# CSR REPORT 2006 DATA BOOK

SUMITOMO CHEMICAL



SUSTAINABLE CHEMISTRY

# 1 Management System

— Introduction of Management System Based on International Standards —

## ① Environmental Management System (ISO 14001)

ISO14001:1996 certification was obtained at all works between 1997 and 1999. From 2005 to 2006, these works submitted to transition inspections and obtained certification for ISO14001:2004, the revised issue of ISO14001:1996. Among the Sumitomo Chemical Group companies, 26 domestic companies and four foreign companies had obtained ISO14001 certification as of July 2006.

**Acquisition of ISO 14001 certification for Sumitomo Chemical's five works**

| Works and Certificate Number | ISO 14001:1996 Certification Date | ISO 14001:2004 Certification Date |
|---|---|---|
| Ehime Works [JCQA-E-018] | April 1998 | April 2006 |
| Chiba Works [KHK-97ER-04] | June 1997 | March 2006 |
| Osaka Works (Kasugade) [JQA-E-90072] | November 1997 | January 2006 |
| Osaka Works (Gifu Plant) [JCQA-E-0206] | December 2000 | December 2005 |
| Osaka Works (Okayama Plant) [JCQA-E-0216] | January 2001 | February 2006 |
| Oita Works [JQA-E-90152] | March 1998 | April 2006 |
| Misawa Works [JQA-EM0355] | March 1999 | February 2006 |

## ② Quality Management System (ISO9001)

Certification of compliance with ISO9002:1994 was completed for all works (with certain exceptions*) between 1994 and 1998. After successfully completing inspections and examinations between 2002 and 2003, Sumitomo Chemical made the transition from compliance with ISO9002:1994 to ISO9001:2000, the 2000 revision of the ISO9001 series. As of July 2006, 27 domestic Group companies and 10 foreign Group companies had obtained ISO9001:2000 series certification.

**Acquisition of ISO 9000 series certification for Sumitomo Chemical's five works**

| Works and Certificate Number | ISO 9002:1994 Certification Date | ISO 9001:2000 Certification Date |
|---|---|---|
| Ehime Works [JCQA-0019] [JCQA-0320] | October 1994 April 1998 | December 2002 March 2003 |
| Chiba Works [JQA-0829] | March 1995 | September 2002 |
| Osaka Works (Kasugade) [JQA-0721] | December 1994 | December 2002 |
| Osaka Works (Okayama Plant) [JQA-1650] | March 1997 | September 2003 |
| Oita Works [JQA-1069] | December 1995 | February 2003 |
| Misawa Works [JQA-0752] | December 1994 | December 2002 |

* The Osaka Works (Gifu Plant) has been pursuing Good Manufacturing Practice (GMP) management as have other Works including the Osaka Works (Kasugade and Okayama Plants), the Oita Works and Misawa Works.

## ③ Occupational Safety and Health Management System (OSHMS)

Certification of the Occupational Safety and Health Management System (OSHMS) was completed by the Japan Industrial Safety and Health Association (JISHA) at the Chiba Works in May 2003 - the first plant in Japan to receive such certification. This was followed by certification for four works and one laboratory between 2003 and 2005. The Oita Works and the Takarazuka Research Center plan to obtain certification by the end of fiscal 2006.

**Acquisition of OSHMS certification for Sumitomo Chemical's four works and a research laboratory**

| Facilities | Certificate Number | Certification Date |
|---|---|---|
| Ehime Works | 04-38-1 | September 2004 |
| Chiba Works | 03-12-1 | May 2003 |
| Osaka Works (Kasugade) | 05-27-3 | February 2005 |
| Misawa Works | 05-2-1 | November 2005 |
| Tsukuba Research Laboratory | 05-8-3 | December 2005 |

## [Preventing Pollution]

### Atmospheric emissions of SOx, NOx, and soot and dust

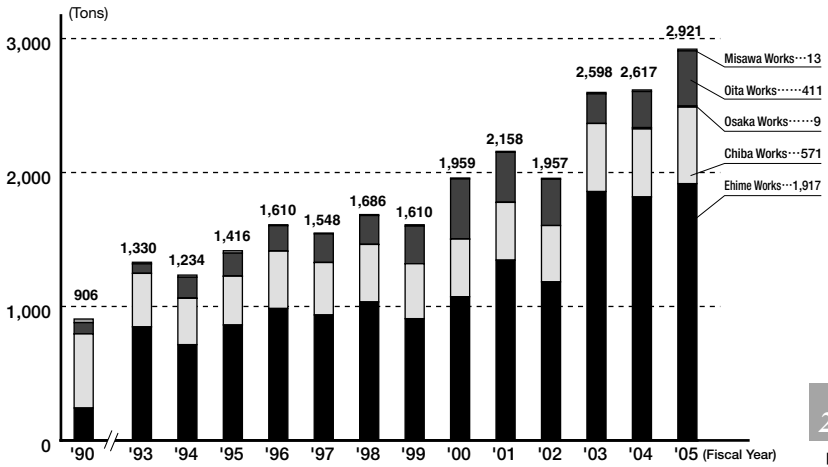
Since 1970, Sumitomo Chemical has achieved a marked reduction in the release of SOx, NOx, and soot and dust into the atmosphere, and has maintained this low level of emissions from 1980 to the present.

Furthermore, the Company has concluded cooperative agreements with local municipal governments at each of its manufacturing works, establishing voluntary control levels that are stricter than the standards of applicable laws and regulations.

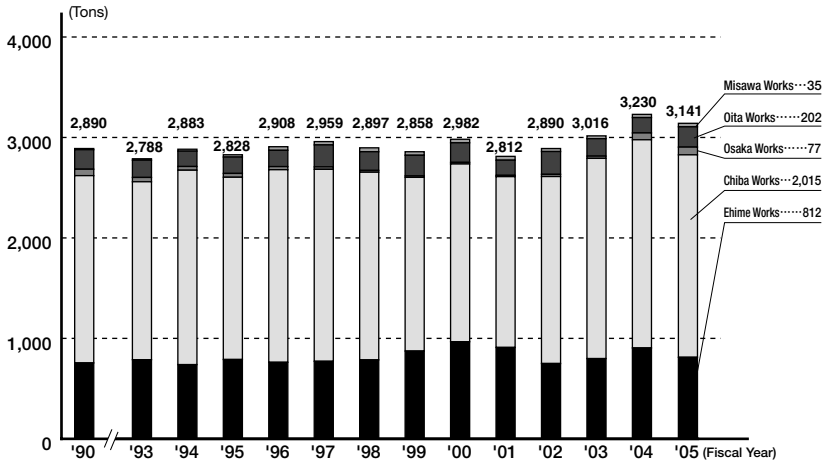
Although emissions of SOx have risen over the past few years because of the increased use of high-sulfur heavy oil, these levels are still substantially below the voluntary control levels.

**Target**
**To continue to sustain levels below voluntary control standard values**

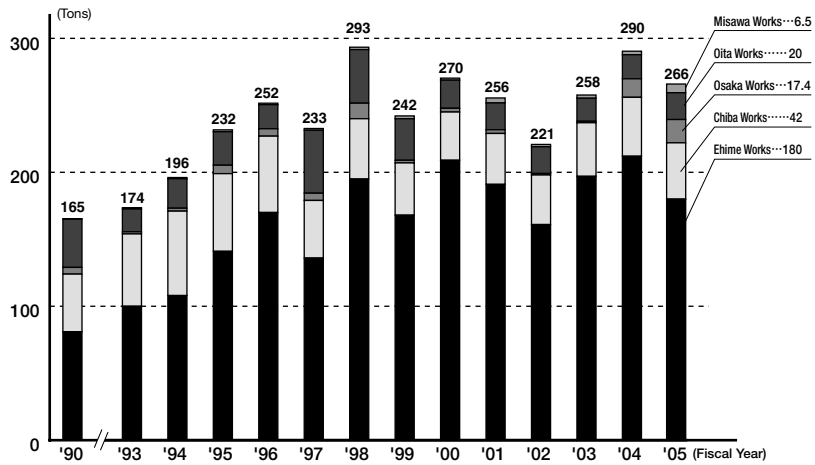
SOx Emissions




NOx Emissions




Soot and Dust Emissions




Misawa Works
Oita Works
Osaka Works
Chiba Works
Ehime Works

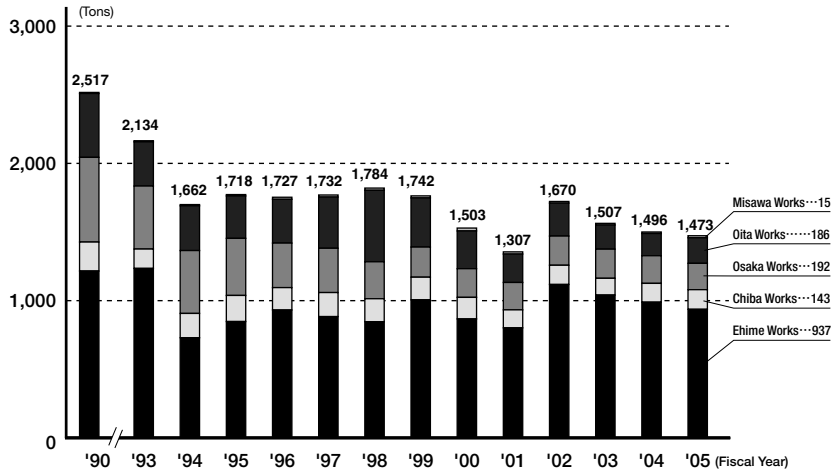
* Data since Fiscal 2004 for the Osaka Works include data for both the Gifu and Okayama Plants.

