Responsible Care Activities: Supplementary Data

1 Responsible Care Management

Environmental Management System

Between 1997 and 2001, ISO 14001:1996 certification was obtained at all Works and continually maintained thereafter. ISO 14001:2004 certification was obtained later and all Works have been inspected on a continual basis to ensure the certification does not expire.

Acquisition of ISO 14001 Certification (Sumitomo Chemical (Target: All Works))

Works	Certificate Number	Certification Date
Ehime Works (including Ohe Works)	JCQA-E-018	April 1998
Chiba Works (including the SCIOCS Chiba Facility)	KHK-97ER • 004	June 1997
Osaka Works	JQA-E-90072	November 1997
Oita Works (Gifu Plant)	JCQA-E-0206	December 2000
Oita Works (Okayama Plant)	JCQA-E-0218	January 2001
Oita Works	JQA-E-90152	March 1998
Misawa Works	JQA-EM0355	March 1999

Quality Management System

Acquisition of ISO 9001 Certification (Sumitomo Chemical (Target: All Works))

Works	Certificate Number	Certification Date
Ehime Works	JCQA-0019 YKA-4004422/J	October 1994 August 2009
Chiba Works	JQA-0829	March 1995
Osaka Works	JQA-0721	December 1994
Oita Works*	JQA-1069	December 1995
Misawa Works	JQA-0752	December 1994
Ohe Works	JET-0829 JCQA-1720	April 1998 January 2010

* The Oita Works (Okayama Plant) and the Oita Works (Gifu Plant) have been pursuing Good Manufacturing Practice (GMP) management.

Responsible Care Activities: Supplementary Data

Occupational Safety and Health Management System

By fiscal 2009, Sumitomo Chemical acquired OSHMS certification from the Japan Industrial Safety and Health Association (JISHA) at four of its Works and two of its Research Laboratories. (JISHA's OSHMS includes the same requirements as OHSAS18001.)

JISHA's Official Websites

Japanese: https://www.jisha.or.jp/about/index.html

English: https://www.jisha.or.jp/english/index.html

Acquisition of OSHMS Certification (Sumitomo Chemical (Target: Works and Research Laboratories))

Facilities	Certificate Number	Certification Date
Chiba Works	03-12-1	May 2003
Osaka Works	05-27-3	February 2005
Oita Works (Utajima)	09-27-14	January 2009
Oita Works (Gifu Plant)	09-21-6	February 2009
Oita Works (Okayama Plant)	09-33-7	February 2009
Oita Works	06-44-1	July 2006
Ohe Works	10-38-4	March 2010
Health & Crop Sciences Research Laboratory	07-28-9	January 2007
Tsukuba Regional Research Laboratory*	05-8-3	December 2005

* The Tsukuba Regional Research Laboratory was reorganized into the Advanced Materials Research Laboratory, IT-related Chemicals Research Laboratory (Tsukuba), and Energy & Functional Materials Research Laboratory (Tsukuba).

Voluntary Safety Management of High-Pressure Gas Based on Certification by the Minister

Sumitomo Chemical continually renews the Accreditation of Completion and Safety Inspection, as stipulated in the High Pressure Gas Safety Act, for the Chiba Works and the Ehime Works. Certification is given to facilities that have achieved excellent safety, management, and technological levels and that are recognized as having met legally mandated requirements for safety management systems. Certified plants are allowed to conduct Completion Inspections and Safety Inspections of their own facilities in place of national, prefectural, and other governmental organizations.

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	2002	March 2018	13
	Kikumoto	2002	March 2018	4
Chiba Works	Anesaki	1987	May 2014	11
	Sodegaura	1987	May 2014	17

Note: Number of facilities given accreditation data as of the time of certification renewal.

Responsible Care Activities: Supplementary Data

Responsible Care Audit Results

Responsible Care Audit Results (Sumitomo Chemical Group)

Facilities		FY2015	FY2016	FY2017
Professional audits*1	Works	8	9	11
	Research laboratories	1	3	0
	Logistics centers	0	0	0
	Business sectors	4	6	5
	Group companies in Japan	15	18	10
	Group companies overseas	6	7	10
Management audits*2	Works and research laboratories	7	6	6
Total		41	49	42

Note: Refer to Responsible Care Auditing Framework on page 27 for more details.

*1 Audits of systems and operations by specialists in each field
*2 Audits from a management perspective by Sumitomo Chemical officers

Professional Audits for Facilities and Business Sectors (FY2017 Results)

Area	Facilities (Works, Research Laboratories)	Business Sectors (Head Office Business Sectors)	Total
Good	33	3	36
Needs improvement	55	5	60
Needs to be examined	119	9	128
Total	207	17	224

Responsible Care Activities: Supplementary Data

Eco-First Commitments

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.

Note: The content was updated in November 2016. From fiscal 2016, measures are being taken in line with the updated content.

ECO FIRST 1

Eco-First Commitments

Updated Version

November 30, 2016

To Koichi Yamamoto
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 to be fundamental and not only observes strict compliance with all relevant laws and regulations, but also works to ensure safety, environmental protection, health and product quality throughout the lifecycle of chemical products. The Company also strives to gain the further trust of society through continuous dialogue and undertakes voluntary initiatives (Responsible Care activities) to contribute to the sustainable development of society.

1 We will promote the management of chemical substances and the risk communication in an appropriate and proactive manner using proprietary technology.

- We will review the information on the safety for all our products manufactured and sold in annual amounts of one tonne or more by fiscal 2016, and we will conduct the appropriate risk assessments based on the results by fiscal 2020 using our proprietary technology. In addition we will make the results available to the general public as Safety Summaries.
- We will collaborate with chemical companies in the world on studies of the impact of chemical substances on human health and the environment (Long-range Research Initiative) in order to improve the safety of chemical substances.
- All the offices and facilities at Sumitomo Chemical will strive to communicate effectively with and promote information disclosure to local residents and other stakeholders in creative and voluntary ways that suit the needs of the local community.

2 We will develop and apply management technologies that help reduce environmental impacts to realize safe and secure water treatment.

- To make it easier to select the more appropriate water treatment method (either activated sludge or incineration), we will work to more uniformly standardize methods for evaluating the various kinds of process water expelled from plants.
- We will use microbiota analysis, microbial immobilization and other proprietary technology to increase the sophistication of activated sludge treatment and thereby achieve the following goals:
  1. Ensure stable water treatment by checking and managing the health of the sludge biota
  2. Improve our treatment capabilities
  3. Switch over a portion of the treatment of wastewater for which activated sludge treatment had been deemed too difficult from incineration to such treatment

3 We will proactively contribute to build a sustainable society.

- To contribute to society through the power of chemistry (and related businesses) and encourage reductions in CO_2 emissions through the widespread adoption of low-carbon products and technologies, we internally designate products and technologies that help address climate change, actively promote the development and widespread adoption of these products and technologies, and make available to the public quantitative information on emission reductions.
- We strive to improve the unit energy consumption of all plants by an annual average of 1%. We will switch to energy sources with low emission factors, introduce cogeneration systems and promote the installation of LED lighting at worksites. Through these and other efforts, we will improve CO_2 emission intensity from energy sources 15% relative to fiscal 2005 by fiscal 2020.
  As a result, total CO_2 emissions in fiscal 2020 will be 15%, or around 3.2 million tonnes, lower than those in fiscal 2005.
- We promote internal education and environmental education activities in different regions to deepen understanding of the importance of environmental protection.

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

SUMITOMO CHEMICAL

Responsible Care Activities: Supplementary Data

2 Occupational Safety and Health / Industrial Safety and Disaster Prevention

Criteria and Results of the President's Safety Award for Zero Lost-Workday Operations (As of May 31, 2018)

Sumitomo Chemical has set facility-specific criteria for the achievement of continuous periods of 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.

Sumitomo Chemical Employees

Facilities	Criteria for the President's Safety Award*1	Results
Ehime Works	3 million hours	Working to reach the target of 12 million work hours.
Ohe Works*2	3 million hours	Working to reach the target of 12 million work hours.
Chiba Works	3 million hours	Reached 12 million work hours in November 2017. Working to reach the target of 15 million work hours.
Osaka Works	3 million hours	Reached 12 million work hours in April 2018. Working to reach the target of 15 million work hours.
Oita Works*3	1.5 million hours	Reached 3 million work hours in March 2018. Working to reach the target of 4.5 million work hours.
Misawa Works	30 months	Working to reach the target of 180 months.
Health & Crop Sciences Research Laboratory	30 months	Working to reach the target of 30 months.
Tsukuba Regional Research Laboratory*4	30 months	Working to reach the target of 360 months.

*1 Continuous periods of zero lost-workday operations.
*2 Ohe Works includes Sumika Assembly Techno Co., Ltd.
*3 Oita Works includes the Utajima Pilot Production Department, Gifu Plant, and Okayama Plant.
*4 The Tsukuba Regional Research Laboratory was reorganized into the Advanced Materials Development Research Laboratory, IT-related Chemicals Research Laboratory (Tsukuba), and Energy & Functional Materials Research Laboratory (Tsukuba).

Contractors / Affiliated Company Employees

Facilities	Criteria for the President's Safety Award	Results
Ehime Association (Plant maintenance)	24 months	Reached 24 months in March 2018. Working to reach the target of 48 months.
Ehime Logistics Association (Logistics)	24 months	Reached 24 months in January 2018. Working to reach the target of 48 months.
Ohe Association (Plant maintenance)	48 months	Working to reach the target of 144 months.
Ohe Logistics Association (Logistics)	48 months	Working to reach the target of 144 months.
Chiba Association (Plant maintenance)	24 months	Working to reach the target of 24 months.
Chiba Logistics Association (Logistics)	24 months	Reached 24 months in February 2018. Working to reach the target of 48 months.
Osaka Association	24 months	Working to reach the target of 24 months.
Oita Association	24 months	Working to reach the target of 96 months.
Okayama Association	48 months	Working to reach the target of 144 months.
Gifu Association	48 months	Reached 96 months in September 2017. Working to reach the target of 144 months.
Misawa Works	48 months	Working to reach the target of 96 months.
Health & Crop Sciences Research Laboratory	48 months	Working to reach the target of 240 months.
Tsukuba Regional Research Laboratory	48 months	Working to reach the target of 96 months.

