying methodologies for assessing environmental efficiency indicators and aggregating the environmental impact of its activities, taking into account relationships between environmental impact and the costs of production efficiency and environmental activities.

## Continuously Studying Practical Application of Environmental Efficiency Indicators Using JEPIX<sup>1</sup>

In fiscal 2007, Sumitomo Chemical again participated in the fourth JEPIX Benchmark Project, a project organized by Professor Nobuyuki Miyazaki of International Christian University, in order to further deepen our understanding of JEPIX.

Meanwhile, the Sumitomo Chemical Group has been continuously studying the effectiveness of environmental efficiency indicators<sup>2</sup> calculated on the basis of the JEPIX method to ascertain whether or not they should be used as indicators in our corporate strategy.

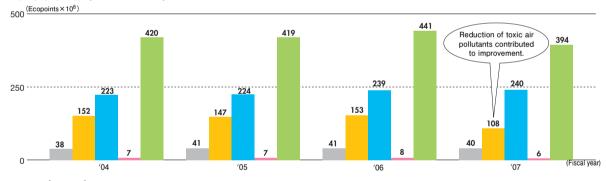
Again in fiscal 2007, Sumitomo Chemical calculated the environmental efficiency of each of its major Group companies in Japan (11 companies\*), and carried out various assessments and analyses in addition to the Company's studies about its own environmental efficiency In the future, the Company will continue to verify the effectiveness of the method by com-

piling various data for more detailed studies. (For details on annual trends of "Ecopoints and environmental efficiency" for Sumitomo Chemical and its Group companies, please refer to p17 of the CSR Report 2008 Data Book.)

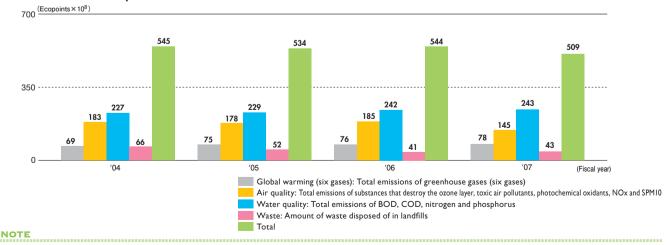
\*Asahi Chemical Co., Ltd.; Koei Chemical Co., Ltd.; Thermo Co., Ltd.; SanTerra Co., Ltd.; Shinto Paint Co., Ltd.; Sumika Color Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.; Sumitomo Dow Ltd.; Taoka Chemical Co., Ltd.; Nihon Medi-Physics Co., Ltd.; and Sumika Kakoushi Co., Ltd.

#### Breakdown and Trends in Aggregate Values for Environmental Impact (Environmental Impact Points or Ecopoints)

#### Sumitomo Chemical (non-consolidated)



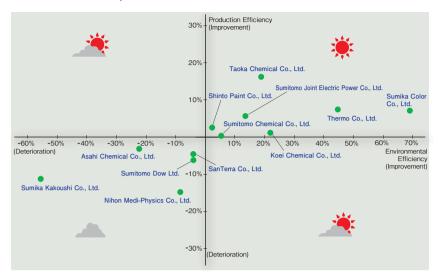
#### Sumitomo Chemical Group (Data from fiscal 2004 to 2006 was reviewed and modified)



1. JEPIX (Environmental Policy Priorities Index for Japan): This method, which employs a uniform single indicator (Environmental Impact Points, or ecopoints) to evaluate environmental effects, is derived from the Swiss LCIA Eco Scarcity methodology. The current method evaluates the discrepancy between targets (e.g. laws and environmental policies) and actual conditions based on material flow data.

2. Environmental Efficiency: Figures such as output, sales and power generation divided by the amount of environmental impact aggregated on the basis of the JEPIX method (using a common and discrete unit called the ecopoint)

#### Relationship between Environmental Efficiency and Production Efficiency (Sumitomo Chemical Group)



- \*This graph shows fiscal 2007 year-on-year percentage increases or decreases in efficiency indicators with 100 representing fiscal 2006 values.
- Environmental efficiency = Output (tons) or Sales (in units of 100 million yen)/Ecopoints
- · Production efficiency = Output (tons) or Sales (in units of 100 million yen)/Energy consumed (kl)



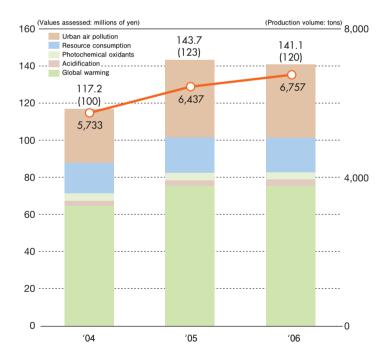
## LCA<sup>3</sup> Evaluations of Environmental Impact of Emissions from Plants (Trial Evaluation Using LIME4)

In addition to the environmental impact assessments carried out using the JEPIX method, Sumitomo Chemical conducts trial evaluations of the aggregated environmental impact of all its plants using the LCA method.

The Company also participated in the Product Green Performance Improvement Promotion program implemented by the Japan Environmental Management Association For Industry (JEMAI) under the auspices of the Ministry of Economy, Trade and Industry. With the full cooperation of JEMAI, the Company used LIME to evaluate the effects of environmental impact reductions. An example of the results obtained is illustrated by the trends in environmental impact aggregation assessments for the Misawa Works over the past three years (fiscal 2004-2006) shown on the right.

Sumitomo Chemical will continue to conduct a variety of assessments using this method and gather the data derived from LCA assessments of the environmental impact of its plants.

### Example of Aggregated Environmental Impact Using LIME (Misawa Works)



- \* Assessment ranged from collection of resources to manufacturing of products. 
  \* Figures in parentheses are index values (fiscal 2004 = 100).
- \* From 2005 to 2006, the values assessed in Japanese yen decreased in spite of an increase in production because of changes in product composition

3. Life cycle assessment (LCA): A method used to quantitatively estimate and assess both the environmental impact of products and the resources and energy used for them throughout their life cycles, from procurement of raw materials, to design, manufacture, use, recycling and final disposal as well as to evaluate the latent environmental impact of products

4. Life-cycle Impact assessment Method based on Endpoint modeling (LIME): Damage calculation-based environmental impact assessment developed jointly by the National Institute of Advanced Industrial Science and Technology and the national LCA project.

## **Environmental Protection Activities**

Sumitomo Chemical has been devoting its efforts to the protection of both the global environment and the living environment as well as the complete prevention of health-related hazards by working to further curtail its energy and resource consumption and reducing emissions to minimize its environmental impact.

## Taking a Multi-Faceted Approach to Energy Conservation and the Prevention of Global Warming

#### **Targets**

Reduce unit energy consumption by 20% relative to fiscal 1990 by fiscal 2010

Reduce unit CO<sub>2</sub> emissions from fossil fuel for captive consumption by 15% relative to fiscal 1990 by fiscal 2010

#### **Summary of Initiatives**

Sumitomo Chemical aims to achieve its targets for energy savings and CO<sub>2</sub> emissions through strategic implementation of the Proposed Medium-Term Initiatives for Reducing Energy Costs.

Sumitomo Chemical has made wide-ranging, multi-faceted efforts to save and use energy more efficiently. These have included improving methods of operating equipment, recovering exhaust energy, streamlining processes, improving the energy efficiency of facilities and equipment, and using our proprietary catalyst technology to significantly improve processes. The results yielded by these efforts have been commensurate, in terms of actual performance, with the targets we have set.

Meanwhile, the reduction of green-

#### Performance in Fiscal 2007

Achieved a 0.1% reduction relative to the previous fiscal year (19.9% reduction from fiscal 1990)

Achieved a 5.3% reduction relative to the previous fiscal year (22.5% reduction from fiscal 1990)

house gas emissions remains one of the most important shared challenges at the national level. In response to this issue, the Company has been working to further reduce emissions of CO<sub>2</sub> and other greenhouse gases, while placing an emphasis on energy efficiency and the development of innovative production processes.

In March 2005, Sumitomo Chemical developed a plan to acquire carbon credits worth approximately 400,000 tons of CO<sub>2</sub> by 2017 through investment in the BioCarbon Fund established by the World Bank. Also, the Company is conducting specific studies on implementation of Kyoto Mechanisms including CDM<sup>1</sup> and JI<sup>2</sup>.

## Assessments and Analyses of unit CO<sub>2</sub> Emissions by Product

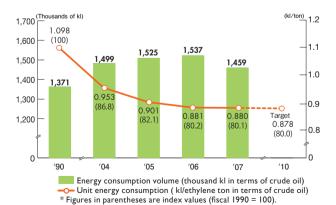
We are conducting various assess-

ments and analyses to achieve more efficient CO<sub>2</sub> emission reductions by totaling the volume of CO<sub>2</sub> emissions from each plant, or the volume of such emissions for each product or product group. (Please refer to p6 of the CSR Report 2008 Data Book.)

### Development and Operation of the Company-wide Greenhouse Gas Totaling System

Sumitomo Chemical has developed its own unique Company-wide Greenhouse Gas Totaling System and has made it available on the Company's intranet. The system began operation in April 2007. The completion of this system has contributed significantly to improving the speed and accuracy of data totaling. As a result, we have realized a considerable reduction in the volume of work required for the emission reporting under the Law Concerning the Promotion of the Measures to Cope with Global Warming and other legislation.

#### **Energy Consumption Volume and Unit Energy Consumption**



#### NOTE

1. Glean Development Mechanism (CDM): A system that allows a developed country to obtain credit for reductions achieved in another country and apply that credit to the fulfillment of its own greenhouse gas reduction and control targets. This system is approved as a method of achieving greenhouse gas reduction targets, and is also known as the Green Development Mechanism

#### CO2 Emissions from Fossil Fuel for Captive Consumption and Corresponding Unit Emissions



CO2 emissions from fossil fuel for captive consumption (10,000 tons of CO2)

Unit CO2 emissions (tons of CO2/ ton of ethylene)
\* Figures in parentheses are index values (fiscal 1990 = 100)

\* Improvement in unit emissions in fiscal 2007 resulted from a considerable increase in consumption of purchased electricity and steam at some of the Works.

2. Joint Implementation (JI): A system that allows certain developed countries to invest jointly in greenhouse gas reduction and control projects and apply the reductions achieved in the joint project toward the fulfillment of their own reduction targets.

#### Volume of CO2 Emissions

(10.000 tons of CO2)

EV	Total	Energy Origin		<b>Environmental Treatment</b>		Dynama
FY	Emissions	Fossil Fuel Consumption	Purchased Electricity/ Steam	Incineration	Effluent	Process
1990	368.7	218.4	103.8	28.2	2.2	16.1
2004	433.2	250.8	125.7	30.7	2.6	23.4
2005	482.8	253.2	161.9	31.1	2.8	33.8
2006	479.4	249.6	159.9	29.9	2.9	37.1
2007	471.1	224.8	176.9	28.2	2.7	38.5

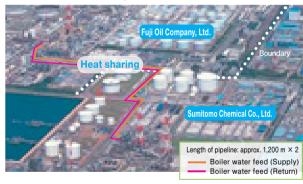
- \* Process: Refers to manufacturing process emissions from chemical reactions (sources other than fuel consumption).
- \* Figures do not include fuel consumed for electricity or steam sold outside the Company.
- \* Figures for fiscal 1990 and fiscal 2004 through 2006 have been revised to improve the accuracy of data

## TOPIC

## **Energy Saving Activities that Extend Beyond a Single Company**

Since fiscal 2005, the Chiba Works has been engaded in a thermal cooperation project with neighboring Fuji Oil Company, Ltd. as an energy saving activity that extends beyond a single company. Aiming for local optimization, the surplus low-temperature exhaust heat generated at Fuji Oil is recovered and used for preheating our boiler feed water. Fuel is burned in the boiler to create steam, which is then sent to turbines that generate electricity. This heat recovery system enables us to obtain necessary steam while reducing fuel consumption. Nevertheless, this system has the disadvantage of reducting power output. In order to compensate for this disadvantage, we have installed a feed-water heater and have achieved a reduction in fuel consumption while at the same time maintaining power output.

In the early stages, we expected to achieve energy savings of 4,900 kl (crude oil equivalent) annually, but the actual savings fell slightly short at 4,300 kl per year. Currently, however, improvements in operating parameters (modifications in methods of control and operation) have realized annual energy savings of 5,300 kl (an annual reduction equivalent to 14,000 tons in CO<sup>2</sup> emissions).



The amount of heat recovered fluctuates seasonally, with the amount of steam recovered increasing in winter and decreasing in summer. Therefore, we plan to renovate the system during our next regular maintenance shutdown (2010) in order to increase the volume of heat recovered in summer. We expect this remodeling project to realize an increase in energy savings of 700 kl per year, bringing our total annual energy savings to 6,000 kl.

Going forward, we will continue to improve the facilities at both the Chiba Works and Fuji Oil to go beyond the current limitations, work torward further increases in heat recovery, and make efforts to save energy and reduce CO<sub>2</sub> emissions in

collaboration with neighboring companies.

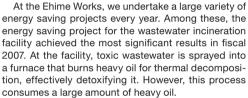
Mikio Murata
Power & Utilities Department,
Chiba Works



## OICE

## Reducing the amount of Heavy Oil used in our Wastewater Incineration Facility

Takao Mizuno Niihama No. 2 Manufacturing Department Ehime Works



After approaching the issue of energy savings at this facility from a number of different angles, we succeeded in reducing the amount of heavy oil used without compromising its efficiency in detoxifying the west-water.

For example, energy can be saved by reducing the amount of air used in combustion. Heavy oil combustion requires air, but an excessive amount results in a decrease in temperature, leading to an increase in heavy oil usage. We clearly recognized that an optimum amount of air could be found, but the problem was that adjusting the amount to an optimum level was difficult because of daily changes in the composition and amounts of wastewater incinerated. We finally succeeded in establishing a system for adjusting the amount of air to the optimum level by introducing predictive controls and arithmetic processing.

We have also made steady efforts to reduce wastewater and utilize waste oil generated in plants as an alternative to heavy oil. Through these efforts, we have succeeded in reducing our energy consumption by 2,600 kl (heavy oil equivalent) per year and CO2 emissions by 7,000 tons per year.



Wastewater incineration facility (Ehime Works)

## Systematic Efforts to Reduce the Release of PRTR<sup>1</sup> Substances and VOC<sup>2</sup>

#### Targe

# Reduce total releases of substances subject to the PRTR Act (into the air and water) by 50% relative to fiscal 2002 by fiscal 2010

Reduce releases of volatile organic compounds (VOCs) by 30% relative to fiscal 2000 by fiscal 2010

#### Performance in Fiscal 2007

Total releases of substances subject to the PRTR Act fell by 8.9% relative to the previous fiscal year (47.7% reduction from fiscal 2002)

Releases of VOCs increased by 19.6% relative to the previous fiscal year (7.4% increase from fiscal 2000)

## creases in production capacity. In fis-

cal 2008, however, enhanced measures to reduce their release are expected to result in a significant reduction.

