

Responsible Care Report 2009

Approach to safety and environment issues

If you have questions, please contact:

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 **SUMITOMO SEIKA CHEMICALS CO.,LTD.**



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In publishing Responsible Care Report:

Having the motto of “securing the company’s co-existence and co-prosperity with the society”, our group intends to contribute to the society by “developing world-class creative and advanced technologies in the field of chemical industry” as well as “supplying unique and quality products at home and abroad”.

We strongly believe that steady and incessant endeavors for improvement in “safety, the environment and quality” will never fail to bring us a bright and prosperous future. We are determined to play a role that is hoped for by the society through our continued R&D of technologies and products useful for mankind, while constantly paying due attention to issues of safety, the environment and quality.

Sumitomo Seika Group Action Charter

1. We respect Sumitomo’s operational rules and aim for coexistence and co-prosperity with society.
2. In the chemical field, we develop original technology accepted in the world, and contribute to society by supplying high quality products both domestically and internationally.
3. We observe laws in and outside the country as well as company regulations, social rules and ethics, and act with social sound judgment.

Corporate profile (as of March 31,2009)

Corporate Name Sumitomo Seika Chemicals Company, Limited.
Head Office [Osaka]The Sumitomo Building 4-5-33 Kitahama, Chuo-ku, Osaka 541-0041, Japan
 [Tokyo]Nihon Jisho Building No. 1 1-13-5 Kudan Kita, Chiyoda-ku, Tokyo 102-0073, Japan
HomepageURL <http://www.sumitomoseika.co.jp/>
Established July 1944
Capital 9,698 million yen
Sales 64,737 million yen as consolidated; 47,021 million yen as solo
No. of employees 1,053 as consolidated; 822 as solo

Major Lines of Business

[Chemicals Division]:
 Industrial Chemicals, Pharmaceutical-related Products, Water-soluble Polymers, Fine Particulate Polymers, and Functional Materials

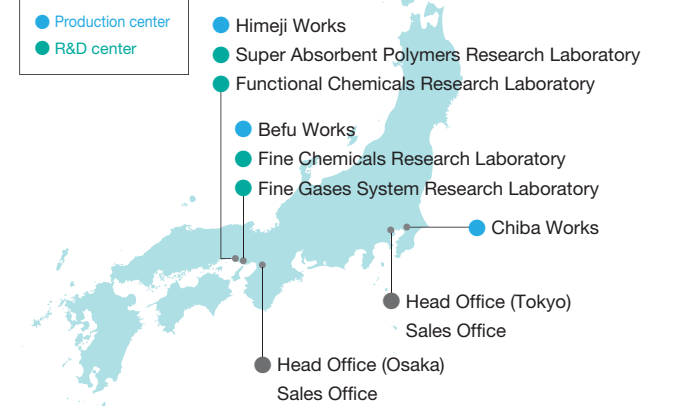
[Super Absorbent Polymers Division]:
 Super absorbent polymer

[Gases and Engineering Division]:
 Medical Gases, Chemical Gases, Standard Gases, Electronic Gases, Generators of oxygen, nitrogen and hydrogen gas (PSA method), and General Chemical machinery

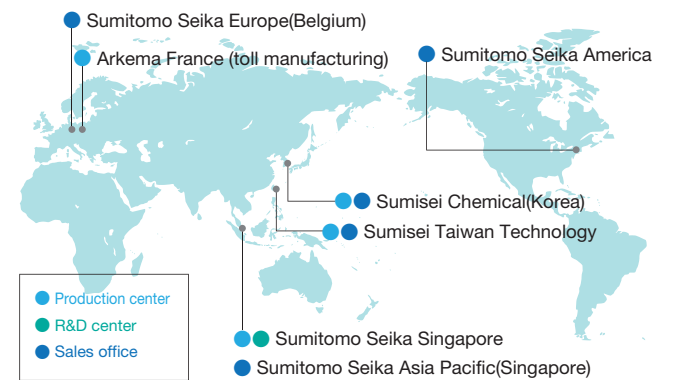
Major Business Locations

Consolidated subsidiaries : 2 companies in Japan, 5 companies overseas
 Production centers : 3 in Japan, 4 overseas
 R&D centers : 4 in Japan , 1 overseas
 Sales offices overseas : 5 offices

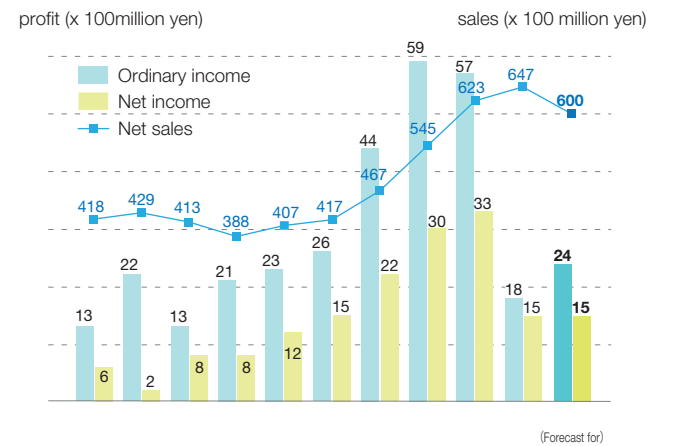
Business locations in Japan



Business locations overseas



Trend of business results in the past



Coverage of this report

Organizations : The company's domestic works
 Period : From April 1, 2008 to March 31, 2009
 Major areas : Environment and safety activities, and performance data
 Publication : Sept. 2009 (Next publication: Sept. 2010)



Sumitomo Seika's products are widely used in daily life.

Sumitomo Seika's products are well accepted for their outstanding functions and qualities in various applications. The company is actively engaged in supply of products which well contribute to protection of the environment and also help enhance product safety.

Super Absorbent Polymers

The Super Absorbent Polymer "AQUA KEEP®", which has the ability to absorb water, is utilized for disposable diapers and industrial products. Its quality has been highly praised by our users.

- Hygiene Products
- Industrial Materials
- Other Applications

Functional Chemicals

We offer a wide variety of functional chemicals, such as water-soluble polymers, water-absorbent polymers, emulsion, latex, powdered plastics, functional materials, etc., all of which are utilized in a number of diverse situations for a variety of reasons, including daily necessities, such as shampoos, detergents, and cosmetics, as well as for polymer coating, special adhesives, and rubber products.

- Water-soluble Polymers
- Water-Absorbent Polymers
- Emulsion
- Latex
- Powdered Plastics
- Functional Materials

Fine Chemicals

We offer fine chemicals, such as pharmaceutical intermediates and various products for the IT industry, while utilizing our flagship synthetic technology of organic sulfur compound. We also run various production facilities with a broad range of applications in order to meet user needs by flexibly dealing with both pilot and large-scale productions under our established quality control system.

- Pharmaceutical-related Products
- Various Additive
- Various Industrial Chemicals

Gases

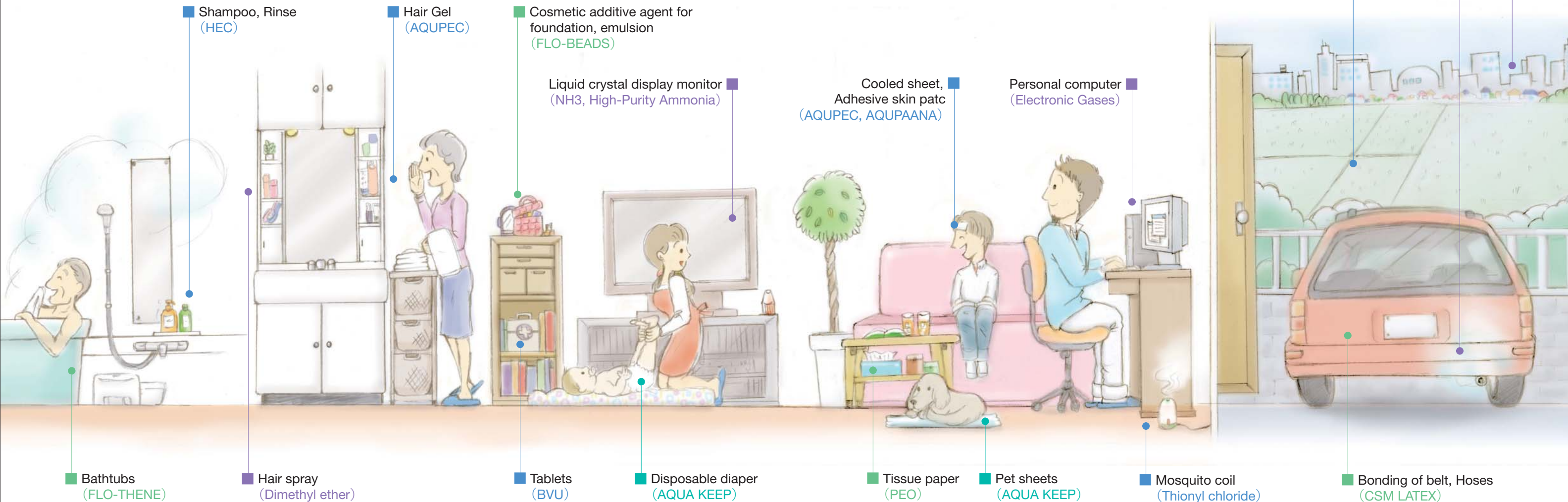
Sumitomo Seika became the first Japanese company to produce standard gases, and the synthesis, purification, and analysis technologies for producing those gases have been highly regarded by our users. We supply cost-competitive high-purity gases that meet every user's needs, such as semiconductor gases and industrial gases used as basic material.

- Electronic Gases (Semiconductor Gases)
- Mixed Gases
- High-Purity Gases
- Standard Gases
- Precision Pressure Regulator
- Gases for precision Industries
- Medical Gases
- Gases used in daily life

Engineering

Since our energy-saving gas generators, with a gas purification and separation system utilizing a PSA (pressure swing adsorption) method with highly efficient absorbency, have the advantage of being highly reliable and energy efficient, they are used all over the world.

- PSA System PSA Gas Generator
- Chemical Plant
- Equipment for Electronic Industry



Boosting Responsible Care Activities Contributing to Formation of Sustainable Society

Sumitomo Seika Chemicals Group engages in business activities with the corporate mission of contributing to the formation of sustainable society and in accordance with the basic principles of achieving "zero-accident and zero-injury operations", ensuring "customer satisfaction" and promoting "co-prosperity with society", while maintaining the fundamental policy of "Safety Comes First"

Based on the above basic principles, we are driving Responsible Care activities involving all phases of a product lifecycle from development to manufacturing, logistics, use, final consumption through disposal whereby we not only secure legal compliance, but also work voluntarily to ensure "environmental protection, accident prevention & safety, occupational health & safety, logistics operational safety, chemicals safety and quality assurance", while making our achievements of these activities known to the public, thereby promoting dialogue and communication with society.

Providing products and services useful to society

Sumitomo Seika Chemicals Group has been contributing to society by developing innovative and world-class chemical technologies and providing unique and quality products to people both at home and abroad. We will continue to take up various challenges sincerely and offer better products to meet the needs of society.