## ② Water Emissions — Levels of COD, Nitrogen, and Phosphorus

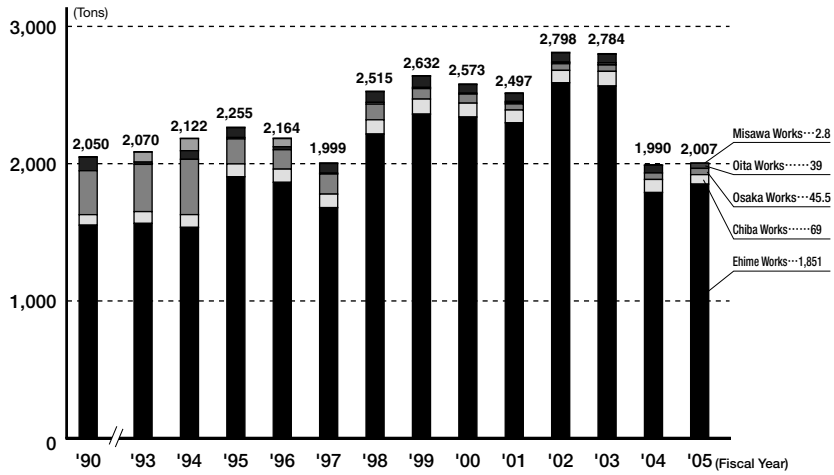
Sumitomo Chemical has also concluded cooperative agreements with local municipal governments to establish voluntary control levels for COD, nitrogen and phosphorous released into waterways. These standards are also stricter than those established under applicable laws and regulations. A number of measures have been implemented to cut emissions in line with 5th generation Water Quality Standards, and emissions of nitrogen and phosphorus in particular have been significantly reduced since fiscal 2004.

**Target**
**To continue to sustain levels below voluntary control standard values**

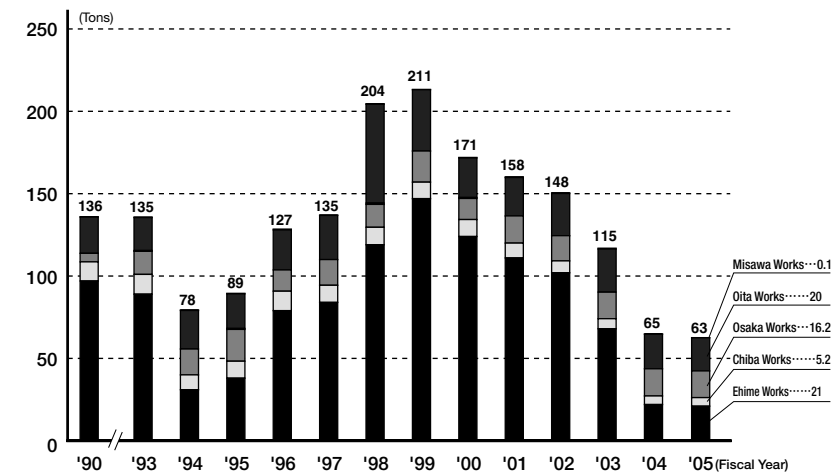
### COD Emissions




### Nitrogen Emissions




### Phosphorous Emissions




Misawa Works
Oita Works
Osaka Works
Chiba Works
Ehime Works

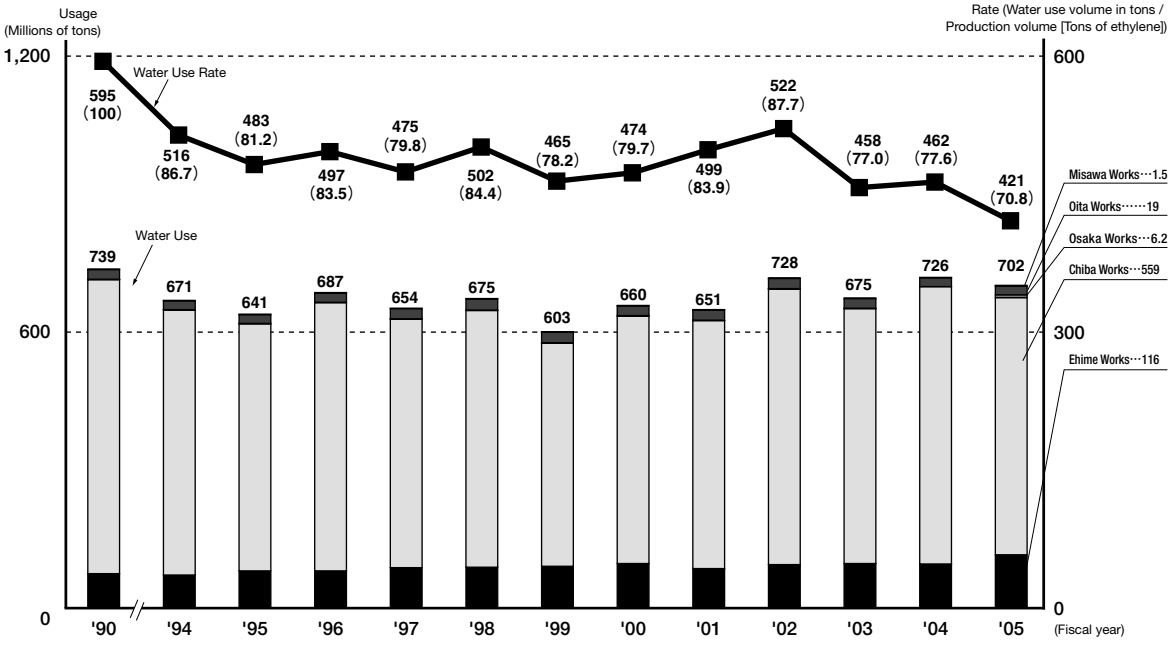
* Data since Fiscal 2004 for the Osaka Works include data for both the Gifu and Okayama Plants.

# [Promoting Effective Use of Water]

Sumitomo Chemical has endeavored to promote the efficient use of water as a precious and essential resource. In fiscal 2005, water use declined by 24 million tons to 702 million tons, an 8.9% improvement in the water use rate.

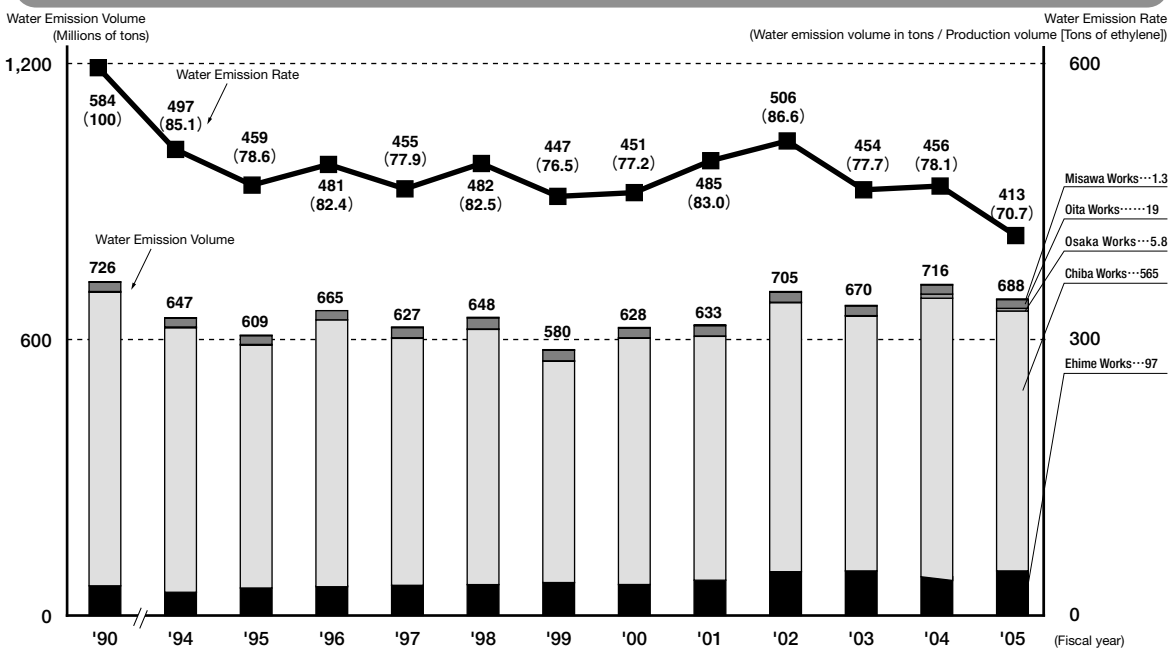
**Target: Efficient use of water resources**

## Water Use and Water Use Rate




* Numerical values in parentheses are index values (1990 = 100)

## Water Emission Volume and Water Emission Rate




* Numerical values in parentheses are index values (1990 = 100)

* Data since fiscal 2004 for the Osaka Works include data for both the Gifu and Okayama Plants.

# [Reducing Greenhouse Gas Emissions]

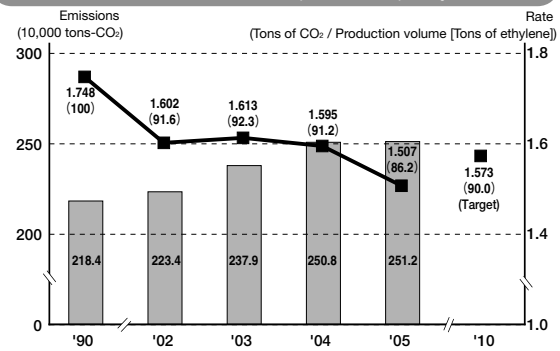
## ① Carbon dioxide ($CO_2$)

In fiscal 2005, Sumitomo Chemical's $CO_2$ emissions totaled 4.693 million tons, an 8.6% increase compared with the previous fiscal year, attributable to a 6.0% increase in production volume. This represents a 27.6% increase compared with fiscal 1990.

