

Fulfilling Our Responsibility to the Environment

We prioritize health, safety and environmental matters in our management of the company as well as strive to reduce our impact on the environment through the reduction of environmental emissions across the entire Nippon Kayaku Group. To learn more visit: <http://www.nipponkayaku.co.jp/csr/2012/environment/>

Environmental, Health, Safety and Quality Assurance Management System

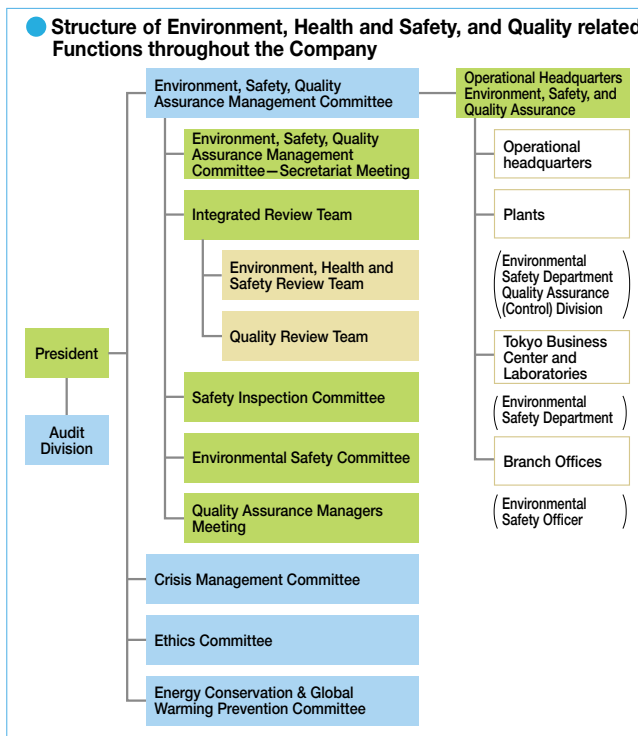
Declaration on Health, Safety, Environmental Protection and Quality

The Nippon Kayaku Group, under the spirit of its CSR philosophy and Responsible Care,*1 has formulated the Declaration on Health, Safety, Environmental Protection and Quality, in order to maintain and enhance its environmental protection, health and safety and quality assurance practices. We are also implementing this declaration using organized activities.

*1 Responsible Care: A voluntary initiative under which companies that manufacture or handle chemical substances actively work on ensuring an operation that is aware of the environment, safety and health throughout its entire value-chain; from product development through production, sales, consumption, and disposal of chemical substances. The initiative began in Canada in 1985, and has now spread to encompass activities at companies in over 50 countries around the world.

Company-wide System for Managing Health, Safety, Environmental Protection and Quality Assurance

The Nippon Kayaku Group takes part in organized activities to ensure employees' health and safety and environmental protection as well as to maintain and improve quality assurance. These activities revolve around the Environment, Safety, Quality Assurance Management Committee, which is led by the President of Nippon Kayaku.



Certification of Quality Assurance System and Environmental Management System as well as GMP Authorization Status

The Nippon Kayaku Group has moved forward with acquiring ISO9001*2 and ISO14001*3 certification in order to provide and develop eco-friendly products and services of superior quality. We began acquiring ISO9001 quality assurance system certification starting with our plants in 1995 and later expanded this scope to include business divisions and R&D departments. We started acquiring ISO14001 environmental management system certification in 1998, and since then all six of our plants as well as manufacturing-related Group companies have obtained this certification as well.

*2 ISO9001: An international standard issued by the ISO (International Organization for Standardization) for quality assurance systems covering everything from design and manufacturing to quality inspection and after-sales service.

*3 ISO14001: An international standard issued by the ISO (International Organization for Standardization) for environmental management systems covering organizational activities, products, and services.

*4 ISO / TS16949: A world standard that was developed jointly by members of the IATF (International Automotive Task Force) to provide high quality products to automobile users around the world.

*5 GMP: A Japanese standard issued by the Ministry of Health and Welfare as a ministerial ordinance in 1980. Stipulates production control and compliance standards to ensure supply of high quality pharmaceutical and medical products.