Giving Due Consideration to the Global Environment

Climate change and chemicals risk need be perceived as vital issues affecting the environment of our planet earth and must be minimized from a global perspective toward our objective of realizing "sustainable development". To meet these social requirements, Sumitomo Seika Chemicals Group has steadily been bringing tangible results by working on improvement of manufacturing processes and facilities, evaluation of chemicals safety, prevention of air pollution and water contamination, wastes reduction, etc. We will step up our endeavor on these activities that give due consideration to the global environment.

Safety Comes First

In operating manufacturing plants, it is our foremost responsibility to ensure safety to our neighboring community and our employees alike. To this end, we must pay utmost attention to safety at all stages of our corporate activities. In this connection, Sumitomo Seika Chemicals Group is working to enhance technical training and experiential training for employees to improve their safety skills and heighten awareness of safety. In addition, when facilities are to be newly built or changed, we carefully carry out prior examination of the facilities, processes involved and substances to be handled from perspectives of their possible impact on safety, the environment and product quality. Last year, we introduced new Computerized Maintenance Management System and Occupational Safety and Health Management System (OSHMS) in all of our three Works in Japan. We will advance our further efforts to maintain the "zero-accident and zero-injury operations" by adhering to our fundamental policy of "Safety Comes First".

Promoting Legal and Ethical Compliance

Sumitomo Seika Chemicals Group has declared that it will conduct activities with sound judgment and in compliance with laws and regulations, both in Japan and overseas, company rules and social norms or ethics. No matter how times change, we wish to stay as a company that is trusted by society. With this aspiration in mind, we will strive to promote legal and ethical compliance as a responsible corporate citizen.

This Report outlines some of the Responsible Care activities that Sumitomo Seika Chemicals Group is undertaking. We hope the Report will help you understand our current efforts, and we welcome any comments or opinions you may have on the Report.

President



Corporate Policy on Safety, Environment and Quality

Sumitomo Seika Chemicals performs activities, conforming to Sumitomo's Business Principles, with the corporate mission of contributing to the growth of society through the supply of unique and quality products and services that draw upon the strength of the Company's innovative and advanced technologies as well as to the formation of sustainable society in promoting business and in accordance with the basic principles of achieving "zero-accident and zero-injury operations", ensuring "customer satisfaction" and promoting "co-prosperity with society", while maintaining the fundamental policy of "Safety Comes First"

Based on these principles, Sumitomo Seika places the highest priority on realizing the following in tune with the objectives of the Responsible Care initiatives:

- 1 To ensure safety of employees and neighboring communities through continued achievement of "zero-accident and zero-injury operations";**
- 2 To assure that all people concerned, including employees, logistics personnel, customers and general consumers, are free from health hazards, by ascertaining safety of raw materials, intermediates and products that the Company handles or supplies;**
- 3 To supply quality products and services that are safe in use and meet customers' needs;**
- 4 To protect the environment by assessing and reducing environmental load at all stages of a product lifecycle from development through disposal.**

Each company section and every employee must fully recognize the vital importance of the above corporate policy and strive to address individual issues proactively and swiftly on their own initiatives and seek continual improvement in compliance with relevant laws and regulations.

Midterm action guidelines

[Common]

- 1) To enhance training on technology and education on legislation
- 2) To facilitate "visualization" of standards, procedures, goals, tasks and facilities
- 3) To promote systematic implementation of facilities replacement and enhance their maintenance and inspection

[Disaster Prevention & Safety]

- 1) To assess process hazards by HAZOP and What-if analysis
- 2) To enhance OSHMS and promote risk assessment of operational hazards and chemicals

[Environment]

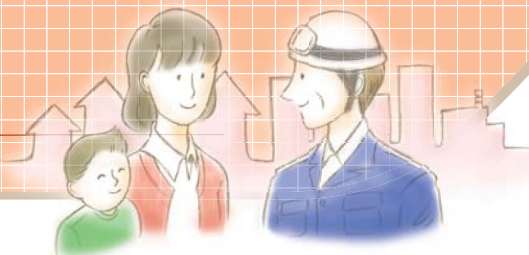
- 1) To develop products and processes with lesser environmental load
- 2) To reduce emissions of air pollutants such as PRTR substances and VOCs
- 3) To promote energy saving and resources saving

[Quality]

- 1) To strengthen a quality assurance system (product quality, cost and delivery) and enhance customer satisfaction through propelling technology development for the future
- 2) To undertake quality assurance activities proactively through such efforts as assessing potential risks and preventing troubles that may arise.

HAZOP : Hazard and Operability Analysis OSHMS : Occupational Safety and Health Management System
PRTR : Pollutant Release and Transfer Register Act VOCs : Volatile Organic Compounds

(Revised March 2009)



Responsible Care of Sumitomo Seika Group

For the formation of sustainable and safe society

Amid the global warming being accelerated, major countries of the world are discussing a framework for reduction of substances causing greenhouse effect such as CO₂.

Sumitomo Seika as a member of the society has a mission of providing good products to the society through its business operations, and at the same time it has to pay due attention to protecting the environment and ensuring safety.

Our activity for environmental protection dates back to 1973 when we created Environment Sector. With fundamental revisions of environment-related regulations then ongoing, reassessment of business activities was unavoidable, and we took steps found necessary as a result.

Later in 1995, in support of the objectives of Responsible Care activities being undertaken by chemical industry of the world, our company officially committed as part of our management policy to paying due attention to the environment and safety, and declared to

proactively implement environment and safety-related measures and to improve them whenever necessary.

At present, in addition to abiding by related regulations and international rules, we set up annual plans for energy and resource saving, environmental protection, disaster prevention through RC initiatives. Our activities include publishing achievements of our initiatives and maintaining dialogue and communication with the society, aiming at gaining even higher level of trust from the society.



With residents of local communities

Responsible Care

"Responsible Care" means that the chemical industry is voluntarily ensuring that no negative impact harms the environment, safety, or human health in any process from development, logistics, use, and final consumption through disposal and moreover, the industry is publishing the results of its initiatives and maintaining an open dialog and good communication with residents of regional communities. Responsible Care was an ideal that came to fruition in Canada in 1985. By 1990, the International Council of Chemical Associations had been established, and

at present Responsible Care had been adopted in 53 countries (as of October 2008).

In Japan, the Japan Responsible Care Council (JRCC) was established in 1995 and we have belonged to it from the beginning of the foundation and actively engaged in the activities.



Sumitomo Seika Group



- Environmental protection
- Safe chemical product
- Disaster prevention
- Safety during transportation
- Occupational safety and health

Self-Control Activities

The Society



Communication
(Publication of achievement,
Dialogue)

Organization to Promote Responsible Care

Our activities for safety and the environment have been promoted by a committee headed by Director in charge of safety and the environment since 1988. The task being an important managerial issue, the committee has been renamed "RC Committee" with all Directors of the company participating as members to examine and determine mid-long term policies and plans and to monitor achievements.

Policies and plans for Responsible Care cover each Works and Sector of the company so that the activities are thoroughly recognized throughout the organization. In addition to bi-monthly self-assessment by each Sector, monitoring of progress and confirmation of achievements (three times a year) are conducted by RC Committee.

Responsible Care Committee

- Setting up and review of basic policies
- Creation and assessment of mid-long term plans and annual plan
- Report to Japan Responsible Care Council

Reduction of environmental load

- Promotion of energy saving
- Reduction and effective utilization of wastes
- Emissions-reduction of chemical substances

Ensuring chemicals safety

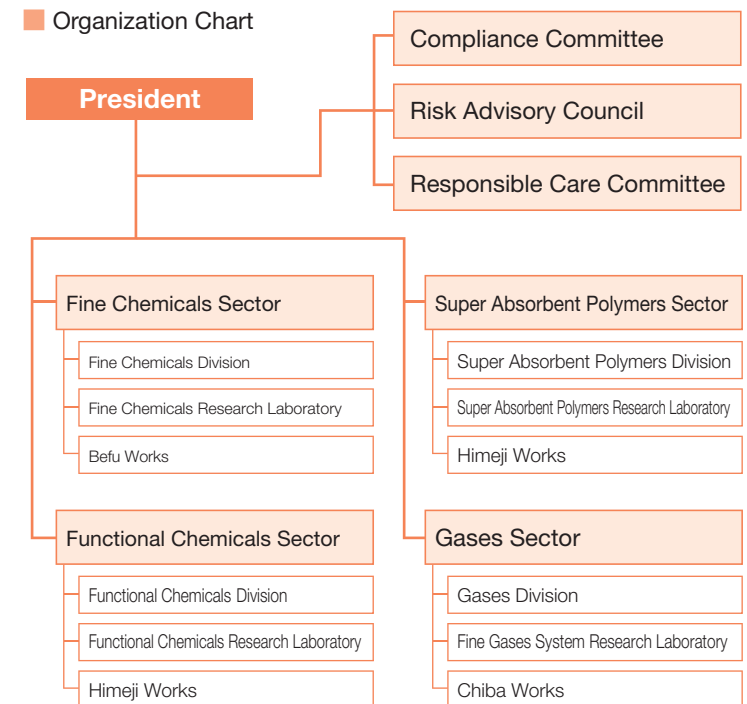
- Ensuring safety of customers
- Ensuring Safety during transportation
- Assessment of product safety
- Furnishing of information on product safety

Ensuring safety/disaster prevention

- Ensuring safe and stable operation
- Promotion of disaster prevention
- Safety assessment of substances and processes

Organization Chart

President



Action Plans

At Sumitomo Seika, activities for environment protection, disaster prevention, occupational safety and health, chemicals safety and safety during transportation are conducted in annual cycles based on mid-long term plans. In addition to complying with regulations, we set up goals for Sumitomo Seika and try to achieve these goals through the cycles of Plan-Do-Check-Action.

Speaking of policies and plans for activities, in July each year mid-long term plan is renewed, and in January, yearly plan is examined and finalized at RC Committee.

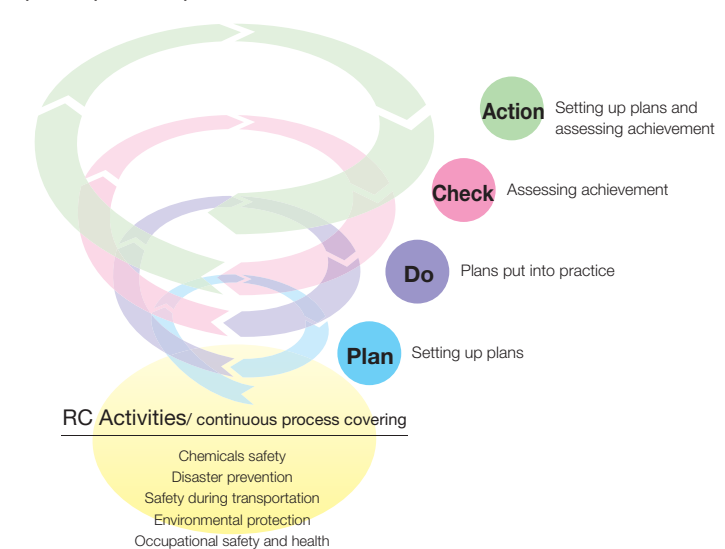
【Validation of Activities】

We have "RC Audit Special Team" headed by the Director in charge of RC to regularly validate, every year, legal compliance and other activities at all works including those abroad.