### **Sumitomo Chemical PRTR Strategy**

- I. Risk management based on environmental risk
- 2. Release control based on release ranking assessments
- 3. Release control in cooperation with the industry and community
- 4. Release control utilizing the environmental impact aggregation method

## **Strategy-Based Initiatives**

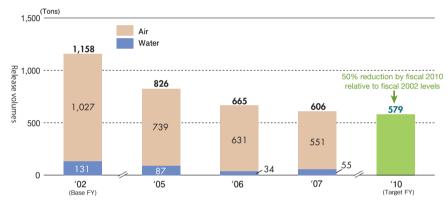
Sumitomo Chemical manages substances subject to the PRTR Act under a risk-based management system. Specifically, we aim to systematically reduce the release of such substances (including VOCs) based on the Sumitomo Chemical PRTR Strategy. In recognition of these initiatives, the Center for Environmental Information Science honored Sumitomo Chemical with its "PRTR Grand Prize 2006" in February 2007.

The Sumitomo Chemical PRTR Strategy is made up of four parts centering on risk management based on environmental risk. To supplement this, we have also introduced a system for release control, which consists of release ranking assessments, cooperation with the industry and community as well as utilization of the environmental impact aggregation method. The PRTR Strategy acts as a powerful driving force for achieving set targets.

Our chief PRTR target is to reduce the total volume released (into the air and water) by 50% from the base year of fiscal 2002 by fiscal 2010. We have put forth our best efforts to achieve this target, and these efforts are currently yielding satisfactory results. In the future, we will consider revising our targets upward based on trends related to comprehensive reviews carried out by the Government of substances subject to the PRTR Act.

Release of VOCs increased relative to the previous fiscal year owing to in-

### PRTR Strategy Target and Total Release Performance



## VOICE

# Introducing New Measures to Further Reduce the Release of Hexane

Naoki Hamada No. 5 Manufacturing Department, Chiba Works



At the Chiba Works, we make continuous efforts to reduce the release of chemical substances into the environment. At the synthetic rubber production facility, exhaust gas from the air dryer contains small amounts of the VOC hexane. We currently use an adsorbent to separate and recover the VOCs contained in the exhaust gas at the Chiba Works. However, we are planning to upgrade this in spring 2009 and introduce a regenerative thermal oxidation system capable of reducing VOCs at a higher rate through high-temperature incineration and decomposition.

When complete, this facility is expected to reduce releases of VOCs by nearly 80%. At the same time, this facility will also enable us to recover about 85% of the heat generated during incineration of VOCs, helping to improve energy conservation.

#### NOTE

- 1. Pollutant release and transfer register (PRTR): A system for recording emissions and movement of environmental pollutants. This system enables collection, totaling and reporting of data from each source and also allows measurement of the extent to which a toxic chemical substance is emitted into the environment or carried out in waste from a site.
- 2. Volatile organic compounds (VOCs): The general term for organic compounds that are volatile and enter the atmosphere in a gaseous state. VOCs include a large variety of substances such as toluene, xylene and benzene. VOCs are one of the leading causes of air pollution such as photochemical smog.

## Making Concerted Efforts to Reduce Air, Water and Sensory Pollution

Targets	Performance in Fiscal 2007
Continue to keep emissions of SOx, NOx, soot	Emissions were at or below voluntary control
and dust, COD, nitrogen, and phosphorus at or	standards
below voluntary control standardss	Reduced the water usage rate by 2.9% relative
Reduce the water usage rate by 25% relative to	to the previous fiscal year (36.0% reduction from
fiscal 1990 by fiscal 2010	fiscal 1990)

## Value Reported to the Regulatory Authorities for Smoke and Soot Generated in the Alumina Kiln, Ehime Works (Soot and Dust Concentration) Exceed Standard Levels

In April 2006, Sumitomo Chemical's Ehime Works submitted a soot and dust report to the Ehime prefectural government, and the data included one value that exceeded the standard level specified by the Air Pollution Control Law. It was found that the Works' alumina kiln was responsible for the excessive emissions. Taking this issue seriously, Sumitomo Chemical conducted a thorough investigation to determine the cause and prevent a recurrence. The Company also took necessary action to improve the facilities and operation system. Moreover, it also reviewed its online system for collecting environmental analysis data. Sumitomo Chemical will make even greater efforts to ensure that this does not happen again and offers its sincerest apologies to all those affected.

## Technical Development for Preventing Air and Water Pollution

Sumitomo Chemical works actively to preserve the purity of the atmosphere and water resources through the development of numerous technologies designed to prevent air and water pollution; to reduce the amount of SOx, NOx and soot and dust released into the atmosphere; and to reduce amounts of COD, nitrogen, and phosphorus released into waterways. The Company uses water efficiently and plays an active role in preserving the air and water environments.

### **Initiatives for Preventing Sensory Pollution**

Sensory pollution refers to unpleasant sensations such as offensive odors, noise, and vibrations as well as light pollution and landscape disturbances. To minimize such pollution, we not only comply with legal standards and limits agreed on with local governments, but also seek to make further improvements by soliciting the opinions of people living in the vicinity of our sites.



### Conclusion of New Environmental Conservation Agreement with Local Government

In 1998, the Gifu Plant concluded an Environmental Conservation Agreement with the town of Anpachi-cho. We recently revised the content of this agreement and, in order to become a more environment-conscious plant, concluded a new agreement that incorporates voluntary air and water quality control standards that are stricter than those legally required.

We also considered the importance of our relationship with the local community and added provisions to the effect that in the event of a serious accident, we will allow local residents to enter and inspect the plant and will provide them with related information, and that when we review the agreement, representatives of the local town council will participate in the discussion as observers.

In the process of revising the agreement, we exchanged views with representatives of the municipal government and members of the local town council and reaffirmed the increasing significance of corporate social responsibility and the increasingly important role we have come to play in the local community. We seek to enhance this relationship of trust with the local community even further and will actively engage in constructive activities to promote prosperous coexistence.

Tomiaki Yamamoto Environment & Technical Department, Gifu Plant



## Paying Careful Attention to Preventing Pollution in the Inland Sea

Toshihiro Ito
Environment & Technical
Department, Okayama
Plant

The Okayama Plant is bordered on the south by Japan's Inland Sea.

Tankers deliver Bunker A fuel oil and the raw material for 48% sodium hydroxide solution to this plant. In order to be prepared for any related emergency situation such as leakages, we have installed an OILFENCE (an oil-spill containment boom), deployed a boat to operate offshore and organized a marine area team as a part of our emergency task force.

When we take delivery of raw materials from a tanker, we monitor its operation both onshore and offshore. Once a year, we conduct an OILFENCE installation drill so that emergency situations can be detected at an early stage and we can respond immediately. These are some of the efforts we are making to prevent marine pollution. We also deploy our marine operations boat to monitor the state of the seawater in the vicinity of the plant to assess environmental impact before proceeding with planned facility expansions or new installations.

## Systematically Implementing Initiatives to Reduce the Volume of Waste Disposed of in Landfills

#### **Targets**

#### Performance in Fiscal 2007

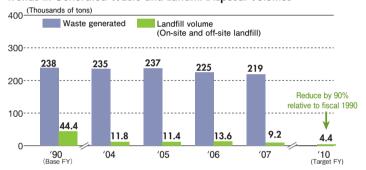
Reduce industrial waste landfill disposal volume by 90% relative to fiscal 1990 by fiscal 2010

Industrial waste landfill disposal volume decreased by 32.4% relative to the previous fiscal year (79.3% reduction from fiscal 1990)

Sumitomo Chemical is working toward a systematic reduction of the volume of waste disposed of in landfills by reducing sludge generated in the course of wastewater processing and implementing measures for recycling waste such as incinerator ash sludge, burnt residue and fine silica sand for use in cement production. At present, zero emissions\* targets have been achieved at four (Chiba, Osaka, Oita, and Misawa) of the five Works.

\* Zero emissions at Sumitomo Chemical: Disposal of less than 3% of generated waste in landfills

### Trends in Generated Waste and Landfill Disposal Volumes



## OICE

### Aiming to Reuse and Recycle 100% of Industrial Waste

Nobuyuki Uehara Environment & Safety De partment, Chiba Works

At the Chiba Works, we have made extensive efforts to promote recycling of industrial waste and reduce final landfill disposal volumes. Up till now, the majority of non-scattering asbestos and insulating materials ended up in landfills, but in fiscal 2007 we asked a contractor that owns a facility for high-temperature melting to recycle and transform waste into artificial sand and blocks and tiles for parking lots and sidewalks. This has brought us close to reusing 100% of our industrial waste. We also contracted with a specialist in industrial waste recycling to treat the soot and dust contained in the exhaust gas from our fluidized-bed incinerator. We succeeded in achieving a 73% recycling rate and transforming it into raw materials for cement. roadbed materials and soil conditioner. We will work toward the achievement of a 100% recycling rate beginning in fiscal 2008.

In order to properly monitor industrial waste treatment, we regularly visit our contractors and observe treatment processes firsthand.

## Continuing Studies for Ceasing the Sea Dumping of Red Bauxite

#### **Targets**

Cease sea dumping of red bauxite by fiscal 2015

Red bauxite is the residue of natural bauxite from which aluminum hydroxide, the raw material for alumina products, has been extracted. This substance is composed of insoluble mineral constituents and saltwater.

Sumitomo Chemical currently disposes of red bauxite through sea dumping. This is carried out in accordance with Japanese laws such as the Law Relating to the Prevention of Marine Pollution and Maritime Disasters and only after the safety of dumping has been confirmed by conducting analytical tests mandated by law. In fiscal 2006, the Company acquired the permit for the disposal of waste through sea dumping from the Minister of the Environment, which is mandatory under the Revised Marine Pollution Prevention Law.

In addition, Sumitomo Chemical has developed a policy to switch to the use of imported aluminum hydroxide as a raw material, which generates no red bauxite, and aims to cease all sea dumping of red bauxite while continuing to develop its alumina products business. We have already begun studies on changing our raw materials as soon as possible. The Company has also been seeking effective uses for red bauxite. In fiscal 2007, Sumitomo Chemical teamed up with a cement company and used approximately 2,400 tons of red bauxite as an ingredient in cement. For fiscal 2008, the Company plans to effectively use approximately 3,100 tons in this manner.

## Strengthening Risk Management of Soil and Groundwater Pollution

#### **Targets**

#### Keep hazardous materials strictly within Company premises Keep Company premises under surveillance by conducting related investigations and remediation and implementing continuous monitoring

### Performance in Fiscal 2007

Survey, evaluation and necessary remediation work for soil pollution of plants and properties are almost complete. Monitoring of groundwater near boundaries has confirmed that levels of hazardous materials are below those stipulated by environmental standards (continued monitoring of groundwater by Sumitomo Chemical).

Sumitomo Chemical encourages the entire Group to continuously ensure thorough compliance with voluntary management policies centered on confining hazardous materials strictly

to within the Company premises and ensuring the careful management of these materials on-site.

The Company also assesses pollution risks when selecting or relocating

business operations domestically or overseas by checking the land use history and conducting ground pollution surveys.

## Proper PCB Waste Recovery, Storage and Treatment

In accordance with the Law concerning Special Measures for Promotion of Proper Treatment of PCB Wastes, Sumitomo Chemical recovers PCB waste (capacitors, transformers, and other electric devices that contain PCB insulating oil). The Company then stores this industrial waste, which is subject to special control, in specified areas within the Company's waste storage facilities, thereby ensuring strict control of these materials.

Sumitomo Chemical plans to complete treatment of all its PCB waste by March 2014, ahead of the July 2016 deadline specified in the PCB Special Measures Law. The Company has completed early registration with Japan Environmental Safety Corporation,

which is engaged in extensive PCB waste treatment, and will systematically process this waste from now on.

Moreover, the insulating oil of devices that are believed to contain no PCBs is analyzed for PCB content when their use is discontinued, and any substances with PCB levels exceeding 0.5 mg/kg (low-concentration PCB waste) are collected and stored as PCB waste, as legally required.

Loading an electric appliance containing PCBs onto a truck (using a protective container)



# Treatment of Electrical Appliances Containing PCBs Completed

Currently, there are few instances of PCBs wastes being treated throughout Japan. However, in June 2007 at Sumitomo Chemical's Osaka Works, ahead of other Works, we asked the Japan Environmental Safety Corporation, which has facilities for decomposition and detoxification of PCBs, to safely treat all the electric appliances that contain PCBs (a total of 33 condensers, including some appliances at affiliated companies) that were stored in the Osaka area. They prioritize safety and

use special protective containers to prevent the condensers from being damaged in the process of handling and transporting PCRs

Shinji Ueno Engineering & Maintenance Department, Osaka Works



## Systematically Eliminating the Use of Refrigeration Units that Use Specified CFCs

Sumitomo Chemical has a strict policy governing management of cooling devices that use specified CFCs (substances specified in the Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures) that are highly damaging to the ozone layer. The Company is committed to ensuring that CFCs are not released into the atmosphere as a result of any tampering with these devices and carries out proper recovery, transportation and destruction of specified CFCs from refrigeration units when they are taken out of use.

The Company is systematically replacing these cooling devices with units that use alternative coolants as it works toward the Group-wide goal of eliminating the utilization of refrigeration units that use the specified CFC coolants (CFC11, CFC12, CFC113, CFC114, and CFC115) by 2025.

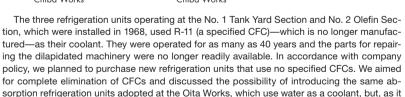
## Our Motto: "Be Strict with Ourselves but Easy on the Environment"

Hisashi Saito (left)

No. 1 Manufacturing Department, Chiba Works

turned out, we were unable to adopt these units.

Yoshiaki Suzuki (right)
No. 1 Manufacturing Department,
Chiba Works



Finally, turbo refrigerators that use the coolant R-123 (hydrochlorofluorocarbon [HCFC]) instead of specified CFCs were installed in both Sections. At the end of March 2008, installation work was completed in the No. 1 Tank Yard Section, and the new refrigeration unit has been operating since April. In the No. 2 Olefin Section, installation work is under way with the new unit due to begin operation from November 2008.

HCFC is a coolant that has a limited impact on the ozone layer and a minimal effect on global warming, a problem that is gaining increasing attention in recent years. Our motto is "be strict with ourselves but easy on the environment," and accordingly, we make continuous efforts to operate refrigeration units and control facilities with due care. This project enabled us to initially replace approximately 40% of the units (31 units in total) that were judged in need of replacement. We will continue to gradually replace the remaining units according to plan.



## **Safety Initiatives**

Working to ensure the safety and health of employees based on the fundamental principle of making safety top priority.

## Occupational Health and Safety Activities for Disaster Prevention

#### Safety Performance in Fiscal 2007

In fiscal 2007, seven accidents resulted in lost workdays (accident frequency rate of lost-workday injuries: 0.57) at Sumitomo Chemical, with six such accidents (accident frequency rate of lost-workday injuries: 0.42) at contractors.