Nevertheless, in fiscal 2005, the $CO_2$ emission rate from in-house fossil fuel consumption improved by 5.5% compared with the previous fiscal year, representing a 13.8% improvement over figures for fiscal 1990.

**Target: To achieve 10% improvement relative to fiscal 1990 in per-unit $CO_2$ emissions originating from fossil fuels consumed in-house by fiscal 2010**

$CO_2$ Emissions from In-house Fossil Fuel Consumption and Corresponding Emission Rates




* Numerical values in parentheses are index values (1990 = 100)

* Figures for fiscal 1990 and 2002-2004 have been revised due to improved accuracy of data.
* Fiscal 1990, 2004 and 2005 data include data for both the Gifu and Okayama Plants of Osaka Works.

## ② Greenhouse Gases (all six gases)

Emissions of all six greenhouse gases regulated by the Law Concerning the Promotion of Measures to Cope with Global Warming increased by 8.6% from the previous year, to 4.75 million tons ($CO_2$ conversion).

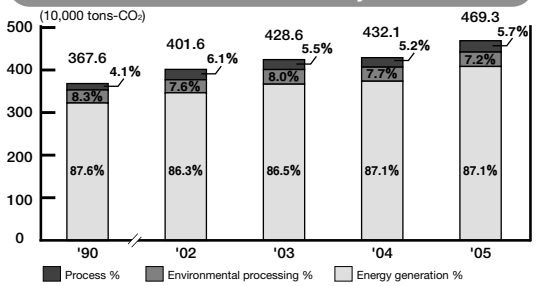
Emissions of Greenhouse Gases (All six gases)

(10,000 tons-$CO_2$ conversion)

| | Fiscal 2003 | Fiscal 2004 | Fiscal 2005 |
|---|---|---|---|
| $CO_2$ | 428.6 | 432.1 | 469.3 |
| Methane | 0.01 | 0.01 | 0.01 |
| Nitrous oxide | 5.3 | 5.1 | 5.7 |
| Hydrofluorocarbon (HFC) | ＜0.01 | 0 | ＜0.01 |
| Perfluorocarbon (PFC) | 0 | 0 | 0 |
| Sulfur hexafluoride | 0 | 0 | 0 |
| Total | 433.9 | 437.2 | 475.0 |

* $CO_2$ figures for fiscal 2003 and 2004 have been revised due to improved accuracy of data.
* Fiscal 2004 and 2005 data include data for both the Gifu and Okayama Plants.

Ratio of $CO_2$ Emissions by Source



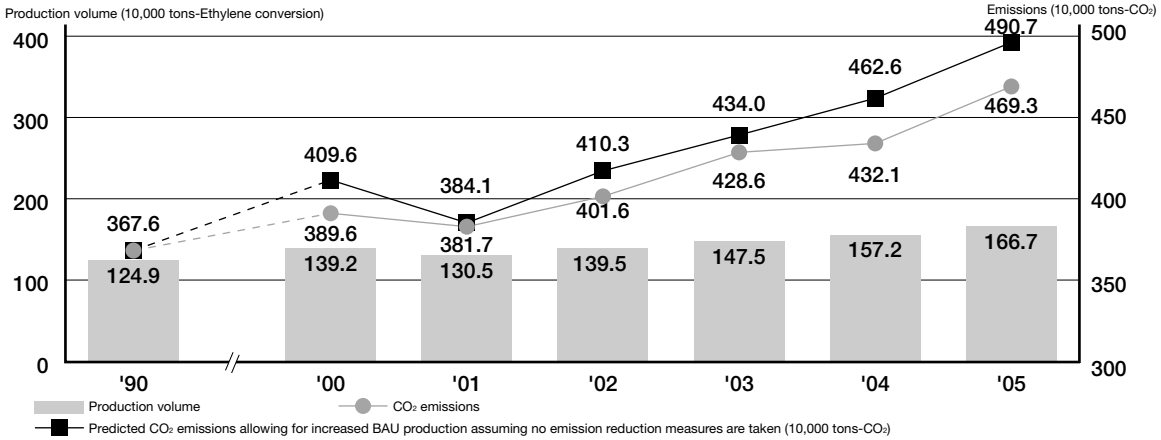

* Figures for fiscal 1990 and 2002-2004 have been revised due to improved accuracy of data.
* Fiscal 1990, 2004 and 2005 data include data for both the Gifu and Okayama Plants.

# [Examination of $CO_2$ Emission Calculation System and Analysis Methods]

## ① Quantitative Analysis of Effects of $CO_2$ Reductions

Production indicators and improvements in $CO_2$ emission rate are analyzed to determine quantitative trends in $CO_2$ emissions.

$CO_2$ Emissions

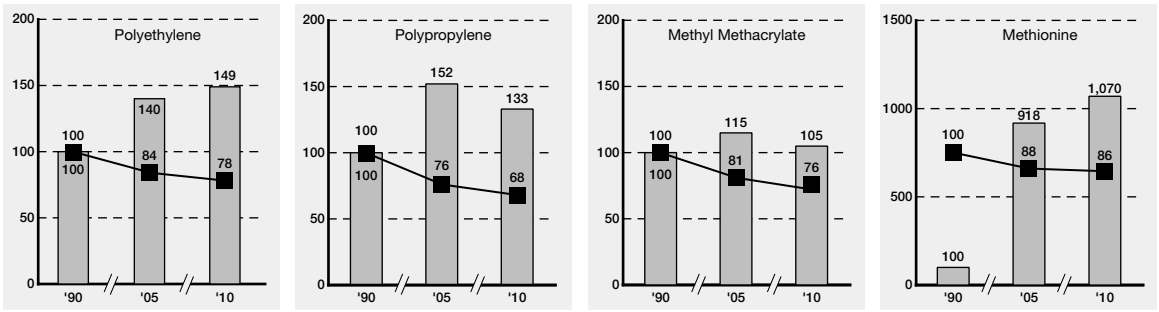



* Fiscal 1990, 2004 and 2005 data include data for both the Gifu and Okayama Plants of Osaka Works.

## ② Analysis of $CO_2$ Emission Trends by Product Group

Analysis is applied to gain a quantitative understanding of $CO_2$ emission rates for individual product groups. Improvement targets are identified and efforts are made to enhance efficiency. Examples are provided for the product groups below.

### $CO_2$ Emissions by Product




* Indicator and rates based on 1990 values as corresponding to 100.

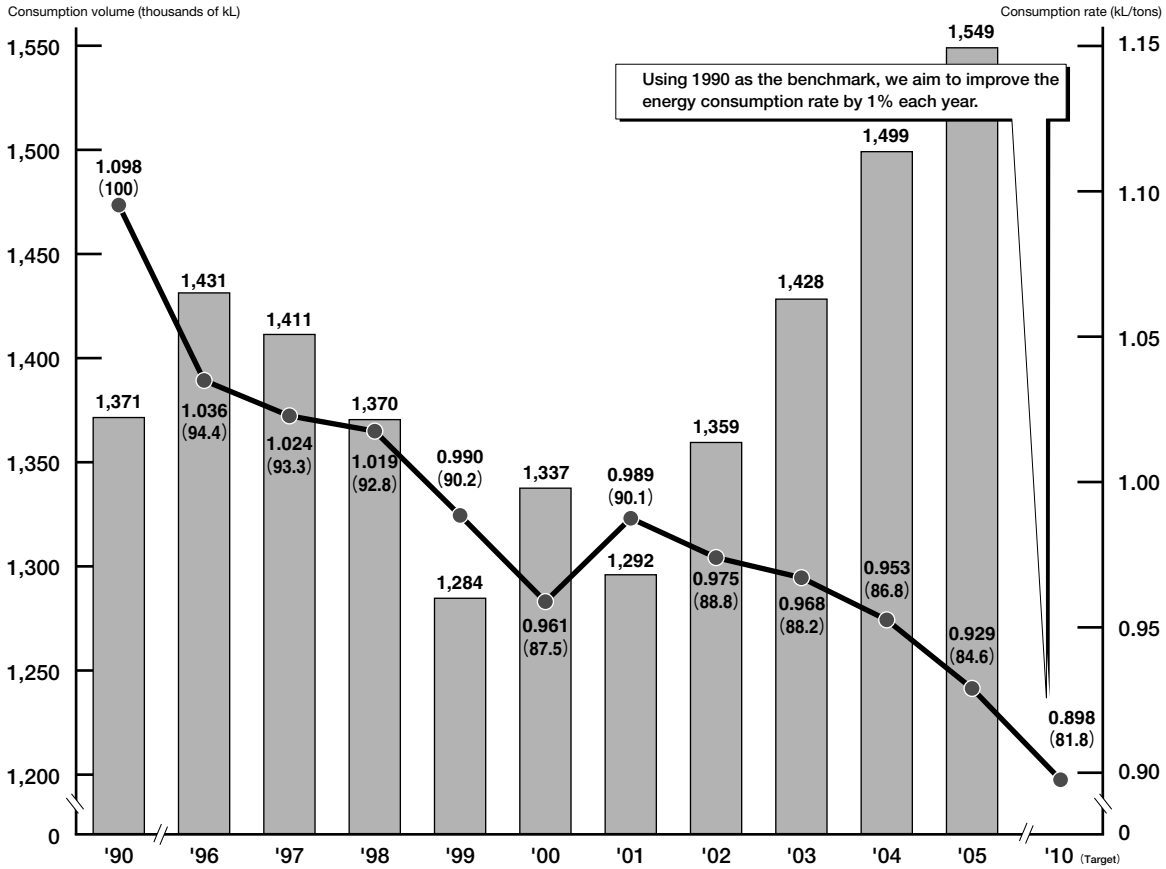
## [Energy Saving]

In fiscal 2005, Sumitomo Chemical used 1.549 million kL of energy (crude oil conversion), representing a 3.3% increase over the previous fiscal year due to increased production volume. However, progress in energy saving measures such as waste heat recovery and process rationalization led to a 2.5% improvement over the previous year in terms of energy consumption rate.