Responsible Care Activities: Supplementary Data

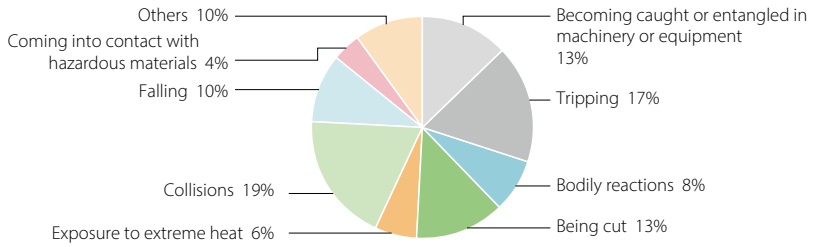
Safety Achievements

Lost-Workday Injuries (Sumitomo Chemical Group*)

	FY2014	FY2015	FY2016	FY2017
Number of lost-workday injuries	10	17	9	17
Frequency rate of lost-workday injuries	0.16	0.27	0.14	0.26
Number of fatal accidents (including employees and contractors)	1	0	0	2
Number of fatal accidents (contract employees)	0	0	0	0

Note: Data for previous fiscal years has been retroactively adjusted to enhance accuracy.

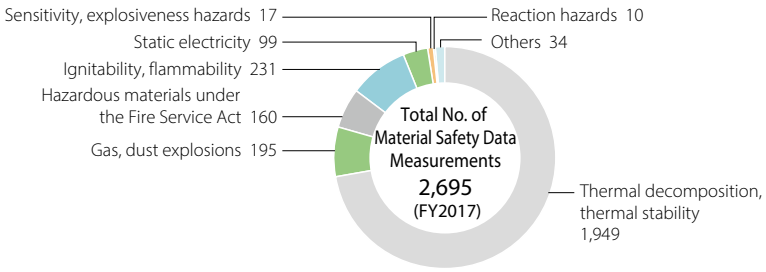
Breakdown of Causes of Injury by Type (Sumitomo Chemical Group*)



* Employees of Sumitomo Chemical, Sumitomo Chemical contractors, and Group companies in Japan and overseas.

Industrial Safety and Disaster Prevention Results

Results of Material Safety Data Measurements



The Safety Engineering Group at the Production & Safety Fundamental 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 2,512 material safety data measurements were taken in fiscal 2017 (2,736 measurements in fiscal 2016) from within Sumitomo Chemical. In addition, 183 measurements were taken in fiscal 2017 (228 measurements in fiscal 2016) from Group companies. Total measurements undertaken were 2,695 in fiscal 2017 (2,964 measurements in fiscal 2016).

Responsible Care Activities: Supplementary Data

The Launch of Several Process Safety Review Committees (Sumitomo Chemical)

	R&D stages		Industrialization stage		
Fiscal Year	Level 1	Level 2	Level 3	Level 4	Level 5
2014	17	40	44	112	31
2015	22	29	41	131	26
2016	14	33	37	81	17
2017	25	19	27	88	47

When new processes are developed at Sumitomo Chemical, the Process Safety Review Committee (levels 1 to 5) convenes at every step, from R&D through to industrial-scale production. In essence, this Committee focuses on process safety assessment results and confirms whether safety countermeasures are appropriate.

Safety Information Database (Sumitomo Chemical)

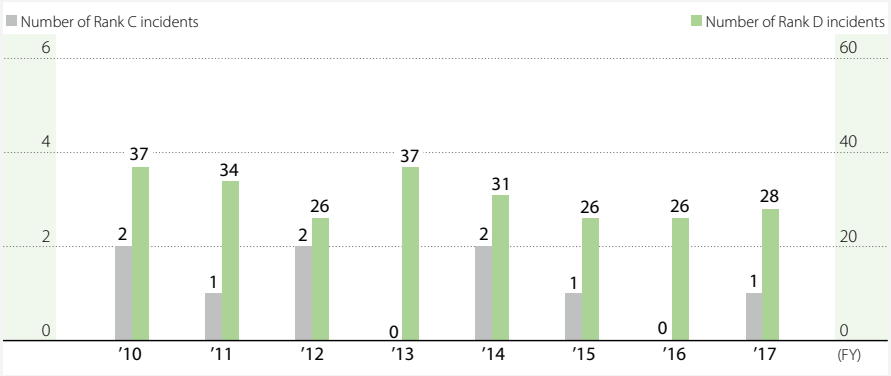
	Number of Data Sets	(Year-on-Year Comparison)
Accident prevention technology information	18,964	(Increased by 545)
Accident cause investigations	2,371	(Increased by 60)
Accident information	20,382	(Increased by 299)
As of March 31, 2018	41,717	(Increased by 904)

A safety information database has been created by collecting information on accidents in Japan and overseas and compiling abstracts of said data. As of the end of March 2018, 41,717 sets of data were stored in the database (40,813 sets of data as of March 31, 2017). This system allows all employees at each Works or Research Laboratory to search stored data using individual terminals. This data is also used in process hazard evaluations and case study examinations to prevent similar accidents. In addition, accident data is also disclosed to Group companies as necessary.

Logistics Quality Assurance

In fiscal 2017, the Company reported one incident of rank C or above and 28 incidents of rank D. However, 16 of these incidents involved errors in shipment and delivery, which can cause significant problems in the quality of customers' products. Going forward, we will continue to promote measures to reduce the number of these incidents.

Logistics Issues Having an Impact on Our Customers (Sumitomo Chemical)



Note: Ranks reflect Sumitomo Chemical's standard, which classifies incidents into Ranks A, B, C, and D in descending order of severity. There were no occurrences of Rank A or Rank B (the most severe) incidents. Incidents within the scope of logistics operations are consigned to Sumitomo Chemical.

Responsible Care Activities: Supplementary Data

3 Environmental Protection / Climate Change Action

Evaluation of Environmental Protection Costs and Economic Effects through Environmental Accounting

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

◆ Items Pertaining to Environmental Accounting

① Period: April 1, 2017 to March 31, 2018
② Boundary: Sumitomo Chemical and 23 major consolidated subsidiaries (18 in Japan and 5 overseas)*
③ Composition (Classification): Based on Ministry of the Environment (Japan) guidelines
④ Outline of the results (investment and expenses): Consolidated investment decreased year on year by 1.7 billion yen, and consolidated expenses decreased by 1.3 billion yen.

* Sumitomo Dainippon Pharma Co., Ltd.; Koei Chemical Co., Ltd.; Taoka Chemical Co., Ltd.; Tanaka Chemical Corporation; Asahi Chemical Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.; Sumika Color Co., Ltd.; Nihon Medi-Physics Co., Ltd.; Nippon A&L Inc.; SanTerra Co., Ltd.; Sumika-Kakoushi Co., Ltd.; Sumika Agrotech Co, Ltd.; Ceratec Co., Ltd.; SC Environmental Science Co., Ltd.; SN Kasei Co., Ltd.; Sumika Agro Manufacturing Co., Ltd.; Sumika Plastech Co., Ltd.; SCIOCS Co., Ltd.; Dongwoo Fine-Chem Co., Ltd.; Sumitomo Chemical Asia Pte Ltd; The Polyolefin Company (Singapore) Pte. Ltd.; Sumika Technology Co., Ltd.; and Sumika Electronic Materials (Wuxi) Co., Ltd.

Environmental Protection Cost

(Billion yen)

Classification		Details of Major Initiatives	FY2016				FY2017			
			Non-consolidated		Consolidated		Non-consolidated		Consolidated	
			Investment	Expenses	Investment	Expenses	Investment	Expenses	Investment	Expenses
Facility area costs			4.0	16.0	5.2	26.6	1.6	16.8	3.5	28.2
Breakdown	Pollution prevention costs	Prevention of air pollution, water pollution, soil contamination, noise pollution, odors, ground subsidence, etc.	(2.5)	(10.9)	(3.5)	(15.2)	(1.2)	(11.8)	(2.6)	(16.5)
Breakdown	Global environmental protection costs	Energy saving, prevention of global warming, ozone layer depletion, and other measures	(1.3)	(0.3)	(1.5)	(3.4)	(0.1)	(0.2)	(0.4)	(3.4)
Breakdown	Resource recycling costs	Resource saving, water saving and rainwater usage, waste reduction/disposal treatment, recycling, etc.	(0.2)	(4.9)	(0.2)	(8.1)	(0.3)	(4.8)	(0.5)	(8.3)
Upstream / Downstream costs		Green purchasing, recycling, recovery, remanufacturing and appropriate treatment of products, recycling costs associated with containers and packaging, environmentally friendly products and services, etc.	0	0	0	0.3	0	0	0	0.3
Administrative costs		Costs associated with environmental education, environmental management systems, the monitoring and measuring of the environmental impact of business activities and products, environmental organization operations, etc.	0	0.8	0	1.3	0	0.7	0	1.3
R&D costs		Development of products with attention to environmental safety, research into energy-saving processes, etc.	0	6.8	0	6.8	0.1	3.9	0.1	4.0
Administrative costs		Protection of the natural environment and enhancement of its scenic beauty and greenery, support for community initiatives aimed at environmental protection, support for environmental preservation groups, environment-related paid contributions and surcharges, etc.	0	0.5	0	0.8	0	0.5	0	0.8
Environmental remediation costs		Environmental rehabilitation of contaminated environments and other environmental damage, reserve funds to cover environmental recovery, etc.	0	0	0	0	0	0	0	0
Total			4.0	24.0	5.3	35.9	1.7	21.9	3.6	34.6

