

# CSR REPORT 2012 DATA BOOK

## Responsible Care (RC) Activities



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# Management System ~ Introduction of Management System Based on International Standards ~

## ● Environmental Management System (ISO14001)

### Acquisition of ISO14001 Certification for Sumitomo Chemical' s Works

Works and Certificate Number	ISO14001:1996 Certification Date	ISO14001:2004 Certification Date
Ehime Works (including Ohe 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-0218]	January 2001	February 2006
Oita Works [JQA-E-90152]	March 1998	April 2006
Misawa Works [JQA-EM0355]	March 1999	February 2006

ISO14001:1996 certification was obtained at all Works between 1997 and 1999. From 2005 to 2006, these Works submitted to transitional inspections and obtained certification for ISO14001:2004, the revised version of ISO14001:1996.

## ● Quality Management System (ISO9001)

### Acquisition of ISO9000 Series Certification for Sumitomo Chemical' s Works

Works and Certificate Number	ISO9002:1994 Certification Date	ISO9001:2008 Certification Date
Ehime Works [JCQA-0019] [YKA-4004422/J]	October 1994 —	October 2009 August 2009
Chiba Works [JQA-0829]	March 1995	April 2010
Osaka Works (Kasugade) [JQA-0721]	December 1994	December 2009
Osaka Works (Okayama Plant) [JQA-1650]	March 1997	April 2010
Oita Works [JQA-1069]	December 1995	January 2010
Misawa Works [JQA-0752]	December 1994	December 2009
Ohe Works [JCQA-0320] [JCQA-1720]	April 1998 —	April 2010 January 2010

Certification of compliance with ISO9002:1994 was completed for all Works except the Osaka Works (Gifu Plant)\* between 1994 and 1998. Sumitomo Chemical made the transition to compliance with ISO9001:2008 in 2009-2010. The Ohe Works registered for ISO9001:2008 in 2010.

\* 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 the Misawa Works.

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

### Acquisition of OSHMS Certification for Sumitomo Chemical' s Works and Research Laboratories

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
Osaka Works (Utajima area)	09-27-14	January 2009
Osaka Works (Gifu Plant)	09-21-6	February 2009
Osaka Works (Okayama Plant)	09-33-7	February 2009
Oita Works	06-44-1	July 2006
Ohe Works	10-38-4	March 2010
Agricultural Chemicals Research Laboratory * 1	07-28-9	January 2007
Tsukuba Research Laboratory * 2	05-8-3	December 2005

By fiscal 2009, Sumitomo Chemical acquired OSHMS certification from the Japan Industrial Safety and Health Association (JISHA) at five of its Works and two of its Research Laboratories.

\* 1 Agricultural Chemicals Research Laboratory is presently named Health & Crop Sciences Research Laboratory.

\* 2 Tsukuba Research Laboratory was reorganized into the Tsukuba Material Development Laboratory and the Advanced Materials Research Laboratory.

## ● Voluntary Safety Management of High Pressure Gas based on Certification by the Minister

Number of Accreditations of Completion and Safety Inspection Given for Sumitomo Chemical Facilities

Works	Area	Year of certification	Year and month renewed	Number of facilities given accreditation
Ehime Works	Niihama	1987	March 2008	13
	Kikumoto	1987	March 2008	6
Chiba Works	Anesaki	2002	May 2009	11
	Sodegaura	2002	May 2009	17

To achieve safe operations, Sumitomo Chemical has obtained Accreditation of Completion and Safety Inspection as stipulated in the High Pressure Gas Safety Act for our 47 facilities. Certification for the Chiba Works, which has been certified since 1987, was renewed in May 2009. The Ehime Works which has been certified since 2002, was also renewed in March 2008. The plants of both Works have been continuing stable operations. Ministerial certification is given to plants which have achieved excellent safety and management levels and meet legal requirements. Such plants are allowed to conduct their safety inspections on a voluntary basis. In order to obtain ministerial certification, prior review is made by a special team including academic experts on the accuracy of daily safety inspection data and the safety management system. Every time, Sumitomo Chemical has been given high marks at the review for renewal of the certification.

## Occupational Health and Safety

### ● Criteria and Results of the President' s Safety Award for zero-accident and zero-lost workday operations

#### Sumitomo Chemical Employees

Facilities	Criteria for the President's Safety Award #1	Results
Ehime Works	3 million hours	Reached 3 million hours in February 2012
Chiba Works	3 million hours	Reached 6 million hours in September 2011
Osaka Works	3 million hours	Reached 3 million hours in July 2011
Oita Works	1 million hours	Reached 6 million hours in September 2011
Misawa Works	30 months	Worked to reach the target of 30 months
Health & Crop Sciences Research Laboratory	30 months	30 months Reached 300 months in June 2011
Tsukuba Research Laboratory # 2	30 months	30 months Reached 270 months in September 2011

Sumitomo Chemical has set facility-specific criteria for the achievement of continuous periods of zero-accident and zero-lost workday operations for employees as well as contractors. The President' s Safety Award is presented to facilities in recognition of their satisfaction of the above-mentioned criteria.

# 1 Continuous periods of zero-accident, zero-lost workday operations

# 2 Tsukuba Research Laboratory was reorganized into the Tsukuba Material Development Laboratory and the Advanced Materials Research Laboratory.

#### Contractors/Affiliated Company Employees

Facilities	Criteria for the President's Safety Award #1	Results
Ehime Association (Plant maintenance)	24 months	(Expected to reach the target of 24 months in August 2012)
Ehime Logistics Association (Logistics)	24 months	(Expected to reach the target of 24 months in June 2012)
One Association (Plant maintenance)	24 months	(Expected to reach the target of 48 months in March 2013)
One Logistics Association (Logistics)	24 months	(Expected to reach the target of 48 months in March 2013)
Chiba Association (Plant maintenance)	24 months	(Expected to reach the target of 24 months in September 2013)
Chiba Logistics Association (Logistics)	24 months	(Expected to reach the target of 24 months in August 2012)
Osaka Association	24 months	(Expected to reach the target of 24 months in October 2012)
Okayama Association	48 months	(Expected to reach the target of 96 months in October 2012)
Gifu Association	48 months	(Expected to reach the target of 48 months in October 2013)
Oita Association	24 months	(Expected to reach the target of 24 months in April 2013)
Misawa Association	48 months	(Expected to reach the target of 192 months in March 2015)
Health & Crop Sciences Research Laboratory Association	48 months	Reached 144 months in March 2011
Tsukuba Research Laboratory Association	48 九月	(Expected to reach the target of 48 months in March 2015)

### ● Safety Achievements of Group Companies

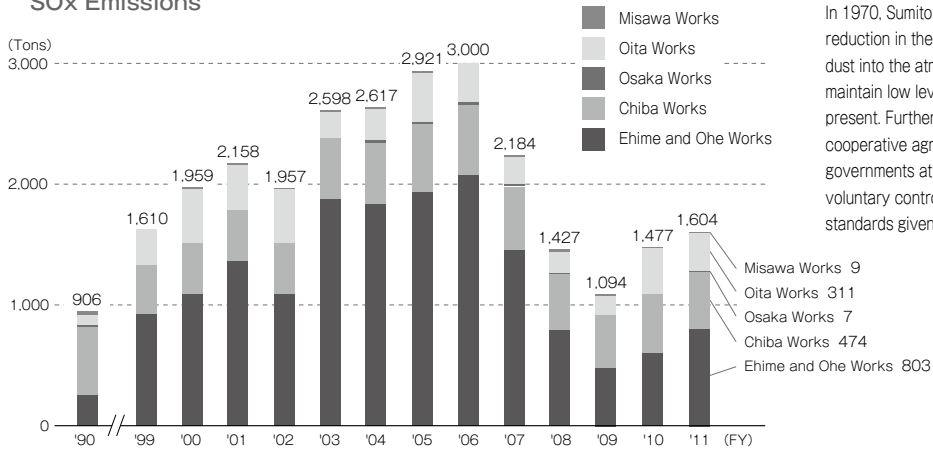
(Sumitomo Chemical Group companies, excluding Sumitomo Chemical Co., Ltd.)

	Number of lost workday injuries	Frequency rate for lost workday injuries
FY 2010	10 件	0.30
FY 2011	8 件	0.24

In fiscal 2011, both the number and rate of frequency of injuries resulting in lost workdays decreased from the previous fiscal year levels. We will further improve the safety achievements of the entire Group by promoting detailed information sharing on accidents throughout the Group.

### ● Preventing Pollution Atmospheric emissions of SOx, NOx, soot, and dust

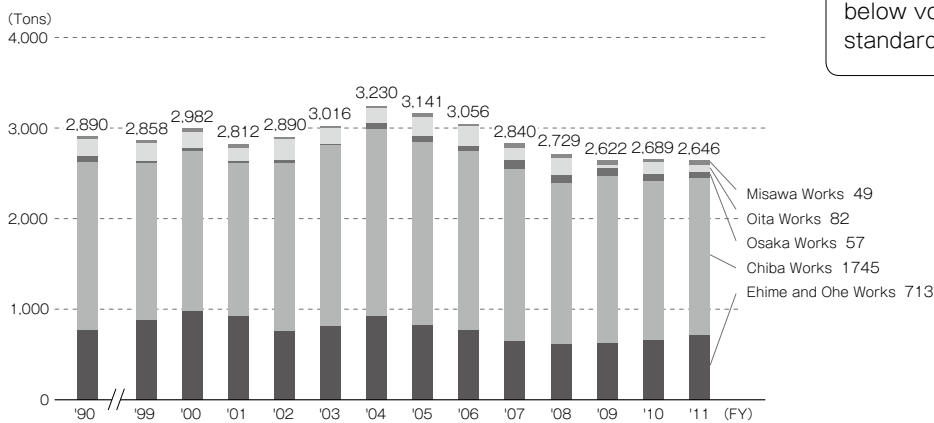
#### SOx Emissions



In 1970, Sumitomo Chemical achieved a marked reduction in the release of SOx, NOx, soot, and dust into the atmosphere, and continued to maintain low levels of emissions from 1980 to the present. Furthermore, the Company has concluded cooperative agreements with local municipal governments at each of its Works, establishing voluntary control levels that are stricter than the standards given under applicable laws and regulations.