As a means of promoting Responsible Care, we have established Occupational Safety & Health Management System (OSHMS) and management systems for environment (ISO14001) and quality (ISO9001), which are validated by authorized organization in each area. We also conduct internal audit of the systems by qualified internal auditors.

In addition, we had validation in 2007 and 2008 by Japan Responsible Care Council, of which our company has been a member to further promote Responsible Care activities.

Spiral-up of Responsible Care Activities



Auditing (OSHMS document)

(Validation at a plant)

We are making efforts to attain targets in high priority areas.

Plans for 2008 have been achieved smoothly. The target for number of work-related accidents was not achieved by occurrence of a minor accident involving no lost workday. "Certification for Occupational Safety & Health Management System" and completion of "Emergency Shut-off System" and "Equipment Management System" are notable achievements.

	Target	Issues/Priority Matters	Achievements	Evaluation	
Management System	Reinforcement of Management System	① Certification for Occupational Safety & Health Management System ② To receive validation by Responsible Care Council	● Certification acquired for three Works ● Validation received at Himeji and Chiba Works.	◎	
Compliance with Law	"Zero" Violation of Law	① To conduct education required by law as planned at each Sector ② Regular assessment at each Sector of compliance utilizing regulation map and to put improvements into practice	● Education required by law and self-assessment utilizing regulation map were conducted as planned and three corrective measures were taken.	▲	
Safety	Occupational Safety and Health	"Zero" accident involving lost workday "Zero" accident involving no lost workday "Zero" trouble owing to human error	① To conduct risk assessment of work ② Construction of a system to utilize past cases of "near miss" and to detect similar cases ③ Promotion of "Visualization", "Mechanization (fool-proof)" and "Prevention of Careless Mistakes" ④ Promotion of 5S (five actions = straightening, ordering, cleaning, cleanliness, and discipline, especially disposal of not-needed material, control with marking)	● Accident involving lost workday: 0 ● Accident involving no lost workday: 8 (calendar year) ● Through TPM, VPM activities and OSHMS, targets were pursued with priority, but there were more accidents than in the previous year.	▲
	Disaster Prevention	"Zero" major accident	① Proper assessment using "Design Control Standard" in introduction of new processes, etc. ② Promotion of risk assessment plan (HAZOP-What-if) for existing processes ③ Promotion of planned renewal and maintenance of old facilities ④ Promotion of anti-earthquake measures for toxic/high-pressure gas tanks	● Major accident: 0 ● Emergency shut-down system introduced as anti-earthquake measure ● Major progress made in preventive maintenance by introduction of new equipment maintenance system and risk-based assessment system	◎
	Chemicals Safety	Enrichment and adequate control of safety information on chemicals	① To deal with European Chemical Regulation (REACH) as planned ② Revision of labels and MSDS based on Industrial Safety and Health Act (GHS) as planned	● New framework started for safety assessment of existing substances in line with steps taken for REACH	○
	Safety during Transportation	"Zero" major accident during transportation	① Security education (more than once/year) for logistics contractors ② Training assuming an accident during transportation (three times/contractor/year)	● Accident: 0 ● Security education: 7 times ● Training: 2 times	◎
Environment	Global Warming /Energy Saving	① Energy consumption: 1% reduction ② Energy consumption for transportation: 1% reduction	① Improvement of processes and equipment with high energy consumption as planned ② Promotion of modal shift and enlargement of lorries (lots)	● Energy consumption: reduced by 1.3% ● Energy consumption for transportation: reduced by 6.6%	◎
	Wastes	Actual record for 2006 to be maintained ① Amount of waste ② Rate of recycling / final disposal by landfill	① Improvement of products with high rate (top five) of waste generation as planned ② Promotion of in-process waste disposal in new or scaled-up processes ③ Setting-up plans for in-process waste disposal in existing processes	● Wastes disposed by external contractor: reduced by 5% from preceding year ● Rate of recycling: compared with preceding year 60% → 59% ● Final disposal by landfill: reduced by 56% from preceding year	◎
	PRTR	① 1,3-butadiene: 1 ton/year or less ② 1,2-dichloroethane: 1 ton/year or less ③ Trichloroethylene: 1 ton/year or less (Target: March 2010)	① 1,3-butadiene : reduced emission through planned installation of drum boilers ② 1,2-dichloroethane : confirmation of capacity after installation of recovery facility (5 tons/year or less) ③ Trichloroethylene : facility improvement and stable operation (3 tons/year or less)	● By measures to reduce trichloroethylene and 1,3-butadiene, overall reduction of 18% from the preceding year	◎
	Volatile Organic Compounds	Reduction by 30% of the emission in 2000 (Target: March 2010)	① Target substances: heptanes, hexane, pentane, methanol, MIBK Setting-up action plans and putting measures for planned reduction into practice	● Measures to reduce heptanes put into practice: reduction by 97 tons from the preceding year	◎
	Contamination of Environment	"Zero" environment-related trouble	① Installation of emergency shut-off valves, etc.(Himeji Works)	● Emergency shut-off valves connected with effluent analyzer installed at several plants	○

◎ : Target achieved ○ : Target almost achieved ▲ : Further efforts needed

We analyze costs of environment-related measures and their effects

We have introduced environmental accounting as a tool to quantitatively grasp and assess cost of environmental protection and its effects, thereby promoting more efficient environmental measures. The accounting is based on guidelines of the Ministry of Environment and Japan Chemical Industry Association.

Amount of Investment

Investment covers all payments for introduction of facilities for environmental protection.

In 2008 we made investments for ①Emergency shutdown system

of effluent facilities, ②Reduction of volatile organic compounds emitted, ③High efficiency equipment for energy saving
These investments amounted to ¥448 million.

Costs

Costs consist of those for maintenance (operation, maintenance, depreciation) of facilities for environmental protection, research expenses for reduction of environmental load, operation of

environmental ISO system and wages & salaries. In 2008, we spent ¥2,480 million. The largest item of cost is for co-generation facilities (in-house power generation) for global environmental protection.

Amounts for 2008

Breakdown of environmental protection costs		Main activities and their effects	Investment	Cost	Ratio	Ratio	
Cost within plant site	Cost to prevent pollution	Prevention of air pollution	Measures to control emission of chemical substances (scrubber tower, measures for VOC)	138	31%	147	6%
		Prevention of water pollution	Installation of effluent shut-off valve, etc. (B: effluent shut-off valve) Operation and control of effluent treatment facilities such as for biological treatment	231	52%	227	9%
		Others	Installation of activated carbon tower, etc.	0	0%	4	0%
	Cost for global environmental protection (global warming/energy saving)	Installation of high-efficiency dryer Operation and control of in-house power generator	49	11%	1,419	57%	
Cost for resource circulation (industrial waste, etc.)	Investment for reduction of sludge (Himeji Works) Disposal/effective utilization of industrial waste	13	3%	339	14%		
Cost for upstream/downstream		Procurement of environment-certified materials (Green procurement)	0	0%	1	0%	
Cost for controlling activities		Cost for running and controlling systems for environmental protection	17	4%	192	8%	
Cost for research & development		Research on reduction of solvent in product Research on reduction of environmental load	0	0%	151	6%	
Cost for social activities		Activities for greening and beautifying areas around our works	0	0%	0	0%	
Cost incurred by damaged environment		Cost for recovering damaged environment	0	0%	0	0%	
Grand total			448	100%	2,480	100%	

Economic Effects

Expansion of facilities for biological treatment resulted in reduction of cost for waste disposal by external contractors. Reduced emission of volatile organic compounds realized less purchasing cost of solvents. These are some effects realized.

Kind	Contents	Amount (in million yen)
Cost saving	Reduction of cost for waste disposal by external contractors owing to expansion of facilities for biological treatment	943
	Purchase cost reduced by reduced emission of volatile organic compounds	73
	Reduction of steam consumption with high-efficiency dryer	34
Others		34
Total		1,084

Period covered: 2008.4.1~2009.3.31 Scope: Sumitomo Seika solo
Method of calculation: Investment and cost are calculated from the total amounts spent times the ratio pertaining to environmental protection.

Improvement of Environmental Performance

As a result of these measures, improvement of environmental performance introduced in each page has been realized.

- Energy consumption: reduction by 1.3%
- Reduction of volatile organic substances (heptanes: reduction by 97 tons/year)
- Wastes land filled: reduction by 44 tons/year
- Amount of wastes disposal by external contractors: reduction by 466 tons/year ...etc.



Approach to prevention of global warming

Our efforts for prevention of global warming through energy saving

Our chemical industry has set a target to reduce unit energy consumption by 20% during the first commitment period (2008-2012) compared with 1990 under Kyoto Protocol in order to reduce CO₂ emissions. In line with this target, Sumitomo Seika sets its own reduction target every year.

Measures for saving energy

Setting a target to reduce unit energy consumption as required by the energy saving law, we have so far taken the following measures:

- Complete conversion of fuel for boilers from heavy oil to city gas
- Introduction of a co-generation facility which supplies electric power and steam*
- Changeover of production methods
- Introduction of energy-saving equipment

As a result, in 2008 we achieved a 33% reduction in unit energy consumption over 1990. However, our production expanded 2.4 times during the same period, and the total energy consumption increased accordingly. Greater efforts are constantly required to reduce the total CO₂ emissions.

*Steam to be consumed in a factory is generated by effectively utilizing waste heat which is generated at the time of generation of electric power for the same factory.



Co-generation facility at Himeji Works

Results of our efforts at the production stage

Though there were some difficulties such as decreased productions of some of our products and a disorder of waste heat recovery facility, we accomplished the following:

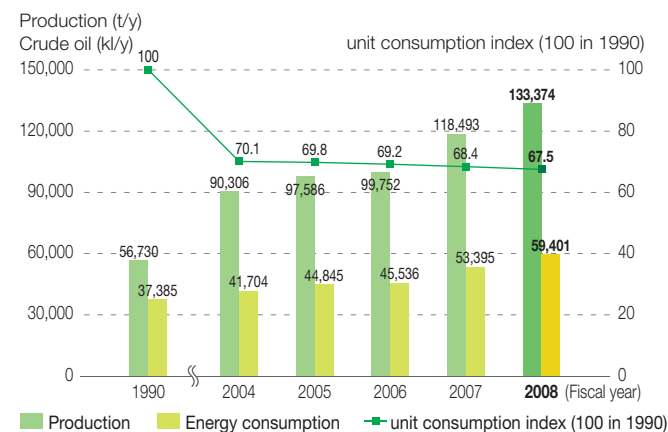
- Successful contribution of high efficiency driers and high efficiency compressors
- Reduction in heat loss by way of improvement of steam line
- Conversion of production methods and improvements in operation conditions

We were able to reduce unit energy consumption by 1.3% over the

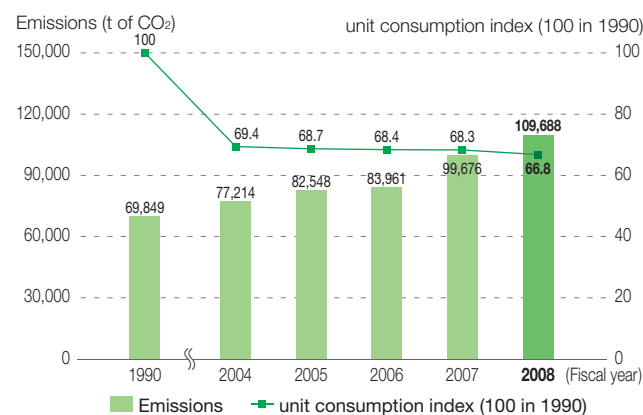
previous year.