Assigning a value of 100 to fiscal 1990 in the energy consumption index, the actual achievement for fiscal 2005 was 84.6, compared with the target of 86.0, representing a target-achievement rate of 110.0%.

**Target: To improve the energy consumption rate by an average of at least 1% per year**

### Energy Consumption Volume and Energy Consumption Rate




*Fiscal 1990 (base year), 2004 and 2005 data include data for both the Gifu and Okayama Plants.

# [Response to the Pollutant Release and Transfer Register (PRTR)]

Based on the results of risk assessments and release evaluations, Sumitomo Chemical has set for itself a new target for reducing release volumes (air and water) of PRTR-targeted substances by 50% relative to fiscal 2002 levels by fiscal 2010. Sumitomo Chemical is currently implementing a variety of systematic measures aimed at reducing release volumes of PRTR-targeted substances. In fiscal 2005, the Company released a total of 826.1 tons of such substances, a decrease of 1.8% from the previous fiscal year.

**Release and Transfer of PRTR-Targeted Substances in Fiscal 2005**

Unit: Tons (Dioxins are measured in mg-TEQ)

| No. | PRTR-Targeted Substances | JCIA-Targeted Substances | Name of Chemical Compound | Amount Released | | | | | Amount Transferred | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Air | Water | Soil | Landfill | Total | Sewerage | Waste | Total |
| 1 | ○ | ○ | Zinc compounds (water-soluble) | 0.0 | 0.8 | 0.0 | 0.0 | 0.8 | 0.0 | 1.2 | 1.2 |
| 2 | ○ | ○ | Acrylamide | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | ○ | ○ | Acrylic acid | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | | ○ | Butyl acrylate | <0.1 | 0.0 | 0.0 | 0.0 | <0.1 | 0.0 | 0.0 | 0.0 |
| 5 | ○ | ○ | Methyl acrylate | 2.3 | 0.0 | 0.0 | 0.0 | 2.3 | 0.0 | 1.2 | 1.2 |
| 6 | ○ | ○ | Acrylonitrile | 9.0 | 0.0 | 0.0 | 0.0 | 9.0 | 0.0 | 11.7 | 11.7 |
| 7 | ○ | ○ | Acrolein | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | | ○ | Adipic acid | 0.8 | 3.4 | 0.0 | 0.0 | 4.2 | 0.0 | 0.0 | 0.0 |
| 9 | ○ | ○ | Acetaldehyde | 0.2 | <0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.2 | 0.2 |
| 10 | ○ | ○ | Acetonitrile | 0.5 | <0.1 | 0.0 | 0.0 | 0.5 | 0.0 | 76.0 | 76.0 |
| 11 | | ○ | Acetone | 52.3 | 0.6 | 0.0 | 0.0 | 52.9 | 0.0 | 303.7 | 303.7 |
| 12 | ○ | ○ | 2,2'-Azobisisobutyronitrile | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 13 | ○ | ○ | 0-Anisidine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 14 | ○ | ○ | Aniline | 0.7 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 13.6 | 13.6 |
| 15 | ○ | ○ | 2-Aminoethanol | 0.0 | <0.1 | 0.0 | 0.0 | <0.1 | 0.0 | 0.0 | 0.0 |
| 16 | ○ | ○ | m-Aminophenol | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 17 | ○ | ○ | Allyl alcohol | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 4.2 | 4.2 |
| 18 | ○ | ○ | Antimony and its compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.6 | 7.6 |
| 19 | | ○ | Ammonia | 7.8 | 0.2 | 0.0 | 0.0 | 8.0 | 0.0 | 3.1 | 3.1 |
| 20 | | ○ | Aluminum compounds (water-soluble) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 21 | ○ | ○ | Isoprene | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 22 | | ○ | Indium and its compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 23 | ○ | ○ | O-ethyl O-(6-nitro-m-tolyl) sec-butylphosphoroamidothioate (also known as Butamifos) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 24 | | ○ | 2-ethyl-1-hexanol | <0.1 | 0.0 | 0.0 | 0.0 | <0.1 | 0.0 | 594.3 | 594.3 |
| 25 | ○ | ○ | Ethylbenzene | 6.7 | 0.1 | 0.0 | 0.0 | 6.8 | 0.0 | 4.4 | 4.4 |
| 26 | ○ | ○ | Ethylene oxide | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 27 | ○ | ○ | Ethylene glycol | 0.7 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 13.1 | 13.1 |
| 28 | ○ | ○ | Epichlorohydrin | 5.2 | 0.3 | 0.0 | 0.0 | 5.5 | 0.0 | 0.0 | 0.0 |
| 29 | ○ | ○ | 1,2-epoxypropane (also known as Propylene oxide) | 17.0 | <0.1 | 0.0 | 0.0 | 17.0 | 0.0 | 0.0 | 0.0 |
| 30 | | ○ | Ammonium chloride | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 31 | | ○ | Hydrogen chloride (excluding Hydrochloric acid) | 0.9 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 | 0.0 |
| 32 | | ○ | Chlorine | <0.1 | 0.0 | 0.0 | 0.0 | <0.1 | 0.0 | 0.0 | 0.0 |
| 33 | ○ | ○ | e-Caprolactam | 0.4 | 79.6 | 0.0 | 0.0 | 80.0 | 0.0 | 0.0 | 0.0 |
| 34 | | ○ | Formic acid | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 35 | ○ | ○ | Xylene | 21.1 | 0.3 | 0.0 | 0.0 | 21.4 | <0.1 | 11.3 | 11.3 |
| 36 | | ○ | Cumene/isopropylbenzene | 130.0 | 0.1 | 0.0 | 0.0 | 130.1 | 0.0 | 0.0 | 0.0 |
| 37 | ○ | ○ | Glyoxal | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 38 | ○ | ○ | Cresol (o.m.p) | 0.3 | <0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| 39 | ○ | ○ | Chromium and chromium(Ⅲ) compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40 | | ○ | Chlorosulphonic acid | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 41 | ○ | ○ | Chloroacetyl chloride | <0.1 | 0.0 | 0.0 | 0.0 | <0.1 | 0.0 | 0.1 | 0.1 |
| 42 | ○ | ○ | o-Chloroaniline | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 43 | ○ | ○ | p-Chloroaniline | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 44 | ○ | ○ | Chloroethane | 11.9 | 0.0 | 0.0 | 0.0 | 11.9 | 0.0 | 62.5 | 62.5 |
| 45 | ○ | ○ | Chloroethylene (also known as Vinyl chloride) | 5.1 | <0.1 | 0.0 | 0.0 | 5.1 | 0.0 | 0.0 | 0.0 |
| 46 | ○ | ○ | Chlorodifluoromethane (also known as HCFC-22) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 47 | ○ | ○ | 3-Chloropropene (also known as Allyl chloride) | 2.4 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 |
| 48 | ○ | ○ | Chlorobenzene | 25.6 | <0.1 | 0.0 | 0.0 | 25.6 | 0.0 | 645.8 | 645.8 |
| 49 | ○ | ○ | Chloroform | 0.6 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 37.5 | 37.5 |
| 50 | ○ | ○ | Divanadium pentoxide | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 51 | ○ | ○ | Cobalt and its compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 52 | | ○ | Ethyl acetate | 13.6 | 0.4 | 0.0 | 0.0 | 14.0 | 0.0 | 245.1 | 245.1 |
| 53 | ○ | ○ | Vinyl acetate | 253.8 | <0.1 | 0.0 | 0.0 | 253.8 | 0.0 | 27.2 | 27.2 |
| 54 | ○ | ○ | a-Cyano-3-phenoxybenzyl N-(2-chloro-a, a, a-trifluoro-p-tolyl)-D-valinate (also known as Fluvalinate) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 55 | ○ | ○ | a-Cyano-3-phenoxybenzyl 2-(4-chlorophenyl)-3-methylbutyrate (also known as Fenvalerate) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 56 | ○ | ○ | Inorganic cyanide compounds (excluding Complex salts and cyanates) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 57 | | ○ | Diethanolamine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 58 | ○ | ○ | 1,4-Dioxane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 130.0 | 130.0 |
| 59 | | ○ | Cyclohexanol | 16.4 | <0.1 | 0.0 | 0.0 | 16.4 | 0.0 | 23.8 | 23.8 |
| 60 | | ○ | Cyclohexane | 55.7 | 0.0 | 0.0 | 0.0 | 55.7 | 0.0 | 0.0 | 0.0 |
| 61 | ○ | ○ | Cyclohexylamine | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 3.1 | 3.1 |
| 62 | ○ | ○ | 1,2-Dichloroethane | 9.0 | 0.0 | 0.0 | 0.0 | 9.0 | 0.0 | 735.0 | 735.0 |
| 63 | ○ | ○ | 1,1-Dichloroethylene (also known as Vinylidene dichloride) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 64 | ○ | ○ | 1,3-Dichloropropene (also known as D-D) | 0.9 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 | 0.0 |
| 65 | ○ | ○ | o-Dichlorobenzene | 0.7 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 498.9 | 498.9 |
| 66 | ○ | ○ | Dichloropentafluoropropane (also known as HCFC-225) | 28.2 | 0.0 | 0.0 | 0.0 | 28.2 | 0.0 | 0.0 | 0.0 |
| 67 | ○ | ○ | Dichloromethane (also known as Methylene dichloride) | 11.1 | 0.0 | 0.0 | 0.0 | 11.1 | 0.0 | 93.5 | 93.5 |
| 68 | ○ | ○ | Dinitrotoluene | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 69 | ○ | ○ | 2,4-Dinitrophenol | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70 | ○ | ○ | Diphenylamine | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 7.7 | 7.7 |
| 71 | | ○ | 2,6-Di-t-butyl-4-methylphenol/BHT | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.4 | 3.4 |
| 72 | | ○ | Dimethylamine | 0.0 | 57.0 | 0.0 | 0.0 | 57.0 | 0.0 | 0.0 | 0.0 |