\* Since fiscal 2004, data for the Osaka Works include data for both the Gifu and Okayama Plants.

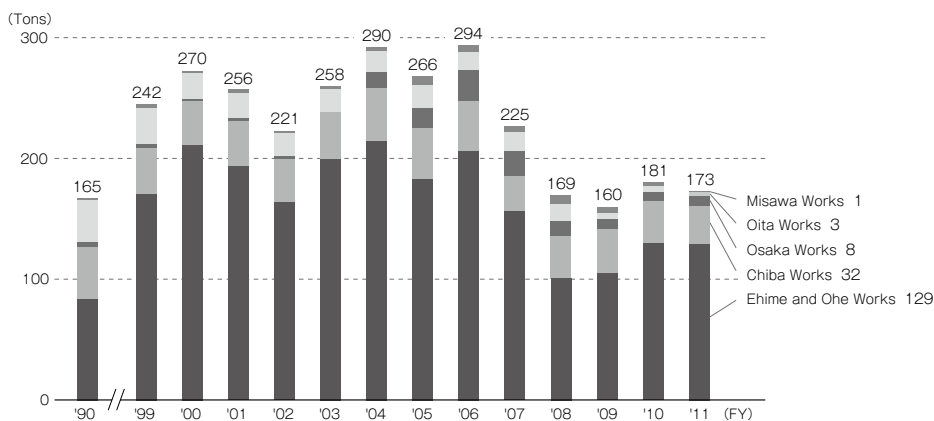
#### NOx Emissions



#### Target

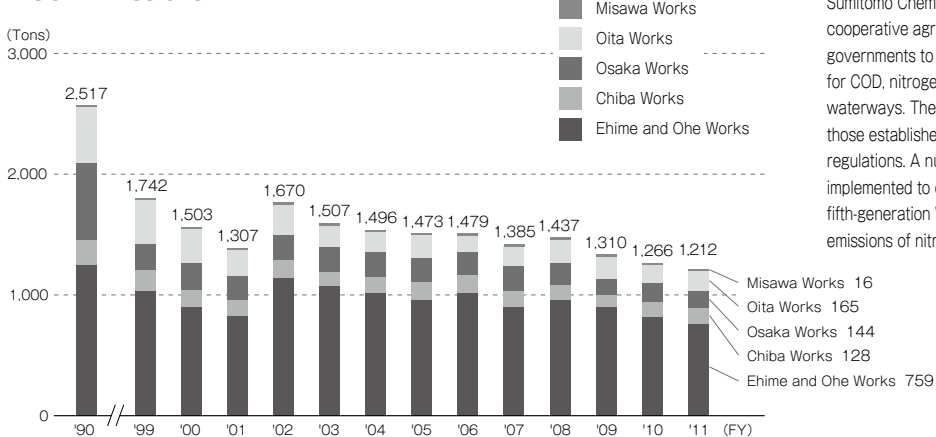
Continue to sustain levels below voluntary control standard values.

#### Soot and Dust Emissions



## Water emissions of COD, nitrogen, and phosphorus

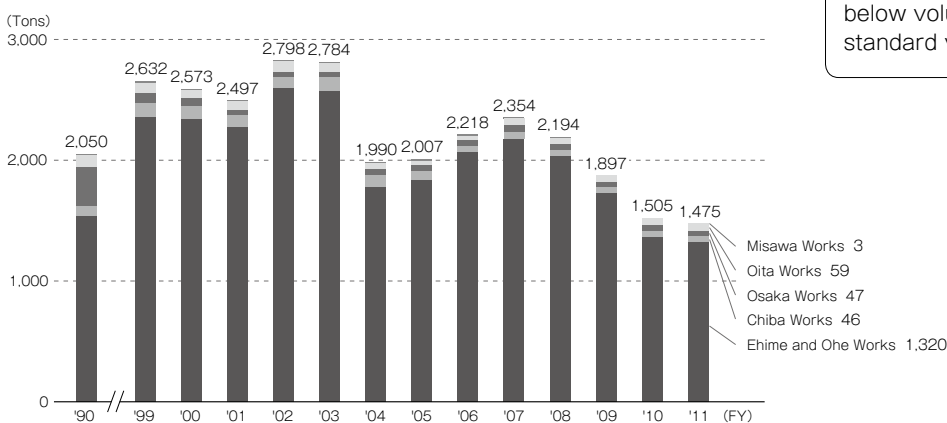
### COD Emissions



Sumitomo Chemical has also concluded cooperative agreements with local municipal governments to establish voluntary control levels for COD, nitrogen, and phosphorus 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 fifth-generation Water Quality Standards, and emissions of nitrogen and phosphorus in particular have been significantly reduced since fiscal 2004.

\* Since fiscal 2004, data for the Osaka Works include data for both the Gifu and Okayama Plants.

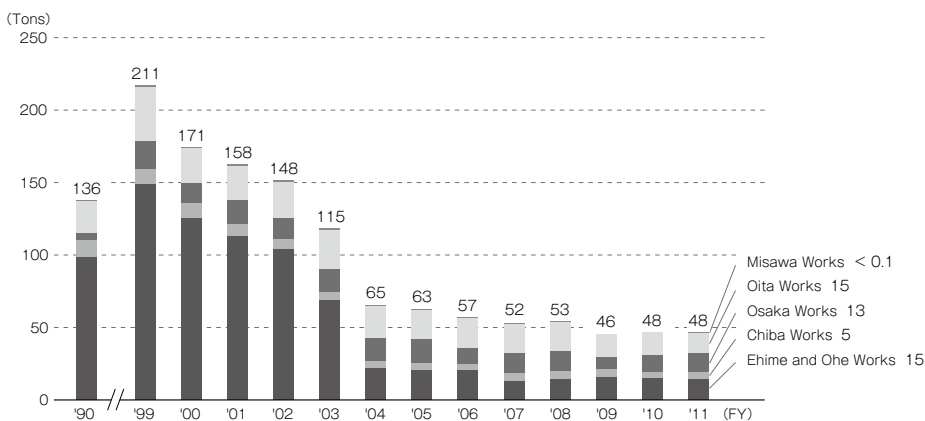
### Nitrogen Emissions



#### Target

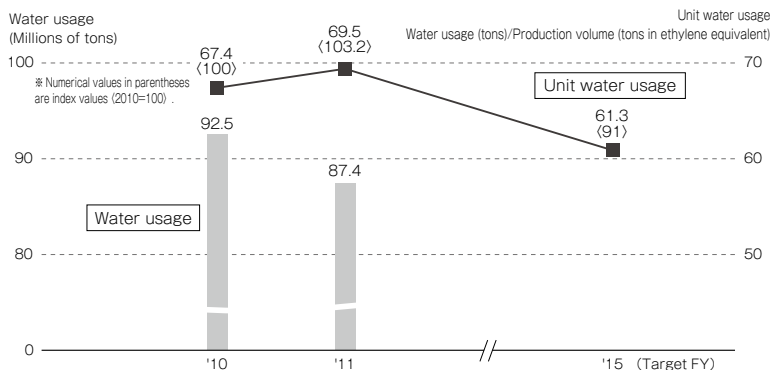
Continue to sustain levels below voluntary control standard values.

### Phosphorus Emissions



## ● Promoting Efficient Use of Water

### Water Usage and Unit Water Usage



Sumitomo Chemical has endeavored to promote the efficient use of water as a precious and essential resource. In fiscal 2011, however, the Company's unit water usage increased by 3.2% from the previous year due to a significant decrease in the production volume.

※ Data for water usage do not include the volume of seawater used.

※ Data for water usage partially include that of the Group companies.

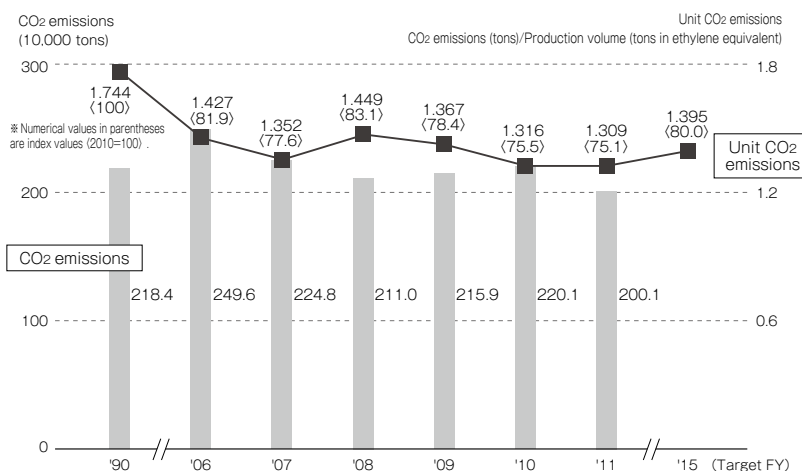
#### Target

Reduce unit water usage in fiscal 2015 by 9% from the fiscal 2010 level.