As a result of continued expansion in production facilities, total productions in 2008 increased 12% compared with the previous year, with increased emissions of CO₂ though. To cope with this circumstance, we identified products which consumed a large quantity of energy, examined measures to reduce such energy and started a study on employment of optimum control approach (inverter control) which meet loads of facilities.

Trend of production and energy consumption (energy consumption as translated into crude oil)



Trend of CO₂ emissions



Our efforts to reduce energy for transportation and to raise awareness among employees

Today prevention of global warming is required not only at the stage of production but also at the stage of transportation and in household, too. We have endeavored to improve energy efficiency in transportation since 2002, including change in transport route and shift in transport means (modal shift to rail transport), increase in transport lot, and improvement in load efficiency. More specifically, we have shifted from truck to rail road by container shipment for five kinds of our product. In addition, weight of short distance transport has increased. As a result, unit energy consumption for transportation improved by 6.6% in 2008 compared with the previous year.



Container shipment for rail road transport

The company encourages its employees to mind their life style particularly in terms of energy consumption. Now the company provides commuter bus services to workers at Befu Works and Himeji Works to avoid use of private cars as much as possible for daily commute to those Works. The number of employees who use commuter bus is increasing, which means use of private cars is declining.

We are determined to constantly tackle the problem of green house effect gas not only in business activities but also transport and daily life.



Introduction of commuter bus services

Our environment-related products

Supplying products helpful for protection of the environment

Sumitomo Seika is manufacturing various functional products by its proprietary technologies. Those products as well as technologies are utilized for the purpose of environment protections.

Introduction of our environment-related products

PSA gas generator

This generator is used to separate CO₂ and methane from waste gas and also to generate hydrogen for which expectations are raised as clean energy.

General reference gases / reference gases for certifying measurement instrument

General reference gases which are standards to determine gas concentration are indispensable for measuring gas emissions from automobile or factory.

Sumitomo Seika has been contributing to the environment protection by developing and supplying various reference gases to industries since 1960s.

A recent example of our contribution in this line is development of reference gas for measuring chlorofluorocarbon (Freon) gas in the air or any other ecosystems, which is known to act to destruct the ozone layer and to cause the global warming.



High purity gas generation facility



Reference gas used for measuring gas emissions

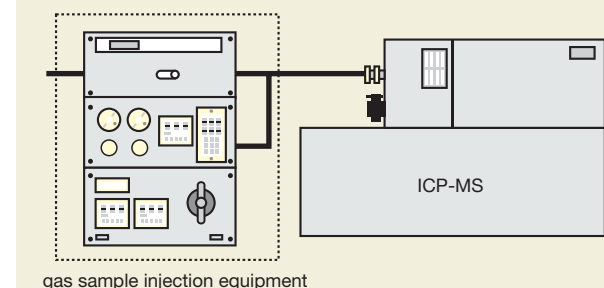
ICP-MS use gas sample injection equipment

In the past, it was impossible to monitor in real time metal elements suspended in an atmosphere. The company has developed "ICP-MS use gas sample injection equipment" to measure in real time metal elements in the air. This equipment is expected to be widely used for analysis of gas emissions from factories.



Gas analysis equipment

ICP-MS use gas sample injection equipment



gas sample injection equipment

Aiming at effective utilization of resources through reduction of waste and its effective use

Sumitomo Seika's measures consist of : ①reducing quantities of waste generated; ②detoxifying waste and reducing weight thereof; ③reducing quantities of waste disposal by contractors; ④prompting effective use of waste; ⑤reducing landfill disposal; thereby promoting effective utilization of resources.

Measures to reduce waste

1.Reduction in waste generation by means of manufacturing process improvements

It is fundamental in regard to the issue of effective utilization of resources that we do not produce unnecessary substances. To this end, our process engineers, supported by research laboratories, are tackling development of waste-free manufacturing processes and process improvements, which will reduce waste output.

2.Reduction in waste disposed of by contractors

We are implementing such programs as "in-house effective utilization" and "reduction in quantities of waste generated" to reduce quantities of waste disposed of by contractors.

①In-house effective utilization

Each production unit is equipped with purification facilities to enable effective utilization within a system.

Alkaline waste exhausted from Himeji Works is utilized for neutralization within Befu Works. This is an example of effective utilization through collaboration between different organizational units.

②Dehydration, separation and concentration

We are trying to reduce waste by installing equipment for dehydration, recovery, excessive sludge reduction, and so on.

③Detoxication treatment (waste water treatment); incineration reduction treatment

Our detoxication facilities include an "activated sludge treatment unit", where a variety of microorganisms proliferate and purify water in aeration vessels.

This unit is used mostly for treatment of domestic waste water. In 2009, we are going to build another unit.

3.Pursuit of effective utilization of waste

In contracting out waste disposal, we go primarily to those contractors who are able to reuse our waste, for example:

- ①fuel making (plastics, oil and others);
- ②recycling (waste solvents are distilled for reuse; metal scraps are reused as such or reducing agents) ; and
- ③other uses (steam recovery from incinerators; power generation; fertilizers)

4.Reduction by landfill disposal

Now that landfill disposal sites are in short supply throughout the country, we supply our waste for making fertilizers and reducing agents at cement mills.



Submerged combustion-type waste liquid incinerator

Measures taken to reduce waste and results in 2008

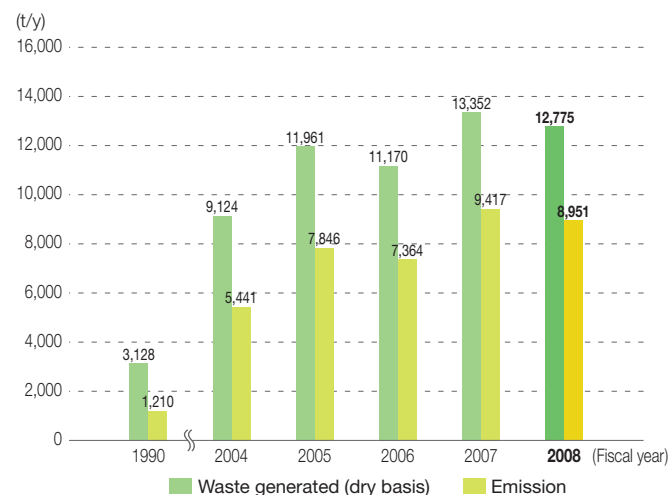
We have been taking measures to suppress waste generation, such as introduction of waste reducing processes and installation of waste reducing devices.

In 2008, plant production increased significantly but waste generated was reduced as a result of the following waste reduction programs:

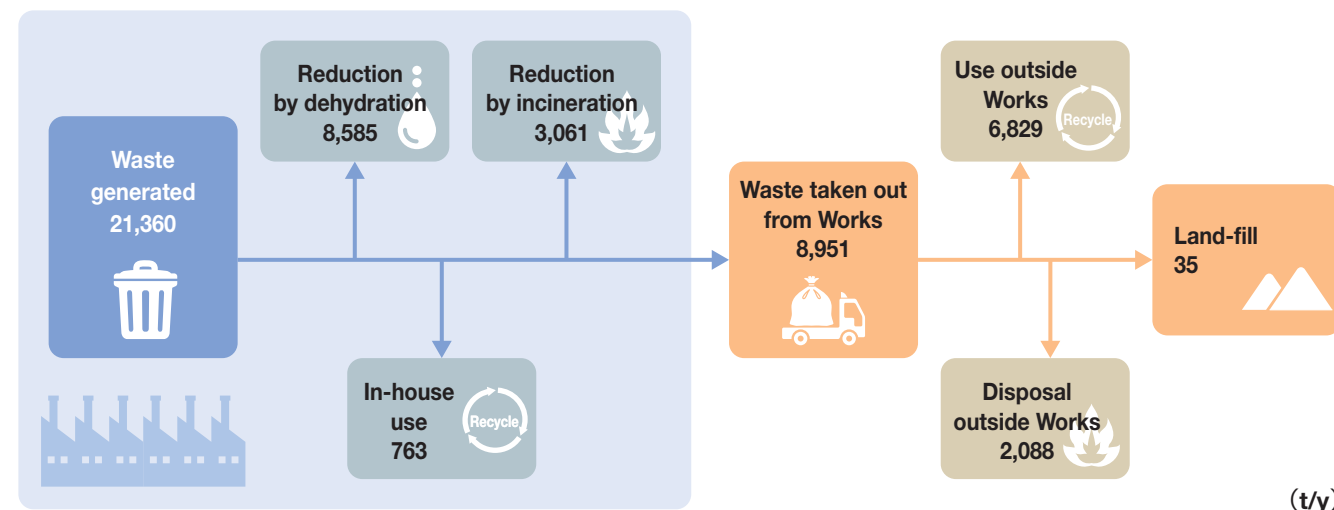
- ①Improvement in high waste output products; and
- ②Surplus sludge drying facility installed in 2007 was in operation throughout the year to reduce waste generation.

We will exert continued efforts to reduce waste generation and waste tonnage by means of improvement in processes which generate high waste output.

Trend of waste generation



Waste disposal



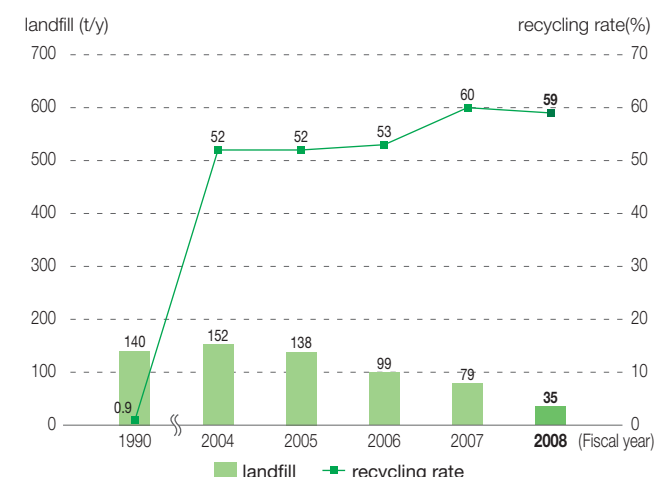
Improvement of recycling rate

Most of our waste is in the form of waste liquid. Some kinds of waste can be recovered by distillation to distilled products, but incineration has so far been the mainstay of our waste treatment.