## Release and Transfer of PRTR-Targeted Substances in Fiscal 2005

| No. | PRTR-Targeted Substances | JCIA-Targeted Substances | Name of Chemical Compound | Amount Released | | | | | Amount Transferred | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Air | Water | Soil | Landfill | Total | Sewerage | Waste | Total |
| 73 | ○ | ○ | N,N-Dimethylformamide | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 134.5 | 134.5 |
| 74 | | ○ | Hydrogen bromide | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75 | | ○ | Oxalic acid | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 |
| 76 | | ○ | Bromine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.6 | 14.6 |
| 77 | | ○ | Nitric acid | 4.3 | 0.0 | 0.0 | 0.0 | 4.3 | 0.0 | 7.9 | 7.9 |
| 78 | ○ | ○ | Styrene | 3.4 | 0.0 | 0.0 | 0.0 | 3.4 | 0.0 | 0.5 | 0.5 |
| 79 | ○ | ○ | Dioxines | 121.8 | 11.2 | 0.0 | 0.0 | 133.0 | <0.1 | 10.3 | 10.3 |
| 80 | ○ | ○ | Thiourea | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 |
| 81 | ○ | ○ | O, O-dimethyl S-2-[1-(N-methylcarbamoyl) ethylthio] ethyl | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82 | ○ | ○ | O, O-dimethyl O-3-methyl-4-nitrophenyl phosphorothioate (also known as Fenitrothion or MEP) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 83 | ○ | ○ | 1,3,5,7-tetraazatricyclo [3.3.1.13.7] decane (also known as Hexamethylenetetramine) | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | <0.1 | <0.1 |
| 84 | ○ | ○ | Tetrachloroethylene | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85 | | ○ | Tetrahydrofuran | 11.3 | 0.5 | 0.0 | 0.0 | 11.8 | 0.0 | 58.1 | 58.1 |
| 86 | | ○ | Tellurium and its compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 |
| 87 | ○ | ○ | Terephthalic acid | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 88 | ○ | ○ | Copper salts (water-soluble, excluding complex salts) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 89 | | ○ | Triethanolamine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90 | | ○ | Triethylamine | 6.1 | 25.0 | 0.0 | 0.0 | 31.1 | 0.0 | 76.9 | 76.9 |
| 91 | ○ | ○ | 2,4,6-trichloro-1,3,5-triazine (Cyanuric chloride) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92 | ○ | ○ | Trichlorotrifluoroethane (also known as CFC-113) | 0.3 | <0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| 93 | | ○ | Trimethylamine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 94 | ○ | ○ | 1,3,5-trimethylbenzene | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95 | ○ | ○ | o-Toluidine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.6 | 12.6 |
| 96 | ○ | ○ | p-Toluidine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97 | ○ | ○ | Toluene | 200.7 | 1.3 | 0.0 | 0.0 | 202.0 | <0.1 | 2,443.0 | 2,443.0 |
| 98 | ○ | ○ | Lead and its compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 99 | ○ | ○ | Nickel | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.4 | 6.4 |
| 100 | ○ | ○ | Nickel compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 101 | ○ | ○ | N-Nitrosodiphenylamine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 23.1 | 23.1 |
| 102 | ○ | ○ | p-Nitrophenol | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.4 | 3.4 |
| 103 | ○ | ○ | Nitrobenzene | 0.6 | 0.8 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 |
| 104 | | ○ | Palladium and its compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105 | ○ | ○ | Hydrazine | 0.1 | 0.2 | 0.0 | 0.0 | 0.3 | 0.0 | 14.9 | 14.9 |
| 106 | ○ | ○ | Hydroquinone | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107 | ○ | ○ | Pyridine | 1.2 | 0.5 | 0.0 | 0.0 | 1.7 | 0.0 | 3.1 | 3.1 |
| 108 | ○ | ○ | Pyrocatechol (also known as Catechol) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 109 | ○ | ○ | m-Phenylenediamine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110 | ○ | ○ | Phenol | <0.1 | 0.0 | 0.0 | 0.0 | <0.1 | 0.0 | 7.8 | 7.8 |
| 111 | ○ | ○ | 3-Phenoxybenzyl 3-(2,2- dichlorovinyl) -2,2-dimethylcyclopropanecarboxylate (also known as Permethrin) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 112 | ○ | ○ | 1,3-butadiene | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 113 | | ○ | Diisobutyl phthalate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 114 | ○ | ○ | Di-n-butyl phthalate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115 | ○ | ○ | Bis (2-Ethylhexyl) Phthalate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 1.7 |
| 116 | | ○ | Butyl alcohol | 1.9 | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 | 49.4 | 49.4 |
| 117 | | ○ | Butyraldehyde | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 118 | ○ | ○ | Hydrogen fluoride and its water-soluble salts | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 | 1.9 |
| 119 | | ○ | Propyl alcohol | 3.9 | 0.0 | 0.0 | 0.0 | 3.9 | 0.0 | 83.9 | 83.9 |
| 120 | | ○ | n-Hexane | 705.8 | 0.6 | 0.0 | 0.0 | 706.4 | 0.0 | 196.3 | 196.3 |
| 121 | ○ | ○ | Benzyl chloride | <0.1 | 0.0 | 0.0 | 0.0 | <0.1 | 0.0 | 0.1 | 0.1 |
| 122 | ○ | ○ | Benzaldehyde | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 123 | ○ | ○ | Benzene | 65.5 | 1.1 | 0.0 | 0.0 | 66.6 | 0.0 | 0.0 | 0.0 |
| 124 | | ○ | Pentaerythritol | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125 | ○ | ○ | Boron and its compounds | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 0.0 | 1.5 | 1.5 |
| 126 | ○ | ○ | Phosgene | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127 | ○ | ○ | Poly (oxyethylene) alkyl ether (alkyl c=12-15) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 128 | ○ | ○ | Formaldehyde | 0.2 | <0.1 | 0.0 | 0.0 | 0.2 | 0.6 | 0.0 | 0.6 |
| 129 | ○ | ○ | Manganese and its compounds | 0.0 | 0.4 | 0.0 | 0.0 | 0.4 | 0.0 | 22.5 | 22.5 |
| 130 | ○ | ○ | Phthalic anhydride | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 131 | ○ | ○ | Maleic anhydride | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132 | ○ | ○ | 2-Ethylhexyl methacrylate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 133 | ○ | ○ | 2,3-Epoxypropyl methacrylate | 8.1 | 0.0 | 0.0 | 0.0 | 8.1 | 0.0 | 0.0 | 0.0 |
| 134 | ○ | ○ | Methyl methacrylate | 44.9 | 0.0 | 0.0 | 0.0 | 44.9 | 0.0 | 75.2 | 75.2 |
| 135 | | ○ | Methanethiol | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 136 | | ○ | Methylamine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137 | | ○ | Methyl alcohol (methanol) | 39.1 | 3.1 | 0.0 | 0.0 | 42.2 | 0.0 | 513.7 | 513.7 |
| 138 | | ○ | Methyl ethyl ketone | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.7 | 0.7 |
| 139 | ○ | ○ | 2-Isoprophenyl N-methylcarbamate (also known as Isoprocarb or MIPC) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140 | ○ | ○ | a-Methylstyrene | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 141 | | ○ | N-Methylpyrrolidone | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 2.5 |
| 142 | | ○ | Methyl isobutyl ketone | 56.7 | 0.4 | 0.0 | 0.0 | 57.1 | 0.0 | 245.8 | 245.8 |
| 143 | | ○ | Melamine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 144 | ○ | ○ | Molybdenum and its compounds | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 |
| 145 | | ○ | Sulfuric acid | 0.3 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 73.3 | 73.3 |
| 146 | | ○ | Diethyl sulfate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147 | | ○ | Dimethyl sulfate | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 148 | | ○ | Phosphorus and its compounds | <0.1 | 34.0 | 0.0 | 0.0 | 34.0 | 14.9 | 189.3 | 204.2 |
| | | | Total 148 substances used by Sumitomo Chemical (FY2005) | 1,846.2 | 212.2 | 0.0 | 0.0 | 2,058.4 | 15.5 | 7,827.5 | 7,843.0 |

* The PRTR Law indicates the use of kilograms (rounded off to two significant figures) to express weight, but in this report numerical values are expressed in tons rounded off to one decimal place (except for dioxins, expressed in mg-TEQ).