## ● Reducing Greenhouse Gas Emissions

### CO<sub>2</sub>

#### CO<sub>2</sub> Emissions from Fossil Fuel for Captive Consumption and Corresponding Unit Emissions



In fiscal 2011, as the production volume decreased by 8.9%, CO<sub>2</sub> emissions decreased by 6.7% from the preceding year to 4,061,000 tons. This represents an increase of 10.1% compared to the fiscal 1990 level. Unit CO<sub>2</sub> emissions from fossil fuel for captive consumption for fiscal 2011 decreased by 0.5% compared to the previous year. This was a 24.9% decrease compared to the fiscal 1990 level.

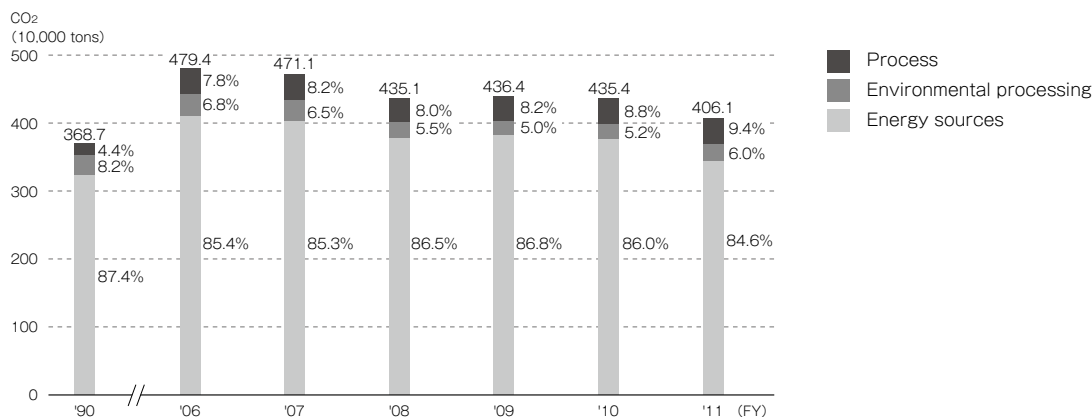
#### Target

Achieve a 20% reduction relative to fiscal 1990 in unit CO<sub>2</sub> emissions originating from fossil fuels consumed in-house by fiscal 2015.

### Greenhouse gases (all six gases)

Emissions	10,000 tons in CO <sub>2</sub> equivalent				
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
CO <sub>2</sub>	471.1	435.1	436.4	435.4	406.1
Methane	0.01	0.01	0.01	0.01	0.01
Nitrous oxide (N <sub>2</sub> O)	5.8	5.3	4.6	5.2	4.8
Hydrofluorocarbon (HFC)	0.02	0.02	0.04	0.05	0.04
Perfluorocarbon (PFC)	0	0	0	0	0
Sulfur hexafluoride	0	0	0	0	0
<b>Total</b>	<b>476.9</b>	<b>440.4</b>	<b>441.1</b>	<b>440.7</b>	<b>411.0</b>

## Ratio of CO<sub>2</sub> Emissions by Source



## ● Energy Saving

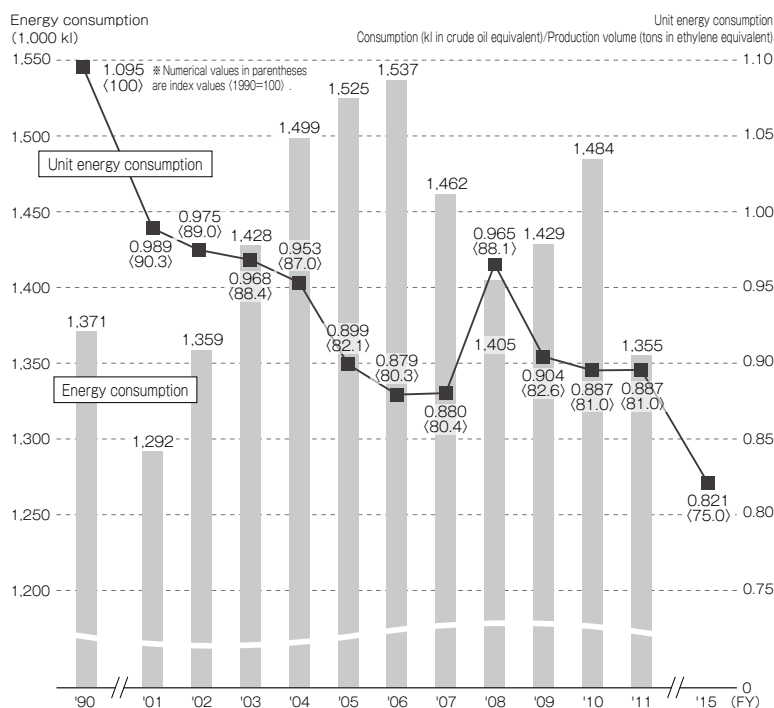
### Breakdown of Unit Energy Consumption

	a Energy consumption (1,000 kl in crude oil equivalent)	b Production (1,000 tons in ethylene equivalent)	a/b Unit energy consumption
Ehime Works	535	661	0.81
Chiba Works	705	764	0.92
Osaka Works	34	29	1.17
Oita Works	43	25	1.72
Misawa Works	12	9	1.33
Ohe Works	26	40	0.65
<b>Total</b>	<b>1,355</b>	<b>1,528</b>	<b>0.887</b>

In fiscal 2011, energy consumption decreased by 8.6% from the previous fiscal year to 1,355,000 kl (crude oil equivalent) due to a substantial decrease in production volume. Meanwhile, unit energy consumption remained at the same level as previous fiscal year (19.0% lower than the fiscal 1990 level), due to increased recovery of energy and improvements made to operational methods at manufacturing facilities.

※ Figures for fiscal 1990 (base year) and those for fiscal 2004 to 2011, and 2015 include data for both the Gifu and Okayama Plants of the Osaka Works.

### Energy Consumption and Unit Energy Consumption



#### Target

Improve unit energy consumption for fiscal 2015 by 25% over fiscal 1990.