Responsible Care Activities: Supplementary Data

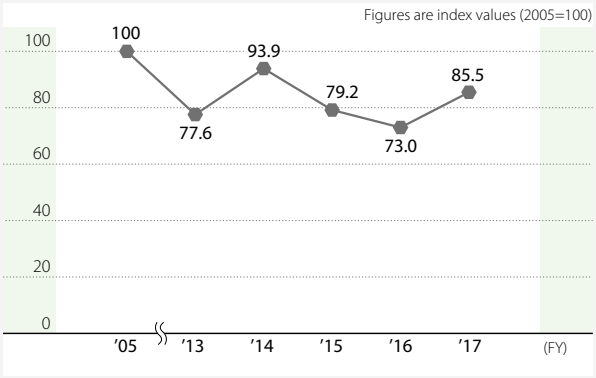
Economic Effects

(Billion yen)

Results	FY2016		FY2017	
	Non-consolidated	Consolidated	Non-consolidated	Consolidated
Reduced costs through energy saving	0.5	1.5	2.2	3.7
Reduced costs through resource saving	0.4	4.0	0.5	6.7
Reduced costs through recycling activities	2.0	3.3	0.6	1.7
Total	2.9	8.8	3.3	12.1

Economic effects are the rationalization value of per-unit improvement in such areas as energy and resource saving. In fiscal 2017, economic effects improved year on year ¥0.4 billion on a non-consolidated basis and ¥3.3 billion on a consolidated basis.

Cost Efficiency of Environmental Protection Measures (Sumitomo Chemical)

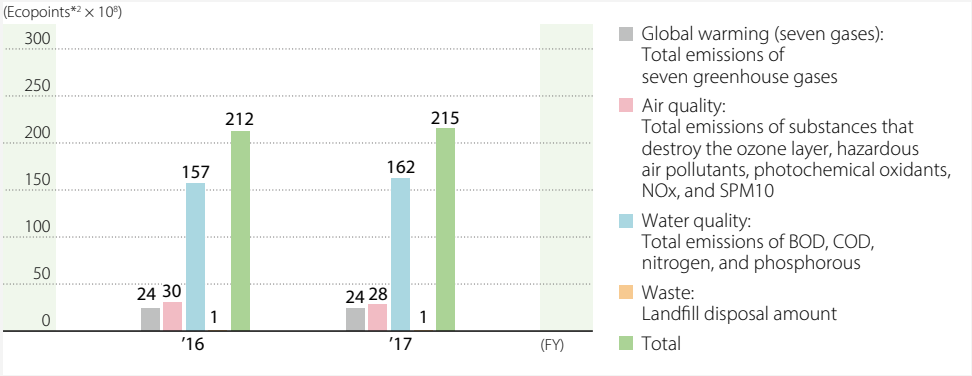


In fiscal 2009, we began implementing measures to improve the cost efficiency of our environmental protection measures by making sure that all activities were as cost effective as possible. We will implement more effective measures by analyzing and studying the breakdown of our environmental protection costs and reviewing each item to determine its importance. We calculate the cost efficiency of our environmental protection as the ratio of annual total production value to total environmental protection costs, in order to better reflect actual production activities in the calculation.

Responsible Care Activities: Supplementary Data

Examining the Practical Use of Environmental Efficiency Indicators and Environmental Management Accounting Methods

Breakdown of Aggregate Values for Environmental Impact (Sumitomo Chemical) by JEPIX*1



Assessing the Environmental Impact of Each Group Company Using JEPIX

In fiscal 2017, as in the previous fiscal year, we undertook environmental impact assessments using JEPIX, in order to evaluate the effectiveness of this index as a strategic management indicator, and continued with relevant analyses.

Assessing the Environmental Impact of Each Product by LIME*3

For more practical use of LCA*4 data both internally and externally, we use LCA software (MiLCA) from the Japan Environmental Management Association for Industry to undertake environmental impact assessments of our major products using the LIME method.

Trial Evaluation of Material Flow Cost Accounting (MFCA)*5

We are continuing to evaluate the effectiveness of this tool and also are performing examinations for the simplification and standardization of the method and procedures in order to foster their use. MFCA, which focuses on the loss of energy and resources, helps minimize loss and cost and reduces environmental impact.

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

*2 Ecopoints:
An indicator for total environmental impact—the smaller the value, the lower the environmental impact.

*3 Life-cycle Impact assessment Method based on Endpoint modeling (LIME)
A life-cycle impact assessment method developed in Japan as a cornerstone for measuring Japan's environmental conditions.

*4 Life Cycle Assessment (LCA):
A method for evaluating the environmental impact of products and services throughout their life cycles.

*5 Material Flow Cost Accounting (MFCA):
An environmental cost accounting method that identifies input costs of materials, processing, electricity, fuel, and others, and compares them with the energy and resources lost in manufacturing processes.

Responsible Care Activities: Supplementary Data

Reducing Greenhouse Gas Emissions

Greenhouse Gas Emissions (All Seven Gases) (Sumitomo Chemical (Target: All Facilities))

(Thousands of tonnes of CO_2e)

		FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
CO_2	Energy sources	3,134	3,190	3,357	3,347	2,559	2,405	2,454
	From other than energy use	98	62	63	65	55	50	93
Methane (CH_4)		—	—	—	—	—	—	—
Nitrous oxide (N_2O)		58	67	63	76	65	45	35
Hydrofluorocarbon (HFC)		—	—	—	—	—	—	—
Perfluorocarbon (PFC)		—	—	—	—	—	—	—
Sulfur hexafluoride (SF_6)		—	—	—	—	—	—	—
Nitrogen trifluoride (NF_3)		—	—	—	—	—	—	—

Note: • CH_4, HFC, PFC, SF_6, and NF_3 are outside the scope of reporting.
• Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

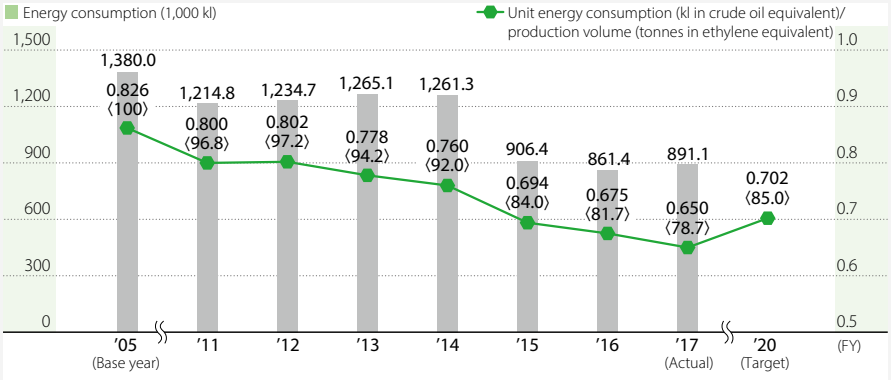
Energy Saving

Breakdown of Unit Energy Consumption (Sumitomo Chemical (Target: All Works))

	(a) Energy Consumption (1,000 kl in Crude Oil Equivalent)	(b) Production (1,000 tonnes in Ethylene Equivalent)	(a/b) Unit Energy Consumption
Ehime Works	409.7	680.8	0.602
Chiba Works	355.0	458.6	0.774
Osaka Works	23.7	18.9	1.254
Oita Works*	57.2	52.9	1.081
Misawa Works	10.4	7.5	1.387
Ohe Works	35.1	152.9	0.230
Total	891.1	1,371.6	0.650

Note: Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.
* Data for the Oita Works includes data for the Gifu and Okayama plants.

Energy Consumption and Unit Energy Consumption (Sumitomo Chemical (Target: All Works))



Note: Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

Target	Improve unit energy consumption for fiscal 2020 by 15% compared with fiscal 2005.
Results	Energy consumption totaled 891 thousand kl in crude oil equivalent in fiscal 2017. In fiscal 2017, unit energy consumption improved 3.7% compared with fiscal 2016 and 21.3% compared with fiscal 2005.

Responsible Care Activities: Supplementary Data

Energy Consumption and CO_2 Emissions

(Sumitomo Chemical and Group Companies in Japan (Target: All Facilities))

	Energy Consumption (1,000 kl in Crude Oil Equivalent)	CO_2 Emissions from Energy Use (1,000 tonnes)
Sumitomo Chemical	903	2,454
Works	891	2,430
Non-manufacturing sites, including the Head Offices and Research Laboratories	12	25
Sumitomo Chemical and Group companies in Japan	1,815	5,452
Works*	1,788	5,396
Non-manufacturing sites, including the Head Offices and Research Laboratories	27	56

Note: • Calculated based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.
• The boundary of calculation covers the same participating companies listed on page 3.

* Includes sales outside the Group by Sumitomo Joint Electric Power Co., Ltd.

Initiatives for Energy Saving and CO_2 Emissions Reduction in the Logistics Division

Energy Consumption and CO_2 Emissions for Group Companies in Japan ("Specified Consigners")

	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Energy consumption (1,000 kl in crude oil)	4.1	3.9	3.9	3.9	1.6	1.6	1.8
CO_2 emissions (1,000 tonnes)	10.9	10.3	10.3	10.3	3.9	4.0	4.6

Note: • Figures between fiscal 2011 and 2014 are totals for Nippon A&L Inc. and Nihon Oxirane Co., Ltd.
• Since fiscal 2015, the figures are only for Nippon A&L Inc.