In the past few years, however, there has been mounting requirements to adapt ourselves to recycling-oriented society and with a view to improving recycling rate, we are seeking outside collaborators who will recycle our waste to prepare fuel additives, neutralizing agents, reducing agents, and thermal recycling (effective use of waste heat).

Our recycling rate in 2008 was 59%, or almost at the same level as in the preceding year, resulting from our strenuous efforts for recycling.

Trend of recycling rate and landfill



Reduction in landfill disposal

We have endeavored to date to reduce landfill disposal based on the chemical industry's voluntary action plan. In particular, sludge generated from the waste water purification plant by activated sludge at our Himeji Works was formerly disposed of for landfill, but was replaced partly by recycling as raw materials for cement milling and fertilizer making.

However, production capacity expansions in the past few years required us to take drastic measures, and we introduced a sludge drying unit in 2007.

In 2008, our landfill disposal tonnage was reduced by 56% against the previous year, which corresponded to as low as 0.4% of the waste disposal by contractors.



Sludge dehydration facility

Observance of legal requirements and locally-agreed limits; Efforts to reduce environmental load

During 2008, we intensified waste water control and leak-to-outside prevention by installing various automatic analyzers and emergency shut-off valves within our premises.

Air pollution prevention

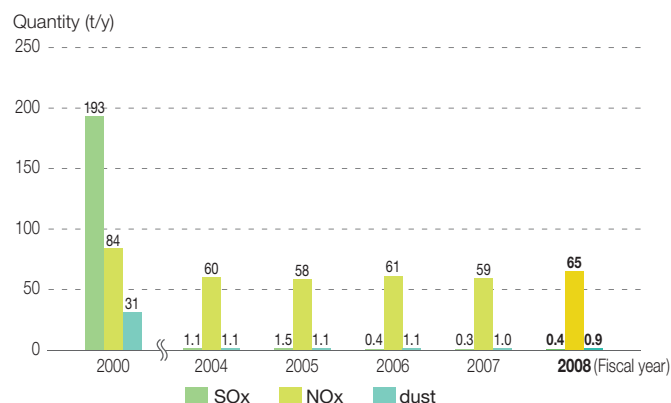
Air Pollution Prevention Law regulates SOx NOx and dust emissions from manufacturing facilities.

Despite our increased productions year after year, we have managed to reduce drastically SOx and dust emissions by switching steam boiler fuel from heavy oil totally to city gas.



Low NOx boiler using city gas

Trend of emissions of three substances which pollute air



Water pollution prevention

Befu Works and Himeji Works face Seto Inland Sea, a closed water area, and are subject to strict water emission regulations. We manage to meet the regulations by keeping track of process-wise load and installing treatment facilities. To meet the total amount regulations of water, we watch out COD, nitrogen and phosphates by automatic measuring apparatus.

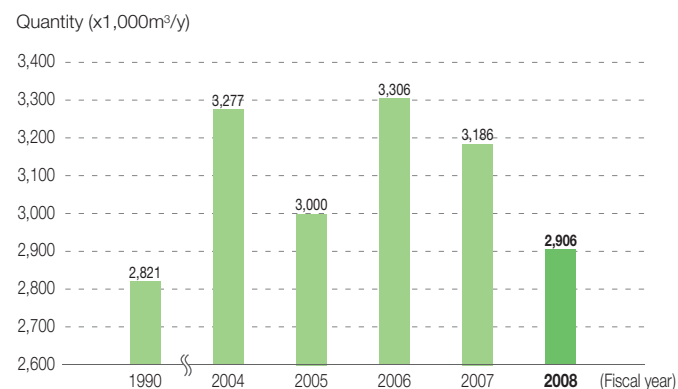


Wastewater treatment facility

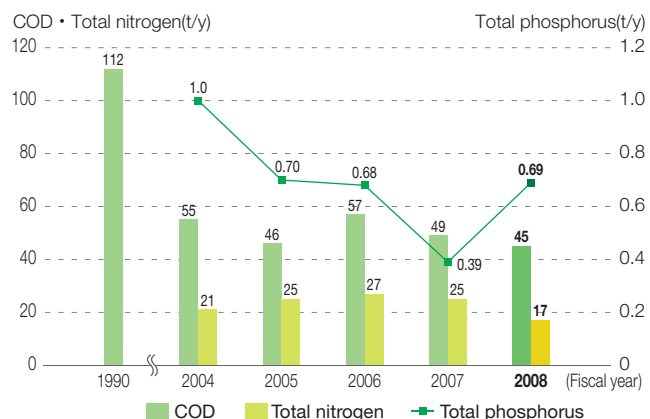
< Pollution load reduction measures >

- April 2004 : Automatic recording of nitrogen and phosphates started (Befu/Himeji Works)
- Oct. 2004 : Fluidized bed activated sludge treatment facilities expanded(Himeji Works)
- June 2007 : Fluidized bed activated sludge treatment facilities expanded(Himeji Works)
- March 2009 : Fluidized bed activated sludge treatment facilities expanded(Himeji Works)

Trend of specified waste water



Trend of load of water contamination



Befu Works and Himeji Works are stepping up waste water control, based on the lessons of waste water troubles in the past.

It is noteworthy that in 2008 an independent waste water control group was established (software) while as to hardware all waste water emission lines were integrated.

Befu Works introduced COD (chemical oxygen demand) meters and Himeji Works put up TOC (total organic carbon) meters, pH (acid/alkali) meters, and an interlocked emergency shut-off valve for waste water. These resulted in an improved control system.

< Emergency prevention measures >

- July 2003 : Emergency shut-off valve of waste water discharge (Befu Works)
- July 2005 : Emergency shut-off valve of plant sewage/TOC-①, etc. (Befu Works)
- Sept. 2006 : Emergency shut-off valve of plant sewage/TOC-② etc. (Befu Works)
- Nov. 2007 : TOC at the inlet of waste water tank (Befu Works)
- Oct. 2008 : Emergency shut-off valve of waste water discharge (Himeji Works)
- May 2009 : Emergency shut-off valve of plant sewage/TOC, etc. (Himeji Works)



Emergency shut-off valve at Befu Works



Emergency shut-off valve at Himeji Works



COLUMN

Around-the-clock surveillance to protect Seto Inland Sea environment

Safety, Environment and Utilities Dept. to which I belong controls procurement and delivery of utilities including water, steam and electricity, which are indispensable for plant operation.

Among other things, waste water emission control is one of the most sensitive areas that is regulated by agreements with local authorities, laws and regulations, and violations of which may force us to suspend plant operation.

The current control is at a sophisticated level supported by water emission surveying machines and emergency shut-off equipment. In case of emergency, waste water emission is shut off at the outlet of each facility, at two points in the plant sewage and finally at the outlet from the Works.

Nevertheless, around-the-clock surveillance of effluent analyzers is indispensable, and even slight indications of abnormality are reported to manufacturing groups in question so as to cautiously avoid functioning of the shut-off system.

From now on, we will put a top priority on preventing discharge of abnormal effluents at each manufacturing unit, and will endeavor to better control manufacturing processes and to achieve better effluent analyses.



Furutani Hideki
Safety, Environment and Utilities Dept., Befu Works

We are tackling emission reduction based on our voluntary reduction plan

Targeting at specified chemical substances and volatile organic compounds, we are implementing measures for reduction of chemical substances emitted to the environment as waste gas, waste water, sewage, garbage and so on.

Reduction of specified chemical substances (PRTR Law: Law concerning release and register of specified chemical substances)

PRTR Law, put into effect in 1999, requires to grasp release to the environment of specified chemical substances and to take voluntary measures for reduction. In 2008, after a lapse of ten years from the enactment, the law was revised to include 462 substances instead of the original 354. On the other hand, the chemical industry started surveying pollutant release and reduction in release as early as in 1995, or four years before the enforcement of the law, as part of the industry's Responsible Care activities. In tandem, our company too set about reduction programs ahead of the law.

In consequence, we have been able to reduce effluents by 90% from the initial level. More specifically, we have focused on the 12 priority substances announced by the industry and engaged in improvement of manufacturing processes, switchover to alternate solvents, beefing up of recovery systems, complete closure of tanks, withdrawal from some businesses, etc.

At present time, we are endeavoring to reduce emission of some existing substances and newly specified substances.

Establishment of emission standards to the atmosphere

For most of the substances that come under PRTR Law or for those designated as hazardous air pollutants, emission standards or environmental criteria are not yet announced because of absence of cause and effect evidences between emitted amounts and hazards.

Thus, emitting companies are required to set up voluntary emission

criteria. We established our own voluntary emission criteria, making due reference to WHO/EPA indications. We have an internal audit system whereby observance of the criteria is regularly verified, and strict control is in place on this basis.

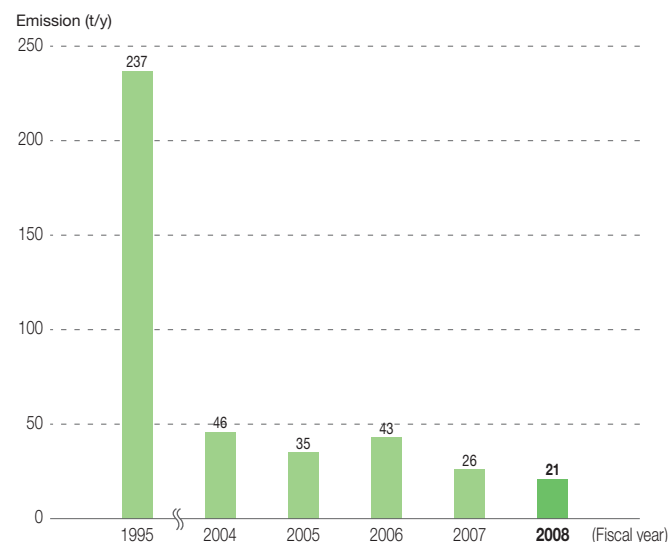
Emission reduction realized for priority hazardous substances

The table below summarizes the priority substances that we are to report under PRTR Law and the measures we have taken to reduce emission. We have realized 91% reduction from 1995 level and 80% cut-off against 1999.

Results of major reduction initiatives

Acrylonitrile	Ceased to trade (2003)
Dichloromethane	Switched to alternate solvents (1998, 2002, 2003)
1,2-Dichloroethane	Expanded recovery facility (1996, 1999, 2002, 2007)
Trichloroethylene	Expanded recovery facility (1998, 2000, 2002, 2006)
Ethylene oxide	Modified recipe/transferred production (2001, 2003, 2006)
1,3-Butadiene	Incinerated waste gas (2003, 2007)
Benzene	Incinerated waste gas (2001)
Formaldehyde	Installed equalizing pipe (1998, 2000)

Trend of priority air pollutant emission



Reduction plan of atmospheric emission

Our reduction plan prescribes that emission in 2010 of three substances, namely, trichloroethylene, 1,2-dichloroethane and 1,3-butadiene should be no more than 1 ton/year.