# ● Response to the Pollutant Release and Transfer Register

## Release and Transfer of PRTR Substances in Fiscal 2011

No.	PRTR Substances	JCIA Substances	Name of Chemical Compound	Amount Released					Amount Transferred		
				Air	Water	Soil	Landfill	Total	Sewage	Waste	Total
1	○	○	Zinc compounds (water-soluble)	0.0	1.5	0.0	0.0	1.5	0.0	126.0	126.0
2	○	○	Acrylic acid and its water-soluble salts	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
3	○	○	Methyl acrylate	3.1	0.0	0.0	0.0	3.1	0.0	4.8	4.8
4	○	○	Acrylonitrile	3.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0
5	○	○	Adipic acid	0.7	60.5	0.0	0.0	60.5	0.0	0.0	0.0
6	○	○	Acetaldehyde	0.3	<0.1	0.0	0.0	0.3	0.0	8.4	8.4
7	○	○	Acetonitrile	3.8	0.1	0.0	0.0	3.9	0.0	26.8	26.8
8	○	○	Acetone	59.1	0.4	0.0	0.0	59.5	0.0	167.4	167.4
9	○	○	Aniline	0.8	0.0	0.0	0.0	0.8	0.0	15.3	15.3
10	○	○	2-Aminoethanol	<0.1	0.2	0.0	0.0	0.2	0.0	18.6	18.6
11	○	○	m-Aminophenol	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4
12	○	○	3-Amino-1-propene	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0
13	○	○	Allyl alcohol	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
14	○	○	Aluminum compounds (water-soluble)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	○	○	Antimony and its compounds	0.0	0.0	0.0	0.0	0.0	0.0	20.1	20.1
16	○	○	Ammonia	1.7	1.0	0.0	0.0	2.7	5.1	<0.1	5.1
17	○	○	Isobutyraldehyde	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
18	○	○	2-Ethyl-1-hexanol	<0.1	0.0	0.0	0.0	<0.1	0.0	487.1	487.1
19	○	○	Ethylbenzene	11.7	0.0	0.0	0.0	11.7	0.2	39.4	39.6
20	○	○	Ethylene oxide	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	○	○	Ethylene glycol	0.0	7.2	0.0	0.0	7.2	0.0	4.9	4.9
22	○	○	Ethylenediaminetetraacetic acid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	○	○	Epichlorohydrin	1.0	4.3	0.0	0.0	5.3	0.0	0.0	0.0
24	○	○	1,2-Epoxypropane (also known as propylene oxide)	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0
25	○	○	Ammonium chloride	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	○	○	Hydrogen chloride (excluding hydrochloric acid)	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0
27	○	○	Chlorine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	○	○	ε-Caprolactam	0.0	21.7	0.0	0.0	21.7	0.0	1.2	1.2
29	○	○	Formic acid	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	<0.1
30	○	○	2,6-Xylenol	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
31	○	○	Xylene	12.8	0.1	0.0	0.0	12.9	0.2	32.9	33.1
32	○	○	Cumene	12.0	<0.1	0.0	0.0	12.0	0.0	0.0	0.0
33	○	○	Cresol	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
34	○	○	Chlorosulphonic acid	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
35	○	○	Chloroaniline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	○	○	Chloroethane	8.3	1.1	0.0	0.0	9.4	0.0	0.0	0.0
37	○	○	p-Chlorotoluene	<0.1	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0
38	○	○	3-Chloropropene (also known as allyl chloride)	6.6	<0.1	0.0	0.0	6.6	0.0	0.0	0.0
39	○	○	Chlorobenzene	11.3	<0.1	0.0	0.0	11.3	0.0	73.3	73.3
40	○	○	Chloroform	0.6	0.0	0.0	0.0	0.6	0.0	13.6	13.6
41	○	○	Cobalt and its compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7
42	○	○	Ethyl acetate	12.0	<0.1	0.0	0.0	12.0	0.0	135.8	135.8
43	○	○	Vinyl acetate	48.7	0.0	0.0	0.0	48.7	0.0	215.2	215.2
44	○	○	Salicyl aldehyde	<0.1	0.0	0.0	0.0	<0.1	0.0	0.1	0.1
45	○	○	Inorganic cyanide compounds (excluding complex salts and cyanates)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	○	○	Diethanolamine	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0
47	○	○	1,4-Dioxane	<0.1	0.0	0.0	0.0	<0.1	1.7	99.9	101.6
48	○	○	Cyclohexanol	10.5	<0.1	0.0	0.0	10.5	0.0	14.2	14.2
49	○	○	Cyclohexane	92.9	<0.1	0.0	0.0	92.9	0.0	0.0	0.0
50	○	○	Cyclohex-1-ene-1,2-dicarboximidomethyl=(1RS)-sis-trans-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate (also known as tetramethrin)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	○	○	Cyclohexylamine	0.0	<0.1	0.0	0.0	<0.1	0.0	1.9	1.9
52	○	○	1,2-Dichloroethane	4.3	0.0	0.0	0.0	4.3	0.0	34.2	34.2
53	○	○	1,2-Dichloropropane	0.1	0.0	0.0	0.0	0.1	0.0	684.9	684.9
54	○	○	1,3-Dichloropropene (also known as D-D)	0.4	<0.1	0.0	0.0	0.4	0.0	445.2	445.2
55	○	○	Dichlorobenzene	0.0	0.0	0.0	0.0	0.0	0.0	161.1	161.1
56	○	○	Dichloropentafluoropropane (also known as HCFC-225)	13.6	0.0	0.0	0.0	13.6	0.0	0.0	0.0
57	○	○	Dichloromethane (also known as methylene chloride)	7.4	0.0	0.0	0.0	7.4	0.0	60.5	60.5
58	○	○	Dicyclopentadiene	0.1	0.0	0.0	0.0	0.1	0.0	9.7	9.7
59	○	○	2,4-Dinitrophenol	0.0	0.0	0.0	0.0	0.0	0.0	40.6	40.6
60	○	○	Diphenylamine	0.1	0.0	0.0	0.0	0.1	0.0	7.2	7.2
61	○	○	1,3-Diphenylguanidine	0.0	0.4	0.0	0.0	0.4	0.0	26.2	26.2
62	○	○	2,6-Di-tert-butyl-4-cresol	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0



No.	PRTR Substances	JCA Substances	Name of Chemical Compound	Amount Released					Amount Transferred		
				Air	Water	Soil	Landfill	Total	Sewage	Waste	Total
63	○	○	2,4-Di-tert-butylphenol	< 0.1	0.0	0.0	0.0	< 0.1	0.0	0.0	0.0
64	○	○	N,N-Dimethylacetamide	< 0.1	0.0	0.0	0.0	< 0.1	0.0	3.7	3.7
65	○	○	Dimethylamine	< 0.1	38.5	0.0	0.0	38.5	0.0	0.9	0.9
66	○	○	Dimethyl sulfide	0.0	< 0.1	0.0	0.0	< 0.1	0.0	0.0	0.0
67	○	○	N,N-Dimethylformamide	< 0.1	0.0	0.0	0.0	< 0.1	0.0	130.2	130.2
68	○	○	Hydrogen bromide	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69	○	○	Oxalic acid	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7
70	○	○	Bromine	< 0.1	0.0	0.0	0.0	< 0.1	0.0	0.0	0.0
71	○	○	Water-soluble bromates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72	○	○	Nitric acid	0.2	0.0	0.0	0.0	0.2	0.0	< 0.1	< 0.1
73	○	○	Styrene	6.4	< 0.1	0.0	0.0	6.4	0.0	0.0	0.0
74	○	○	Dioxins	30.9	18.9	0.0	0.0	49.8	< 0.1	145.9	145.9
75	○	○	Thiourea	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
76	○	○	Tetrahydrofuran	5.1	2.4	0.0	0.0	7.5	0.0	72.5	72.5
77	○	○	Terephthalic acid	0.0	0.0	0.0	0.0	0.0	0.0	116.8	116.8
78	○	○	Water-soluble copper salts	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0
79	○	○	Sodium dodecyl sulfate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	○	○	Triethanolamine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81	○	○	Triethylamine	4.4	10.7	0.0	0.0	15.1	0.6	34.5	35.1
82	○	○	2,4,6-Trichloro-1,3,5-triazine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83	○	○	Trichlorofluoromethane (also known as CFC-11)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84	○	○	1,2,3-Trichloropropane	0.3	0.0	0.0	0.0	0.3	0.0	392.1	392.1
85	○	○	Trimethylamine	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
86	○	○	Toluidine	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
87	○	○	Toluene	144.5	0.1	0.0	0.0	144.6	0.9	1726.4	1726.4
88	○	○	Naphthalene	0.0	< 0.1	0.0	0.0	< 0.1	0.0	0.0	0.0
89	○	○	Nickel compounds	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
90	○	○	Nitrobenzene	0.6	0.6	0.0	0.0	1.2	0.0	47.5	47.5
91	○	○	Arsenic and its inorganic compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92	○	○	Hydrazine	< 0.1	< 0.1	0.0	0.0	< 0.1	0.0	5.2	5.2
93	○	○	Hydroquinone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94	○	○	Pyridine	3.1	1.3	0.0	0.0	4.4	0.0	7.1	7.1
95	○	○	Phenylenediamine	0.0	< 0.1	0.0	0.0	< 0.1	0.0	0.0	0.0
96	○	○	1,3-Butadiene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97	○	○	Diisobutyl phthalate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98	○	○	Di-n-butyl phthalate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99	○	○	Bis(2-ethylhexyl)phthalate	0.0	0.0	0.0	0.0	0.0	0.0	9.1	9.1
100	○	○	Butyl alcohol	1.4	0.0	0.0	0.0	1.4	0.0	3.7	3.7
101	○	○	tert-Butyl hydroperoxide	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102	○	○	2-tert-Butyl-5-methylphenol	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
103	○	○	Propyl alcohol	2.1	0.0	0.0	0.0	2.1	0.0	90.9	90.9
104	○	○	2-Bromopropane	< 0.1	0.0	0.0	0.0	< 0.1	0.0	0.0	0.0
105	○	○	Hexadecyltrimethylammonium chloride	< 0.1	0.0	0.0	0.0	< 0.1	0.0	0.0	0.0
106	○	○	n-Hexane	62.5	< 0.1	0.0	0.0	62.5	0.0	638.5	638.5
107	○	○	Benzyl chloride	< 0.1	0.0	0.0	0.0	< 0.1	0.0	0.0	0.0
108	○	○	Benzaldehyde	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109	○	○	Benzene	8.5	0.8	0.0	0.0	9.3	0.0	0.0	0.0
110	○	○	Pentaerythritol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111	○	○	Boron compounds	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4
112	○	○	Polyoxyethylene alkyl ether (alkyl C=12-15) and its mixture	0.0	< 0.1	0.0	0.0	< 0.1	0.0	0.0	0.0
113	○	○	Formaldehyde	0.1	0.1	0.0	0.0	0.2	2.8	0.0	2.8
114	○	○	Phthalic anhydride	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	○	○	Maleic anhydride	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116	○	○	Manganese and its compounds	0.0	< 0.1	0.0	0.0	< 0.1	0.0	0.0	0.0
117	○	○	Methacrylic acid	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0
118	○	○	2,3-Epoxypropyl methacrylate	5.9	0.0	0.0	0.0	5.9	0.0	9.6	9.6
119	○	○	Methyl methacrylate	29.3	0.0	0.0	0.0	29.3	0.0	21.5	21.5
120	○	○	Methylamine	0.1	0.0	0.0	0.0	0.1	0.0	6.0	6.0
121	○	○	Methyl alcohol	516.1	0.4	0.0	0.0	516.5	0.0	1017.7	1017.7
122	○	○	Methylnaphthalene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123	○	○	N-Methylpyrrolidone	< 0.1	0.0	0.0	0.0	< 0.1	0.0	2.7	2.7
124	○	○	Methylbutylketone	6.1	24.5	0.0	0.0	30.6	0.0	3.0	3.0
125	○	○	Morpholine	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0
126	○	○	Sulfuric acid	2.2	0.0	0.0	0.0	2.2	0.0	8.1	8.1
127	○	○	Diethyl sulfate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
128	○	○	Phosphorus and its compounds	0.2	22.9	0.0	0.0	23.1	0.0	0.3	0.3
Total substances used by Sumitomo Chemical: 128 (FY 2011)				1128.7	201.4	0.0	0.0	1330.1	11.7	7377.8	7389.5