### Release and Transfer of PRTR-Targeted Substances in Fiscal 2005

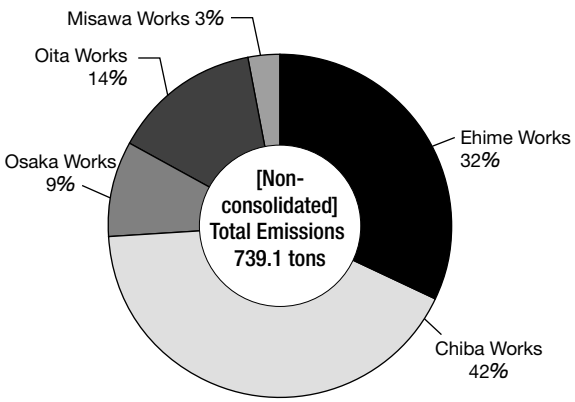
(Tons)

| | | Released | | | Transferred | | |
|---|---|---|---|---|---|---|---|
| | | Air | Water | Subtotal | Sewage | Waste | Subtotal |
| PRTR-targeted substances | Non-consolidated (102 substances) | 739.1 | 87.0 | 826.1 | 0.6 | 5,139.4 | 5,140.0 |
| | Consolidated | 1,258.0 | 184.4 | 1,442.4 | 23.5 | 8,635.4 | 8,658.9 |
| JCIA-targeted substances | Non-consolidated (148 substances) | 1,846.2 | 212.2 | 2,058.4 | 15.5 | 7,827.5 | 7,843.0 |

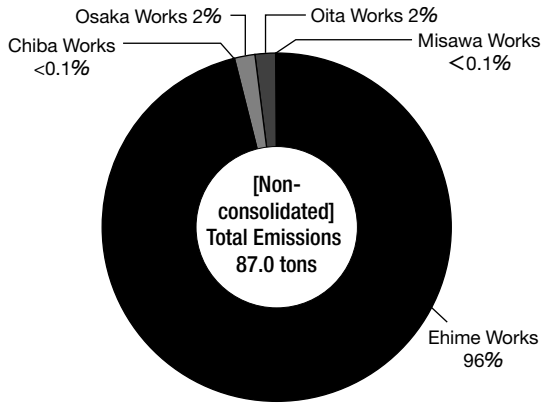
* Consolidated figures for fiscal 2005 for the release and transfer of PRTR-targeted substances reflect totals for Sumitomo Chemical and its 17 domestic Group companies. Figures for the Waste (tons) under the Transferred column increased from last year's figures because of a switch by several Sumitomo Chemical facilities (non-consolidated) to a different calculation method.

## Breakdown of Emissions by Works

### Atmospheric Emissions (PRTR-targeted substances)




### Water Emissions (PRTR-targeted substances)




## [Initiatives to Reduce Emissions of Volatile Organic Compounds]

With the revision of the Air Pollution Control Law, volatile organic compounds (VOCs) became subject to new regulations. Thus, in addition to its voluntary initiatives, Sumitomo Chemical established a new target in April 2004 to reduce VOC emissions by 30% relative to fiscal 2000 levels by fiscal 2010. The Company is currently formulating PRTR-compliance and related plans to reduce emissions. In fiscal 2005, a substantial increase in hexane emissions because of problems with the activated carbon absorption equipment at the Chiba Works resulted in a 15.9% increase in VOC emissions to 3,327 tons, which represents a reduction of 10.5% relative to fiscal 2000.

## [Prevention of Ozone Layer Damage]

Sumitomo Chemical maintains strict control of cooling devices that use specified CFCs (designated 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 accidentally into the atmosphere from devices that contain them and carries out the proper recovery, transportation and destruction of specified CFCs from refrigeration units upon disposal. In fiscal 2005, one system using specified CFCs was withdrawn from use.

**Target: Eliminating the use of refrigeration units that use the specified CFCs (CFC11, CFC12, CFC113, CFC114, CFC115) as coolants by 2025**

### Number of Refrigeration Units that Use Specified CFCs in Use as of the End of Fiscal 2005 (Non-consolidated & Consolidated)

| | Non-consolidated | Group |
|---|---|---|
| Type | Number of units | |
| CFC11 | 24 | 30 |
| CFC12 | 20 | 49 |
| CFC113 | 0 | 0 |
| CFC114 | 0 | 2 |
| CFC115 | 0 | 9 |
| Total | 44 | 90 |

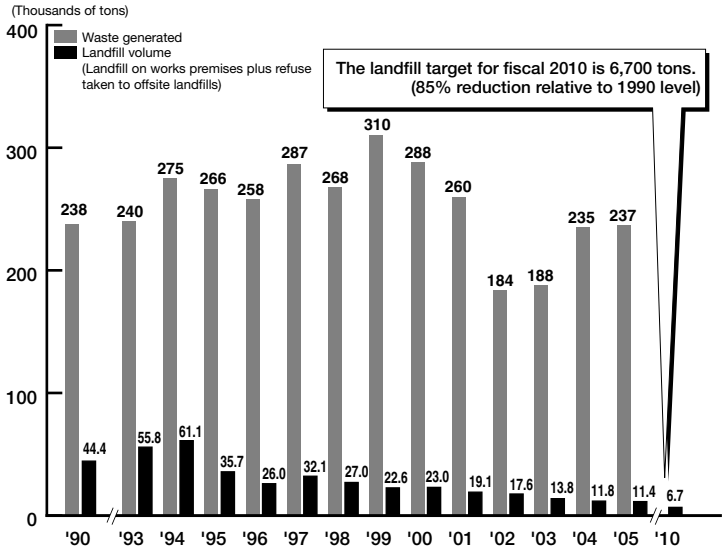
* These data have been revised due to improvements in accuracy.
*Data for Group reflect totals for Sumitomo Chemical and its 17 domestic Group companies

# [Waste Reduction]

Thanks to Sumitomo Chemical's promotion of waste reduction, and reuse and recycling, landfill waste in fiscal 2005 totaled 11.4 thousand tons, down 3.4% from the previous fiscal year and 74.3% from fiscal 1990.

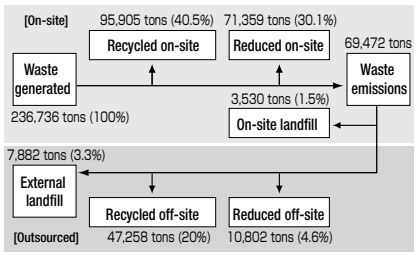
**Target: To reduce landfill waste by fiscal 2010 by 85% relative to fiscal 1990 level**

Trends in Waste Generated and Landfill Volume (Non-consolidated)

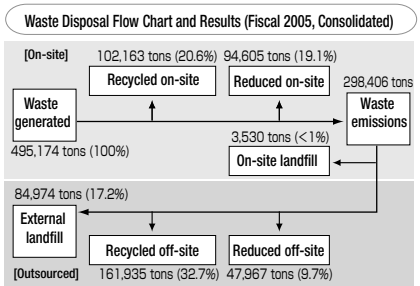



* The fiscal 1990, 2004 and 2005 data include data for Osaka works (Gifu and Okayama Plants).

Waste Disposal Flow Chart and Results (Fiscal 2005, Non-consolidated)




Waste Disposal Flow Chart and Results (Fiscal 2005, Consolidated)




Waste recycled: Total amount of waste that was reused, recycled, or thermally recycled
Waste reduced: Total amount of waste reduced through incineration, etc.
*Data for Group reflect totals for Sumitomo Chemical and its 17 domestic Group companies.

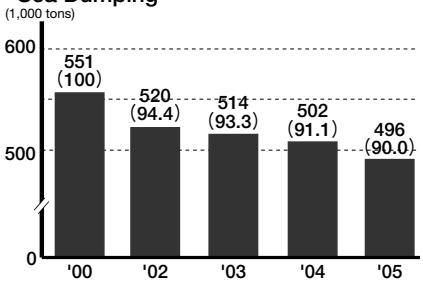
# [Reducing Bauxite Residue]

The volume of red bauxite (the residue of natural bauxite from which aluminum has been extracted) disposed of through sea dumping declined 1.2% from the previous fiscal year to 496 thousand tons, representing a 10% reduction relative to the fiscal 2000 level.

**Targets**

- **To terminate the disposal of red bauxite through sea dumping by 2015**
- **To reduce the amount of red bauxite disposed of through sea dumping by fiscal 2005 to 10% below fiscal 2000 level**

**Disposal of Red Bauxite Residue through Sea Dumping**




* Numerical values in parentheses are index values (2000 = 100)

# [PCB Recovery, Storage and Treatment]

In accordance with Law Concerning Special Measure against PCB waste (polychlorinated biphenyls), Sumitomo Chemical recovers PCB waste (capacitors, transformers and other electronic 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, subsequently ensuring strict control of these materials. Sumitomo Chemical plans to treat all of its PCB waste by March 2014, ahead of the deadline specified by the Law.

**Target: To recover and store PCB waste in an appropriate manner and to complete the treatment of this waste by March 2014**

**PCB waste storage and control as of the end of fiscal 2005 (Non-consolidated & Consolidated)**

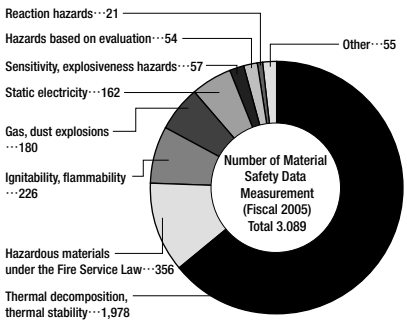
| | Number of Units of PCB Waste | PCB Volume ($m^3$) |
|---|---|---|
| Non-consolidated | 764 (726 Stored / 44 in Use) | 33.9 |
| consolidated | 1,540 (1,040 Stored / 500 in Use) | 37.6 |

* Low-level PCB waste is not included.
* Data have been revised due to improvements in accuracy.
*Data for Group reflect totals for Sumitomo Chemical and its 17 domestic Group companies.