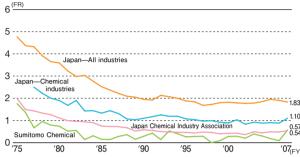
The number of accidents resulting in lost workdays increased considerably compared to fiscal 2006 (one accident resulting in lost workdays). The seven accidents included four accidents resulting from contact with toxic substances, one accident resulting from contact with hightemperature substances, one accident caused by falling objects, and one traffic accident. The Company looked into the causes of these accidents and found that a major factor was insufficient attention to prediction of emergency risks in non-routine operations. In fiscal 2008, risk assessment for non-routine operations and risk assessment-based countermeasures are being implemented as part of the safety assurance policy.

The number of accidents among contractors' employees has been increasing slightly since fiscal 2001. Because the number of disasters involving falls from high places is particularly large, the Working Group for Accident Prevention at Contractors was established in fiscal 2007, and the members concentrated on measures to prevent accidents involving falls. The Company will put into practice the measures studied and proposed by the Working Group.

## Continuous Operation of Occupational Safety and Health Management System (OSHMS)

The high incidence of major disas-

#### Trends in the Frequency Rate of Lost Workdays



ters such as fires and explosions at large-scale industrial sites nationwide since summer 2003 has prompted the widespread introduction of the OS-HMS. Sumitomo Chemical was quick to recognize the effectiveness of the OSHMS framework and created its own system, first launching it at the Chiba Works in July 2000. Certification for an OSHMS from the Japan Industrial Safety and Health Association (JISHA) has been obtained by seven of the Works and Research Laboratories to date. The OSHMS focuses on aggressive safety and health activities to prevent disasters by clarifying all the obvious or latent hazard risks in the workplace and implementing risk assessment-based improvements accord-

ing to the PDCA cycle. Further efforts have been made to convey the know-how and principles and basic rules behind these activities by systematizing and documenting all safety- and health-related activities.

#### **Acquisition Status of OSHMS Certification**

Date Certified	Certification No.
May 9, 2003	03-12-1
September 15, 2004	04-38-1
February 1, 2005	05-27-3
November 21, 2005	05- 2-1
December 14, 2005	05- 8-3
July 10, 2006	06-44-1
January 10, 2007	07-28-9
	May 9, 2003 September 15, 2004 February 1, 2005 November 21, 2005 December 14, 2005 July 10, 2006

In fiscal 2008, the Utajima Pilot Production Department at the Osaka Works, as well as the Gifu Plant and Okayama Plant expect to acquire OSHMS certification independently.

## HPEC Established (Ehime Works)



In December 2007, the Human Property Education Center (HPEC) was established as a place for educating people—the most important asset in the manufacturing business—about the importance of strictly following fundamental principles and observing rules. The HPEC consists of two main facilities: a facility for practical training in the operation of the distillation column and a facility for providing experiential safety training. We first used these facilities in

January 2008 as part of a training seminar for new recruits. In the future, we aim to enhance the facilities in order to broaden the range of educational activities the HPEC can be used for.

Muneharu Wada
General Affairs Department,
Ehime Works

Experiential traning facility with simulation of "getting stuck or caught in machinery."

NOTE

 $\textbf{1. Accident frequency rate of lost-workday injuries:} \ \texttt{Number of victims suffering lost-workday injuries per actual working hours} \ \texttt{X 1,000,000} \ \texttt{Accident frequency rate of lost-workday injuries} = (\texttt{Number of victims suffering lost-workday injuries}) \ / \ (\texttt{actual working hours}) \ \texttt{X 1,000,000} \$ 



## **Working Group for Accident Prevention** at Contractors Aims to Achieve **Zero Fall Accidents**

In 2006, a fatal accident occurred after an employee of a contractor fell while working in a high place. Immediately after the accident, we investigated and analyzed past accidents occurring among employees of contractors and reaffirmed that accidents involving falls generally resulted in more serious outcomes than other work-related accidents. Aiming to eradicate such accidents, we organized the Working Group for Accident Prevention at Contractors and studied effective preventive measures. Issues identified and measures proposed are summarized below.

(1) Accidents involving falls frequently occur during the preparatory and clean-up stages of the work carried out in high places. We therefore decided to record specific safety measures for these stages in the "construction work procedures," and implement them rigorously. (2) Accidents involving falls also occurred more frequently as employees moved about in high places. In order to prevent such accidents, we encourageed the proper use of safety belts2 and double safety belts, and clarified standard usage of safety blocks.

(3) In the case of work being carried out at places higher than the specified level where it is difficult to install handrails or sufficiently secure temporary scaffolds, we decided to require the employees to use safety nets and safety belts and also assign personnel to monitor the safety of operations.

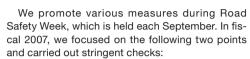
In fiscal 2008, we will make sure to incorporate the above measures and proposals in the working system to achieve zero fall-related accidents.



## **Promoting Strict** Obsevance of Traffic **Rules and Manners**

#### Rvohei Komaki

General Affairs, Environment, and Safety Agricultural Chemicals Research Laboratory



(1) Commuters in vehicles must use seatbelts; (2) Bicycle commuters must dismount at the entrance.

Workers were unaware of the inspections, since they were conducted without advance notice. From now on, we will take every opportunity to

raise employees' awareness of traffic rules and etiquette.

Checking to make sure bicycle commuters dismount at the entrance



## A Variety of Measures to Address the Asbestos Problem

Because Sumitomo Chemical uses materials containing asbestos at various locations, including production facilities and plant buildings, we take the following actions:

### **Buildings Constructed Using Materials Containing Asbestos**

Sumitomo Chemical surveyed all its buildings to determine whether they had been constructed with materials containing asbestos. Asbestos was removed, enclosed or surrounded, in accordance with the Ministry of Health, Labour and Welfare's Regulations for the Prevention of Asbestosrelated Diseases. All such work was completed by December 2005.

### Manufacturing Equipment that Uses **Materials Containing Asbestos**

Some of our manufacturing equipment makes use of sealing and heat insulating materials that contain asbestos, and we are gradually replacing these materials with asbestos-free alternatives. There is no danger of exposure to asbestos during the normal operation of this manufacturing equipment.

If, however, there is a risk of dust being produced when handling these sealing and heat insulating materials, we take measures to prevent exposure, requiring persons handling the material to wear protective clothing, for example. (Sealing materials do not produce dust when handled normally, but will when, for example, they are cut. Under such circumstances, antiexposure measures such as wearing protective clothing, therefore become necessary.)

### Maintaining the Health of Former Employees

If former employees have handled materials containing asbestos while working at Sumitomo Chemical and so request, we will arrange for them to have a physical examination and will discuss their concerns with them, regardless of the degree to which they handled the materials in question. So far we have organized physical examinations for 1,367 people, 14 of whom have been deemed eligible for workers' compensation insurance benefits under the Worker's Accident Compensation Insurance Law. Seventy-one people were issued a Health Check Note. Three persons have been deemed eligible for special bereaved family compensation under the Asbestos-Related Health Damage Relief Law (as of March 31, 2008).

Information on these physical examinations is also provided on the Sumitomo Chemical website.

#### NOTE

2. Safety belt: A "life rope" used for work in high places. This safety equipment consists of two parts: a rope with a hook on the end and a belt with a shock absorber to reduce impact in the event of a fall.

# Making Safety Top Priority and Working to Build a Comprehensive Security and Disaster Prevention System

### Security and Disaster Prevention Management for Preventing Accidents at Plants and Assuring Safety

The foremost mission of disaster prevention management is to prevent unforeseen plant accidents by ensuring process safety and plant integrity, and plants must also be protected against natural disasters and terrorist attacks. Stringent risk assessments are therefore conducted, in addition to continuous safety improvement and comprehensive self-administered safety management. In fiscal 2007, there were no major accidents at Sumitomo Chemical

for new chemical plants are also examined and evaluated to select the optimum materials with lower life cycle costs.

#### (3) Plant Safety Confirmation

While plant design and construction are based on legal technical standards, processes are additionally subjected to hazard assessment in order to highlight potential dangers and incorporate, from the standpoint of self-administered management, more stringent safety precautions into the

design and construction processes. In addition, operational manuals are created and training is provided for operators. The Company also conducts process hazard evaluations regularly after the start of plant operations and any time there is a change in operating parameters in order to ensure plant safety.

## Process Safety Management From Research and Development to Plant Operation and Dismantling

In an effort to reduce environmental impact and achieve zero-accident and zero-injury operations, Sumitomo Chemical performs safety assessments at each stage from new chemical process R&D through plant design, construction, operation, and maintenance, to dismantling.

## (1) Examination of Process Safety

The Process Safety Review Committee convenes at every step from R&D through industrial scale production processes to oversee a system in which the safety of each stage is thoroughly verified before moving on to the next stage. The system is in use at Sumitomo Chemical, and all Group companies are instructed to adopt it.

#### (2) R&D Safety Confirmation

At the R&D stage, materials safety data and other related data on the chemicals to be handled are examined and assessed in detail. These data are then used to select the safest chemicals and to assess the required amounts in order to ensure that the R&D will entail only fundamentally safe chemical processes. The construction materials

## TOPIC

## e-Learning for the Internal Safety Management System

Sumitomo Chemical has established detailed internal rules concerning security and disaster prevention, and one of these is the Safety Management Guidelines. The Guidelines incorporate rules formulated from the perspective of safety assurance, that is to say, how the safety of an innovative product that enhances people's lives can be assured throughout the process, from the time the idea is generated to lab-scale and pilot pland production experiments to commercial production. The Guidelines incorporate knowledge and know-how that is useful in practical application.

It is essential for all employees to fully understand the Safety Management Guidelines, which are effectively laws, and follow them properly. However, a conventional training program would not have allowed such a large amount of information to be conveyed under the given time constraints. Sumitomo Chemical therefore introduced a PC-based e-learning system.

It takes at least 40 minutes to read through the main text of the Safety Management Guidelines, or about two hours if users also carefully read the supplementary linked material. The professional narration allows employees to progress at their own pace, and the e-learning program provides an environment that facilitates effective learning. All employees take a test to check their understanding and need to score 80 points to pass. The e-learning program also offers the advantage of letting employees take the test until they pass. All technical workers are required to take the e-learning course, and a total of 2,515 employees have passed the test

to date. We also encourage new employees to participate in this program.







## **Emergency Safety Measures Based** on the Risk Management Program

Sumitomo Chemical places the highest priority on the safety of everyone, both in areas near our plants and those entering its premises, by examining accident-scenario risks for toxic substances handled at our existing plants with reference to U.S. standards. The main accident simulation software tool used at the Company's Works and Research Laboratories is TRACE, made by SAFER Systems in the United States. This simulation software enables us to estimate the distribution of concentrations of toxic substances released into the air. At the Ehime Works, weather data measured at points around the site are collected in real time and used to establish capabilities for minimizing damage from any possible chemical accident.

## Advanced Self-Administered Safety Management

Aiming to achieve advanced selfadministered management, Sumitomo Chemical's Process & Production Technology Center works to improve and effectively utilize the support system and tools obtained from various sources. Its mission is to support a process security and disaster prevention management, prepare various security and disaster prevention guidelines, and compile a database of security information (technical information and accident information) and risks related to mixing of or contact with substances.

### Self-Administered High-Pressure Gas Safety Management Authorized by the Ministry of Economy, Trade and Industry

Sumitomo Chemical has obtained Certified Safety Inspector and Certified Completion Inspector certification in accordance with the High-Pressure Gas Safety Law to ensure safe operations at its 46 production facilities. Since obtaining the certification in 1987, the Chiba Works has continually renewed this certification. The Ehime Works obtained the certification in 2002 and renewed it in March 2008. The two Works continue to ensure the stable and

continuous operation of their plants.

When facilities obtain certifications granted by the Minister of Economy. Trade and Industry for their outstanding safety technology and management system and satisfaction of the conditions stipulated by law, they are permitted to conduct self-administered safety inspections in addition to the inspections stipulated under relevant legislation. Ministry certification involves a prior audit by an inspection team (comprising academics and other experts) to assess the validity of daily safety inspection data and safety management systems. Sumitomo Chemical has received high evaluations in each certification renewal audit.

## Acquisition Status of Certified (Completion/Safety) Inspector Certification

Works	Region	Date Certified	No. of Facilities Certified
Ehime	Niihama	March 2008	13
Works	Kikumoto	March 2008	6
Chiba	Anesaki	May 2004	11
Works	Sodegaura	May 2004	16



### Initial Trial of Multi-Group Joint Emergency Drill (Tsukuba Research Laboratory)

In fiscal 2007, the joint emergency drill was launched at the Tsukuba Research Laboratory. The purpose of

this drill is to verify that the cooperation and communication system functions properly in the event of a disaster at the laboratories, which are shared by several research groups, to cope with the primary disaster and prevent a secondary disaster. The following scenario was enacted to simulate a variety of possible situations: victims call loudly for emergency help but the group leader is not present; the workers on the scene request members of other groups near the laboratory to take quick action to respond to the emergency; and, members launch rescue operations in accordance with the the research groups' cooperation system.

The joint emergency drill was the first for members of the two groups who share the same laboratory. "We gained experience by reflecting on our actions and decided to continue to conduct joint emergency drills in the future so that we can behave rationally in the event of unexpected disaster." As demonstrated by this decision, all participants thoroughly recognize the value of carrying out the drills.



Yoshihiro Kawakami Energy Device Development Group Tsukuba Research Laboratory



Kazue Ouchi Functional Organic Materials Group Tsukuba Research Laboratory



Kayo Maie Technical Office Tsukuba Research Laboratory

Participating in External Firefighting Drills to Enhance the Plant's Disaster Prevention Capabilities

(Chiba Works)

Yukio Itasaka Chiba General Service Co., Ltd

In the event of an unexpected fire at the plant, we must be able to keep it from spreading and work to minimize its impact on the adjacent area, and in our efforts to continually enhance our disaster prevention capabilities, special firefighters at the Chiba Works participate in an external firefighting drill conducted at the Maritime Disaster Prevention Center. During this one-week practical training program, the special firefighters experience a mock disaster simulated by using the chemical plantscale tanks, learn basic firefighting techniques for largescale fires, how to maintain a safe distance from the fire, and about the safe positioning of firefighting teams. The Center's instructors offered the following comment, "For the first three days or so, all the firefighters were intimidated by the emergency drill, but from about the fourth day they began to get the hang of it."

Because the program includes actual fire simulation



drills that cannot be experienced at the plant, this was a truly valuable experience that has enabled us to improve our practical firefighting techniques.