Responsible Care Activities: Supplementary Data

Industrial Waste Reduction

PCB Waste (Sumitomo Chemical and Group Companies in Japan (Target: All Works))

Storage and Control of High Concentrations of PCB Waste (As of the End of Fiscal 2017)

	Number of Units of PCB Waste			Volume of PCBs (kl)
	Total	Storage	Usage	
Sumitomo Chemical	18	18	0	0.06
Sumitomo Chemical and Group companies in Japan	58	58	0	1.0

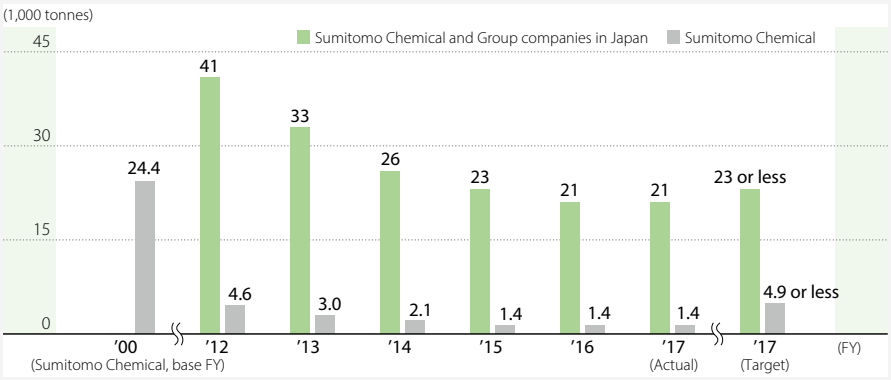
Note: The volume of PCBs does not include minute amounts of PCB waste in the PCB net conversion amount. High concentrations of PCBs in such classes of materials as fluorescent lamps, mercury lamp ballast, and contaminated substances (wastepaper, etc.) fall outside the scope of collation.

Target	Properly collect and store high-concentration PCB-containing waste and complete treatment of this waste at an early date.

In accordance with the Act on Special Measures against PCB Waste, Sumitomo Chemical properly collects high-concentration polychlorinated biphenyl (PCB)-containing waste.* The Company then stores this industrial waste, which is subject to special controls, 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 ahead of the deadline specified under the Act.

* Transformers, capacitors, and other electronic devices that contain PCB insulating oil.

Landfill Disposal Amount



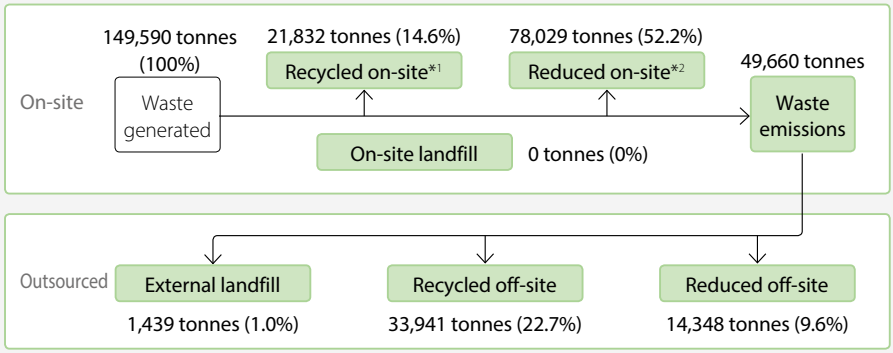
Digitization of Manifests to Be Prepared Pursuant to the Waste Management and Public Cleansing Act (Sumitomo Chemical (Target: All Works))

	Number of Manifests Issued	Number of Manifests Digitized	Digitization Rate (%)
FY2012	17,502	13,259	76
FY2013	19,389	15,329	79
FY2014	18,662	14,930	80
FY2015	18,973	16,337	86
FY2016	19,868	19,594	99
FY2017	19,858	19,585	99

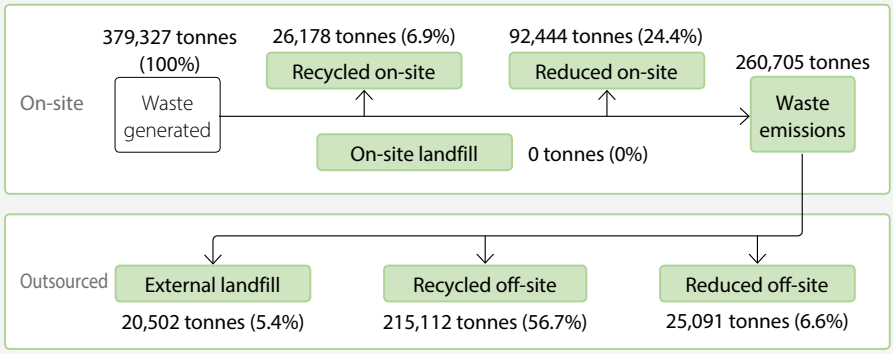
Sumitomo Chemical has been fostering the digitization of manifests to improve operational efficiency and ensure compliance with the law and transparency of data.

Responsible Care Activities: Supplementary Data

Waste Disposal Flow Chart and Results (Sumitomo Chemical (Target: All Works))



(Sumitomo Chemical and Group Companies in Japan (Target: All Works))



Note: Although the amount of waste emissions from Sumitomo Chemical and Group companies in Japan includes the amount of waste reduced at Sumitomo Chemical's facilities, the reduced amount is insignificant.

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

List of Results by Item in Connection with the Disposal of Waste (Sumitomo Chemical (Target: All Works))

(Tonnes)

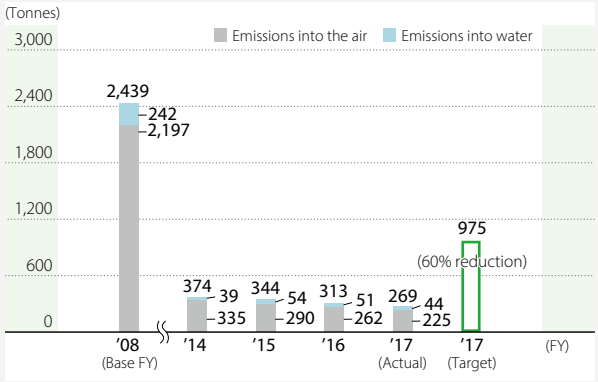
Type	Waste	Recycled On-site		Reduced On-site		Waste Emissions	On-site Landfill	Reduced Off-site	Recycled Off-site		External Landfill
	Generated	Reused, Recycled	Thermally	Incineration	Other				Reused, Recycled	Thermally Recycled	
Burnt residue	3,701.7					3,701.7			3,532.7		169.0
Sludge	47,519.2		7,474.3	21,466.9	2,893.1	15,616.7		2,083.4	13,327.3	3.3	292.2
Oil waste	34,690.4	4,509.6	9,566.4	10,750.6		9,863.7		3,502.1	5,280.2	1,049.4	31.9
Waste acid	8,456.2		14.6	6,142.4	815.8	1,483.4		1,036.0	425.7	8.8	4.9
Waste alkali	45,288.4	10.1	9.6	33,727.7	81.4	11,459.6		6,301.1	4,007.3	1,082.3	53.4
Waste plastic	5,810.0		157.4	1,211.9		4,440.8		438.8	3,273.7	140.5	588.8
Waste paper	1,141.7		66.5	822.7		252.5		28.0	224.3		0.2
Wood waste	915.7			81.5		834.3		54.4	639.2	131.7	9.0
Textile waste	46.1			35.0		11.1		9.5	1.7		0.0
Animal and plant residues	11.1					11.1		11.1			
Metal waste	858.5			0.4		858.0		457.5	385.0		15.5
Glass and pottery waste	335.9					335.9		18.9	270.9		46.2
Slag	31.0					31.0			31.0		
Debris	729.0	18.0				711.0		406.8	122.0		182.3
Soot and dust	55.1		5.7			49.4			3.8		45.6
Total	149,590	4,538	17,294	74,239	3,790	49,660	0	14,348	31,525	2,416	1,439

Responsible Care Activities: Supplementary Data

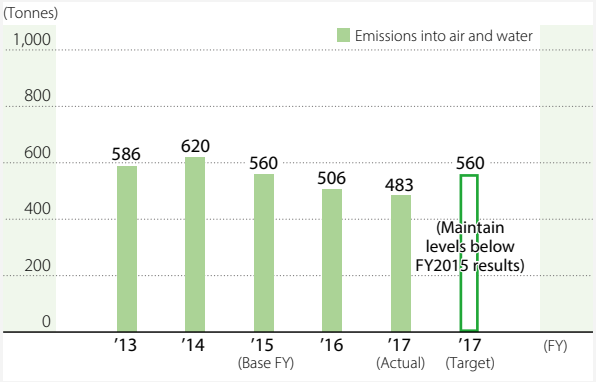
Addressing PRTR and VOCs

Trends in Emissions of Substances Subject to the PRTR Act

Sumitomo Chemical



Sumitomo Chemical and Group Companies in Japan

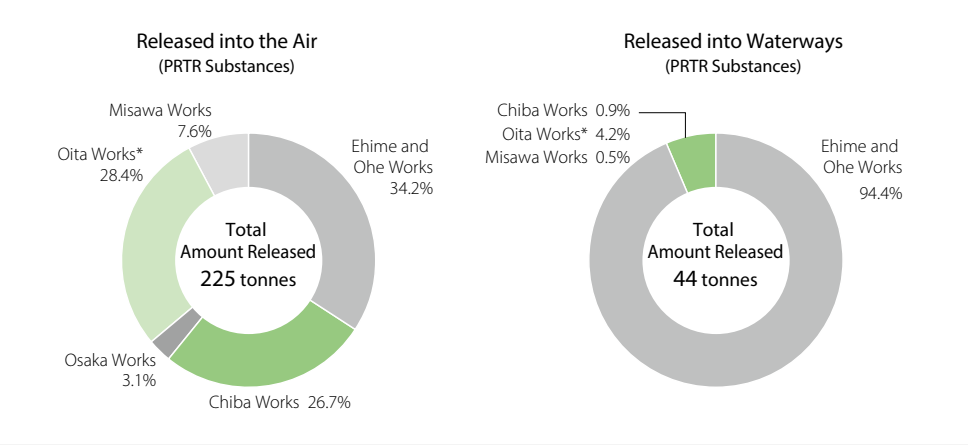


Release and Transfer of PRTR Substances (Sumitomo Chemical and Group Companies in Japan)