# 3 Process Safety and Disaster Prevention

## [Results of Material Safety Data Measurement]

The Safety Engineering Laboratory at the Ehime Process & Production Technology Center studies and assesses process safety, researches safety measures, measures and evaluates material safety data, compiles a database on safety technologies, and undertakes training for safety engineers in its efforts to enhance process safety management and to prevent accidents such as fires and explosions. A total of 3,089 material safety data measurements were taken in fiscal 2005, 64% of which measured thermal decomposition and thermal stability.




## [Safety Information Database]

A safety information database has been created by preparing excerpts collected from accident data in Japan and overseas. As of May 2006, 27,179 data were stored in the database. Extracts of stored data can be searched from all employees' terminals at each facility or research laboratory, and the original data can be viewed or printed using dedicated terminals. These data are used in process hazard evaluations and case study examinations to prevent similar accidents. Accident data are also disclosed to interested outside parties through affiliate companies. Accident prevention technology information: 11,738 items
Accident cause investigations: 1,629 Accident information: 13,812 items

## [Process Safety Review Committee]

The Process Safety Review Committee convenes at every stage of the R&D and commercialization processes to oversee a system in which the safety of each stage is thoroughly verified before moving on to the next stage. This system is governed by the in-house process Development Commercialization Regulations and Safety Management Guidelines, and ensures that work is conducted with clearly defined research and development supervision. The Company notifies all concerned Group companies of its operations. The Process Safety Review Committee convened a total of 160 times at all facilities in fiscal 2004, and in fiscal 2005 this was increased to a total of 211 sessions. Work continues on in-depth determination of process hazards.

**Process Safety Review Committee Conventions**

| Fiscal year | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Total |
|---|---|---|---|---|---|---|
| 2004 | 4 | 32 | 34 | 66 | 24 | 160 |
| 2005 | 1 | 43 | 48 | 100 | 19 | 211 |

# 4 RC Audits

## [Audits Conducted]

In fiscal 2005, a total of 29 EH&S and management audits were conducted.

**Responsible Care Audit Results (Past 10 Years)**

| Facilities | | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EH & S Audits | Works | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 7 | 52 |
| | Laboratories | 0 | 0 | 2 | 1 | 0 | 2 | 1 | 0 | 1 | 1 | 0 | 8 |
| | Distribution Centers | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 |
| | Business Divisions | — | — | 4 | — | 4 | 4 | 4 | 7 | 5 | 6 | 5 | 39 |
| | Group Companies (Japan) | — | — | — | — | 5 | 22 | 16 | 9 | 8 | 12 | 10 | 82 |
| | Group Companies (Overseas) | — | — | — | — | — | — | 2 | 1 | 2 | 3 | 1 | 9 |
| Management Audits | Works and Laboratories | 5 | 5 | 6 | 6 | 5 | 6 | 6 | 5 | 6 | 6 | 5 | 61 |
| Total | | 10 | 10 | 16 | 12 | 19 | 38 | 34 | 27 | 27 | 32 | 29 | 254 |

* Including laboratories within the works compounds

The fiscal 2005 Sumitomo Chemical EH&S audit resulted in a total of 225 items meriting comment.

Audit items will be expanded and enhanced each year to ensure continual improvement.

**Fiscal 2005 Environment, Health & Safety Audits**

| Area \ Target | Facilities (Works, Laboratories) | Business Divisions (Head Office Business Divisions) | Total |
|---|---|---|---|
| Good (Important) | 36 | 14 | 50 |
| Needs Improvement | 42 | 33 | 75 |
| Needs to be Examined | 95 | 35 | 130 |
| Total | 173 | 82 | 255 |

# 5 Unification of Group Environmental Preservation Targets

Group-wide quantitative targets have been established and specific measures to achieve these targets are being implemented to reduce primary environmental impact systematically across the Group as a whole by fiscal 2010. These cover unit energy consumption, unit $CO_2$ emissions, emissions of PRTR-targeted substances (air and water) and landfill disposal.

## ① Improvement of unit energy consumption

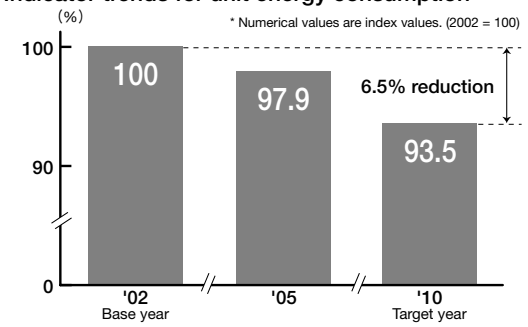
**Target**

**To reduce unit energy consumption by 6.5% relative to fiscal 2002 levels by fiscal 2010**

**Results**

Unit energy consumption in fiscal 2005 was reduced by 2.1% relative to fiscal 2002 levels.

Indicator trends for unit energy consumption




## ② Improvement of unit $CO_2$ emissions rate

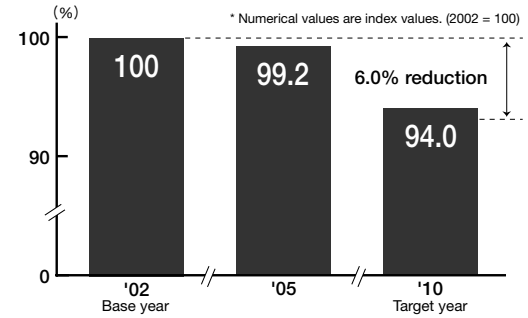
**Target**

**To reduce unit $CO_2$ emissions by 6.0% relative to fiscal 2002 levels by fiscal 2010**

**Results**

Unit $CO_2$ emissions in fiscal 2005 were reduced by 0.8% relative to fiscal 2002 levels.

Indicator trends for unit $CO_2$ emissions




## ③ Reduction of emissions of PRTR-targeted substances

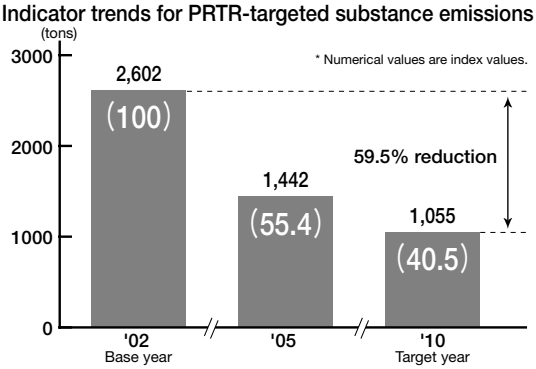
**Target**

**To reduce total emissions of PRTR-targeted substances (air and water) by 59.5% relative to fiscal 2002 levels by fiscal 2010**

**Results**

Total emissions of PRTR-targeted substances in fiscal 2005 were reduced by 44.6% relative to fiscal 2002 levels.

Indicator trends for PRTR-targeted substance emissions




## ④ Reduction of landfill disposal volume

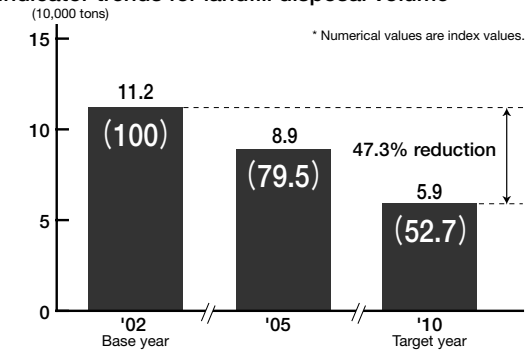
**Target**

**To reduce landfill disposal volume by 47.3% relative to fiscal 2002 levels by fiscal 2010**

**Results**

Landfill disposal volume in fiscal 2005 was reduced by 20.5% relative to fiscal 2002 levels.

Indicator trends for landfill disposal volume




*Values for individual target items (fiscal 2010) set by Sumitomo Chemical and its 17 domestic Group companies are cumulative. Target values have been revised in accordance with revisions by Group companies in June 2006.

## [Individual Group Company Targets]

The individual company targets that formed the basis of the unified Group targets (specific target settings) are listed below for the major areas of environmental preservation management.