## Complete Chemical Safety Activities from R&D to Product Recycling

## **Increasing Global Requirements for Chemical Risk Reduction**

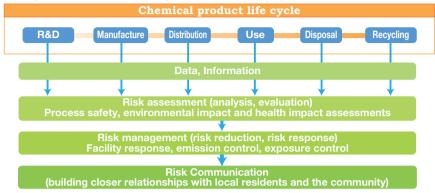
In August 2002, the World Summit on Sustainable Development was held in Johannesburg, the Republic of South Africa. The Summit proposed targets for 2020 aiming to ensure "that chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment." This led to the adoption of the Strategic Approach to International Chemicals Management (SAICM), administered and inspected by the U.N. Environment Program (UNEP), in the International Conference on Chemicals Management (ICCM). This reflects acceleration in global initiatives toward the reduction of risk throughout the life cycle of chemical substances.

The chemical industry has also pledged to promote Global Product Strategy (GPS) as a voluntary initiative. Currently, risk-based management of chemical substances is becoming mainstream in terms of both regulations and self-administered management.

## Activities for Assuring the Safety of Sumitomo Chemical's Products

Sumitomo Chemical's Environmental Health Science Laboratory plays a central role in a diverse variety of safety assessments for various products developed by the Sumitomo Chemical Group. It conducts sophisticated research in diverse fields ranging from genetics to environmental and ecological sciences on a global scale, making use of the latest scientific knowledge and advanced technologies as well as the Company's abundant expertise in chemical safety assessment developed over many years. In addition, as the core laboratory supporting the technological aspects of RC activities for chemical safety, the Laboratory provides the entire company with safety information and the results of risk assessments in order to ensure

### Management of Chemicals throughout the Product Life Cycle



safety and protect the environment throughout the life cycle of chemical products, from development to use and disposal.

Enhanced collection and management of safety information for each specific chemical substance is now becoming mainstream as risk-based

management of chemical substances becomes the global norm. Sumitomo Chemical is working to increase its knowledge of chemical safety by evaluating the safety of gases and discharged water emitted from its facilities and also assessing the safety of both substances handled and new

## бріс

# Enhancing Programs for Compiling Existing Findings and Information on Chemical Safety for Appropriate Management of Chemical Substances Handled by Sumitomo Chemical

SAICM, adopted by the ICCM in 2006, defines risk reduction throughout the life cycle of chemical substances as a primary goal. One particularly prominent example of the increasing importance of chemical substance management is the European Union's Registration, Evaluation and Authorization of Chemicals (REACH) legislation brought into force in 2007, requiring extensive provision of safety information as well as safety information-based risk assessment of all chemical substances.

Meanwhile, in 2006, in response to the adoption by the chemical industry of SAICM, the International Council of Chemical Associations (ICCA) announced that it would promote GPS, a voluntary initiative for risk management throughout the life cycle of chemical substances.

As shown by these global trends, riskbased chemical substance management regulations are becoming increasingly strict and the industry is stepping up related initiatives for self-administered risk-based chemical substance management. In order to properly conduct risk-based management, we need to focus on improving safety information, estimate exposure according to how chemical substances are used, and perform thorough risk assessments.

In fiscal 2005, Sumitomo Chemicalstarted a program for consolidating comprehensive safety information on substances produced by Sumitomo Chemical, including not only our proprietary information but also publicly available information and also fully examine the reliability of the collected information in order to establish a reliable system for improving and maintaining safety information for all the chemical substances handled by Sumitomo Chemical.

Sumitomo Chemical will utilize the achievements of this program for risk assessment of its products and implementation of self-administered management of chemical substances. As part of this program, in fiscal 2007, Sumitomo Chemical prepared chemical substance hazard information needed for REACH registration.

products developed by the Company. In addition, the Company also focuses on comprehensive information surveys with thorough reliability checks and on the research and development of technologies in order to further enhance chemical safety assessment.

### Building a New System in line with Global Trends in Management of Chemical Substances

Sumitomo Chemical is enhancing a program for compiling existing findings and information on the safety management of chemical products. In order to properly manage all safety information, including that collected through this program, and utilize it effectively, Sumitomo Chemical is building a next-generation comprehensive chemical management system that will incorporate the data accumulated in the conventional chemical safety database system, CHEMSAFE2. Furthermore, the Company is conducting accurate chemical-related risk assessments in various fields and working to improve the quality of these assessments using the chemical safety assessment system developed by the Environmental Health Science Laboratory.

## Active Participation in Voluntary Initiatives in Japan and Overseas

Sumitomo Chemical plays a leading role in compiling reports on some of the target chemicals in the voluntary safety assessment program for high production volume (HPV) chemicals conducted by the ICCA. The Company also provides data on other chemicals that it handles, both as a member of the industry and as a sponsor of the HPV program. Furthermore, the Company is also actively involved with the Japan Challenge Program, a Japanese version of the HPV program, going further than just sponsorship; the Company participates in data-entry trials to create templates for organizing the data collected, for example.

Sumitomo Chemical is also an active participant in and is providing continuous support for the Long-Range Research Initiative (LRI) for research on the impact of chemicals on human health and the environment, which, like the HPV program, was initiated by the ICCA. This initiative is being implemented by chemical industry associations in Japan, the United States and Europe.

#### Animal welfare

In the process of developing useful chemical substances or assessing their safety, a large variety of studies and evaluations are required. These assessments, however, cannot be completed without conducting tests using laboratory animals. Sumitomo Chemical advocates humane treatment of laboratory animals and applies the 3Rs of animal use and animal welfare: replacement, reduction and refinement. In addition, the Company follows the standards specified by current laws and regulations on animal care and use issued by the Ministry of Education, Culture, Sports, Science and Technology; the Ministry of Health, Labour and Welfare; and the Ministry of Agriculture, Forestry and Fisheries. The Company has also internal rules for conducting animal experiments and has established the Animal Welfare Committee to evaluate and ensure the qualities of our animal programs, facilities, research practices and procedures. Furthermore, the Company has been actively improving its system for educating specialists and developing alternative techniques that do not use animals.

#### TOPIC

## Protecting the Health of Plant Workers: Establishment of Respiratory Sensitization Test

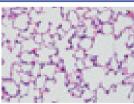
Respiratory sensitization is an allergenic response that occurs in the airway (from the nose to the lungs). Common symptoms are rhinitis (nasal inflammation) and asthma, and especially severe asthma is considered life-threatening. All those handling chemical substances are required to check whether the substances cause any such allergic response in the airway and protect themselves from exposure to respiratory sensitizing substances before handling chemical substances at the Company's plants.

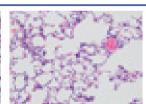
At present, however, there is no validated testing system to assess the respiratory sensitization potential of chemicals, and are currently at the stage where various research groups are proposing a diverse variety of testing methods.

Sumitomo Chemical has also been

involved in developing a respiratory sensitization test and has established a method to differentiate the

respiratory sensitizing substances from skin sensitizing substances and nonsensitizing substances using the results of measurements of antibody titer in the blood of animals sensitized with the human respiratory sensitizing substances and allergic reactions in their lungs (changes in the content of specific cytokines1 in the bronchoalveolar lavage fluid). Evidence supporting this method is that the respiratory sensitizing substances increase both the antibody titer in the blood and the content of specific cytokines in the bronchoalveolar lavage fluid, while the skin sensitizing substances and nonsensitizing substances increase either the





Normal cells (left) and pneumonic cells (right)

antibody titer in the blood or the content of specific cytokines in the bronchoalveolar lavage fluid, or neither.

Sumitomo Chemical will continue to verify the effectiveness of the respiratory sensitization test and examine changes in respiratory function and other indices to enhance its reliability.

In order to establish an evaluation method that does not require the use of animals, the Company is also exploring the possibility of introducing a simplified respiratory sensitization test using cultured cells.

#### NOTE

1. Cytokines: Proteins that are secreted from cells in an immune reaction and are involved in cell signaling. Abnormalities in their signaling function cause allergic reactions.

## Making Safety Top Priority in all Logistics Operations

Based on Sumitomo Chemical's basic policy of making safety top priority, the logistics divisions of the Company formulate their respective Policies for Responsible Care Activities for logistics quality assurance and environmental safety each fiscal year and pursue these activities throughout the divisions as well as all Group logistics companies.

### **New Initiatives for Assuring Logistics Safety and Quality**

(1) Launch of Logistics Quality and Safety Information Management System

In February 2008, the Company established its logistics quality and safety management information system, which links logistics companies through a network in order to immediately process information on logistics quality and safety as well as analyze the information entered in the system to prevent the recurrence of any problems.

Under this system, a database of logistics-related problems is entered into the Company's internal computer system and made available to the concerned departments. This system is utilized to encourage the further sharing of information and to prevent the occurrence of potential problems.

### (2) Activities of the Sumitomo Chemical Logistics Partnership Council

In May 2007, the Company reorganized the membership of the Sumitomo Chemical Logistics Partnership Council, which is made up of logistics companies nationwide with which Sumitomo Chemical does business. The Council consists of four local Works committees (Ehime, Chiba, Osaka, Oita), two depot committees (east and west), one marine depot committee and two special committees (onshore and offshore).

Under the Policies for Responsible Care Activities, the Company works to improve logistics management through the sharing of information, sharing of information mutual learning and educational activities for issues concerning logistics safety, the environment and product quality throughout the logistics divisions.

### (3) Activities for Enhancing Logistics Safety and Quality Assurance

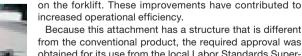
In order to prevent logistics-related



### **Development of an Attachment for Forklifts that** Assures Safety and Excellent Maneuverability

Japan's occupational safety and health regulations stipulate the use of a specialized attachment to prevent industrial accidents when flexible containers1 are lifted off the ground with a forklift and loaded onto a truck. Shinto Unyu Co., Ltd., a subsidiary of Group company Sumika Logistics Co., Ltd. has succeeded in developing an attachment for forklifts that is safer and demonstrates greater maneuverability than conventional

With the conventional hook attachment, an incident<sup>2</sup> can occur where workers' fingers can get caught in the narrow space when setting or detatching the hook on the strap for the flexible container. Another drawback is that the forklift operator needs to dismount from the forklift at the time of setting or detaching the attachment. As a result of improvements, the newly developed attachment requires slinging work3 only at the time of setting the strap for the flexible container. It requires no detachment process, and this reduces the risk of injury. The new attachment also enables the simultaneous hanging of four flexible containers and setting or detachment of the attachment while the operator remains



Because this attachment has a structure that is different from the conventional product, the required approval was obtained for its use from the local Labor Standards Super-

Attachment for hanging four flexible containers

accidents and assure safety, the Company fully informs logistics companies of its logistics RC rules and provides them with thorough instruction for complying with these rules. In addition, the Company advises them to introduce a transport management system and obtain the Safety Prime Office Certification issued by the Japan Trucking Association, while also providing necessary support. Through the logistics RC audit, we advise on and support their safety and quality assurance activities to improve and enhance overall logistics activities.

#### **Environmental Protection in Logistics**

With the enactment of the revised Law Concerning the Rational Use of Energy, Sumitomo Chemical was designated a specified consigner. Since fiscal 2007, the Company has been implementing energy conservation initiatives, targeting an average 1% reduction in annual unit consumption, using fiscal 2006 as the base year. The Company has long been working to further reduce its environmental impact, for example, by working toward a modal shift to rail and vessel shipping, which exerts a relatively low environmental impact, improving the transport capacity for each lot, using larger containers in line with ISO specifications and transporting resin in bulk containers as well as integrating warehouses. The rate of reduction in unit consumption achieved in the Company's Japanese logistics divisions in fiscal 2007 was 2.5% compared with the fiscal 2006 level. (Refer to page 11 of the CSR Report 2008 Data Book for trends in annual CO<sub>2</sub> emissions.)

The Company also advises its logistics companies to obtain Green Management Certification for transport and provides them with necessary support in order to enhance their environmental protection activities in logistics.

	Performance in Fiscal 2007
Energy consumption in logistics divisions in Japan	39.7 (1,000 kl in terms of crude oil)
Unit energy consumption in logistics divisions in Japan	0.0111 (kl/ton)

#### NOTE

1. Flexible container: A bag-shaped container made of flexible and collapsible materials. It consists of two parts: hangers for lifting the container off the ground and an opening for loading and unloading products

2. Incident: An event that could have resulted in a serious accident or injury in a worst-case scenario; a close call or

3. Slinging work: Containers are secured to the hooks of a crane with cables to assure their safety during

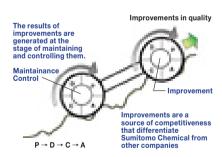
## **Quality Assurance Initiatives**

Sumitomo Chemical works "to supply high-quality products and services that satisfy customer's needs and ensure safety in their use" as the top priority of its quality assurance policy.

## **Quality Assurance Activities that** show a **Quality First Policy**

Sumitomo Chemical's quality assurance activities are based on a companywide quality assurance policy for the fiscal year, which is annually discussed and approved by the Responsible Care Committee. Based on this policy, each Business Sector, Works and Research Laboratory, as well as the Procurement Office and Logistics Department, formulates and executes its own quality assurance plan for the fiscal year. In addition, the quality committee at each Works and the quality control group for each Business Sector work to improve the level of quality assurance by repeating the PDCA cycle (quality assurance activities undertaken to achieve maintenance and control on the one hand and improvement on the other).

The results of these improvements are generated at the stage of maintaining and controlling them. We therefore recognize that both processes are essential components of our quality assurance activities and actively implement these in tandem.



Internal quality audits and product liability (PL) audits are conducted to ensure that all employees of the Sumitomo Chemical Group, in their daily production and sales activities, are implementing quality assurance activities in strict accordance with Company rules based on current laws and regulations.

The Company is leading a series of related activities to further enhance em-

ployees' awareness about quality assurance and product quality. We also strive to raise employees' awareness of quality assurance and product liability in their daily activities and ensure that they understand how this is related to gaining the greater trust and confidence of customers, and promote quality assurance activities that will cause customers to regard us as a quality-first company.

## Improving the Quality of Products and Operations through TQM\*

Sumitomo Chemical is implementing Total Quality Management (TQM) as a company-wide quality management initiative. The Company actively participates in the Corporate Quality Management Survey conducted by the Union of Japanese Scientists and Engineers to measure the contributions of all the departments and employees to improving quality. In fiscal 2007, we moved up in the rankings from 50 the previous year to 19. All employees strive each and every day to improve not only the quality of products, but also the quality of operations.

#### Sumitomo Chemical's TQM



### Establishment of Quality Award Contributes to Raising Awareness of Quality Assurance Activities

In order to invigorate the Company's quality assurance activities and raise awareness of product quality, Sumitomo Chemical has established the quality award to recognize operations, including those of other Group companies, that contribute to quality assurance ac-



tivities. Two outstanding quality prizes were awarded in fiscal 2007. One was awarded in recognition of the creation of quality assurance management capabilities at the start of Olyset Net production at the plant in Tanzania. The other was awarded to recognize the creation of a technique to inspect the full length of optical functional films, dissemination of this technique to raw material manufacturers and improvement of yields leading to cost reductions. In addition, three excellent quality prizes and six quality prizes were awarded.