To achieve this objective, in 2009 we are implementing the following reduction initiatives:

- ① Improvement in air tightness of trichloroethylene unit;
- ② Improvement in manufacturing process of 1,2-dichloroethane (alternate solvents);
- ③ Incineration in water tank boiler of 1,3-butadiene.

Emission to the atmosphere of priority hazardous substances (t/y)

Substance	1995	2004	2005	2006	2007	2008
Acrylonitrile	9.0	-	-	-	-	-
Dichloromethane	70.0	11.7	4.2	4.2	2.4	1.4
1,2-Dichloroethane	72.0	11.7	8.3	6.9	5.3	6.1
Tetrachloroethylene	1.0	0.7	0.6	1.2	0.6	0.1
Trichloroethylene	70.0	12.4	11.5	17.6	5.6	4.1
Ethylene oxide	4.7	3.2	3.0	2.8	1.9	1.7
1,3-Butadiene	3.0	4.4	4.8	8.3	7.7	5.8
Benzene	4.0	0	0	0	0	0
Formaldehyde	3.0	1.9	2.1	2.4	2.2	1.8
Total	236.7	46.0	34.5	43.4	25.7	21.0



Solvent recovery unit (Chiba Works)



Solvent recovery unit (Himeji Works)

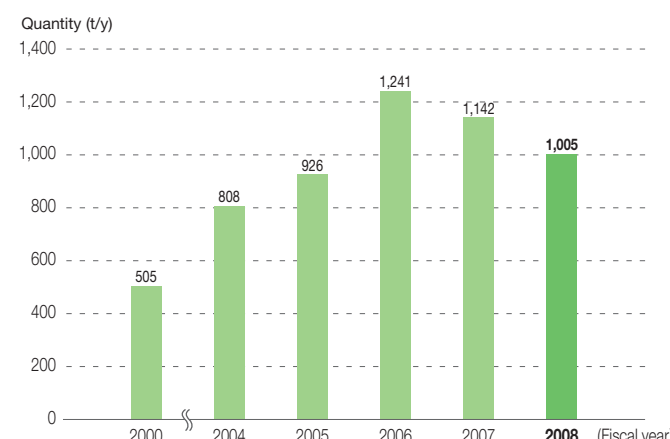
Reduction of volatile organic compounds (VOC)

In 2004, a revision to Air Pollution Prevention Law came into force calling for a 30% reduction of VOC by 2010 on the basis of the 2000 actual figures.

We have installed new production facilities and expanded existing plants to increase production volumes since the revision, and our current emission level is far above the benchmark year.

In 2008, we carried out reinforcement of sealing of rotating machines and this enabled a 19% reduction from the 2006 level. Our 2009 action plan calls for continued efforts to reduce emission by installing additional recovery equipment and by improving manufacturing processes.

Trend of VOC emission



VOC recovery unit



Chemicals safety issues

For safe use of Sumitomo Seika's products

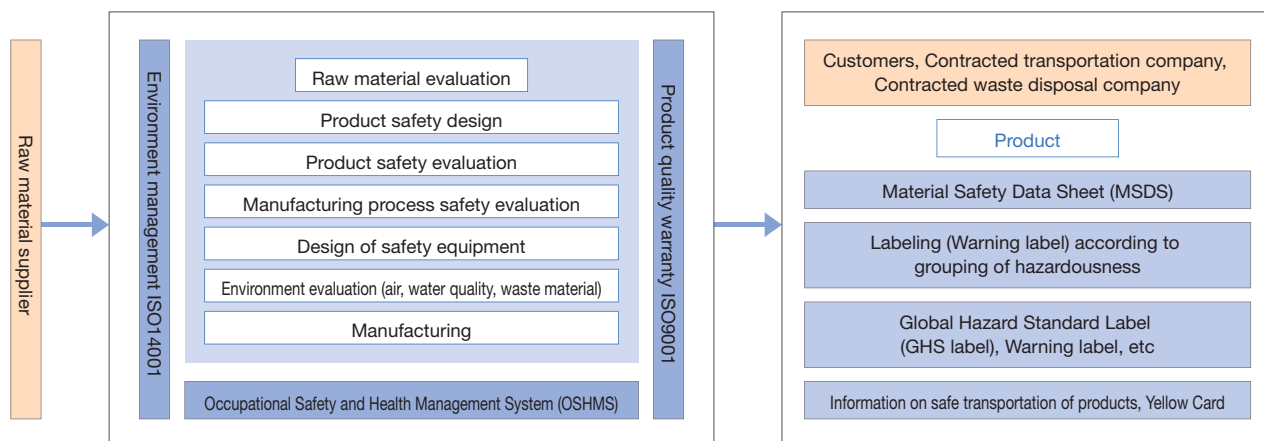
Our emphases are placed on risk assessment on chemical substances, management of safety data obtained thereby and timely furnishing to customers of such data, for the purpose of safe production as well as safe use of our products by customers.

Aiming at chemicals safety

Chemical substances, which are used in almost all fields of our modern society, are indispensable for earning wealth and comfort of our daily life. On the other side of coin, however, attention should be paid to the fact that they are hazardous or toxic in many cases. There is, therefore, a global movement to evaluate risks in advance to reduce such risks for safer use of chemicals.

In view of hazardous characteristics of chemical substances, we

exert all possible efforts to secure safety in use of our chemical substances, including supply of appropriate safety information to our customers. Our efforts start from acquisition of safety information at the stage of R&D, and then extend to collection of safety information on existing chemical substances, implementation of process safety evaluation at the stage of designing, management of safety data obtained thereby and supply of such data to our customers.



Evaluation of a new chemical substance

We conduct safety tests such as biodegradability test and mutagenicity test on a newly developed chemical substance and obtain the required national approval in accordance with "the law

regarding examination of chemical substance and regulation on manufacture" before it is commercially produced.

Examination on safety of existing chemical substances

In the global summit conference on sustainable development, it was agreed that influences of chemical substances should be minimized by 2020. Based on this agreement, evaluations on safety of existing chemical substances are required. In Europe safety evaluations on all chemical substances that are manufactured or imported by 1 t/year or more are required. Also in Japan, laws and regulations have been revised in regard to examinations of chemical substances and manufacture thereof.

We have conducted safety evaluations of our products based on the program of Organization for Economic Co-operation and Development and reported results to the OECD evaluation conference. However, this is not enough for us to sell our chemicals in Europe. We need to collect safety data and obtain approvals and registrations meeting the European regulation before we sell chemicals there. We have a plan to conduct safety evaluations as required at a higher priority on our products to be sold in the European market.

Quality assurance

We are encouraged to ensure "customers' satisfaction and ease" through operation and improvement of the quality management system (ISO 9001). For manufacture of pharmaceutical chemicals, we have established an extensive quality warranty organization in accordance with GMP of ICH.

Additionally in 2008 for the purpose of further strengthening the extensive quality warranty organization covering not only the product quality but also the function, cost, and delivery time, the Quality Assurance Office was newly formed. This Office controls and manages

quality of the whole range of products of our overall operations. By so doing, we are constantly improving our quality assurance practice and systems.

(Note)

ICH: International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use, among Japan, U.S.A., and EU.

GMP: Good Manufacturing Practice (regulations for controlling manufacture of medical and pharmaceutical products and their quality control)

Furnishing of product safety data

Since chemical substances are traded globally, for the purpose of properly informing handlers of characteristics (hazard / toxicity), the United Nations recommends providing information based on the internationally common rule (Globally Harmonized System for Classification and Indication of Chemicals: GHS).

In Japan, Occupational Health and Safety Law, which was revised in 2006, requires supply of information according to the international rule.

We obtain hazard and toxicity data proactively, and encourage our customers to refer to "Product Brochure", "Material Safety Data Sheet" and "Warning Label" in order for them to ensure safe handling of our products.

Since warning labels and MSDS meeting the international rule are needed in Japan and many other countries, we provide parties concerned with the required information in accordance with the international "Classification and Indication."

Disaster prevention issues

We constantly evaluate risks and enhance disaster prevention measures.

Safe operation free from accident and disaster is fundamentally important for manufacturers. Placing "Making Safety First Priority" at the top of our business policy, we are taking positive measures for promotion of self-imposed security under our RC initiatives.

Aiming at safe and stable operation

We place an emphasis on the following five areas to strengthen our disaster prevention measures leading to zero accidents:

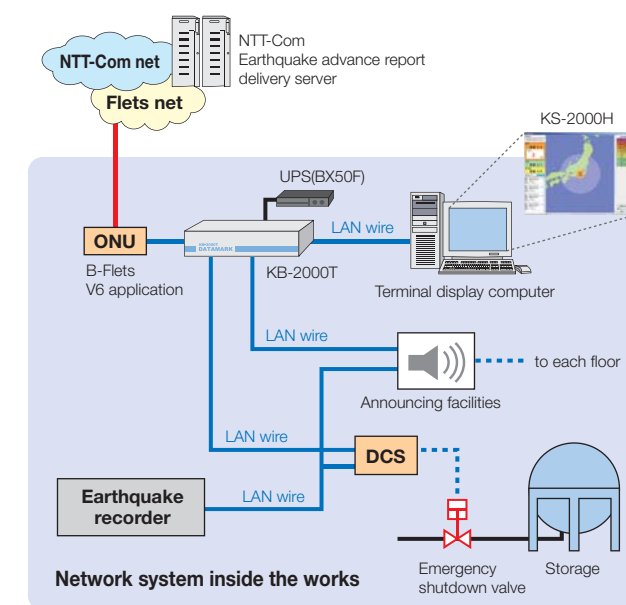
1. Close examination on safety when a new facility is installed or when an existing facility is modified
2. Upgrading of employees' knowledge and skill (expertise, technique) relating to operation
3. Risk management of facilities and scheduled maintenance and renewal
4. Extensive safety measures applicable to cases of natural disasters
5. Intensive practice and drill to prepare for a contingency

Details of each of the above are described later; our efforts made in 2008 were mostly in the following aspects:

- Improvement in technical education under our revised technical training curriculum
- Intensive safety examination on newly installed equipment and modified existing equipment
- Introduction of earthquake detection systems to enhance necessary measures
- Setting up of maintenance management systems to facilitate scheduled maintenance
- Implementation of disaster drill

General description of each area is as follows:

Outline of an emergency advance report of earthquake



Technical education

As a result of expansion of our business as well as our production capacity, weight of new operators among all the employees is rapidly increasing. It is therefore imperative to educate new operators who will be our core workforce in future.