### Energy Conservation and Global Warming Initiatives

| Company | Target details |
|---|---|
| Asahi Chemical Co., Ltd. | Reduce energy consumption by fiscal 2010 by 10% relative to fiscal 1990 |
| Sumika-Kakoushi Co., Ltd. | Reduce unit energy consumption by 1% annually<br>Reduce energy consumption by 20% relative to fiscal 2004 for three years from fiscal 2005 |
| Koei Chemical Co., Ltd. | Reduce unit energy consumption by 1% annually |
| Thermo Co., Ltd. | Reduce energy consumption by fiscal 2010 by 30% relative to fiscal 2003<br>Reduce unit $CO_2$ emissions by fiscal 2010 by 30% relative to fiscal 2003 |
| Sanzen Kako Co., Ltd. | Reduce unit energy consumption by 1% annually |
| Shinto Paint Co., Ltd. | Reduce unit energy consumption by 1% annually |
| Sumika Color Co., Ltd. | Reduce unit energy consumption by fiscal 2010 by 20% relative to fiscal 1990 |
| Sumitomo Joint Electric Power Co., Ltd. | Reduce unit $CO_2$ emissions from thermal power stations by fiscal 2010 by at least 10% relative to fiscal 1990 |
| Dainippon Sumitomo Pharma Co., Ltd. | Reduce unit energy consumption by 1% annually<br>Maintain $CO_2$ emissions by fiscal 2010 below fiscal 1990 levels<br>Reduce unit $CO_2$ emissions by 1% annually |
| Sumitomo Dow Ltd. | Reduce unit energy consumption by 1% annually<br>Reduce unit $CO_2$ emissions from in-house fossil fuel consumption by 1% annually |
| Sumitomo Bayer Urethane Co., Ltd. | Reduce unit energy consumption by 1% annually<br>Reduce unit $CO_2$ emissions from in-house fossil fuel consumption by fiscal 2010 by 10% relative to fiscal 1990 |
| Taoka Chemical Co., Ltd. | Reduce unit energy consumption by 0.25% annually<br>Reduce unit $CO_2$ emissions from in-house fossil fuel consumption by fiscal 2010 by 3% relative to fiscal 1990 |
| Nippon A&L Inc. | Reduce unit energy consumption by 1% annually |
| Nihon Medi-Physics Co., Ltd. | Reduce electricity consumption by 1% annually |
| Nihon Oxirane Co., Ltd. | Reduce unit energy consumption by 1% annually<br>Reduce unit $CO_2$ emissions from in-house fossil fuel consumption by fiscal 2010 by 10% relative to fiscal 1990 |
| Sumika Takeda Agrochemical Co., Ltd. | Reduce unit energy consumption by 1% annually<br>Reduce unit $CO_2$ emissions from in-house fossil fuel consumption by fiscal 2010 by 10% relative to fiscal 1990 |
| New STI Technology Co., Ltd. | Reduce unit energy consumption by 1% annually<br>Reduce unit $CO_2$ emissions from in-house fossil fuel consumption by fiscal 2010 by 10% relative to fiscal 1990 |
| Sumitomo Chemical Co., Ltd. | Reduce unit energy consumption by 1% annually<br>Reduce unit $CO_2$ emissions from in-house fossil fuel consumption by fiscal 2010 by 10% relative to fiscal 1990 |

## PRTR Initiatives

| Company | Target Details |
|---|---|
| Asahi Chemical Co., Ltd. | Maintain emissions (water/air) by fiscal 2010 below fiscal 2001 levels |
| Sumika-Kakoushi Co., Ltd. | Reduce emissions (water/air) by fiscal 2010 by 70% relative to fiscal 2002 |
| Koei Chemical Co., Ltd. | Limit emission increases corresponding to production levels |
| Thermo Co., Ltd. | Maintain zero emissions (water/air) |
| Sanzen Kako Co., Ltd. | Maintain zero emissions (water/air) |
| Shinto Paint Co., Ltd. | Reduce emissions (water/air) by fiscal 2008 by 50% relative to fiscal 2001 |
| Sumika Color Co., Ltd. | Reduce emissions (water/air) by fiscal 2010 by 15% relative to fiscal 2003 |
| Sumitomo Joint Electric Power Co., Ltd. | Maintain zero emissions (water/air) |
| Dainippon Sumitomo Pharma Co., Ltd. | Reduce total dichloromethane, chloroform, and 1,2-dichloroethane air emissions by 20% relative to fiscal 2003 |
| Sumitomo Dow Ltd. | Reduce emissions (water/air) by fiscal 2010 by 50% relative to fiscal 2003 |
| Sumitomo Bayer Urethane Co., Ltd. | Reduce emissions (water/air) by fiscal 2010 by 60% relative to fiscal 2002 |
| Taoka Chemical Co., Ltd. | Maintain emissions (water/air) by fiscal 2010 below fiscal 2002 levels |
| Nippon A&L Inc. | Reduce emissions (water/air) by fiscal 2010 by 60% relative to fiscal 2002 |
| Nihon Medi-Physics Co., Ltd. | Maintain zero emissions (water/air) |
| Nihon Oxirane Co., Ltd. | Reduce molybdenum waterway emissions by fiscal 2010 to 10 tons |
| Sumika Takeda Agrochemical Co., Ltd. | Reduce emissions (water/air) by fiscal 2010 by 50% relative to fiscal 2002 |
| New STI Technology Co., Ltd. | Reduce emissions (water/air) by fiscal 2010 by 50% relative to fiscal 2002 |
| Sumitomo Chemical Co., Ltd. | Reduce emissions (water/air) by fiscal 2010 by 50% relative to fiscal 2002 |

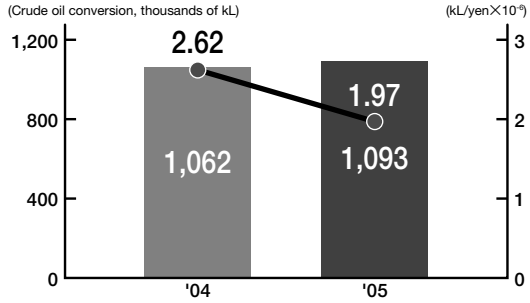
## Landfill Disposal Reduction Initiatives

| Company | Target Details |
|---|---|
| Asahi Chemical Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 7% relative to fiscal 1990 |
| Sumika-Kakoushi Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by at least 99% relative to fiscal 2002 |
| Koei Chemical Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 20% relative to fiscal 2002 |
| Thermo Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 12% relative to fiscal 2002 |
| Sanzen Kako Co., Ltd. | Maintain landfill disposal volume by fiscal 2010 below fiscal 2003 levels |
| Shinto Paint Co., Ltd. | Reduce landfill disposal volume (excluding sludge) by 2% relative to previous year |
| Sumika Color Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 20% relative to fiscal 1990 |
| Sumitomo Joint Electric Power Co., Ltd. | Achieve 70% utilization rate for coal ash |
| Dainippon Sumitomo Pharma Co., Ltd. | Reduce landfill disposal volume by fiscal 2008 by at least 80% relative to fiscal 1990 |
| Sumitomo Dow Ltd. | Maintain landfill disposal volume by fiscal 2010 below fiscal 2003 levels |
| Sumitomo Bayer Urethane Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 85% relative to fiscal 1990 |
| Taoka Chemical Co., Ltd. | Maintain landfill disposal volume by fiscal 2010 below fiscal 2002 levels |
| Nippon A&L Inc. | Reduce landfill disposal volume by fiscal 2010 by 85% relative to fiscal 1990 |
| Nihon Medi-Physics Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 to 27 tons |
| Nihon Oxirane Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 85% relative to fiscal 1990 |
| Sumika Takeda Agrochemical Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 85% relative to fiscal 1990 |
| New STI Technology Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 85% relative to fiscal 1990 |
| Sumitomo Chemical Co., Ltd. | Reduce landfill disposal volume by fiscal 2010 by 85% relative to fiscal 1990 |

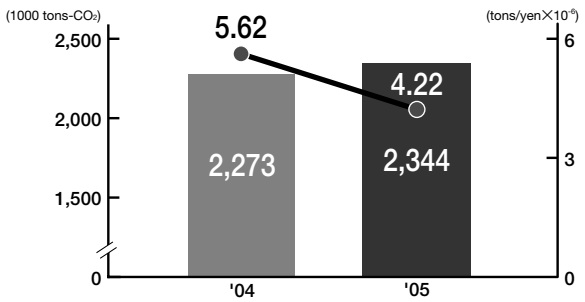
# 6 Environmental Performance of Overseas Group Companies

The year-to-year changes in total energy consumption, $CO_2$ emissions, water use, and landfill disposal volume for the nine principal overseas Group companies* are shown below.

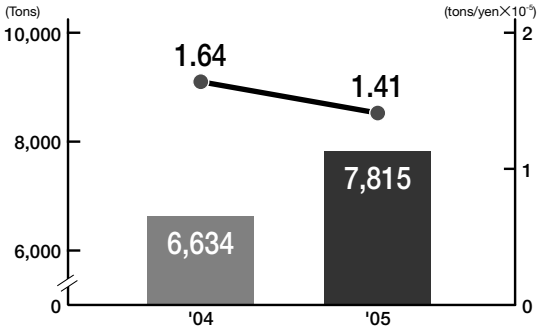
### Energy Consumption & Unit Energy Consumption



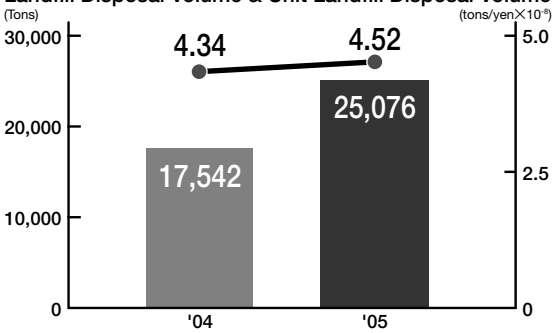

### $CO_2$ Emissions (energy sources) & Unit $CO_2$ Emissions




### Water Use & Unit Water Use




### Landfill Disposal Volume & Unit Landfill Disposal Volume




* These figures reflect the totals for the following nine overseas Group companies:

Sumitomo Chemical Singapore Pte Ltd.,
Petrochemical Corporation of Singapore (Pte) Ltd.,
The Polyolefin Company (Singapore) Pte. Ltd.,
Sumipex (Thailand) Co., Ltd.,
Bara Chemical Co., Ltd.,
Dailan Sumika Chemiphy Chemical Co., Ltd.,
SC Enviro Agro India Private Ltd.,
Sumika Technology Co., Ltd.,
Dongwoo Fine-Chem Co., Ltd.


Sumitomo Chemical produces an "Environment, Health & Safety Report" at each of the Company's works.

Contact the relevant site below for details.

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