(Tonnes)

	Released			Transferred		
	Air	Water	Subtotal	Sewage	Waste	Subtotal
PRTR substances						
Sumitomo Chemical (96 substances)	225	44	269	5	4,201	4,207
Sumitomo Chemical and Group companies in Japan	438	45	483	11	7,478	7,490

PRTR Substances Released by Works (Sumitomo Chemical)

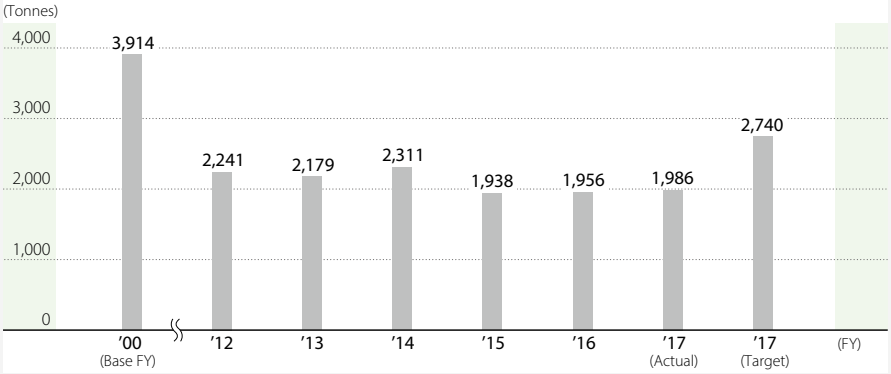


* Data for the Oita Works includes data for the Gifu and Okayama plants.

Target	Reduce the total release of PRTR substances by 60% compared with fiscal 2008 by fiscal 2017.
Results	Reduced the total release of PRTR substances by 269 tonnes, or 89.0%, compared with fiscal 2008 by fiscal 2017, achieving the target.

Responsible Care Activities: Supplementary Data

Initiatives to Reduce Emissions of Volatile Organic Compounds (VOCs) (Sumitomo Chemical)



Target	Maintain a 30% reduction in VOC emissions compared with fiscal 2000.
Results	Reduced emissions by 1,986 tonnes, or 49.3%, compared with fiscal 2000 by fiscal 2017, achieving the target.

Prevention of Ozone Layer Depletion

Number of Refrigeration Units That Use Specified CFCs and HCFCs as Coolants (As of the End of Fiscal 2017)

(Number of units)

	Sumitomo Chemical	Sumitomo Chemical and Group Companies in Japan
CFC11	11	11
CFC12	1	35
CFC113	0	0
CFC114	0	0
CFC115	0	2
HCFC22	76	227
HCFC123	26	31
HCFC142b	0	3

Target	• Eliminate the use of refrigeration units that use specified CFCs as coolants by fiscal 2025. • Eliminate the use of refrigeration units that use HCFCs as coolants by fiscal 2045.

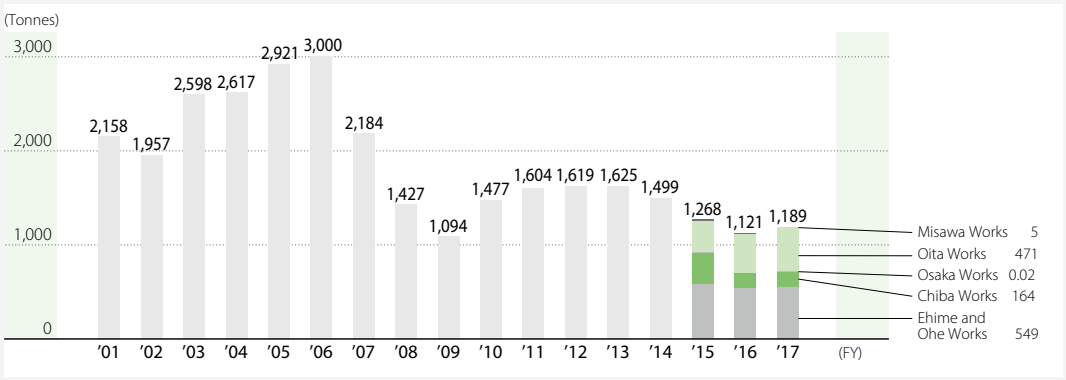
Responsible Care Activities: Supplementary Data

Preventing Pollution: Atmospheric Emissions of SOx, NOx, Soot, and Dust

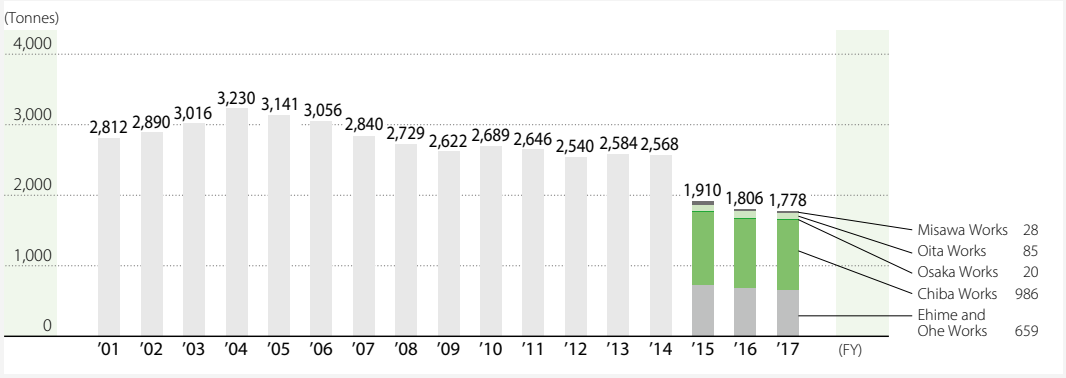
In 1970, Sumitomo Chemical achieved a marked reduction in the release of SOx, NOx, soot, and dust into the atmosphere, and continued to maintain low levels of emissions from 1980 to the present. Furthermore, the Company has concluded cooperative agreements with local municipal governments at each of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

Note: Data for the Gifu Plant and Okayama Plant from fiscal 2004 to fiscal 2012 is included in Osaka Works.
Data for the Gifu Plant and Okayama Plant from fiscal 2013 is included in Oita Works.

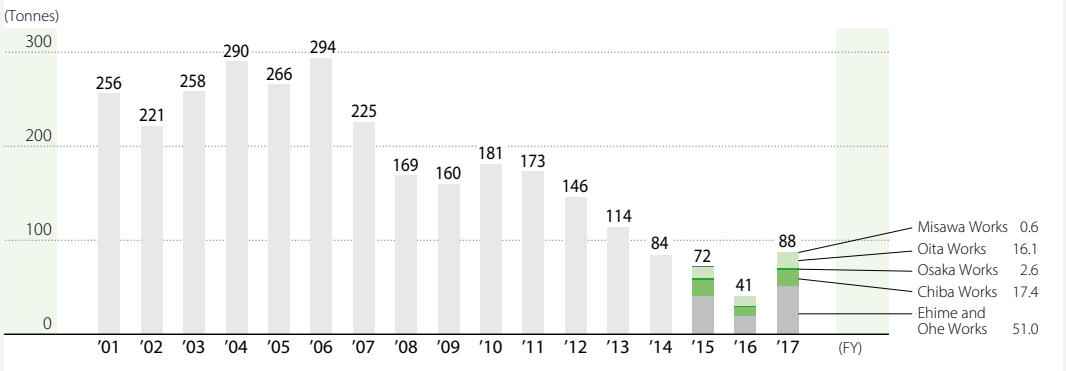
SOx Emissions (Sumitomo Chemical)



NOx Emissions (Sumitomo Chemical)



Soot and Dust Emissions (Sumitomo Chemical)



Target	Continue to sustain levels below voluntary control standard values.