For this award program Sumitomo Chemical evaluates the contributions of affiliate companies, such as external contractors, and presents a certificate of appreciation to companies that have made a significant contribution. In fiscal 2007, the Company presented certificates of appreciation to three companies. This is how Sumitomo Chemical works to enhance not only the Company's quality assurance activities but also the activities of external contractors.

#### Expansion of the Quality Assurance Activities to External Contract Companies

**Quality Prize** 



Certificate of Appreciation



NOT

\*TQM: A systematic activity that contributes to the achievement of corporate goals by effectively and efficiently managing all corporate operations in a way that enables timely provision of products and services that meet customers' quality standards at reasonable prices.

# From Development to Sales-Sumitomo Chemical's Quality Assurance System

Sumitomo Chemical works to assure the development and manufacture of products that are safe by conducting comprehensive PL risk assessments, including confirming that all legal requirements are met, at all main stages from R&D to industrial scale production through to commercial manufacturing.



**Research and Development** 



Industrial Scale Development



Production Management

At the Environmental Health Science Laboratory, researchers conduct health and environmental risk assessments based on the toxicological effects on animals, pharmacological effects, ecotoxicity and physicochemical properties, making use of a large variety of information and a wide range of technologies

in the life sciences. These assessments are used to perform PL risk

Meanwhile, researchers at the Process & Production Technology Center are involved in safety assessments related to disaster prevention at each stage, from R&D to manufacturing. The results are used to perform PL risk assessments.

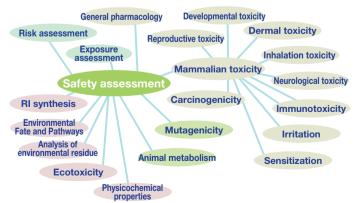


The Research Laboratories and the Process & Production Technology Center develop technologies that enable the safe manufacture of products according to plan. After quality is checked during the indust-rial scale production stage, commercial manufacturing is started.

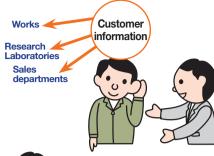
Standardized production manuals are prepared for manufacturing in order to provide customers with products of consistently high quality. When any production process is to be changed, the impact on product quality is assessed in advance in accordance with the Process Change PL Guidelines in consultation with the concerned departments before any changes are implemented.



#### **Items Subject to Safety Assessment**



In order to prevent major product quality problems, the Company implements its Guidelines for Preventing Major Quality Problems.









**Product Inspection** 

Storage and Transport

Sales

**Customer** Information

Product inspections are conducted under appropriate test conditions and specified testing methods to evaluate whether or not products meet specified criteria. In addition to specifications, data on factors such as changes in amounts of impurities that have a significant effect on the assurance of product quality are also checked in order to provide customers with pro-ducts of consistent quality.

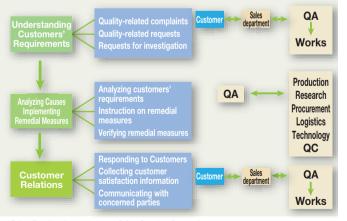
Inventory and orders received are strictly controlled and products delivered to customers in strict accordance with their orders. Drivers are instructed always to carry a yellow card (emergency contact card) containing emergency contact information and emergency measures to be taken in the event of an accident during transport.

Material safety data sheets (MSDS)\* are prepared and provided to customers along with related safety information in a thorough and timely manner.

Complaints, requests and other information from our customers are shared among the Works, Research Laboratories and sales departments, and the collected information is utilized effectively to handle complaints promptly and appropriately, and improve product quality.

#### Management of Information Related to Customers and Product Quality





QA: Quality Assurance QC: Quality Control

CS: Customer Sutisfaction

#### NOTE

<sup>\*</sup> MSDS (Material Safety Data Sheet): A data sheet containing information necessary for the safe handling of chemical products (properties, handling methods, safety measures, etc.)

#### Green Procurement Activities for Delivering Products that Assure Safe Use

In order to supply products that satisfy customer's needs and ensure their safety in use, it is necessary to establish a management system that enables the procurement of safe raw materials, control of production processes to prevent contamination by toxic substances and verify that none are contained in any products.

These are defined as Green Procurement activities, and are actively promoted. Sumitomo Chemical's green procurement activities are characterized not only by cooperation within the Company, but also by collaboration with a variety of different industries in its efforts to establish a rational green procurement system that is beneficial to consumers, the environment and industry alike.

### Participation in Green Procurement Activities Extending Beyond Single Companies and Across Industries

Many of the green procurement activities generally undertaken are not necessarily effective or rational for all those concerned. The major problems to be addressed exert a considerable impact on the management of chemical substances and the response to regulations in various countries. Although the need for improvement has been recognized, such problems cannot be solved through the efforts of a single company or single industry alone, and improvements remain unimplemented.

Against this backdrop, companies that belong to every industry along the supply chain from the upstream to the downstream voluntarily got together in September 2006 and organized the Joint Article Management Promotion-consortium (JAMP) aimed at establishing a system that assures the supply of safe and satisfactory products to society.

Sumitomo Chemical is actively participating and fulfilling a leading role in JAMP, working in cooperation with other member companies to establish a rationalized system to convey information on the details of substances subject to regulatory control. The Company has also actively incorporated the achievements of JAMP activities into its system for controlling targeted substances contained in its products and has made improvement upon improvement to establish more effective control capabilities.

As demonstrated by JAMP, Sumitomo Chemical recognizes the significance of cooperation, not only among companies within the same industry but also among different industries, in promoting activities that are beneficial to society and the environment. Such activities have produced a steady flow of successful results and have also attracted attention from various sectors overseas. These achievements are expected to become firmly established and to be developed further both in Japan and overseas in the future.

#### **Main Issues in Current Green Procurement Activities**

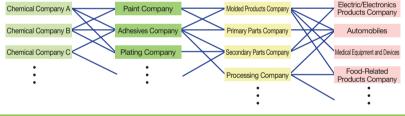
- 1. Main Issues for Upstream and Midstream Companies such as the Chemical and Parts Industries
  - Because customers have a large variety of different demands, numerous operational processes are needed in order to respond effectively to these demands.
  - Some requested information is not utilized in practice and the man-hours spent in its preparation end up wasted.
  - The voluntary controls adopted by companies result in exclusion from the market.
- 2. Main Problems for Downstream Companies such as the Electric/Electronics and Automotive Industries
  - · A large volume of data is needed because of the large number of component parts.
  - Collection of reliable data from upstream and midstream companies is difficult.
  - The intrinsic risk of economic losses or the loss of social trust is great in the event of a violation of domestic or overseas regulations.
- 3. Common Problems

Chemical Industry

Parts Industry

- Tracing the flow of information is difficult because of the complexity of supply chains (flows of products).
- Those concerned do not sufficiently understand the risks.
- It is difficult to adequately convey information needed for REACH and other regulations

The route of the product flow (supply chain) and the information flow are long and complex. Companies do not disclose information on their suppliers of raw materials or their customers because such information is treated as trade secrets. Consequently, identifying the overall flow of products and information is difficult.





#### Standardization of Methods to Convey Information through JAMP

Standards were integrated throughout the supply chain. Analysis of MSDS and MSDSplus can now be conducted easily and the information is more reliable.

MSDS and MSDSplus<sup>1</sup> are provided for the molded products industry

They are delivered to the downstream companies after their conversion into AIS<sup>2</sup>.

Final Products Industry

Chemical Industry

Parts Industry

Company A: MSDS, MSDSplus

Company B: MSDS, MSDSplus

Company C: MSDS, MSDSplus

Chemical or physical changes occur at this stage\* (conversion of information is necessary).

\* The types and volume of the substances contained in molded products may change because chemical reactions such as polymerization and physical changes such as concentration and dilution may occur in the process of manufacturing molded products from chemical substances.

#### NOTE

1. MSDSplus: A form developed by JAMP to convey information on the substances subject to regulatory control contained in chemical products

2. AIS: A form developed by JAMP to convey information on the substances subject to regulatory control contained in molded products

## **CSR Procurement Initiatives**

CSR procurement is a concept that requires business partners to implement CSR, and companies thus implementing CSR activities receive priority in terms of purchasing. Sumitomo Chemical requests that its partners implement CSR and that Group companies both in Japan and overseas implement CSR procurement with an understanding of the Company's concept of CSR procurement. Sumitomo Chemical is implementing a variety of activities for promoting CSR procurement.

### Details of CSR Procurement Activities in Fiscal 2007

After completion of the trial period for CSR procurement in fiscal 2006, the Company launched several specific projects during fiscal 2007.

## **Extending Implementation of CSR Procurement to Partners**

## (1) CSR Procurement Seminars

Sumitomo Chemical believes that promoting sufficient understanding among its partners of its concept of CSR procurement is important for encouraging them to properly implement CSR. Accordingly, the Company held CSR procurement seminars for suppliers of raw materials and packaging materials.

#### Results of participation in CSR procurement seminars

Suppliers of raw materials: A total of 17 representatives of 9 trading companies participated in the seminar held on October 18, 2007. Individual consultations were also conducted after the seminar. Suppliers of packaging materials: A total of 47 representatives of 44 companies participated in the seminars held on October 19 and November 7, 2007.

## (2) Survey of Status of CSR Implementation by Partners

The Company directed its attention to companies that participated in its CSR procurement seminars and used its checklists to survey the status of implementation of CSR by its partners (as reported by partners), including those in China. The Company also visited the plants directly and verified the reported details as necessary.

## Companies subject to survey of CSR implementation

Suppliers of raw materials: A total of 41 companies (38 companies in China, 2 companies in Japan, and 1 other)

Suppliers of packaging materials: A total of 27 companies (16 companies in China, 8 companies in Japan, and others)

## (3) Monitoring Adherence to CSR Principles by Partners

In order to determine the degree of adherence to CSR by partners, the Company started to instruct Group companies' to monitor levels of adherence to CSR by the companies they do business with based on information provided by newspapers and other media sources.

## **Extending Implementation of CSR Procurement to Group Companies**

In order to deepen understanding of Sumitomo Chemical's CSR procurement and encourage CSR procurement activities among Group companies both in Japan and overseas, the Company's Procurement Office held information exchange meetings for procurement managers from these companies to explain and discuss the details of CSR procurement.

## (1) Information Exchange Meetings for Japanese Group Companies

The Company explained its CSR Procurement Policy to the procurement departments of 16 domestic Group companies in November 2007 and March 2008.

## (2) Information Exchange Meetings for Overseas Group Companies

In February 2008, the Company held its Global Meeting on Raw Materials Procurement to discuss and exchange views with the representatives of procurement departments of seven overseas Group companies on their CSR procurement efforts. (See "TOPIC" below.)

## CSR Procurement Initiatives for Fiscal 2008

Based on its fiscal 2007 activities, Sumitomo Chemical aims to further enhance its CSR procurement in fiscal 2008 by extending its CSR procurement to its Japanese Group companies as incorporated in the Company's Three-Year Corporate Business Plan.

# Extending Implementation of CSR Procurement to Japanese Group Companies

The Company held meetings for its Japanese Group companies to explain its concept of CSR procurement. In fiscal 2008, the Company plans to implement specific initiatives in cooperation with Group companies.

#### **Systematizing**

The Company is reviewing its CSR procurement initiative launched in fiscal 2007 in order to build a practical CSR procurement system.

## Company Rules that Reflect the CSR Procurement Policy

The Company will fundamentally revise the Procurement Code of Conduct and the Raw Material Procurement Operation Rules to define CSR procurement as one of the criteria for selecting partners with whom to transact business.



### **The Global Meeting on Raw Materials Procurement**

On February 26, 2008, at Sumitomo Chemical's Tokyo Head Office, we held the Global Meeting on Raw Materials Procurement, which was attended by procurement department personnel from seven overseas Group companies. In this third annual meeting, representatives of Sumitomo Chemical's Procurement Office explained the Company's CSR Procure

ment Policy and participants exchanged views on the topic. We reaffirmed that the Sumitomo Chemical Group will take a global approach to promoting CSR procurement as a corporate group.



Procurement personnel from Japan, China, India, Singapore, Saudi Arabia and South Korea who participated in the Global Meeting on Raw Materials Procurement

# Social Activities



As a member of society, Sumitomo Chemical strives to enhance its relationships with local communities and employees.

## Hand in Hand with Employees

Sumitomo Chemical is working to create a workplace environment in which individual employees can make the most of their skills and feel satisfaction in their jobs.

## Specific Key Objectives for Human Resources' Efforts to Further Enhance the Workplace Environment

Sumitomo Chemical has put forth key objectives based on its Three-Year Corporate Business Plan, and is implementing initiatives according to these objectives so that employees can make the most of their skills and feel even greater motivation as well as satisfaction in their jobs.

The key objectives for the three years from fiscal 2007 to fiscal 2009 are detailed below.

### Key Objectives for Fiscal 2007 to Fiscal 2009

## 1. Promoting global human resources measures

With the increasing globalization of the Sumitomo Chemical Group, its presence now encompasses 49 overseas companies boasting a total overseas workforce of over 7,000 persons, a greater number of personnel than for the non-consolidated Sumitomo Chemical itself (6,039 employees as of March 31, 2008). The Sumitomo Chemical Group is also endeavoring to strengthen and promote global human resources policies and systems for the Group as a whole, including overseas affiliates, in order to provide efficient human resources management tools to meet the needs of the Group in its continuing global expansion.

## 2. Promoting human resources policies for boosting morale

To reach new heights as a global company, the Company wants employ-

ees to strive to make the most of their skills, show a high level of motivation, and fulfill their duties and positions to their maximum potential. Based on this principle, the Company implements its human resources policies with the aim of further enhancing employee morale and motivation.

## 3. Developing appropriate personnel plans and securing a solid workforce

Personnel plans will be developed on the basis of the following three fundamental concepts: 1) appropriate personnel management according to business plans; 2) building efficient and effective organizations and jobs as well as further enhancing labor productivity by optimizing the utilization of human resources; and 3) steadily securing talent to match available roles.

In addition, the Company will concentrate on recruiting personnel

capable of conducting business on the global stage as the Company increasingly globalizes its business.

## 4. Further promoting human resource development

In June 2007, Sumitomo Chemical established its HR Development Center to foster and train human resources talent, and to work toward the systematic and focused development of the following related policies:

- (1) Systematically fostering global leaders capable of assuming a core role in management;
- (2) Steady progress in the transfer of skills and technologies that support business:
- (3) Developing the talent necessary for global business development; and
- (4) Supporting the acquisition and development of the required knowledge, skills and competencies for each employee tier.

## Implementation of Employee Training, Reform of Re-Employment Program and other Initiatives

## Revamped Human Resources System for Non-Managerial Employees

In order to cope with changes in social and economic conditions surrounding Sumitomo Chemical, labor and management jointly launched a study group in November 2006 to discuss the introduction of a human resources (HR) system that enables willing and able employees to take on more challenging tasks and be treated according to their contributions to the Company. As a result, we have implemented full-scale reform of the HR system for non-managerial employees, introducing a role-based grade system in July 2007, revamping the Employee Evaluation System in October 2007, and revamping the wage system in April 2008.