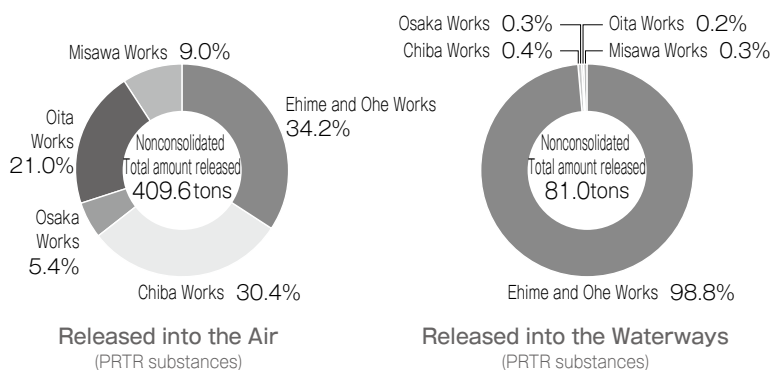
## Release and Transfer of PRTR Substances (FY 2011) (Tons)

	Released			Transferred		
	Air	Water	Subtotal	Sewage	Waste	Subtotal
PRTR substances						
Nonconsolidated (96 substances)	409.6	81.0	490.6	6.6	5360.0	5366.6
Group	614.6	100.8	715.4	9.5	8089.1	8098.6
JCIA substances						
Nonconsolidated (128 substances)	1128.7	201.4	1330.1	11.7	7377.8	7389.5

In April 2011, we began implementing measures to achieve the new target of reducing the total release of PRTR substances by 60% from the fiscal 2008 level by fiscal 2015. The total release in fiscal 2011 was 490.6 tons, down 15.2% from the previous fiscal year. We will continue making efforts to reduce our environmental impact through the practice of risk management.

\* Figures for the release and transfer of PRTR substances for the Group for fiscal 2011 reflect totals for Sumitomo Chemical and its 16 domestic Group companies.

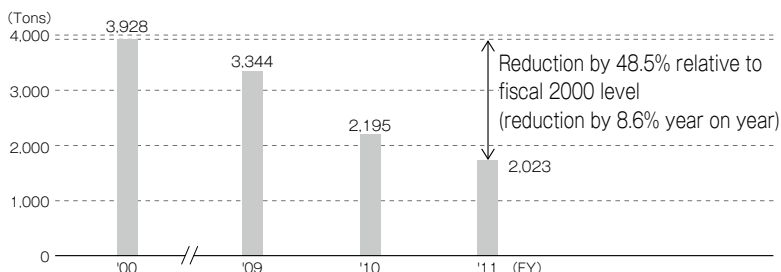
### PRTR substances released by facility



#### Target

Reduce the total release of PRTR substances by 60% from the fiscal 2008 level by fiscal 2015.

## ● Initiatives to Reduce Emissions of Volatile Organic Compounds



In April 2011, we began implementing measures to achieve the new target of maintaining a 30% reduction in VOC emissions relative to fiscal 2000. Total VOC emissions in fiscal 2011 decreased by 48.5% from the fiscal 2000 level to 2,023 tons (down 8.6% year on year).

#### Target

Maintain a 30% reduction in VOC emissions relative to fiscal 2000.

## ● Prevention of Ozone Layer Damage

Number of Refrigeration Units that Use Specified CFCs as Coolants (as of the end of fiscal 2011)

Type	Nonconsolidated	Group
CFC11	14	16
CFC12	4	60
CFC113	0	0
CFC114	0	0
CFC115	0	7
Total	18	83

#### Target

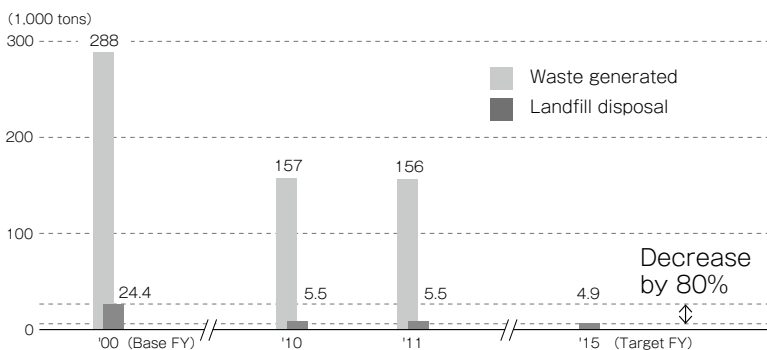
Eliminate the use of refrigeration units that use specified CFCs (CFC11, CFC12, CFC113, CFC114, CFC115) as coolants by 2025.

Sumitomo Chemical maintains strict control of cooling devices that employ specified CFCs (designated in the Act on 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 specified CFCs are not accidentally released into the atmosphere from devices containing them, and carries out proper recovery, transportation and destruction of specified CFCs contained in refrigeration units upon disposal.

\* Group data reflect totals for Sumitomo Chemical and its 16 domestic Group companies.

## ● Industrial Waste Reduction

### Trends in Waste Generated and Landfill Amounts (Nonconsolidated)



In April 2011, we began implementing measures to achieve the new target of reducing landfill disposal by 80% from the fiscal 2000 level by fiscal 2015. Landfill disposal in fiscal 2011 decreased to 5,500 tons, down 77.5% from the fiscal 2000 level (up 0.6% year on year).

\* Figures for fiscal 1990 (base year) and those for fiscal 2004 to 2011 include data for both the Gifu and Okayama Plants of the Osaka Works.

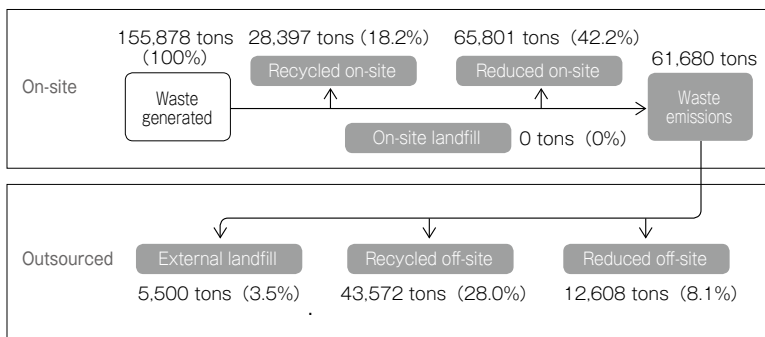
\* The amount of waste that was reduced off-site and disposed to landfill without being recycled was included in the amount of external landfill.

#### Target

Reduce landfill disposal by 80% from the fiscal 2000 level by fiscal 2015.

### Waste Disposal Flow Chart and Results (FY 2011)

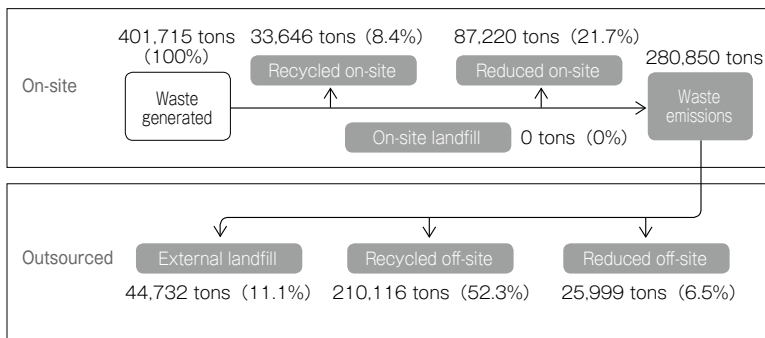
#### Nonconsolidated



Recycled waste: Total amount of waste that was reused, recycled, or thermally recycled  
Reduced waste: Total amount of waste reduced through incineration, etc.

\* Group data reflects totals for Sumitomo Chemical and its 15 domestic Group companies.

#### Group



## ● Digitization of Manifests to be Prepared Pursuant to the Waste Management and Public Cleansing Act

	Number of manifests issued	Number of manifests digitized	Digitization rate
FY 2010	17,745	12,609	71%
FY 2011	19,243	15,048	78%

Sumitomo Chemical has been fostering the digitization of manifests to improve operational efficiency and ensure compliance with the law and transparency of data. In fiscal 2011, the Company issued 19,243 manifests, of which 15,048 (78%) were electronic.

## ● PCB Waste

PCB Waste Storage and Control as of the End of Fiscal 2011 (Nonconsolidated & Group)

	Number of units of PCB waste	Volume of PCB (m <sup>3</sup> )
Nonconsolidated	94 (stored : 88/in use : 6)	22.1
Group	1,370 (stored : 941/in use : 429)	25.0

\* Low-level PCB waste is not included. \*Group data reflects totals for Sumitomo Chemical and its 16 domestic Group companies. \*Handling of ballasts of fluorescent lamps and mercury lamps was : - excluded from the data (Sumitomo Chemical Co. Ltd.) - excluded from the data, except for some Group companies (Group)

### Target

Store PCB waste in an appropriate manner and complete treatment of this waste by March 2014.

In accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes, Sumitomo Chemical collects polychlorinated biphenyls (PCB) waste\*. 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 this waste. Sumitomo Chemical plans to treat all PCB waste by March 2014, ahead of the deadline specified under the Act.