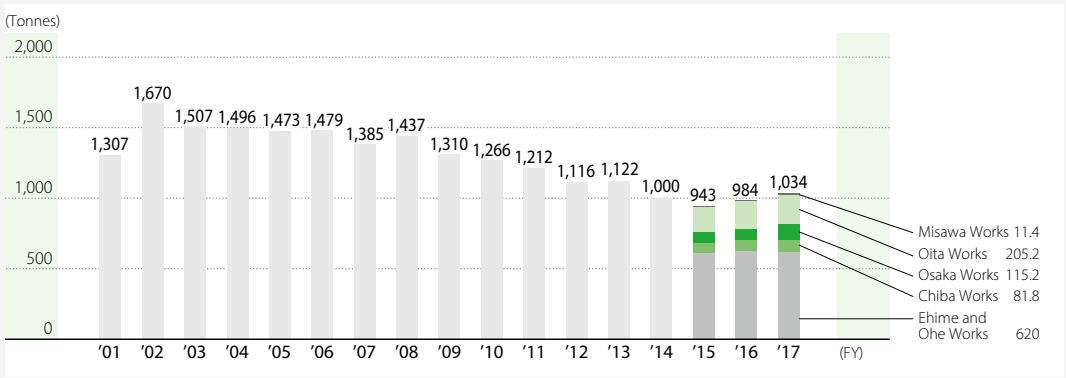
Responsible Care Activities: Supplementary Data

Preventing Pollution: Water Emissions of COD, Nitrogen, and Phosphorus

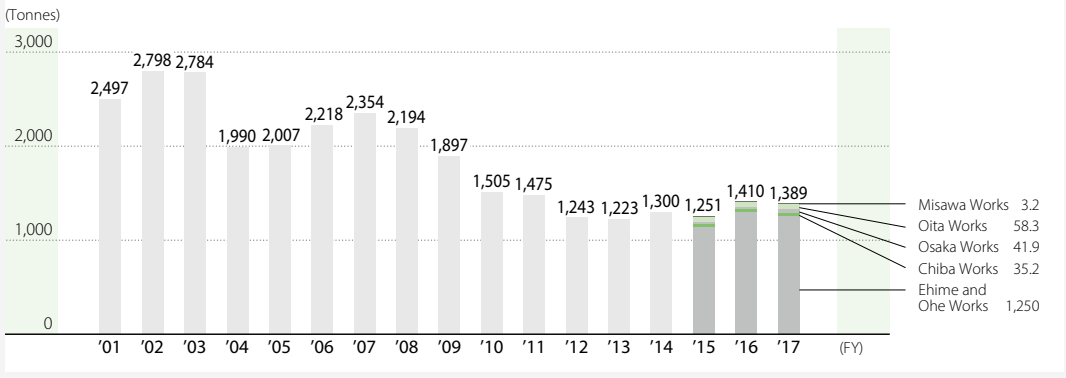
A number of measures have been implemented to cut emissions, in line with fifth-generation Water Quality Standards, and emissions of COD, nitrogen, and phosphorus into waterways have been significantly reduced since fiscal 2004. Sumitomo Chemical has also concluded cooperative agreements with local municipal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

Note: Data for the Gifu Plant and Okayama Plant from fiscal 2004 to fiscal 2012 is included in Osaka Works.
Data for the Gifu Plant and Okayama Plant from fiscal 2013 is included in Oita Works.

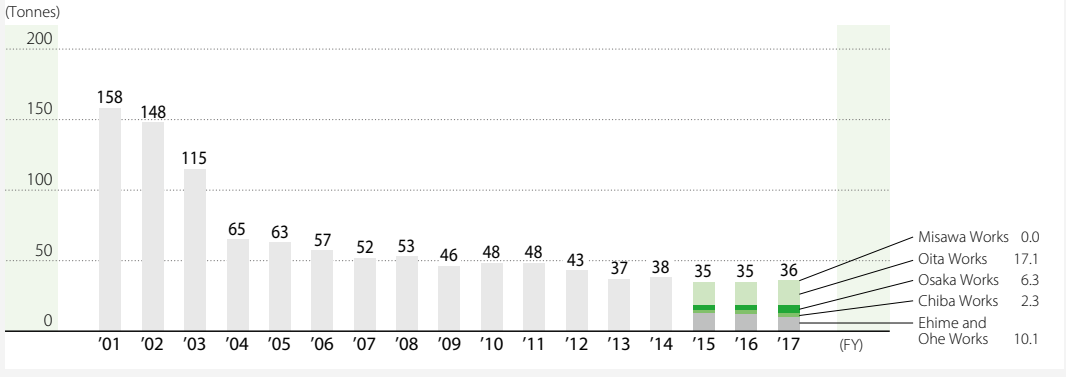
COD Emissions (Water Emissions include Water Discharge to Sewage Systems) (Sumitomo Chemical)



Nitrogen Emissions (Sumitomo Chemical)



Phosphorus Emissions (Sumitomo Chemical)



Target	Continue to sustain levels below voluntary control standard values.

Responsible Care Activities: Supplementary Data

Response to the Pollutant Release and Transfer Register Ordinance (Issued on November 21, 2008)

Release and Transfer of PRTR Substances in Fiscal 2017 (Sumitomo Chemical (Target: All Works))

(Tonnes, except where noted)

No.	Name of Chemical Compound	Amount Released					Amount Transferred		
		Air	Water	Soil	Landfill	Total	Sewage	Waste	Total
1	Zinc compounds (water-soluble)	0.0	3.6	0.0	0.0	3.6	0.0	110.5	110.5
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	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0
4	Acrylonitrile	4.5	<0.1	0.0	0.0	4.5	0.0	0.0	0.0
5	Acrolein	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	<0.1
6	Acetaldehyde	0.3	<0.1	0.0	0.0	0.3	0.0	0.0	0.0
7	Acetonitrile	<0.1	0.0	0.0	0.0	<0.1	0.0	26.7	26.7
8	o-Anisidine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Aniline	0.7	0.0	0.0	0.0	0.7	0.0	31.8	31.8
10	2-Aminoethanol	<0.1	0.2	0.0	0.0	0.2	0.0	22.4	22.4
11	m-Aminophenol	0.0	<0.1	0.0	0.0	<0.1	0.0	4.1	4.1
12	Allyl alcohol	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
13	Antimony and its compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Isobutyraldehyde	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0
15	O-ethylO-6-nitro-meta-tolyl-sec- butylphosphoramidothioate (Butamifos)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	Ethylbenzene	2.4	<0.1	0.0	0.0	2.5	<0.1	72.3	72.3
17	Epichlorohydrin	0.6	<0.1	0.0	0.0	0.6	0.0	0.0	0.0
18	1,2-Epoxypropane (also known as propylene oxide)	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0
19	ε-Caprolactam	0.2	0.9	0.0	0.0	1.1	0.0	0.0	0.0
20	Xylene	3.6	<0.1	0.0	0.0	3.6	<0.1	55.0	55.1
21	Quinoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Cumene	21.2	<0.1	0.0	0.0	21.2	0.0	0.0	0.0
23	Cresol	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
24	Chloroacetic acid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	3-Chloropropene (also known as allyl chloride)	1.6	0.0	0.0	0.0	1.6	0.0	0.0	0.0
26	Chlorobenzene	3.6	<0.1	0.0	0.0	3.6	0.0	108.7	108.7
27	Chloroform	<0.1	0.0	0.0	0.0	<0.1	<0.1	122.4	122.4
28	Cobalt and its compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	Vinyl acetate	17.0	<0.1	0.0	0.0	17.0	0.0	8.1	8.1
30	Salicyl aldehyde	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	Inorganic cyanide compounds (excluding complex salts and cyanates)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	1,4-Dioxane	<0.1	0.0	0.0	0.0	<0.1	<0.1	135.7	135.8
33	Cyclohexylamine	0.0	<0.1	0.0	0.0	<0.1	0.0	1.3	1.3
34	2,2-Dichloro-1,1,1- trifluoroethane (HCFC-123)	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0
35	1,2-Dichloropropane	<0.1	0.0	0.0	0.0	<0.1	0.0	339.4	339.4
36	1,3-Dichloropropene (also known as D-D)	0.6	0.0	0.0	0.0	0.6	0.0	220.6	220.6
37	Dichlorobenzene	0.0	0.0	0.0	0.0	0.0	0.0	139.2	139.2
38	Dichloromethane (also known as methylene chloride)	3.5	0.0	0.0	0.0	3.5	0.0	8.2	8.2
39	Dicyclopentadiene	<0.1	0.0	0.0	0.0	<0.1	0.0	4.4	4.4
40	2,4-Dinitrophenol	0.0	0.0	0.0	0.0	0.0	0.0	40.4	40.4
41	1,3-Diphenylguanidine	0.0	0.5	0.0	0.0	0.5	0.0	10.3	10.3
42	2,6-Di-tert-butyl-4-cresol	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0
43	2,4-Di-tert-butylphenol	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
44	N,N-Dimethylacetamide	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0
45	N,N-Dimethylaniline	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1
46	Dimethylamine	0.0	5.5	0.0	0.0	5.5	0.0	0.6	0.6
47	N,N-Dimethylformamide	<0.1	<0.1	0.0	0.0	<0.1	0.0	104.3	104.3
48	Styrene	2.3	0.0	0.0	0.0	2.3	0.0	2.0	2.0
49	Dioxins (in mg-TEG)	<0.1	<0.1	0.0	0.0	<0.1	<0.1	<0.1	<0.1
50	Thiourea	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7

Responsible Care Activities: Supplementary Data

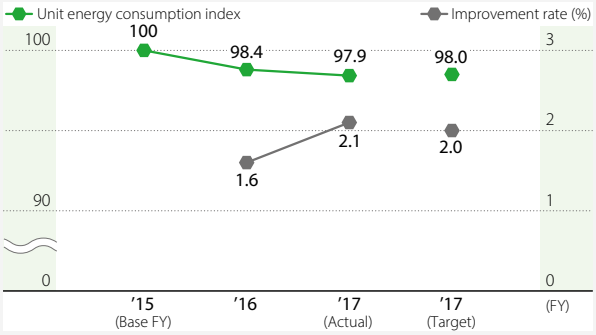
(Tonnes, except where noted)