### Introducing Mentor System for Early Training of Younger Employees and the Transfer of Skills and Technologies

Sumitomo Chemical introduced a mentor system in January 2008. This system aims at the early training of younger employees and the transfer of skills and technologies by certifying experienced employees who have the skills to train young people as mentors and by having them assume roles as instructors and consultants for younger employees. As of April 1, 2008, 49 employees have been appointed as mentors throughout the Company.

## **Internships for Students from Japan** and Abroad

Sumitomo Chemical is implementing a variety of internships for university and graduate students. In fiscal 2007, 20 university and graduate students from within Japan and abroad participated in practical training at plants and laboratories, including students sent from Japan's Ministry of the Environment under its Eco-internship program and also five students from the Dalian University of Technology

in China, who received two months of practical training. We will continue to offer opportunities for students to learn corporate ethics as well as the connection between corporate activities and society.

### **Launch of the Career Recovery System**

In October 2007, the Company introduced the Career Recovery System, its re-employment program, for people who worked for the Company for more than three years and who left the Company due to: 1) pregnancy; 2) child rearing; 3) nursing care; or 4) job transfer of his or her spouse.

The basic wage upon re-employment is generally set at the same level as when the employee left the Company.

## TOPIC

## Acquisition of Certification Mark for Child Rearing Support

In April 2008, Sumitomo Chemical obtained the next-generation certification mark "Kurumin" from the Ministry of Health, Labour and Welfare. The mark is granted to companies that have fulfilled an action plan developed in accordance with the Law for Measures to Support the Development of the Next Generation, which came into force in April 2005, and provides proof of recognition as a corporation that supports a healthy work-life balance.



## **Establishing On-site Childcare Facilities**

In April 2008, the Ehime Works and Osaka Works started new on-site childcare facilities. The Company is considering doing the same at its other Works and Laboratories. The Osaka Works also accepts any children who reside nearby.



### On-site Childcare Facility-"Sumika Kids Ehime"

Yumi Matsumoto
Business Planning &
Administration Department
Optical Materials
Division (Ehime)



"Both my child and I were full of anxiety since it was our first experience using a childcare facility. Nevertheless, we were immediately able to relax thanks to the cheerful atmosphere as well as the kind and polite staff. My daughter is happy to go to the facility and I can see her growth every day in her facial expressions, her increasing vocabulary and the different kinds of games she plays."

#### Shinichi Kawase

Niihama No.1 Manufacturing Department, Ehime Works



"When I come home, I often find my three-year-old daughter wearing different clothes from the ones she was wearing in the morning. Reading through the daily nursery journal, I can easily imagine her playing in the mud. But there is no need for us to wash her muddy clothes and prepare lunch for her—the facility does it all. We appreciate that the facility is friendly to parents as well as children."

## Aiming to Realize an HR System that Leads to Enhanced Employee Morale and Motivation

### Role-Based HR System for both Managerial and Non-Managerial Employees

Since 2001, Sumitomo Chemical has been implementing an HR system for managerial employees based on their roles and responsibilities. In April 2008, the Company thoroughly revised its HR system for nonmanagerial employees, basing it more closely on the principles applied to management-level staff. Consequently, the Company now has an HR system

that is consistent for both managerial and non-managerial employees.

## **Evaluating Employees According to Their Actions**

Both managerial and non-managerial employees are evaluated not only for performance achievements, but also according to their capacity to act and their implementation of processes for action (managerial employees) or their attitude toward work (non-managerial employees). The aim of this system is not the pursuit

of short-term achievements, but rather the fostering of employees and medium-to long-term business development.

# Introduction of Evaluations for CSR (the Environment, Safety and Product Quality) and Compliance

In order to enhance the awareness of CSR and compliance that is vital to corporate management, contributions to CSR (the environment, safety and product quality) and strict observance of compliance are also evaluated.

## Creating a Comfortable Workplace Environment while also Respecting Diversity

#### **Working Hours**

Sumitomo Chemical continuously implements measures for improving the balance between its employees' work and private life (work-life balance) and also seeks to further raise employees' motivation and morale by offering ways to enhance this balance through shortened working hours and increased time off (as shown in Table 1).

## **Employee Assistance Programs for Childcare and Nursing Care**

Sumitomo Chemical has established various employee assistance programs, as shown in Table 2 (see Table 3 for usage results), to enable employees with childcare or nursing care duties

to more easily fulfill both their work and household responsibilities.

## **Measures for Enhancing Physical** and Mental Health

Sumitomo Chemical has developed its comprehensive Sumika Health Improvement Plan (SHIP) for both mind and body to promote measures for enabling employees to better manage and enhance their physical and mental health.

With regard to mental health, the Company introduced employee assistance programs (EAP) in 2007. Employees are now able to consult external specialist institutions for counseling or obtain a simple stress

diagnosis at any time.

As for physical health, the Company and its health insurance association plan to join forces to address the Specific Medical Examination and Specific Health Guidance initiative.

#### **Diversified Employment**

Sumitomo Chemical accepts applications for employment and recruits talent for a wide range of areas regardless of age, background, gender or nationality based on business plans. In fiscal 2007, the Company recruited 114 new graduates, including exchange student from overseas, and 154 jobchangers with previous work experience.

Table 1 – Measures Relating to Working Hours

Item	Description
Reduced designated working hours (from April 2006)	Daytime workers:1,952 hours to 1,888 hours Shift workers:1,918 hours to 1,883 hours
Instituted "refreshment day" (from April 2006)	Employees are encouraged to leave the work site early one day per week ("refreshment day"), which is designated by the individual facility or workplace.
Number of days of paid leave granted annually (from April 2007)	Twenty days granted to all employees (fewer days for those who have worked less than one year according to the month they joined the Company)
Increased the number of employ- ees qualified for half-day paid leave (from April 2008)	Grants half-day paid leave for those under the flextime program without any core time.
Instituted leave for volunteer activities (from April 2008)	Two days' consecutive leave may be acquired per year.

Table 2 - Assistance Programs for Childcare and Nursing Care

Item	Description
Nursing care paid leave	Twenty days or less per event/available when taking care of sick children or nursing family members (paid leave)
Nursing care leave	Available for up to one year
Childcare leave	Available for up to 18 months, regardless of the reason
Maternity leave	Available once a month, when the applicant undergoes an antenatal examination under the Maternal and Child Health Law (paid leave)
Reduced working hour system	Reduction of working hours by up to three hours per day for employees with children in the third grade of elementary school or younger, or for employees nursing family members

Table 3 - Usage of the Assistance Programs for Childcare and Nursing Care

	FY 2005	FY 2006	FY 2007
Childcare Leave/Nursing Care Leave	51 Employees	48 Employees	51 Employees
Measures for Shorter Working Hours	7 Employees	12 Employees	19 Employees
Limited Overtime and Exemption from Late-night Work	0 Employees	0 Employees	1 Employees
Accumulation of Expired Paid Leave	8 Employees	10 Employees	17 Employees

## Commitment to Employment of Physically Challenged Individuals

Sumitomo Chemical actively employs people with physical disabilities. When assigning physically challenged persons to workplaces, the Company devises work duties in accordance with the particular situation of the individual in question and the degree of their disability, and makes necessary adjustments to the workplace environment (e.g., the addition of wheelchair ramps) to ensure that physically challenged persons can fully exercise their abilities.

## Employment of Physically Challenged Individuals

Fiscal Year	2004	2005	2006	2007
Employment Rate	1.93%	1.85%	1.89%	1.93%

### Introduction of Retiree Re-Employment Program

In fiscal 2001, Sumitomo Chemical began a re-employment program for retirees, and in April 2006 introduced a new re-employment program in conformity with the revised Law concerning Stabilization of Employment of Older Persons. In fiscal 2007, 129 (63%) out of 205 retirees (those who worked for Sumitomo Chemical) were re-employed. They are now once again providing the Company with the high levels of skill and expertise they have cultivated over many years at their respective workplaces.

### No. of Re-Employed Retirees on Payroll

End of March 2005		End of March 2007	
48 persons	48 persons	125 persons	211 persons

## **Protection of Human Rights**

Sumitomo Chemical has been promoting various initiatives, mainly training programs, so that each employee will have a proper understanding of human rights issues and behave in a responsible manner.

Sumitomo Chemical has undertaken company-wide efforts to prevent sexual harassment and similar behavior. These entail not simply determining whether specific behavior in individual cases qualifies as sexual harassment, but seeking to create a workplace where people can demonstrate their skills regardless of gender. The Company will continue its efforts to raise the awareness of employees based on this concept.

## Aiming to Train World-Class Professionals and Working to Enhance Related Systems

Sumitomo Chemical implements training rotations and offers a range of human resources development programs to train world-class professionals who can help enable Sumitomo Chemical to reach new heights as a global company. In line with the new HR system, these programs also enable motivated personnel to utilize their skills to their full potential.

### **Training Rotations**

Since fiscal 2004, the Company has been carrying out systematic training rotations of younger employees to ensure future placement of individuals in positions for which they are best suited. In certain juncture years (administrative employees: 4th, 7th and 11th years with the Company; technicians: 5th, 9th and 12th years with the Company) employees rotate positions in a range of fields, including overseas assignment postings, to enable them to gain broader experience. The wishes of the employees themselves and their competency (ability to produce results) are also taken into account in these rotations. To date, 173 employees (40 employees in fiscal 2007) have undergone training rotations.

## **Enhanced Human Resources Development Programs**

In June 2007, the Company established its HR Development Center as an organization for implementing efficient and effective human resources development. We have also formulated

## **HR Development Program**

	Basic management knowledge training		
Knowledge/	Primary course		
skills	Specialized knowledge training (legal affairs, intellectual property, RC, etc.)		
Transfer of techniques and skills	Training common to the production departments		
Competency	Competency development training		
Support for globalization	TOEIC test		
	English conversation training (by priority level)		
	English business writing course		
	Global communication skills training		
	Overseas assignment/studying abroad (MBA)		
	Global trainee program		
Early	Global leader training		
cultivation of global leaders	Leadership training		
Others	CSR training		
	Life design training		

new company-wide policies on human resources development and training, under which systematic and focused measures are created.

In fiscal 2007, the HR Development Center held regular training seminars focusing on improving practical English communication skills, in addition to existing human resources development programs. These included enhanced training for employees due to be stationed abroad and training in the delivery of presentations.

## **Preparation of Training Guidebook**

In order to ensure that training is implemented effectively, the Company prepared and distributed to all employees a Training Guidebook that lists training courses and specifies the

purpose, coverage, and criteria for attending courses as well as curricula.



## Working Hand in Hand with Local Communities and Society

Sumitomo Chemical upholds its mission of prospering together with the local community in conducting its business operations. In this spirit, Sumitomo Chemical, as a responsible member of society, strives to foster good relations with local communities and employees.

## **Promotion of CSR Activities Unique to Sumitomo Chemical**

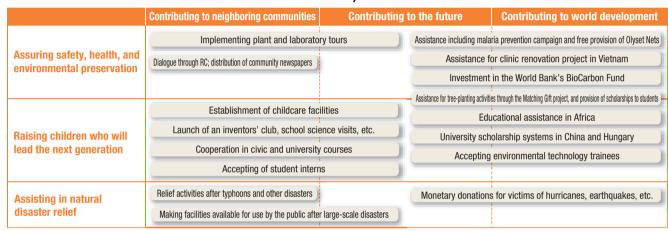
#### -Basic concept

Sumitomo Chemical undertakes its CSR activities from the threefold perspective of prosperous co-existence with local communities, continuous support for society into the future and as a global company conducting business worldwide.

The Company has been promoting activities for contributing to society and enhancing communication between plants and research laboratories at every Group Company and local communities, plotting a matrix of its efforts along the vertical axes of: (1) assuring due attention to safety, the environment and health; (2) raising children who will lead the next gen-

eration; and (3) assisting in natural disasters, and also the horizontal axes of: (1) contributing to neighboring communities; (2) contributing to the future, starting with educational assistance for children; and (3) contributing to world development by providing assistance to the international community. (Please refer to the matrix below.)

#### Matrix of Sumitomo Chemical's many Social Contribution Activities







Sumitomo Chemical's Works and Research Laboratories strive to build and maintain goodwill relationships with local communities and also work to provide people in the communities with an accurate understanding of the Company's business. For this purpose, they engage in the disclosure of information and various means of communicating on a day-to-day basis with the communities they operate within by conducting plant and laboratory tours, providing facilities for community events, and holding community dialogue gatherings.

## Shifting the Focus of Plant Tours from "Seeing" to "Experiencing"

The Ehime Works has been active in its exchanges with local communities, especially by offering plant tours. In fiscal 2007, a new experimental "Plant Tour you can Experience" was introduced, and also a summer holiday science class for parents and children was held on August 11. On this day, a variety of programs were presented. These included tours of the integrated instrument room controlling the entire plant and resin and liquid crystal film plants, experiencing the world at minus 180°C through liquid oxygen, and an activity which saw parents and their children make putt-putt boats with simple heat engines, which they raced. A total of about 30 participants including elementary school children, their parents and teachers were offered an opportunity to discover the world of chemistry, which was largely unfamiliar to them.

At the Ehime Works, approximately 1,000 people, including the members of residents' associations and elementary school children, visited its plant and historical reference library in fiscal 2007, and a total of 18 science classes were held (with approximately 800 participants) at neighboring elementary schools. The Ehime Works will continue to carry out these and related activities in the hope that members of the community will become more familiar with the chemical plant and discover the joys of studying science.



Children excitedly watching the phenomena that occur at minus 180°C during the summer holiday science class for parents and children

## Seaside Clean-up Activity—Love Earth Clean Up 2007

Love Earth Clean Up 2007 is a joint Korea-Japan project to clean, together and on the same day, the seaside of the northern coast of Kyushu and the southern part of Korea, which face each other across the Genkai Sea. The project was started in 1992 and Sumitomo Chemical's Fukuoka Branch Office has been participating in the activity since 2004 as a member of the Sumitomo Nisuikai,



Clean-up activity at Uminonakamichi Seaside Park in Fukuoka

which comprises 65 affiliate companies of the Sumitomo Group.

On June 10, 2007, approximately 350 people from the Sumitomo Nisuikai gathered at the Uminonakamichi Seaside Park (in Higashi Ward, Fukuoka City) and collected about 1,600 bags of waste from the beach together with people from Fukuoka City's Port & Harbor Bureau and others.

### Sphere of Volunteer Efforts Expanding Japan Table Tennis Championships for the Disabled

On October 20 and 21, 2007, employees of the Osaka Works participated as ball persons in the Eighth Japan Table Tennis Championships for the Disabled held in Osaka City. This was the third time we have been involved in the event. We also invited six neighboring companies that we hold exchanges with to participate and, in total, 146 people took part in the two-day event.