\* Capacitors, transformers and other electronic devices that contain PCB insulating oil

## Environmental Preservation in Logistics Operations

### ● Initiatives for Energy Saving and CO<sub>2</sub> Emissions Reduction in Logistics Operations

Trends in Energy Consumption of and CO<sub>2</sub> Emissions from Logistics Operations

	2006	2007	2008	2009	2010	2011
Energy consumption (1,000 kl in crude oil)	28.1	27.7	24.2	22.9	22.6	20.7
Unit energy consumption (kl/ton)	0.0080	0.0078	0.0073	0.0073	0.0076	0.0072
CO <sub>2</sub> emissions (1,000 tons)	73.4	73.0	63.8	60.3	59.4	54.4

Energy Consumption and CO<sub>2</sub> Emissions for Two Group Companies ("Specified Consigners" ) \*

	2006	2007	2008	2009	2010	2011
Energy consumption (1,000 kl in crude oil)	3.8	3.7	3.0	3.1	3.4	4.1
CO <sub>2</sub> emissions (1,000 tons)	10.3	9.6	7.9	8.3	8.9	10.9

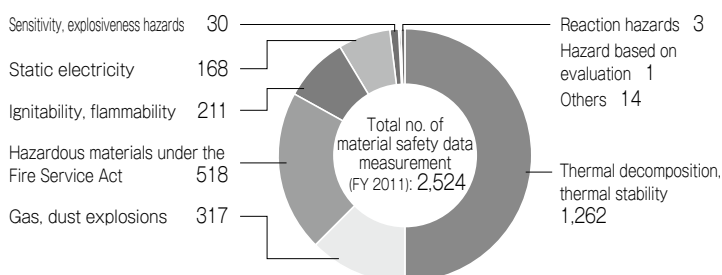
\* Totals for Nippon A&L Inc. and Nihon Oxirane Co., Ltd.

Sumitomo Chemical has been working to reduce the environmental impact of its logistic operations by continuously increasing transportation efficiency through upsizing delivery volume, improving modal shift rate and shortening the transportation distance by changing storage facilities. As a result, the unit energy consumption for fiscal 2011 fell by 5% year on year, and the average unit energy consumption for the previous six years (fiscal 2006 to 2011) was 8.7% lower than that of fiscal 2006.

This year, in order to improve the accuracy of fuel consumption per ton-kilometer, the figures for fuel consumption per ton-kilometer for trucks were changed from predetermined figures in "load factor unknown" cases to more accurate figures that were assigned to each load factor. Past data, including those for base fiscal year (fiscal 2006), were also revised accordingly.

## Process Safety and Disaster Prevention

### ● Results of Material Safety Data Measurement



The Safety Engineering Laboratory at the Process & Production Technology Center (Ehime) 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 2,374 material safety data measurements were taken in fiscal 2011 (1,931 measurements in fiscal 2010) at the request of Sumitomo Chemical. In addition, 150 measurements were taken at the request of the Group companies.

## ● Safety Information Database

	Number of data sets	Year on year comparison
Accident prevention technology information	15,052	Increase by 732
Accident cause investigations	2,055	Increase by 53
Accident information	17,704	Increase by 544
As of March 31, 2012	34,811	

A safety information database has been created by collecting information on accidents in Japan and overseas and preparing abstracts of such accidents. As of the end of March 2012, 34,811 sets of data were stored in the database (33,482 sets of data as of March 31, 2011). This system allows all employees at each Works or Research Laboratory to search stored abstracts, and abstracts and their original data can be viewed or printed at individual terminals. These data are also used in process hazard evaluations and case study examinations to prevent similar accidents. In addition, accident data are also disclosed to Group companies as necessary.

## ● Process Safety Review Committee

### Process Safety Review Committee Convention

	Level 1	Level 2	Level 3	Level 4	Level 5	Total
FY 2010	34	11	74	94	48	261
FY 2011	23	18	54	96	37	228

The Process Safety Review Committee convenes at every stage of the R&D and commercialization processes to oversee a system in which safety at each stage is thoroughly verified before moving on to the next stage. This system is governed by the in-house Process Development and Commercialization Regulations and Safety Management Guidelines, and it ensures that work is conducted with clearly defined research and development supervision. The Company promotes the system not only within itself but also in relevant Group companies. Through these meetings, the Company is making continuous efforts to identify and manage any possible process risks that may arise.

## Responsible Care Audits

### ● Audits Conducted

#### Responsible Care Audit Results

Facilities	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Specialized Audits												
Works	4	5	4	5	4	7	4	5	4	11	11	10
Research Laboratories	2	1	0	1	1	0	1	1	0	1	1	0
Logistics Centers	0	0	1	0	0	1	0	0	1	0	0	0
Business Sectors	4	4	7	5	6	5	5	6	5	5	4	4
Group Companies (Japan)	22	16	9	8	12	10	12	14	16	16	14	14
Group Companies (Overseas)	—	2	1	2	3	1	4	4	4	3	6	7
Management Audits												
Works and Research Laboratories	6	6	5	6	6	5	6	6	5	7	7	6
Total	38	34	27	27	32	29	32	36	35	43	43	41

#### Specialized Audits for Facilities and Business Sectors

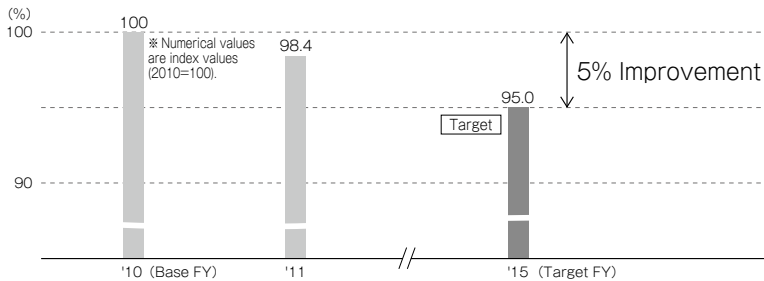
Area	Facilities (Works, Research Laboratories)	Business Sectors (Head Office Business Sectors)	Total
Good (Important)	25	6	31
Needs Improvement	61	10	71
Needs to be Examined	52	18	70
Total	138	34	172

In fiscal 2011, a total of 41 specialized and management audits were conducted. The Sumitomo Chemical specialized audits resulted in a total of 172 items meriting comment. Audit items will be expanded and enhanced on an annual basis to ensure continual improvement.

# Unification of Group Environmental Preservation Targets

## ● Group Companies in Japan

Indicator Trends for Energy Consumption and Unit Energy Consumption



Improvement in unit energy consumption

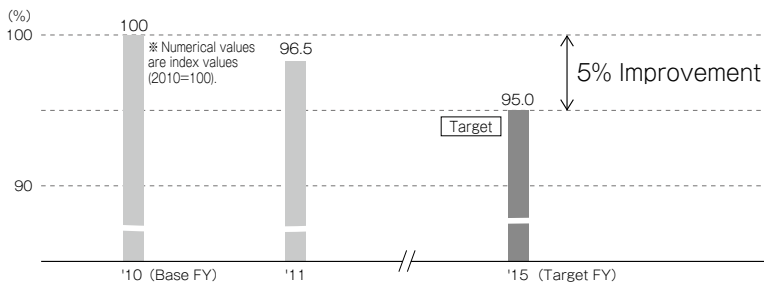
### Target

Reduce unit energy consumption by 5.0% relative to fiscal 2010 levels by fiscal 2015.

### Result

Unit energy consumption in fiscal 2011 was reduced by 1.6% relative to fiscal 2010 levels.

Indicator Trends for Unit CO<sub>2</sub> Emissions



Improvement in unit CO<sub>2</sub> emissions

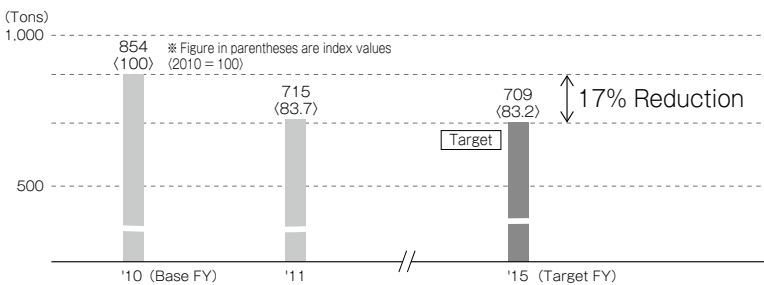
### Target

Reduce unit CO<sub>2</sub> emissions by 5.0% relative to fiscal 2010 levels by fiscal 2015.

### Result

Unit CO<sub>2</sub> emissions in fiscal 2011 were reduced by 3.5% relative to fiscal 2010 levels.

Volume of PRTR Substances Released (into the Air and Water)



Reduction of volume of PRTR substances released

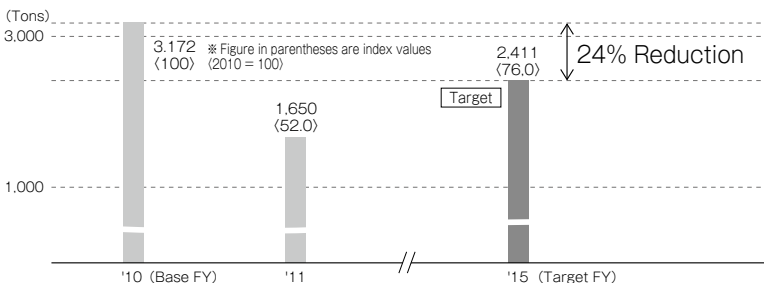
### Target

Reduce the total volume of PRTR substances released (into the air and water) by 17.0% relative to fiscal 2010 levels by fiscal 2015.