No.	Name of Chemical Compound	Amount Released					Amount Transferred		
		Air	Water	Soil	Landfill	Total	Sewage	Waste	Total
51	O,O-Dimethyl O-(3-methyl-4-nitrophenyl) phosphorothioate (Fenitrothion or MEP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	2,3,5,6-Tetrachloro-para-benzoquinone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	Terephthalic acid	0.0	0.0	0.0	0.0	0.0	0.0	423.1	423.1
54	Water-soluble copper salts (excluding complex salts)	0.0	<0.1	0.0	0.0	<0.1	0.0	0.0	0.0
55	Sodium dodecyl sulfate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	Triethylamine	1.0	29.6	0.0	0.0	30.6	0.8	53.9	54.7
57	2,4,6-Trichloro-1,3,5-triazine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	Trichlorofluoromethane (also known as CFC-11)	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
59	1,2,3-Trichloropropane	<0.1	0.0	0.0	0.0	<0.1	0.0	16.8	16.8
60	1,2,4-Trimethylbenzene	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0
61	Toluidine	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.9
62	Toluene	108.5	0.2	0.0	0.0	108.7	1.3	1,836.3	1,837.6
63	Naphthalene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64	Nickel compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
65	Nitrobenzene	0.6	0.5	0.0	0.0	1.1	0.0	47.2	47.2
66	Vanadium compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67	Arsenic and its inorganic compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	Hydrazine	<0.1	0.3	0.0	0.0	0.3	0.0	53.3	53.3
69	Hydroquinone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	Biphenyl	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
71	Pyridine	0.0	<0.1	0.0	0.0	<0.1	0.0	1.4	1.4
72	Phenylenediamine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73	1,3-Butadiene	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.9
74	tert-Butyl hydroperoxide	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	2-tert-Butyl-5-methylphenol	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
76	2-Propyn-1-ol	<0.1	0.0	0.0	0.0	<0.1	0.0	<0.1	<0.1
77	2-Bromopropane	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7
78	Hexadecyltrimethylammonium chloride	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
79	n-Hexane	34.8	<0.1	0.0	0.0	34.9	0.0	141.2	141.2
80	Water-soluble salts of peroxydisulfuric acid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81	Benzyl chloride	<0.1	0.0	0.0	0.0	<0.1	0.0	0.0	0.0
82	Benzaldehyde	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83	Benzene	0.3	0.2	0.0	0.0	0.5	0.0	0.0	0.0
84	Boron compounds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	Polyoxyethylene alkyl ether (alkyl C=12–15) and its mixture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86	Formaldehyde	0.2	0.2	0.0	0.0	0.4	2.7	0.0	2.7
87	Phthalic anhydride	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88	Maleic anhydride	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	<0.1
89	2,3-Epoxypropyl methacrylate	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
90	Methyl methacrylate	9.0	0.0	0.0	0.0	9.0	0.0	40.9	40.9
91	(Z)-2'-Methylacetophenone=4,6-dimethyl-2-pyrimidinyl hydrazone (Ferimzone)	0.0	1.7	0.0	0.0	1.7	0.0	0.0	0.0
92	Methylamine	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
93	3-Methylsulfanylpropanal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94	Methylnaphthalene	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
95	Morpholine	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0
96	Triphenyl phosphate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		225.0	43.8	0.0	0.0	268.8	5.0	4,201.4	4,206.5

Responsible Care Activities: Supplementary Data

Sharing Environmental Protection and Management Targets (Japan)

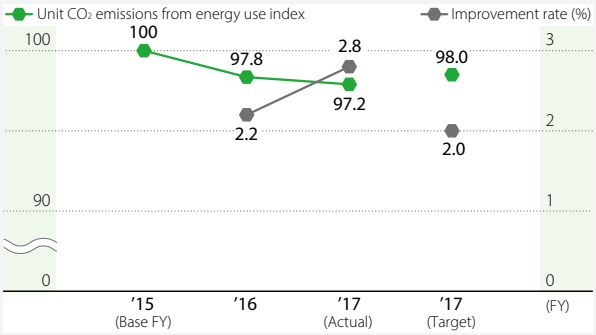
Unit Energy Consumption Indices (2015 = 100)



Improvement in Unit Energy Consumption

Target	Improve unit energy consumption by at least 1% annually on average.
Results	Unit energy consumption in fiscal 2017 improved by 2.1% compared with fiscal 2015, achieving the target.

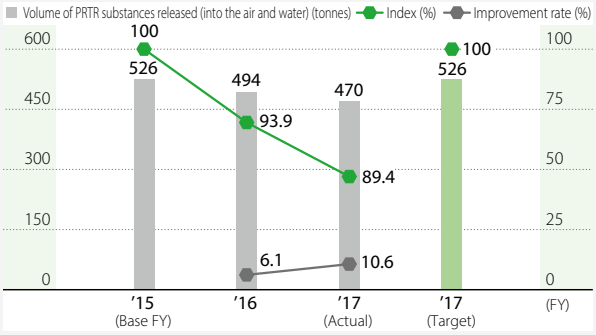
Unit CO_2 Emissions from Energy Use Indices (2015 = 100)



Improvement in Unit CO_2 Emissions from Energy Use

Target	Improve unit CO_2 emissions by at least 1% annually on average.
Results	Unit CO_2 emissions in fiscal 2017 improved by 2.8% compared with fiscal 2015, achieving the target.

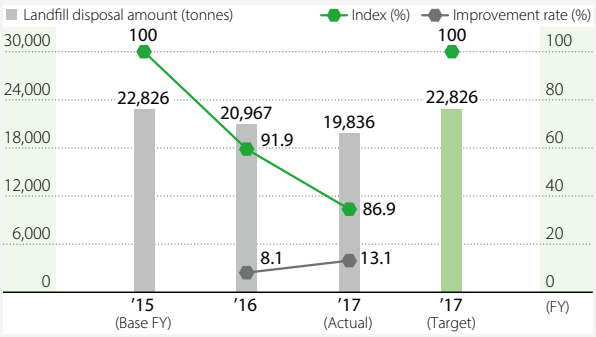
Volume of PRTR Substances Released (into the Air and Water) and PRTR Substance Emissions Indices (2015 = 100)



Reduction of Volume of PRTR Substances Released

Target	Maintain the total volume of PRTR substances released (into the air and water) at or below fiscal 2015 levels.
Results	The total volume in fiscal 2017 was reduced by 10.6% compared with fiscal 2015, achieving the target.

Landfill Disposal Amount and Landfill Disposal Indices (2015 = 100)



Reduction of Landfill Disposal Amount

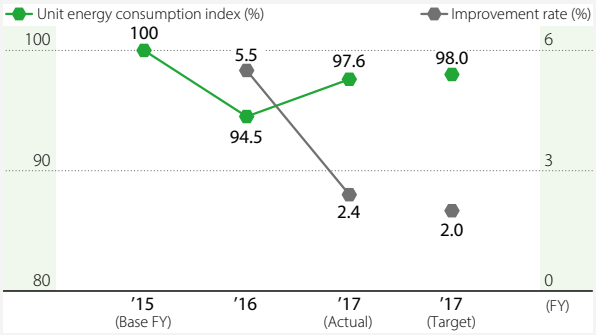
Target	Maintain landfill disposal amount at or below fiscal 2015 levels.
Results	The amount in fiscal 2017 was reduced by 13.1% compared with fiscal 2015, achieving the target.

Note: Sumitomo Chemical and the 15 Group companies listed below are included in the boundary of calculation.
Sumika-Kakoushi Co., Ltd.; Sumika Color Co., Ltd.; Sumika Plastech Co., Ltd.; Nippon A&L Inc.; Nihon Methacryl Monomer Co., Ltd.; Asahi Chemical Co., Ltd.; Ceratec Co., Ltd.; Sumika Assembly Techno Co., Ltd.; SanTerra Co., Ltd.; Sumika Agro Manufacturing Co., Ltd.; SC Environmental Science Co., Ltd.; Sumika Agrotech Co., Ltd.; Sumitomo Chemical Garden Products Inc.; Nihon Medi-Physics Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.

Responsible Care Activities: Supplementary Data

Sharing Environmental Protection and Management Targets (Overseas)

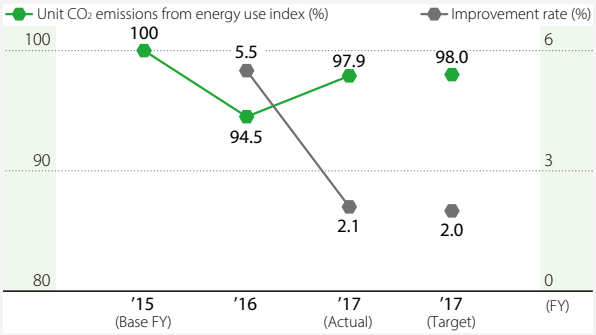
Unit Energy Consumption Indices (2015 = 100)



Improvement in Unit Energy Consumption

Target	Improve unit energy consumption by at least 1% annually on average.
Results	Consumption in fiscal 2017 improved by 2.4% compared with fiscal 2015, achieving the target.

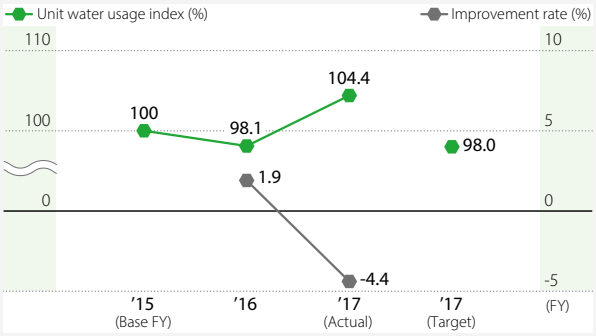
Unit CO_2 Emissions from Energy Use Indices (2015 = 100)



Improvement in Unit CO_2 Emissions from Energy Use

Target	Improve unit CO_2 emissions by at least 1% annually on average.
Results	Emissions in fiscal 2017 improved by 2.1% compared with fiscal 2015, achieving the target.