To cope with this situation, we have selected tutors dedicated to giving technical instructions to those new members, covering basic knowledge and skill they should be equipped with. Practical educations are included in the program such as "high-place work", "pinching and rolling in" and "electrostatic explosion," which provide them with pseudo-experience or visual experience in possible risks or

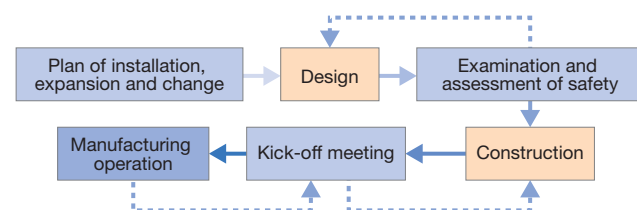
hidden risks in their daily working place and enable them to understand the meaning of safety.



Technical education on motors Sensing risks at high work-place

Pre-evaluation of facilities

Steps for installing a new facility or modifying an existing one are as illustrated; which include discussions and pre-assessments on safety of the facility in question among members responsible for production, design, environment, safety, and quality assurance to prevent accidents and to protect the environment. In 2005, HAZOP method (Process Safety Evaluation Method) was added to the steps.



Aged facility and measures for possible earthquake

Facility handling chemical substances has higher mechanical risks such as aged deterioration and developed corrosion which are usually seen after some continuous operations.

Our long-time practice was to carry out scheduled maintenance based on our repair records and inspection records with regard to machinery and equipment.

However, in recent years, information on accident and disaster cases of other companies is made available and warnings against possible Tohoku-Nankai earthquakes are officially circulated among various parties concerned. Under such circumstances, specific risk management techniques have been added to our facility maintenance system in line with our RC initiative program.

Management of aged facility

In the U.S. and Europe, "risk" is defined as follows:

Risk = probability of occurrence of damage x magnitude of damage

Paying due attention to this definition, we have evaluated the risk of each production facility as of today, in which damage records, inspection records, and properties of materials handled are taken into consideration. Based on findings, we have worked out a system under which we implement repair or improvement of our facilities in the order of risk from the highest to the lowest.

Measures against possible earthquake

The Meteorological Agency started delivering an emergency advance report of earthquake based on certain detection systems in November 2006.

This emergency advance report tells us an occurrence of a large-scale earthquake several seconds or several tens of seconds before it actually arrives, and within such very short period, measures should be taken in our works to minimize possible damages of our production facilities coming from the earthquake so detected.

We introduced in 2008 a system to receive such emergency advance report of earthquake through a proprietary receiving terminal. Based on this system, we are able to predict the arrival time and the magnitude of earthquake in advance, which enables us to secure safety of employees and also our local community area by automatic emergency shutdown of production facility and also by automatic announcement throughout the works, though such practice depends on the magnitude of earthquake then forecasted.

Additionally, we evaluated the seismic strength of selected storages and obtained findings, that is, that they can withstand seismic level 2 (the maximum level of seismic force probable at present and in the future).

Disaster drill

We believe we maintain a full range of disaster prevention measures. However, a "drill" is indispensable to minimize a possible damage in case a disaster ever happens.

Both Himeji and Befu Works are subject to "the disaster prevention law of petrochemical complex and similar facilities." In the two Works, drills (practice of fire extinguishing, calling out, and fire dispatch) are conducted occasionally under the company's well established disaster prevention initiatives, and in addition, the company has signed "the local area disaster prevention agreement" to mutually assist locally in case a disaster occurs.



Disaster prevention drill

Occupational safety and health issues

Keeping our worksite free from accident and disaster

In addition to conventional safety actions such as 5S (five actions = straightening, ordering, cleaning, cleanliness, and discipline, all beginning with the letter "S" in Japanese words), risk prediction, near miss prevention, and safety patrol, we have introduced a risk assessment method by which we find hidden risks in facilities as well as operation processes and take improvement measures based on a predetermined priority order.

Occupational safety and health

In 2008, we reconfirmed the necessity and significance of our conventional campaigns including "near miss accident listing," "5S," "risk prediction," and "finger pointing confirmation." Additionally, aiming at improvement in the level of work safety and health campaign, we introduced officially the work safety and health management system. In February 2009, we acquired the certifications of "central occupational disaster prevention association method of OSHMS Standard" at our three domestic works.

In each worksite, by way of the risk assessment (survey of risks and hazards), hidden risks at the time of possible occurrence of disaster were identified, whereby work environment was improved.

Several trials were done under our education program so as to help employees to better sense risks, which are pseudo-experience in pinching, rolling-in and downfall possibly taking place at their worksites. Those were all intended to prevent such risks from happening.

An emergency drill is another example we implement as a regular program to familiarize employees with methods as to how to cope with an emergency case. AED (automatic external defibrillator) has been installed, and how to use it has been instructed to our employees.

Records in 2008 were:

Loss in work time: nil

Accidents without loss in work time: 8 (calendar 2008)

Rate of lost-worktime injuries: nil (whole industry: 1.90, chemical industry: 0.88)

However, we still have some room to improve.

President of Sumitomo Seika made a safety inspection tour to manufacturing works and stressed the importance of securing the safety at each work place, and requested steady implementation of daily safety initiatives by not only our employees but also employees of companies cooperating with us at our works.

We are aiming at creating a culture where communication is made freely on safety issues beyond generations or beyond years of experience inside the company and every employee is well aware that a high priority is placed on safety.



President's safety inspection tour

Risk assessment

We are continuing improvement for both software and hardware to detect hidden risks and hazards at each worksite, and implementation of counter-measures for them when detected.

Risks found at the worksite are evaluated to determine their priorities and are classified into ①immediate improvement, ②prompt improvement, ③scheduled improvement, and ④improvement upon necessity.

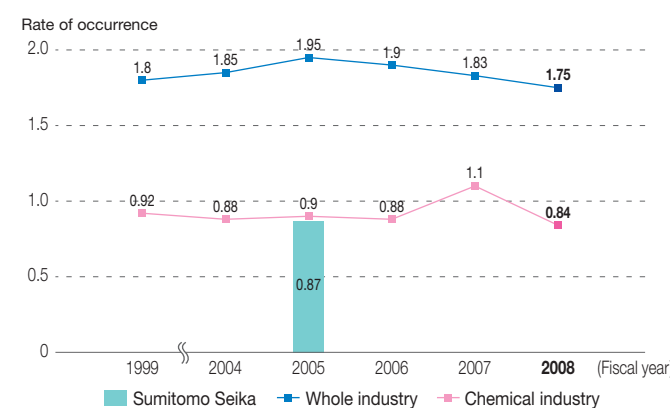


Risk assessment education

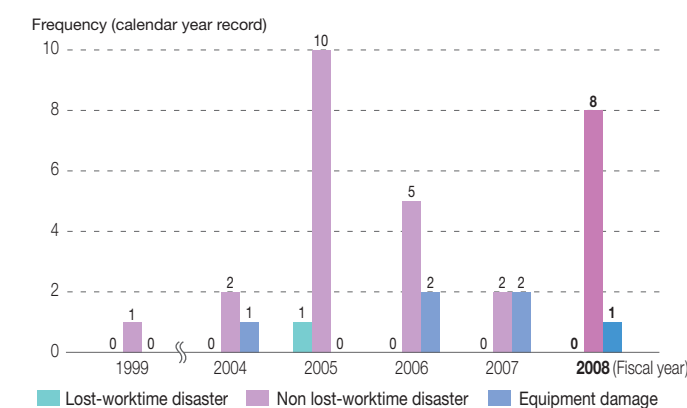
Rescue training by trainees with protection ware

Cardio-pulmonary resuscitation training by using AED

National comparison of rate of work disaster



Yearly occurrence of work disaster (inside works)



Efforts are continuing to secure safety in logistics area.

An accident during transportation of chemical products, if it ever happens, may give serious damages to the environment including areas around the spot of accident. We, therefore, keep close contact with logistics companies to ensure safe transportations.

Safe transportation

To deliver products to customers safely and on time is as important as to manufacture products safely and on time at factories.

One characteristic difference, however, is that we need cooperation from logistics companies, our third parties. Since 1999, we have been maintaining "the conference of logistics safety and the environment" jointly with logistics companies who cooperate with us for transportation of our products, in which we ask for their understanding on our policy concerning safety and the environment associated with transportation of our chemicals, and at the same time receive from respective companies reports of their plans and actions on

safety and the environment. In this way, we are trying to heighten the safety level through learning from each other.



Conference of logistics safety and the environment

Furnishing of safety information

To enable logistics companies transport our products safely, it is necessary for us to provide them with product information such as properties of substances, emergency measures, and the information desk to be contacted in case an accident occurs.

We regularly provide logistics companies with material safety data sheet and emergency treatment information (yellow card) required just in case an accident happens. Vehicles of logistic companies are obliged to carry yellow cards at any time during transportation.

Assistance to logistics companies for safe transportation

We have a security education program for crews of logistics companies to let them familiarized with properties of our products as well as emergency treatment methods and ways of communication which

are needed when an accident happens. We also conduct emergency drills occasionally jointly with logistics companies to enhance abilities to respond to real emergency cases.



Security education for logistics companies



Joint emergencies drill with logistics companies



Emergency treatment training

Evaluation of hazard and evaluation of transportation methods

Hazard of each product of ours is evaluated in accordance with the standards of "the American Association of Fire Defense", which is based on the three major factors of "health hazard," "combustion hazard," and "instability hazard." In this evaluation, transportation methods are evaluated for both new and routine cases in regard to "construction of transportation container," "transportation unit," "transportation route," and "logistics company contracted for transportation" in order to secure safety of transportation.

In 2008, eight new products were evaluated in the way as described above.

Additionally, we are now a member of the conference of pressurized gas local disaster prevention, and participate in local disaster drills which are held occasionally in our works. An emergency communication channel is also established, which is subject to renewal from time to time.

We endeavor to improve the credibility for co-existence with the society.

Sumitomo Seika's basic policy is to keep the company's co-existence and co-prosperity with the society. In conformity with this policy, we keep paying attention to relations with our community so that such relation can always be amicable and harmonious.

Together with people of our local community

For many years, we have been in contact with local people, taking various opportunities including the environmental prevention conference sponsored by local governments in both Befu and Himeji, in which we have made presentations on our achievements pertaining to the environment protection, and invited local people to plant tours. In Befu Works, we occasionally invite local people to our disaster prevention drill which is held jointly with the local fire station so that they can be familiarized on the spot with our ways to tackle accidents and disasters.

Although not every year but once in every two years, in line with the purposes of RC initiatives, we hold, jointly with neighboring chemical companies, an information exchange meeting to which local community representatives are invited. For this meeting, we conduct

a questionnaire survey in the local communities to gather and understand in advance their thoughts and opinions in broad areas including the environment protection. Their thoughts and opinions are summarized, and at the meeting, opinions and necessary information are exchanged freely between the two sides.

There are several local festivals and other programs including the environment festival in Himeji and local town cleaning, in which we positively and regularly participate.

Our welfare facilities such as athletic field, tennis court, and gym are made available for use by local people. We will keep our relations with them in this way, trying to gain their constant trust in and adoration for our organization.