### Result

Total volume of PRTR substances released in fiscal 2011 was reduced by 16.3% relative to fiscal 2010 levels.

Landfill Disposal Amount



Reduction of landfill disposal amount

### Target

Reduce landfill disposal amount by 24.0% relative to fiscal 2010 levels by fiscal 2011.

### Result

Landfill disposal amount in fiscal 2011 was reduced by 48.0% relative to fiscal 2010 levels.

Group-wide quantitative domestic targets were established, and specific measures to achieve these targets are being implemented at all Group companies in Japan in order to reduce primary environmental impact systematically by fiscal 2015. These cover unit energy consumption, unit CO<sub>2</sub> emissions, release of PRTR substances (into the air and water) and amounts of landfill disposal.

## ● Targets of Domestic Group Companies

### Energy Saving and Global Warming Initiatives

Asahi Chemical Co., Ltd.	Reduce unit energy consumption by 20% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 20% relative to fiscal 2010 by fiscal 2015
Sumika-Kakoushi Co., Ltd.	Reduce unit energy consumption by 1% annually
Koei Chemical Co., Ltd.	Reduce unit energy consumption by an average of at least 1% per year
Thermo Co., Ltd.	Reduce unit energy consumption by 5% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 5% relative to fiscal 2010 by fiscal 2015
SanTerra Co., Ltd.	Reduce unit energy consumption by 5% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 5% relative to fiscal 2010 by fiscal 2015
Shinto Paint Co., Ltd.	Reduce unit energy consumption by 3% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 3% relative to fiscal 2010 by fiscal 2015
Sumika Color Co., Ltd.	Reduce unit energy consumption by 5% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 5% relative to fiscal 2010 by fiscal 2015
Dainippon Sumitomo Pharma Co., Ltd.	Reduce unit energy consumption by at least 5% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by at least 5% relative to fiscal 2010 by fiscal 2015
Sumika Styron Polycarbonate Ltd.	Reduce unit energy consumption by 5% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 5% relative to fiscal 2010 by fiscal 2015
Sumika Bayer Urethane Co., Ltd.	Reduce unit energy consumption by 7% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 7% relative to fiscal 2010 by fiscal 2015
Taoka Chemical Co., Ltd.	Reduce unit energy consumption by 5% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 5% relative to fiscal 2010 by fiscal 2015
Nippon A&L Inc.	Reduce unit energy consumption by 5% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 5% relative to fiscal 2010 by fiscal 2015
Nihon Medi-Physics Co., Ltd.	Reduce energy consumption by 1% annually Reduce unit CO <sub>2</sub> emissions from energy use to below fiscal 2010 levels
Nihon Oxirane Co., Ltd.	Reduce unit energy consumption by 1% annually Reduce unit CO <sub>2</sub> emissions from energy use by 1% annually
Sumika Agrotech Co., Ltd.	Reduce unit energy consumption by 5% relative to fiscal 2010 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from energy use by 5% relative to fiscal 2010 by fiscal 2015
Sumitomo Chemical Co., Ltd.	Reduce unit energy consumption by 25% relative to fiscal 1990 by fiscal 2015 Reduce unit CO <sub>2</sub> emissions from fossil fuel for captive consumption by 20% relative to fiscal 1990 by fiscal 2015

## PRTR Initiatives

Asahi Chemical Co., Ltd.	Reduce amount of PRTR substances released (into the air and water) during manufacturing processes to zero
Sumika-Kakoushi Co., Ltd.	Maintain amount released (into the air and water) at the fiscal 2010 level
Koei Chemical Co., Ltd.	Control increase of amount released to correspond to production levels
Thermo Co., Ltd.	Maintain zero release (into the air and water)
SanTerra Co., Ltd.	Maintain zero release (into the air and water)
Shinto Paint Co., Ltd.	Reduce amount released (into the air and water) by 5% relative to fiscal 2010 in fiscal 2015
Sumika Color Co., Ltd.	Reduce amount released (into the air and water) by 10% relative to fiscal 2010 by fiscal 2015
Sumitomo Joint Electric Power Co., Ltd.	Maintain zero release (into the air and water)
Dainippon Sumitomo Pharma Co., Ltd.	Reduce amount released (into the air and water) to below fiscal 2010 levels by fiscal 2015
Sumika Styron Polycarbonate Ltd.	Maintain amount released (into the air and water) at the fiscal 2010 level
Sumika Bayer Urethane Co., Ltd.	Reduce amount released (into the air and water) by 10% relative to fiscal 2010 by fiscal 2015
Taoka Chemical Co., Ltd.	Reduce amount released (into the air and water) by 5% relative to fiscal 2010 by fiscal 2015
Nippon A&L Inc.	Reduce amount released (into the air and water) by 20% relative to fiscal 2010 by fiscal 2015
Nihon Medi-Physics Co., Ltd.	Maintain amount released (into the air and water) at the fiscal 2010 level
Nihon Oxirane Co., Ltd.	Reduce amount of molybdenum released into the water to 10 tons by fiscal 2015
Sumika Agrotech Co., Ltd.	Maintain amount released (into the air and water) at the fiscal 2010 level
Sumitomo Chemical Co., Ltd.	Reduce amount released (into the air and water) by 60% relative to fiscal 2008 by fiscal 2015

## Landfill Disposal Reduction Initiatives

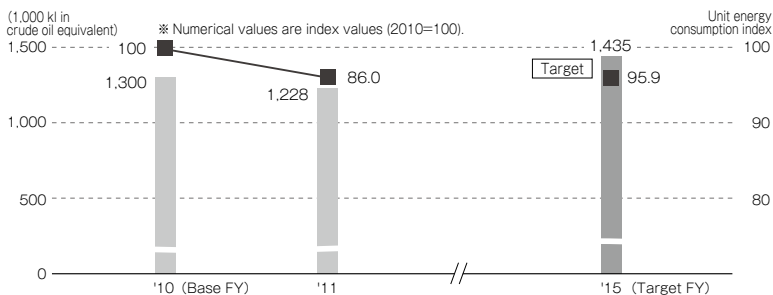
Asahi Chemical Co., Ltd.	Maintain landfill disposal at the fiscal 2010 level
Sumika-Kakoushi Co., Ltd.	Maintain landfill disposal at the fiscal 2010 level
Koei Chemical Co., Ltd.	Reduce landfill disposal by 25% relative to fiscal 2010 by fiscal 2015
Thermo Co., Ltd.	Reduce landfill disposal by 20% relative to fiscal 2010 by fiscal 2015
SanTerra Co., Ltd.	Maintain landfill disposal at the fiscal 2010 level
Shinto Paint Co., Ltd.	Reduce landfill disposal by 5% relative to fiscal 2010 by fiscal 2015
Sumika Color Co., Ltd.	Reduce landfill disposal by 5% relative to fiscal 2010 by fiscal 2015
Dainippon Sumitomo Pharma Co., Ltd.	Reduce landfill disposal to 1% or less of waste generated
Sumika Styron Polycarbonate Ltd.	Maintain landfill disposal at the fiscal 2010 level
Sumika Bayer Urethane Co., Ltd.	Maintain landfill disposal at the fiscal 2010 level
Taoka Chemical Co., Ltd.	Reduce landfill disposal by 5% relative to fiscal 2010 by fiscal 2015
Nippon A&L Inc.	Reduce landfill disposal to below fiscal 2010 levels
Nihon Medi-Physics Co., Ltd.	Reduce landfill disposal to below fiscal 2010 levels
Nihon Oxirane Co., Ltd.	Reduce landfill disposal by 80% relative to fiscal 2000 by fiscal 2015
Sumika Agrotech Co., Ltd.	Reduce landfill disposal by 50% relative to fiscal 2010 by fiscal 2015
Sumitomo Chemical Co., Ltd.	Reduce landfill disposal by 80% relative to fiscal 2000 by fiscal 2015

Individual company targets that formed the basis of the unified Group targets (determined specific target values) for the major areas of environmental preservation management were as above.



## ● Overseas Group Companies

### Trends in Energy Consumption and Unit Energy Consumption Indices



### Improvement in Unit Energy Consumption

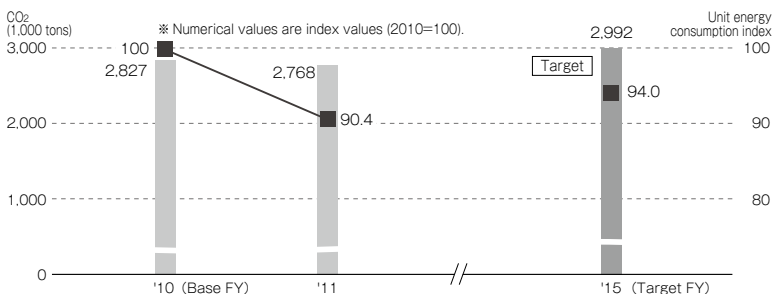
#### Target

Reduce unit energy consumption by 4.1% relative to fiscal 2010 levels by fiscal 2015.

#### Result

Unit energy consumption in fiscal 2011 was reduced by 14.0% relative to fiscal 2010 levels.