Employees assisting in the championship event as ball persons, retrieving balls that roll out of reach of participating players

During the opening ceremony, the President of the event expressed his thanks to volunteers and noted, "Ball people are essential to the games," adding, "We appreciate the cooperation of corporate volunteers from Sumitomo Chemical and other companies." The players also offered a big round applause for our efforts.

Volunteers also commented that they felt inspired by the way the players do not let a disability stand in the way of their spirited sportsmanship. We will work to further expand the sphere of volunteer efforts with an eye to providing continuing support for the entire community.



In order to encourage childrenthe leaders of the future-to develop an interest in science and technology, Sumitomo Chemical's Works engage in a variety of activities tailored to the particular needs of communities. Such activities include accepting local high school students as interns, and organizing school science visits.

### **Providing Opportunities to Consider** Career Options—Accepting Student **Interns**

The internship program is intended to provide participants with basic knowledge and skills and also help them cultivate perspectives on careers and work. In fiscal 2007, the Oita Works accepted a total of nine students from local high schools and technical junior colleges. The students studied how the Oita Works operates, initiatives implemented for plant safety, and were able to experience inspections of instruments and equip-

ment and also participate in patrols. We will continue to actively accept student interns in cooperation with local schools.

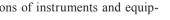
### **Inventors' Club for Conveying the** Pleasure and Thrill of Creating Things

The Chiba Works started the Ichihara-Sodegaura Young Inventors' Club in 2002 in commemoration of its 35th anniversary with the aim of contributing to the development and invigoration of local communities. The enthusiasm and steadfast cooperation of numerous parties have been essential to the continuation of these activities. Those parties include the Ichihara and Sodegaura boards of education, 42 volunteer instructors comprising Chiba Works employees and former employees as well as schoolteachers, and community residents.

In fiscal 2006, we began conducting school science visits, making use of science classes at elementary schools, to allow a greater number of school children to experience the joys of science. In addition, we have taken part in local community events in the form of handicraft classes, to the delight of local citizens.



The Ichihara-Sodegaura Young Inventors' Club, where 150 children from the third grade of elementary school to the second grade of junior high school are selected by lottery each year to experience the joys of science



### Intern Experience—Feedback from High School Students

"Through the five-day practical training, I was able to learn about the atmosphere, the rules, the strictness, and the pleasures of the workplace. I will put the learning I gained in this practical training to use in my daily life from now on."

"I was accepted (as in intern) into the Environmental Services Section. This section is where harmful substances

are transformed into safe ones and this section is so important that the Works cannot operate without it. I hope the section will continue working to prevent problems."

"Everyone in the workplace was really nice and they took time to answer my questions, and I learned a lot during the three days I spent there."



## An instructor at the Young Inventors' Club

Catalyst Material Design Group, Petrochemicals Research Laboratory Shunji Murao



"I have worked with many children over the past five years, and I feel that I too have grown just as much as the children. I plan to continue these fun activities with the children of the Young Inventors' Club."

> Polypropylene Group, Petrochemicals Research Laboratory



#### Masatada Tasaka

"Children often surprise me with their innovative ideas in free handcrafting. While children have abundant knowledge, they actually have a hard time in handcrafting, and instructors also have hard time helping them to solve their problems. I am happy to see the smiles on the kids' faces once they have completed their craftwork."

### Sumitomo Chemical Cup Sports **Events for Promoting the Healthy** Growth of Children

The Misawa Works hosts various sporting events for promoting the healthy growth of children in the community through sports. In the boys' baseball tournament, which celebrated its 17th anniversary in fiscal 2007, employees of the Misawa Works worked as volunteers, managing the site and acting as umpires together with other local residents involved in baseball.

In fiscal 2007, we also introduced new volleyball and ice hockey events. With the support of the various community associations involved, the events turned out to be a great success.





From the perspective of a global company developing its businesses all around the world, we are actively engaged in CSR activities unique to Sumitomo Chemical, working for the protection of the global environment and the sustainable development of society.

### Initiatives for Achieving the U.N. Millennium Development Goals

On May 6, 2008, Sumitomo Chemical's President, Mr. Yonekura, attended the Business Call to Action, a conference hosted by the United Kingdom and others, which attracted top representatives of leading companies throughout the world, and signed the Business Call to Action Declaration.

The Business Call to Action Declaration pledges that every government and corporate leader shall work with a sense of urgency and devotion toward the achievement of the Millennium Development Goals\*. It was launched at the proposal of U.K. Prime Minister Gordon Brown.

One of the Millennium Goals is to combat HIV/AIDS, malaria and other diseases. It intends to halt the incidence of malaria and other diseases by 2015, and then reduce the incidence rate thereafter. Sumitomo Chemical has been supporting malaria prevention projects of African nations and international institutions through the provision or donation of our Olyset Nets, a proprietary mosquito net we developed to combat malaria. We will continue our efforts toward the achievement of the Millennium Development Goals in cooperation with related institutions.

### Vietnamese Clinic Renovation **Project**

Sumitomo Chemical, in cooperation with the nonprofit organization (NPO) World Vision Japan, assisted with a renovation program for a clinic in the Van Yen district of northern Vietnam. On March 12, 2008, an opening ceremony was held with the governmental officials from the region and local residents playing key roles.

One patient expressed gratitude, saying, "I feel much better about coming to see the doctors at the new clinic than I did at the old, run-down clinic. It's much easier to see the doctor and receive treatment. I also find that the clinic staff members seem to work more energetically and have a greater interest in treating patients."

Sumitomo Chemical is hopeful that the medical care and hygiene of the region will improve thanks to this clinic. and that this will contribute to the autonomous development of the entire region.

### Conveying the Realities of the African Situation—Supporting the One Life Experience Project

Sumitomo Chemical supports One Life Experience, an event organized by the NPO World Vision Japan that aims to convey an experience of Africa not possible through textbooks.

This event is intended to simulate the severe environment in which African children live. The concept is to comprehend the actual living conditions in Africa and consider what each of us can do to improve the situation.

Starting with an inaugural event held in November 2007 in Tokyo, the project has now been held at a total of four venues in Tokyo, Kobe and Sapporo, and was attended by as many as 8,516 participants (as of June 2008).



"Message to the children of Africa"



## Simulatina the Experiences of African Children

—Comment from a Participant in One Life Experience

"I was able to gain an understanding of deplorable conditions African children actually live in-something that can never be learned from textbooks. It made me think of what I could do-right now-for children who must contend with this degree of poverty and grief."



Renovated clinic (Vietnam)

Clinic opening ceremony

\* Millennium Development Goals: Based on the U.N. Millennium Declaration adopted by the United Nations in September 2000, the MDGs comprise eight goals to be achieved by 2015, including the eradication of poverty, the achievement of universal education, environmental sustainability and the promotion of gender equality, and outline specific action plans.



to society among its key social responsibilities as a company. When making donations, the Company takes into consideration a comprehensive range of factors, including the importance to society, the long-term sustainability and urgency.

### Launching New Social Contribution Activities Based on Employee Participation

Sumitomo Chemical has been carrying out social contribution activities unique to the Sumitomo Chemical Group, such as malaria prevention activities and the Young Inventors' Club, as part of its CSR. With a view to further expanding and spreading these social contribution activities, the Company started the Matching Gift project as an employee-based activity in November 2007. The project is intended to invite donations from Board members, executives and employees. The Company matches the amounts donated and then the total is pledged to support causes.

In March 2008, approximately 11 million yen was donated to OISCA (The Organization for Industrial Spiritual and Cultural Advancement-International) to support its tree-planting activities. This amount included donations from Board members, officers and employees of Group companies both in Japan and abroad, in addition to the amount offered by the Company.

Sumitomo Chemical provides as-

Continuing donation of Olyset Nets

sistance for tree-planting activities as part of its efforts to reduce CO<sub>2</sub> for the prevention of global warming. For instance, donations are put toward a project in Ranong Prefecture in southern Thailand for planting mangroves, which have a high capacity to store CO<sub>2</sub>.

### Contributing to the Development of Friendly Japan-China Relations through Scholarships for Chinese Students

Sumitomo Chemical has established a scholarship system for students of the Dalian University of Technology and the School of Japanese Studies at Dalian University of Foreign Languages in Dalian City, Liaoning Province, China. These institutions enjoy a close relationship with the Company, which has local operations for the production of Olyset Nets and is establishing affiliated companies in China.

Fiscal 2007 marks the second round of the scholarship program. Upon being granted a scholarship at the Dalian University of Foreign Languages, the recipient students expressed thanks, with one saying, "The scholarship was granted to reward my achievements during the past year, and is an incentive for me to continue studying Japanese." Although this is only a small effort, we believe that the sum total of such efforts will help deepen ties between Japan and China.

#### FY 2007 Donations

Community activities	130
Sports	35
Education/Social education	30
Culture/Arts	18
Academics/Research	10
Social welfare	15
International exchange/ cooperation	31
Health/Medicine	9
Environment	11
Historical/Traditional cultural preservation	8
Assistance to disaster-stricken areas	5
Assistance for town development to strengthen disaster prevention	4
Creating the foundation for NPOs	2
Others	176
Total Number of Donations	484

(Amount: 350.8 million yen)

#### **Principal Donations** (Millions of yen) U.S. NPO Malaria No More (Free 56 provision of Olyset Nets) Expansion of basic assets of the 38 Sumitomo Foundation Project commemorating the 150th anniversary of Japan-France rela-20 Repair work on the Sumitomo 16 Collection Project commemorating the 60th anniversary of the foundation of 15 Osaka Philharmonic Orchestra Relocation of the Ise Shrine 10 TICAD IV side event 10 Preparation Foundation for the establishment of Makuhari 10 International School

Japan-China culture & sports

exchange project



Presentation ceremony for Dalian University of Technology scholarships

## Communication

Sumitomo Chemical is engaged in activities to improve public understanding of the Company by enhancing information disclosure for and promoting dialogue with its various stakeholders as a means of further gaining their confidence. The Company also responds in good faith to comments it receives as part of the fulfillment of its social responsibility as a corporate citizen.

### Company-wide Risk **Communication Activities**

Sumitomo Chemical actively works to improve risk communication by developing company-wide policies on risk communication and further defining tasks and items for specific initiatives. Actual undertakings at each Works are notable for their originality and their emphasis on their individual creativity and independence, with local conditions also being taken into consideration based on Company policy.

### **Initiatives Unique to Individual Works for Information Disclosure** Rooted in the Local Community

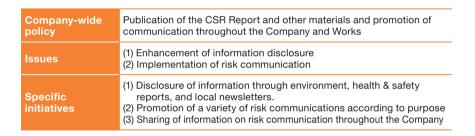
CSR reports and other materials are issued regularly by the Company and all its Works. Works versions are called "Report on the Environment, Health and Safety," and compliment the company-wide CSR Report with regard to local efforts. The layout and content of these reports differ greatly by Works, all of which aim to produce their own unique report.

In addition, three Works (Ehime, Osaka and Oita) publish local newsletters providing area-specific information. These newsletters are read with interest in the local communities and lead to an enhanced relationship and deepened friendship with the community.



### Implementing a Variety of Risk Communication Dialogues

Each Works engages in a variety of risk communications for various purposes. These include risk communication model projects carried out jointly with local governments, support projects related to the environment and safety for governments and businesses both in Japan and abroad, regular meetings with local residents, and local dialogues based on cooperation within the chemical industry. The Company will further enhance these initiatives unique to Sumitomo Chemical in order to provide continuous and effective communications.



## **Responsible Care Regional Dialogue Held to Promote Communication with Local** Residents on Subjects such as **Environmental Preservation and Disaster Prevention (Oita Works)**

On February 16, 2008, the Oita Works co-hosted the 6th Oita Region RC Regional Dialogue sponsored by the JRCC (Japan Responsible Care Council) member companies in the Oita Region, including Sumitomo Chemical. The event was held at a local hotel, and some 130 people, including 54 local residents, participated.

In this dialogue, we prompted communication with the community by presenting relevant issues such as environmental preservation and disaster prevention as initiatives for companies' RC activities. Sumitomo Chemical outlined its initiatives to combat global warming as one case study, advocating that not only efforts on the part of businesses but also by each individual in the community are essential in order to solve problems associated with global warming.



In the panel discussion, joined by representatives from the community, environmental NPOs, universities, governments and corporations, frank questions and comments were presented from the floor in addition to the panelists, which stimulated vigorous debate.

# Economic Activities



Focusing its efforts in its six core Business Sectors,
Sumito mo Chemical promotes Sustainable Chemistry
through CSR management, and is currently working to boost
profitability by continuously developing and supplying
products and services that enhance people's lives.

## Three-Year Corporate Business Plan (Fiscal 2007-2009)

In April 2007, Sumitomo Chemical launched its new three-year corporate business plan, under which the Company aims to reach new heights as a global company. The Company is working to steadily realize profits from the aggressive business investment conducted under the previous plan (fiscal 2004-2006), as well as further strengthen the core businesses in each Business Sector and rapidly cultivate new businesses. In particular, completion of the Rabigh Project, scheduled to start commercial operation in the first quarter of 2009, is top priority.

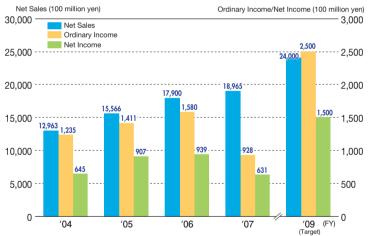
### Basic Principle of the Three-Year Corporate Business Plan

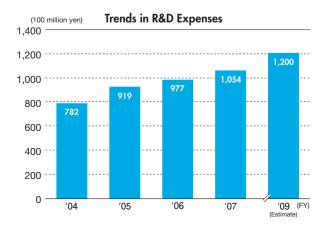
Sumitomo Chemical aims to achieve and consolidate high profitability and secure sustained growth potential to generate the added value our shareholders expect in our business as we work to reach new heights as a global company.

#### **Basic Initiatives**

- 1) Complete the Rabigh Project
- 2) Enhance global management to support global business development
- 3) Expand the Company's businesses in the life sciences and IT-related materials and strengthen their competitiveness as well as enlarge value-added components of every Business Sector
- 4) Determine strategic investment framework and accelerate corporate research
- 5) Maintain a robust balance sheet
- 6) Ensure thorough legal compliance and promote CSR

### Trends in Net Sales, Ordinary Income and Net Income (consolidated)





## **Summary of Business Sectors**

#### **Basic Chemicals Sector**

The Basic Chemicals Sector provides various manufacturing industries with a wide variety of products, including industrial chemicals and inorganic materials, alumina products, methyl methacrylate (MMA) monomer and polymer and aluminum.



Methyl methacrylate (MMA) products

In order to satisfy rapidly increasing demand, particularly in China, we enhanced our production capacity in Singapore and Korea. Currently, the Sumitomo Chemical Group boasts the largest production capacity in Asia in the area of MMA polymer and its raw material, MMA monomer, and continues to strengthen its presence going forward. We make continuous efforts to meet the rapidly increasing demand for caprolactam, the raw material for nylon used for synthetic fibers, in countries where demand is strong, particularly China—where demand is booming-and enhance our bases of operation through rationalizations and technical enhancements. In addition, we hold a major share of the global market for high purity alumina,



Caprolactam plant (Ehime Works)

which is being increasingly used in new applications such as components for light-emitting diode (LED) base materials and lithium-ion secondary batteries, and we continue to develop products to meet our customers' needs.