Himeji environment festival



Local area cleaning activity

Internship

The company accepts students under the internship program to help them develop professional awareness and to provide them with opportunities of voluntary job selections. In 2008, we accepted 31 internship students who were stationed in the research lab and manufacturing works, in which they experienced analysis, design, maintenance, and some other skills. They also learnt our RC initiatives.

The internship students expressed their comments that their experiences in our lab and manufacturing works were helpful in

determining their future courses. We will continue in this way to support development of human resources who will play roles to create the 21st century.



Experimental lab work

Responsible care activities at overseas works

The company constructed two affiliate works in Taiwan in 2006 and in Korea in 2008, in addition to our Singapore Works.

Their production facilities were constructed under the laws of respective countries. It is imperative to introduce the Japanese technologies for the environment protection and safety to those works, though there may be some complicacy in management because of difference in religion, race, and educational background among their employees. These works have been continuing operations without accidents since the start-up.



Sumisei Taiwan Technology



Sumisei Chemical (Korea)

Site Report

Befu Works



Location:
346-1 Miyanishi, Harima-cho,
Kako-gun Hyogo 675-0145, Japan

Site area:
250,000m²

Employees:
Approx.400

Production Items:
Fine Chemicals, Basic Chemical Products,
Gas Products etc.

【 Outline of the Works 】

This Works is located in Harima Industrial Zone facing Harima-nada (part of Seto Inland Sea) in the southern part of Hyogo Prefecture.

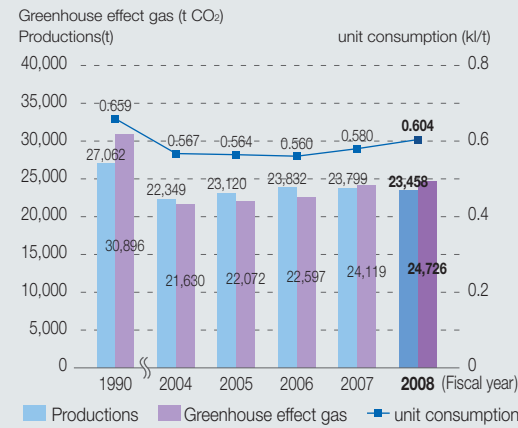
This Works was established in 1944. Since then, it has been the main works of Sumitomo Seika, having the longest history among all the company's works. Major production items are specialty chemicals (fine chemicals, basic chemicals, and gases).

【 Policy of the Works 】

In the society which has been diversified and sophisticated along its development, protection of the environment and assurance of safety are strongly requested. Meeting such request, the Works is aiming at establishment of the entity that is trusted by its local community as well as customers with the motto of "harmonious co-existence with the community".

Placing the highest priority on achieving "zero-accident and zero-injury", the Works has been implementing various programs these years, including "scheduled renovation of aged facilities", "strict examination on safety" at the time of changeover of facilities as well as new constructions, and enhancement of preparedness against possible earthquakes or the like.

In the area of environment protection, the Works has reexamined its effluent discharging route, reinforced its management, and promoted its visualization and automation with emphasis on "reinforcement of effluent infrastructure". In addition, the Works has built up multiple protective function systems against troubles. In 2008, we invited neighbors to the Works and listened to their candid opinions. We will continue to implement this kind of program to enhance our community relations through talks with local people.



■ Performance Data at Befu Works

Energy (as crude oil)	14,175kl/y
Air	
CO ₂	24,726t/y
SOx	0.4t/y
NOx	25.5t/y
Effluent	
Volume of effluent(unit: X 1,000 m ³ /y)	1,574
COD	33.4t/y
Waste materials	
Quantity	14,298t/y
Recycle ratio	59%
landfill	24t/y
PRTR (Volume of exhaust to air)	10.5t/y

Chiba Works



Location:
1384-1 Kamikoya, Yachiyo City, Chiba
276-0022, Japan

Site area:
33,000m²

Employees:
Approx. 80

Production Items:
Gas Products, Fine Powder Plastics etc.

【 Outline of the Works 】

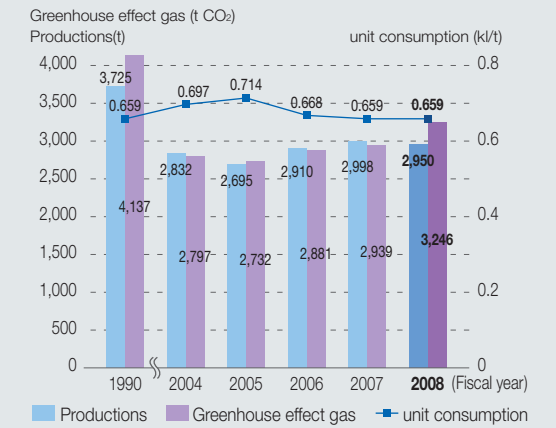
This Works is located about 30 km from the center of Tokyo, the company's production base in Kanto Area. The Works is comfortably bright, surrounded by greenery. Its major production items are special gases, coating materials for metal products, and powdered plastics which are materials for fabricating bathtubs, keeping major market shares respectively in Japan.

【 Policy of the Works 】

This Works' main targets are to "secure safe and stable operations", to "protect the environment", and to "contribute to the society through supply of useful products".

Among them, we have been operating the factory without accident consecutively for 20 years and aiming at a record of longer time.

To protect the environment, the Works has taken measures four times for the purpose of reduction in discharge of solvents used in the Works. We have a program to further improve the environment in 2009. The company's reference gases are vital in the field of environmental measurements. We are determined to supply those products on a continuous basis and contribute to reduction in environmental loads. The employees all together tackle those environmental issues and endeavor to gain trust from communities with the slogan, "Clean & Safety, Communication & Speed".



■ Performance Data at Chiba Works

Energy (as crude oil)	1,944kl/y
Air	
CO ₂	3,246t/y
SOx	0t/y
NOx	0.6t/y
Effluent	
Volume of effluent(unit: X 1,000 m ³ /y)	340
COD	0.5t/y
Waste materials	
Quantity	202t/y
Recycle ratio	33%
landfill	7t/y
PRTR (Volume of exhaust to air)	4.1t/y

Himeji Works



Location:
1 Irifune-cho, Shikama-ku, Himeji City
Hyogo 672-8076, Japan

Site area:
270,000m²

Employees:
Approx. 340

Production Items:
Super Absorbent Polymers, Water-soluble
Polymers, Fine Particulate Polymers etc.

【 Outline of the Works 】

This Works is located in Harima Industrial Zone facing Harima-nada (part of Seto Inland Sea) in southern part of Himeji City, Hyogo Prefecture. It produces super absorbent polymers, the company's flagship product, and some other functional products related to water.

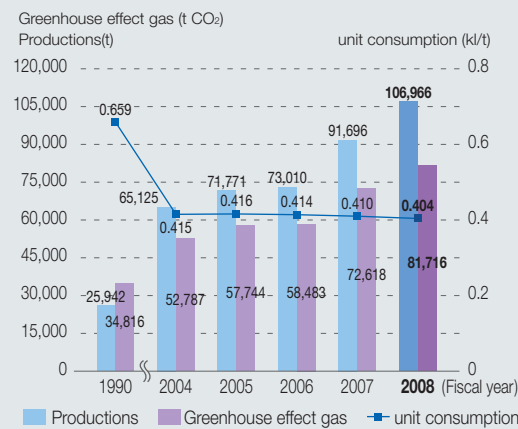
【 Policy of the Works 】

This Works is carrying out Responsible Care activities with ISO14001 (EMS), ISO9001 (QMS) and OSHMS as management tools, and seeking for harmonization among the three stakeholders of local communities, customers, and employees.

The basic activities in this particular field of the Works are as follows:

- ① To prevent labor accidents, promote health of employees, build up comfortable work environment, and thereby raise the standard of safety and health
- ② To thoroughly prevent environment pollution, constantly improve its level, and thereby ensure ease in communities
- ③ To constantly improve the levels of the three requirements from customers (quality, delivery time, and price) to gain customer satisfaction

By so doing, the Works is exerting efforts to be relied upon and trusted by communities, customers and employees.



■ Performance Data at Himeji Works

Energy (as crude oil)	43,182kl/y
Air	
CO ₂	81,716t/y
SOx	-
NOx	38.8t/y
Effluent	
Volume of effluent(unit: X 1,000 m ³ /y)	992
COD	10.8t/y
Waste materials	
Quantity	6,860t/y
Recycle ratio	62%
landfill	4t/y
PRTR (Volume of exhaust to air)	16t/y

Sumitomo Seika Singapore Pte. Ltd.



Location:
17 Sakra Road Singapore 627866

Site area:
10,500m²

Employees:
43

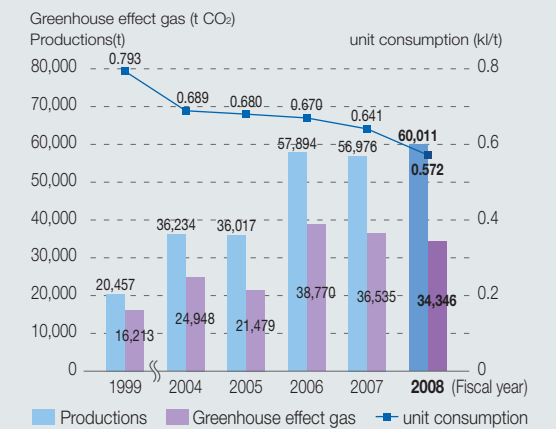
Production Items:
Super Absorbent Polymers

【 Outline of the Works 】

This Works was established in 1999 as the company's first overseas subsidiary to produce super absorbent polymers. In 2006, its second expansion project was completed. This Works is located in Jurong Island, which is called "the Chemical Island". Its products are shipped out from the Singapore Port, one of the largest ports in the world in terms of container shipment handling capacity, to the markets covering Southeast Asia, Middle East, Africa and Americas.

【 Policy of the Works 】

The Works has the basic business policy that is to enhance as much as possible our customers' satisfaction, continuing operations with the objectives of "safe and stable operation", "protection of the environment", "supply of quality products and advanced technical services", and "compliance with laws". The Works acquired certifications of ISO9001 in 2000 and ISO14001 in 2004. It has been continuing operations for ten years without any loss in work time since the start of its operations and further looking for a renewed record. Four companies within the chemical complex have a common competition program which is called "5S Initiatives" (five actions = straightening, ordering, cleaning, cleanliness, and discipline, all beginning with the letter "S" in Japanese words). We gained the highest award of the year consecutively in 2007 and 2008. In the environment protection area, in 2008 we succeeded in reducing the discharge of organic solvents used in the Works down to about 40% of the level at the time of start-up and intend to further reduce it down to 25% in 2009.



■ Performance Data at Sumitomo Seika Singapore Pte. Ltd.

Energy (as crude oil)	-
Air	
CO ₂	23,934t/y
SOx	-
NOx	-
Effluent	
Volume of effluent(unit: X 1,000 m ³ /y)	139
COD	-
Waste materials	
Quantity	558t/y
Recycle ratio	0.0%
landfill	547.7t/y
PRTR (Volume of exhaust to air)	-