### Trends in CO2 Emissions (Energy Sources) and Unit CO2 Emissions Indices



### Improvement in Unit CO2 Emissions

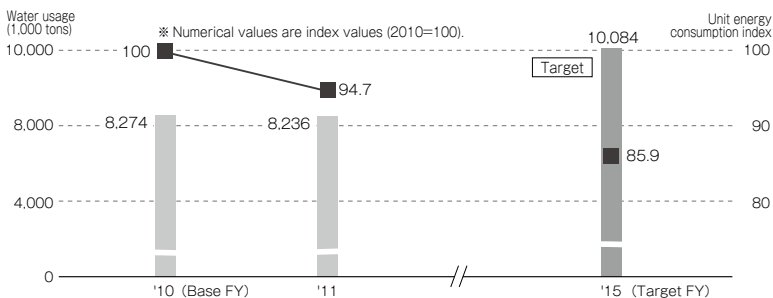
#### Target

Reduce unit CO2 emissions by 6.0% relative to fiscal 2010 levels by fiscal 2015.

#### Result

Unit CO2 emissions in fiscal 2011 was reduced by 9.6% relative to fiscal 2010 levels.

### Trends in Water Usage and Unit Water Usage Indices



### Reduction in Unit Water Usage

#### Target

Reduce unit water usage by 14.1% relative to fiscal 2010 levels by fiscal 2015.

#### Result

Unit water usage in fiscal 2011 was reduced by 5.3% relative to fiscal 2010 levels.

For 11 principal overseas Group companies, unified quantitative targets for fiscal 2015, corresponding to the indicators for the Group companies in Japan, were established with regard to unit energy consumption, unit CO2 emissions and unit water usage. The overseas Group companies are proactively taking initiatives to achieve these targets.



These figures reflect the totals for the following eleven overseas Group companies:

#### Singapore

- Sumitomo Chemical Singapore Pte Ltd.,
- Petrochemical Corporation of Singapore (Pte) Ltd.,
- The Polyolefin Company (Singapore) Pte. Ltd.,

#### Thailand (Bangkok, Samutprakarn)

- Sumipex (Thailand) Co., Ltd.,
- Bara Chemical Co., Ltd.,

#### China (Dalian, Wuxi)

- Dalian Sumika Chemphy Chemical Co., Ltd.,
- Sumika Electronic Materials (WUXI) Co., Ltd.,

#### Taiwan (Kaohsiung, Tainan)

- Sumipex Techsheet Co., Ltd.,
- Sumika Technology Co., Ltd.,

#### India (Mumbai)

- SC Enviro Agro India Private Ltd.,

#### South Korea (Seoul)

- Dongwoo Fine-Chem Co., Ltd.

# Energy Consumption and CO<sub>2</sub> Emissions ※ 1

	Energy consumption (1,000 kl in crude oil equivalent)	CO <sub>2</sub> emissions from energy use (1,000 tons)
<b>Sumitomo Chemical Group</b>	<b>2,787</b>	<b>4,164</b>
Works	2,756	4,108
Non-manufacturing sites including the Head Offices and Research Laboratories	31	56
<b>Sumitomo Chemical (unconsolidated)</b>	<b>1,192</b>	<b>3,024</b>
Works	1,180	3,001
Non-manufacturing sites including the Head Offices and Research Laboratories	12	23

The following table shows the results of domestic Group companies (a total of 17 companies including Sumitomo Chemical ※ 2) for fiscal 2011. These results are based on the data reported to the governmental authorities by each of the companies at the end of July 2012.

※ 1 Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures  
 ※ 2 The companies that started implementing measures to achieve new targets, as described in "7 Unification of Group Environmental Preservation Targets"

## Others (Topics)

### ● Power Saving Efforts during the Summer

#### Sumitomo Chemical Chiba Works

The national power-saving edict, issued for the summer of 2011 as a result of the power shortage triggered by the Great East Japan Earthquake, required us to reduce power consumption from July to September 2011 by 15% from the previous year during peak weekday hours. This government order placed us in a difficult situation. Without taking any special measures, Tsukuba Research Laboratory (presently the Tsukuba Material Development Laboratory and the Advanced Materials Research Laboratory) and the Group companies served by Tokyo Electric Power Company were not able to maintain their day-to-day operations. Furthermore, the Chiba Works could not carry out regular large-scale repair work that had previously been conducted every four years, and which was scheduled to start in September 2011.

To solve these problems, the following measures were taken:

- (1)Tokyo Head Office, Tsukuba Research Laboratory and relevant Group companies were divided into a few groups, with electricity interchanged between them. Specifically in July and August, excess electricity that was not used by the Chiba Works was provided to the Group companies, and in September when regular repair work was conducted at the Chiba Works, the Group companies provided the Chiba Works with their excess electricity.
- (2)Tokyo Head Office, Tsukuba Research Laboratory and the Chiba Works were closed on designated weekdays, operating on weekends instead in order to limit peak-hour power consumption.
- (3)Employees at plants and laboratories became united in their efforts to implement a range of power-saving measures.


Thanks to implementation of the above measures, we were able to reduce peak-hour power consumption by 15% compared to the previous year.

If a power-savings request is made again in fiscal 2012 or thereafter, the Sumitomo Chemical Group will make every effort to achieve the target set by the government, utilizing experience obtained this year.

#### Sumitomo Chemical Osaka Works (Gifu Plant)

In response to the power supply shortage caused by the Great East Japan Earthquake, the Gifu Plant of the Osaka Works launched a range of power-saving initiatives to achieve the target of a 15% reduction for the summer of 2011. Specifically, in order to eliminate unnecessary or excessive power use, the waste incinerator was operated in such a way as to maximize its efficiency, while freezer temperature at each production site and air conditioners at each worksite in the plant were carefully controlled. In administrative offices, ceiling fans were installed to increase air conditioning efficiency and room temperature was carefully controlled to save electricity. By employing these proactive measures, power consumption from manufacturing sites decreased by 6% (peak cut: 11%) and by 17% (peak cut: 5%) for non-manufacturing sites. We also implemented these measures during the winter months (December to March). In fiscal 2012, we will continue to work to reduce power consumption to save energy.

In March 2012, Sumitomo Chemical reported the progress and results of its efforts to fulfill the Eco-First Commitments to the Japanese Minister of the Environment while announcing its Eco-First Commitments Updated Version.



## Eco-First Commitments Updated Version

Initiatives We Are Undertaking for Global Environmental Protection  
as an Environmentally Advanced Company

March 22, 2012

**To Goshi Hosono**  
Minister of the Environment

President of  
Sumitomo Chemical Co., Ltd  
**Masakazu Tokura**

As a leader in the chemical industry, Sumitomo Chemical Co., Ltd. considers the appropriate management of chemical substances fundamental, and not only observes strict compliance with all relevant laws and regulations, but also works to ensure safety, environmental protection and product quality throughout the lifecycle of its products. The Company engages in public dialogue to gain the further trust of society and undertake voluntary activities (Responsible Care activities) to contribute to the sustainable development of global society.


- 1 We will manage chemical substances and promote risk communication in an appropriate and proactive manner.**

  - ◆ We will review the information on the safety of all our products manufactured or sold in annual amounts of one ton or more by fiscal 2016 in order that all members of society may use Sumitomo Chemical's products more safely and with peace of mind, and we will conduct the appropriate risk assessments based on the results by fiscal 2020.
  - ◆ We will collaborate with chemical companies globally on voluntary projects for inspecting the safety of high production volume (HPV) chemicals and studies of the impact of chemical substances on human health and the environment in order to improve the safety of chemical substances.
  - ◆ By fiscal 2015, we will achieve a 60% reduction in the total release into the air and water of chemical substances subject to the PRTR Act relative to fiscal 2008 levels.
  - ◆ All the offices and facilities at Sumitomo Chemical will communicate effectively with and voluntarily promote information disclosure to consumers and other stakeholders in creative ways that suit the local community.
- 2 We will actively promote initiatives to prevent global warming.**

  - ◆ We will work to improve unit energy consumption by 25% at all our Works and unit CO<sub>2</sub> emissions from the captive consumption of fossil fuels by 20% over fiscal 1990 levels by fiscal 2015.
  - ◆ As a member of the Japan Petrochemical Industry Association, we are committed to the heat recovery technology (HEART) Project with a view to developing and commercializing innovative energy-saving technologies to recover low-temperature heat (130 degrees Centigrade and lower) generated by our petrochemical plants that has not been recycled and reuse it at our manufacturing plants by fiscal 2015.
  - ◆ We will promote a modal shift in logistics and upsize transport containers to improve the efficiency of our logistics divisions, thereby improving their unit energy consumption by 1% annually.
  - ◆ In cooperation with the labor union, we will implement measures to help prevent global warming through the reduction of household CO<sub>2</sub> emissions by encouraging employees to make continuous efforts to reduce CO<sub>2</sub> emissions at home.
- 3 We will actively promote initiatives for building a recycling-based society.**

  - ◆ We will endeavor to reduce waste and promote recycling, aiming at achieving a 80% reduction in industrial waste landfill relative to fiscal 2000 levels by 2015.
  - ◆ We will reduce the ratio of landfill to total waste generated at all our Works to less than 3% by fiscal 2015.

Sumitomo Chemical Co., Ltd. will monitor the progress made in the above initiatives, make the results publicly available, and report them to the Ministry of Environment on a regular basis.



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※ For information concerning the Utajima Pilot Production Department, Gifu Plant, and Okayama Plant of the Osaka Works, please contact the Osaka Works (Kasugade).

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