Unit Water Usage Indices (2015 = 100)



Improvement in Unit Water Usage

Target	Improve unit water usage by at least 1% annually on average.
Results	Usage in fiscal 2017 worsened by 4.4% compared with fiscal 2015, failing to achieve the target.

Note: • Data for previous fiscal years has been retroactively adjusted to enhance accuracy.

• **The following 20 Group companies overseas are included in the boundary of calculation:**

Singapore	• The Polyolefin Company (Singapore) Pte.Ltd. • Sumitomo Chemical Asia Pte Ltd
Thailand	• Sumipex (Thailand) Co., Ltd. • Bara Chemical Co., Ltd. • Sumika Polymer Compounds (Thailand) Co., Ltd.
China	• Dalian Sumika Chemphy Chemical Co., Ltd. • Sumika Electronic Materials (Wuxi) Co., Ltd. • Sumika Electronic Materials (Hefei) Co., Ltd. • Sumika Huabei Electronic Materials (Beijing) Co., Ltd. • Sumika Electronic Materials (Shanghai) Co., Ltd. • Sumika Electronic Materials (Xi'an) Co., Ltd. • Sumika Polymer Compounds Dalian Co., Ltd. • Zhuhai Sumika Polymer Compounds Co., Ltd. • Dalian Sumika Jingang Chemicals Co., Ltd.
Taiwan	• Sumika Technology Co., Ltd. • Sumipex Techsheet Co., Ltd.
India	• Sumitomo Chemical India Private Limited
South Korea	• Dongwoo Fine-Chem Co., Ltd. • SSLM Co., Ltd.
United States	• Sumitomo Chemical Advanced Technologies LLC

Responsible Care Activities: Supplementary Data

★: Assured by an independent assurance provider

4 Additional Data: Pollution and Resources

Environmental Performance

Sumitomo Chemical collates and totals environmental data for the Company and Group companies in Japan and overseas, including data on energy and resource consumption, production quantities, and environmental impact (e.g., release of pollutants into the air and water).

Environmental Performance (Fiscal 2015–2017), Boundary: Sumitomo Chemical and Group Companies in Japan

INPUT Energy and Resources

Water

(Millions of tonnes)

	FY2015	FY2016	FY2017★
Industrial water	67.5	66.1	68.8
Drinking water	0.9	0.8	0.9
Seawater	949.8	888.4	926.9
Groundwater	22.0	16.7	17.6
Other water	2.3	2.7	2.5

Energy
Calculated as kl of crude oil

(Thousands of kl)

	FY2015	FY2016	FY2017★
Fuel, heat, and electricity*1	1,880	1,750	1,837

Exhaustible Resources

(Thousands of tonnes)

	FY2015	FY2016	FY2017
Hydrocarbon compounds	1,940	1,779	1,835
Metals (excluding minor metals)*2	123	116	120
Minor metals*3	0.08	0.17	10.17

PCB/CFCs under Secure Storage

	FY2015	FY2016	FY2017
No. of electrical devices containing high concentrations of PCBs*4	51	61	58
PCB volume*4	1.0	1.0	1.0
No. of refrigeration units using specified CFCs as a coolant	47	45	48
No. of refrigeration units using HCFCs as a coolant	340	235	262

Note: The number of companies included in the boundary of calculation for the environmental performance data on page 72 is as follows for each year.
2015: Sumitomo Chemical and Group companies in Japan: 14 companies
2016: Sumitomo Chemical and Group companies in Japan: 19 companies
2017: Sumitomo Chemical and Group companies in Japan: 21 companies

*1 From fiscal 2017, the energy (calculated as kl of crude oil) indices were calculated in accordance with the GHG Protocol.
• Having adopted the GHG Protocol standards for our GHG emission disclosures, we now include the following data previously excluded from calculations: amount of energy used to produce power and steam sold to external parties by Sumitomo Chemical and Group companies in Japan (the portion attributable to energy provider subsidiaries was included in years prior to fiscal 2016). In addition, the amount of energy used by Sumitomo Chemical's non-production sites is included from fiscal 2017.

*2 Calculations include the following 12 metals: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium.

*3 Calculations include the following seven minor metals: nickel, chromium, tungsten, cobalt, molybdenum, manganese, and vanadium. The supply structure for each of these minor metals is extremely fragile. These minor metals are subject to national stockpiling.

*4 Fluorescent lamps and mercury lamp ballast as well as contaminated substances (wastepaper, etc.), including PCB waste, are not included in unit and volume data.

Responsible Care Activities: Supplementary Data

★: Assured by an independent assurance provider

OUTPUT Product Manufacturing and Environmental Impact

Products

(Thousands of tonnes)

	FY2015	FY2016	FY2017★
(Calculated on the basis of ethylene production)*1	1,582	1,517	2,602

Water Pollutant Emissions

(Tonnes)

		FY2015	FY2016	FY2017★
COD	Coastal waters/waterways	945	977	998
	Sewer systems	200	185	234
Phosphorus	Coastal waters/waterways	34	34	32
	Sewer systems	4	5	6
Nitrogen	Coastal waters/waterways	1,318	1,478	1,442
	Sewer systems	28	36	72
Substances subject to the PRTR Act*2		55	52	45

Water Discharge

(Millions of tonnes)

	FY2015	FY2016	FY2017
Total amount of water discharge	270	232	234

Note: The total amount of water discharge does not include used seawater emitted by Sumitomo Joint Electric Power Co., Ltd.

Waste Materials

(Thousands of tonnes)

	FY2015	FY2016	FY2017★
Waste emission*3	261	255	261
Landfill*3	23	21	21
(Breakdown)			
On-site landfill	0	0	0
External landfill	23	21	21

Note: The number of companies included in the boundary of calculation for the environmental performance data on page 73 is as follows for each year.
2015: Sumitomo Chemical and Group companies in Japan: 14 companies
2016: Sumitomo Chemical and Group companies in Japan: 19 companies
2017: Sumitomo Chemical and Group companies in Japan: 21 companies

*1 Certain assumptions were made in calculations due to the difficulty of obtaining weight-based figures for some products.

*2 Calculated based on the amount released into water/the air of each substance subject to the PRTR Act.

*3 The amount of coal ash generated at Sumitomo Joint Electric Power, which is included in "Waste emissions" and "Landfill" (Sumitomo Chemical and Group companies in Japan) is calculated on a dry-weight basis. Moreover, although the amount of waste emissions from Sumitomo Chemical and Group companies in Japan includes the amount of waste reduced at Sumitomo Chemical's facilities, the reduced amount is insignificant.

Responsible Care Activities: Supplementary Data

★: Assured by an independent assurance provider

Atmospheric Emissions

(Thousands of tonnes of CO_2)

		FY2015	FY2016	FY2017★
Greenhouse gases (seven gases)*1		6,062	5,509	6,432
CO_2	Emissions from energy use (CO_2)	5,786	5,323	5,611*2
	CO_2 emissions from other than energy use	66	61	711
N_2O		150	125	110
HFC*3		—	—	—
PFC*3		—	—	—
CH_4*3		—	—	—
SF_6*3		—	—	—
NF_3*3		—	—	—

(Tonnes)

	FY2015	FY2016	FY2017
Others			
NOx	4,896	4,736	4,703
SOx	5,281	4,920	5,023
Soot and dust	209	166	247
Substances subject to the PRTR Act*4	505	454	438

Note: The number of companies included in the boundary of calculation for the environmental performance data on page 74 is as follows for each year.
2015: Sumitomo Chemical and Group companies in Japan: 14 companies
2016: Sumitomo Chemical and Group companies in Japan: 19 companies
2017: Sumitomo Chemical and Group companies in Japan: 21 companies

*1 From fiscal 2017, the greenhouse gas (all seven gases) indices were calculated using the GHG Protocol for greenhouse gas emissions.
- Having adopted the GHG Protocol standards for our GHG emission disclosures, we now include the following data that was previously excluded from calculations: CO_2 emissions from energy sold to external parties by Sumitomo Chemical and Group companies in Japan (the portion attributable to energy provider subsidiaries was included in years prior to fiscal 2016); CO_2 emissions from energy use attributable to Sumitomo Chemical's non-production sites; and CO_2 emissions from non-energy sources not included in the scope of the Act on Promotion of Global Warming Countermeasures. In addition, from fiscal 2017, we include energy use attributable to Sumitomo Chemical's non-production sites.

*2 Calculations include the following 12 metals: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium.

*3 Outside the scope of reporting under the Act on Promotion of Global Warming Countermeasures.

*4 Calculated based on the amount released into water/the air of each substance subject to the PRTR Act.

Compliance with Environmental Laws and Regulations

Status of Compliance with Environmental Laws and Regulations

(Yen)

	FY2015	FY2016	FY2017
Total fines	0	0	0

Note: Sumitomo Chemical and Group companies in Japan are included in the boundary of calculation.
The production sites of the 21 Group companies in the boundary are listed below.
Sumika-Kakoushi Co., Ltd.; Sumika Color Co., Ltd.; Sumika Plastech Co., Ltd.; Nippon A&L Inc.; Nihon Methacryl Monomer Co., Ltd.; Asahi Chemical Co., Ltd.; Ceratec Co., Ltd.; Sumika Assembly Techno Co., Ltd.; SanTerra Co., Ltd.; Sumika Agro Manufacturing Co., Ltd.; SC Environmental Science Co., Ltd.; Sumika Agrotech Co., Ltd.; Sumitomo Chemical Garden Products Inc.; Nihon Medi-Physics Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.; Koei Chemical Co., Ltd.; Taoka Chemical Co., Ltd.; Tanaka Chemical Corporation; SCIOCS Co., Ltd.; Sumitomo Dainippon Pharma Co., Ltd.; and SN Kasei Co., Ltd.