### **Petrochemicals & Plastics Sector**

The Petrochemicals & Plastics Sector is engaged in the manufacture and sale of a wide range of petrochemical products, including organic chemicals like propylene oxide and styrene monomer, synthetic resins like polyethylene and polypropylene, and also synthetic rubber. The sector has positioned completion of the Rabigh Project for the construction and operation of a world scale integrated refining and petrochemical complex as its top priority. The Project is progressing steadily toward completion, with commercial operation scheduled to begin in the first quarter of 2009. This Project will secure a stable supply of cost-competitive feedstock, and construction of world-class production facilities will enable the Project to leverage economies of scale. This Project will allow Sumitomo Chemical to significantly boost the profitability of

its petrochemical business and further accelerate global business development in the three major regions where the Company has operations, namely Japan, Singapore and Saudi Arabia. Sumitomo Chemical has already established production centers for polypropylene compounds used in automo-

bile bumpers and interiors to expand its business in North America, China and Europe. In order to strengthen capabilities for supplying materials to the globally expanding automotive industry, the Company will also establish production centers in Thailand and Saudi Arabia.



The Rabigh Project under construction progressing toward the start of commercial operations in the first quarter of 2009

#### **Fine Chemicals Sector**

The Fine Chemicals Sector is engaged in the manufacture and sale of specialty chemicals such as resorcinol, additives for rubber and polymers, and pharmaceutical chemicals such as active pharmaceutical ingredients bulk and intermediates. Resorcinol is widely used as a raw material in adhesives for rubber and wood, as well as in flame-retardants, but most commonly as a raw material in adhesives

for binding tire rubber with reinforcing material. In recent years, automobile production has been steadily increasing in developing countries throughout Asia, particularly China, and the Company has undertaken the construction of new facilities at its Oita Works to meet the growing demand. Construction of the new facilities at the Oita works, in addition to its existing facilities at the Chiba Works,





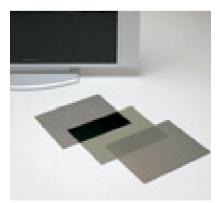


Resorcinol used in adhesives for tires

will give the Company two production centers, providing it with the capabilities to ensure a stable supply. Polymer additives are essential for maintaining and improving quality in the processes of manufacturing and using synthetic resin and rubber. Sumitomo Chemical works to enhance the performance of and add value to its polymer additives and also step up its sales activities in order to meet the needs of its customers. Sumitomo Chemical is one of the world's top manufacturers of pharmaceutical chemicals and supplies a variety of active pharmaceutical ingredients and intermediates to manufacturers of pharmaceuticals both in Japan and overseas. The Company is working to enhance its strict quality assurance system as well as its accumulated organic synthesis and industrialization technologies, and is also increasing its sales force in Europe and the U.S. while at the same time working to enhance its logistics system aiming for further expansion in this Business Sector.

#### **IT-Related Chemicals Sector**

The IT-Related Chemicals Sector is engaged in the manufacture and sale of liquid crystal display (LCD) materials such as polarizing film, color filters, light diffusion sheets, aluminum sputtering targets and pigment-dispersed resists, and semiconductor



Polarizing film, one of the components needed for the production of LCDs

processing materials such as highpurity chemicals and photoresists, in addition to super engineering plastics. In the area of LCD materials, the market for LCDs, including large-screen televisions, is growing rapidly and, in order to meet the increasing demand, the Company is enhancing its production capabilities for polarizing film and light diffusion sheets in Korea, Taiwan, China and Poland, The Company also works continually to enhance technological development and product quality as well as to accelerate the development of new products in response to its customers' requirements. In addition, the trend toward increasing miniaturization of semiconductor circuits is driving growth in the market for argon fluoride (ArF)

immersion resists, and the Company has built a new plant for ArF immersion resists at the Osaka Works and has also equipped laboratory facilities with advanced performance evaluation devices in the Company's efforts to expand its business in the area of semiconductors.



Photoresists

## **Agricultural Chemicals Sector**

The Agricultural Chemicals Sector is engaged in the manufacture and sale of agricultural chemicals such as insecticides, fungicides, herbicides and plant growth regulators, fertilizers, household insecticides, public hygiene insecticides and feed additives, and exports a large variety of products to more than 100 countries around the world. In 2007, in its agricultural chemicals business, the Company integrated Sumitomo Chemical Takeda Agro Co., Ltd., formed in 2002 as a joint venture with Takeda Pharmaceutical Co., Ltd., in order to strengthen its competitiveness and optimize business management efficiency. This integration has generated a variety of synergies, including capabilities for consistent management from the production of active ingredients to the marketing of final products, and also the development of new products that satisfy customers' needs. In the



DL-Methionine (feed additive)

household insecticides and public hygiene insecticides businesses, the Company is working to expand the markets for new products to achieve further overseas business expansion. The Company is also directing its efforts to increasing sales and distribution of its anti-malarial Olyset Net, which has been endorsed as a long lasting insecticidal net (LLIN) by the World Health Organization (WHO) and other international organizations. In the feed additives business, the Company is expanding marketing activities for DL-methionine in response to growing demand.



A variety of household insecticides

#### **Pharmaceuticals Sector**

The Pharmaceuticals Sector is centered on Dainippon Sumitomo Pharma's ethical pharmaceuticals business and Nihon Medi-Physics' radiopharmaceuticals business as well as their related operations. Dainippon Sumitomo Pharma (DSP), which was formed in October 2005 following the merger of Sumitomo Pharmaceuticals and Dainippon Pharmaceutical, focus-



Amlodin (therapeutic agent for hypertension and angina pectoris)

es its research efforts on the fields of diabetes and cardiovascular diseases, psychoneurotic disorders and inflammation and allergies, and is actively engaged in the development of new drugs to treat such diseases. DSP's four main products are Amlodin (therapeutic agent for hypertension and angina pectoris), Gasmotin (gastroprokinetic agent), Prorenal (vasodilator),



Meropen (antibiotic)

and Meropen (carbapenem antibiotic). DSP is concentrating its marketing resources on these four main products to enhance its revenue base in Japan and working toward global development by establishing direct marketing capabilities overseas for Lurasidone, its atypical antipsychotic agent for the treatment of schizophrenia. Nihon Medi-Physics specializes in research & development, manufacture and supply of in vivo diagnostic radiopharmaceuticals and diagnostic radiopharmaceuticals for positron emission tomography (PET), a procedure considered useful for the early diagnosis of diseases such as malignant tumors. In addition, Nihon Medi-Physics is engaged in sales of Iodine-125 radioactive seeds used in brachytherapy for the treatment of prostate cancer as well as radiopharmaceuticals used to relieve pain due to bone metastasis of solid tumors.

## **Independent Assessment**

Having become eligible under the environmental rating-based interest subsidy system of the Development Bank of Japan (DBJ), Sumitomo Chemical can now procure investment funds for global warming prevention at low interest rates. In the future, the Company will continue to strengthen environmentally conscious programs and step up its activities to address global warming.

Environmental Rating-based Loan Granted to Sumitomo Chemical Co., Ltd.

First Application of the Environmental Rating-based Interest Subsidy System to a Chemical Company (News release issued by the Development Bank of Japan)

News Release

December 12, 2007 Development Bank of Japan

Environmental Rating-based Loan Granted to Sumitomo Chemical Co., Ltd. First Application of the Environmental Rating-based Interest Subsidy System to a Chemical Company

- On November 30, 2007, the Development Bank of Japan (DBJ) selected Sumitomo Chemical Co., Ltd. (Head Office: Chuo-ku, Tokyo) as a loan recipient under its Loan Program for Promotion of Environmentally Conscious Management and granted an environmental rating-based loan.
- 2. Under the Loan Program for Promotion of Environmentally Conscious Management, companies are scored in terms of environment-oriented management according to a screening system (rating system) developed by the DBJ to select outstanding companies, and the interest rate for loans is set for each company at one of three different rates according to the score obtained. This financing system is the first in the world to incorporate this kind of environmental rating.
- 3. Sumitomo Chemical has been engaged in Responsible Care (RC) activities, voluntary activities of the chemical industry aiming at protecting the environment, and ensuring safety, health and product quality, and has been actively engaged in its Sustainable Chemistry initiative for comprehensively increasing the social value and impact as well as the economic added-value of chemical products.
  - In this assessment, the DBJ rated the following three efforts of Sumitomo Chemical highly: (1) the Company' s involvement in the development of Green Processes focusing on the reduction and control of the environmental impact of manufacturing processes; (2) the Company conducts risk-based strict management of chemical substances; and (3) the Company directs special attention to the importance of communication with the local community and encourages each local factory to develop voluntary programs to promote communication with local residents. Consequently, the Company was rated as "a particularly advanced company in the promotion of environmentally conscious activities."
- 4. Recognizing that combating global warming is an issue of global concern, the DBJ established its environmental rating-based interest subsidy system during the current fiscal year as a new option for environmental rating-based financing. Under this system, companies that have acquired the DBJ Environmental Rating and pledged to reduce their CO2 emission rates by at least 5% within five years are given a 1% reduction in interest on loans used for combating global warming. Recently, Sumitomo Chemical acquired the DBJ Environmental Rating and pledged to reduce its CO2 emissions by the specified amount. The DBJ thus granted Sumitomo Chemical a preferred interest rate on loans for the Company's initiatives to address global warming. Sumitomo Chemical was the first chemical company to acquire preferential treatment under this system.
- The DBJ will continue to implement its environmental rating-based interest subsidy system to accurately evaluate environmentally conscious business management in an effort to combat global warming.

(Translated by Sumitomo Chemical)

## Independent Review by KPMG AZSA Sustainability Co., Ltd.



#### Independent Review Report on "Sumitome Oscoled CSR Report 2005"

To the Board of Observes of Sentimes Chemical Company, Ltd.

#### 1. Purpose and Scope of our Review

to have revisioned "Sumitorio Chemical CSB Support 2005" (the "Report") of Sumitorio Chemical Compa (the "Company") for the year mobile March 10, 2008. Our engagement was designed to expect to the Company based on the results of our review, the condition of the conformation and salety necksonesses includes etal accounting indicators, and social preferes information for the period from April 1, 200° to March 31, 2000 pullsdraft to the Report.

The Report, including the identification of material issues, in the empoundable of the Company's manager multility is to independently report the smalls of our procedures performed on the bedrames.

We conducted our service selecting to the "International Numbers on Assurance Engages 2005 around to the immunicional federation of Accountaints (EAC) and in accordance with the "Practice Contributes no Engagements on Sustainability Information" (February 2008) bound by the Japanese Association of Assessor Digardentess for Sestainability Information, with the criteria which are the mandards the Company breaked (for "Company's Handards") drawing upon reference including the "Sectionmental Reporting Contributes (Facul Year 2017 Ventury) (June 2017) tensed by the Ministry of the Environment of Japan and the "Sustainability Reporting Contributes Venture 347 (Chickes 200) second by the Chickel Reporting Solutions.

#### 5. Principlants Performed

We have performed the billowing review procedures;

- (f) With respect to the Company's policies for compilation of the Report, intercement the Company's impossible
- (2) Assessed the Company's Standards used for collecting, compiling and exporting the Indicate
- (3) With respect to the way of collecting the Indicators and the process flow of calculating these, interviewed the Company's responsible personnel and reviewed the systems and processes used to generate the values of the
- 0) Compared the indicators on a sample basis with the supporting orthonous to not the conformity in collection, compilation and reporting of the Indicators in the Company's Standards.
  (It Made on site importance of the Company's facilities dissession.
  (It Endoated the ownell distraction to which the Indicators are expressed.

#### 6. Results of the Propoduces Performed

We believe that our review procedures provide a manowable basis for our co

Based on our service, nothing has come to our attention that causes us to before that the faulticature in the Sauce are not collected, compiled and reported, to all material respects, nationally and its accordance with the Company's

Our firm and impagement numbers have no interest in the Company which would have to be disclosed pure to the provisions of the Assurance Standard for Environmental Expects sprint constant passed by the Ministry of the

KPM's AZSA Audionlike Co. Led.

KPARG-ASKA Sustainability Co., Dall

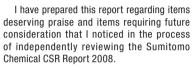
Challes Super-



## **Reviewing Sumitomo** Chemical CSR Report 2008

Senior Manager KPMG AZSA Sustainability Co., Ltd.

Akira Kajiwara



With the problems facing Africa attracting increasing attention in Japan since the Tokyo International Conference on African Development in May 2008,, Sumitomo Chemical's report on its CSR activities focusing on the Olyset Net deserves praise as disclosure of information that serves the interests of society. In April 2006, soot and dust emitted from the Ehime Works exceeded emissions standards. The details of this accident have been explained in the CSR Report and other documents, and this deserves praise for reflecting Sumitomo Chemical's serious attitude toward the candid disclosure of even negative information.

Nevertheless, the main body of the CSR Report should have contained more data on topics of global relevance, including the Company's environmental performance. While the separate "CSR Report Data Book" contains data on the Company's environmental performance in foreign countries, readers could better assess the overall performance of the Sumitomo Chemical Group as a global company if such information were included in the main body of the CSR Report. Because the CSR Report is published each year, it can be regarded as a "report card" that shows the degree to which targets for a given year have been achieved. When we consider the nature of CSR reports, we find relatively few records pertaining to the degree to which targets set for a given year (in this case, fiscal 2007) were achieved. This can make it difficult for readers (stakeholders) to evaluate the CSR activities conducted that year.

Sumitomo Chemical's CSR activities are characterized by the combination of its business principles, as represented by its contributions to society through its Olyset Net business, and its unique technologies. We expect the Company to continue to engage in such serious initiatives well into the future.



As a Responsible Care company, Sumitomo Chemical Company, Limited voluntarily implements policies that take safety, the environment and health into consideration in all processes, from chemical substance

that take safety, the environment and health into consideration in all processes, from chemical substance development to disposal. The Responsible Care mark and logo may only be used by companies that are members of the Japan Responsible Care Council.



The PRTR Awards are designed to acknowledge companies and business establishments that understand the purpose of the PRTR system, take initiative in chemical substance management and actively promote communication with the local residents to gain their understanding. The logo may only be used by companies that have received the Grand Prize at the PRTR Awards.



Only companies and organizations participating in the national campaign against global warming —Team Minus 6%—are permitted to display this logo.



Sumitomo Chemical actively promotes the support program for employees who choose to continue working while raising children. Companies that introduce practical measures to cope with the declining

birthrate under the Law for Measures to Support the Development of the Next Generation are permitted by the Ministry of Health, Labour and Welfare to use the next-generation certification mark "Kurumin."

## SUMITOMO CHEMICAL

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