Quality Assurance Management / Environment Management System Certified Workplaces

Workplace	● ISO9001 ■ ISO / TS16949*4	ISO14001
Fukuyama Plant	● June 1995	April 1999
Asa Plant	● Jan. 1995	Sept. 1998
Tokyo Plant	● June 1995	Dec. 1998
Takasaki Plant	● July 2003	Jan. 2000
Himeji Plant	● Sept. 2007	Jan. 2001
Kashima Plant	● Dec. 1995	March 1999
Functional Chemicals Group	● Jan. 2001	—
Pharmaceuticals Group	● Sept. 2003	—
Safety Systems Group	● Sept. 2007	—
Agrochemicals Division	● Sept. 2003	—
POLATECHNO CO., LTD.	● Jan. 1999	Aug. 2002
NIPPON KAYAKU FOOD TECHNO CO., LTD.	● Nov. 2003	—
KAYAKU CHEMICAL (WUXI) CO., LTD.	● March 2005	Aug. 2006
MicroChem Corp.	● April 2002	—
Wuxi Advanced Kayaku Chemical Co., Ltd.	● April 2007	July 2007
Zhaoyuan Advanced Chemical Co., Ltd.	● March 2005	—
INDET SAFETY SYSTEMS a.s.	■ March 2002	Dec. 2002
Kayaku Safety Systems (Huzhou) Co., Ltd.	● June 2010	—
Kayaku Safety Systems de Mexico, S.A. de C.V.	● Sept. 2010	—

● GMP*5 Approval Status

Workplace	Main governments
Takasaki Plant	Japan, USA, Europe, Canada, Brazil

Health, Safety, Environmental Protection and Quality Assurance Initiatives

The Nippon Kayaku Group engages in a wide range of health, safety, and quality assurance activities.

We conduct a safety screening whenever we institute new work flows or changing facilities and existing work flows, in order to prevent accidents, injuries or environmental accidents from happening. As part of our efforts, we also conduct risk assessments to ascertain inherent risk factors.

We have also created a database of troubles we have experienced in terms of our environmental protection, safety and quality assurance initiatives that is used across all of our workplaces. Central integrated reviews (environment, health and safety/quality reviews) are conducted on our workplaces and certain Group companies.

Initiatives to Enhance Quality Assurance Functions

In order to promote training on and the percolation of quality management technologies, we send employees to participate in external lectures, hold group training sessions on statistical calculation methods, and conduct onsite presentations at our plants on the seven tools of quality control and other themes. Additionally, we publish a compilation of quality improvement case studies and seek to encourage greater use of statistics to improve quality, such as the experimental design method.

We also hold practical training programs that promote actual operational improvements or reform based on the challenges faced by individual workplaces. In fiscal 2011, this training program was held at the Fukuyama Plant under the theme “Fukuyama Plant—Good Manufacturing Practices”.

Health and Safety Initiatives and Results

The Nippon Kayaku Group takes a systematic approach to eliminating accidents and injuries in the workplace. As a result of our efforts, in fiscal 2011 there were a total of only three no-lost worktime accidents and one lost worktime accident.

In terms of traffic safety, there were 42 traffic accidents involving company-owned vehicles, representing an increase of 20 compared to last fiscal year. As a result, we will continue with safe driving reviews of our MRs using a camera-equipped drive recorder as well as assure safer driving habits by combining these reviews with a driving aptitude test approved by the National Police Agency.

We are also working to share safety awareness across different workplaces by distributing work flow checklists to help eliminate shortcuts or omissions, having employees issue a safety declaration to prevent shortcuts and omissions, as well as displaying this safety declaration clearly in each workplace.

● Safety and Quality Assurance Activities

Safety Activities	Quality Assurance Activities
<ul style="list-style-type: none"> ◦ Risk Assessment ◦ 5S Activity*1 ◦ Hiyari Hatto Activity*2 ◦ KYT Activity ◦ TPM Activity*3 	<ul style="list-style-type: none"> ◦ Quality Risk Assessment ◦ Quality Patrol ◦ Trend Management (Visualization) ◦ Campaign to Prevent the Reoccurrence of Quality Problems ◦ Quality Technology Training

*1 5S Activity: An acronym of five Japanese words phonetically starting with the letter “S”.

*2 Hiyari Hatto Activity: Activities that are not accidents but may lead to accidents if left unattended.

*3 TPM Activity: Total Productive Maintenance Activity. Activities that help maintain production and ensure safety by means of regular maintenance of equipment and machinery.

● Fiscal 2011 Safety Targets and Performance

Items	Target	Actual
Major Injury / Accidents	0	0
Serious environmental accidents	0	0
Lost worktime accidents	0	1
Accidents not accompanied by lost worktime	Rate of lost worktime accidents*4 of under 1	0.56
	Less than 5 cases	3
Work-related automobile collisions	Less than 3%	10.5 %
	Less than 12 cases	42
Non-injury workplace accidents	0	0

*4 Rate of lost worktime accidents: The number of lost worktime accidents that occur in every 1 million work hours.

Kashima Plant Receives Award from the Minister of Health, Labour and Welfare

On October 5, 2011, Nippon Kayaku’s Kashima Plant was presented with a Fiscal 2011 Excellence Award from Japan’s Minister of Health, Labour and Welfare. This award is given to business sites that are recognized among their peers in Japan for excellence in health and safety initiatives. Nippon Kayaku’s Kashima Plant was one of six business sites in Japan to receive this honor.

This award recognizes the Kashima Plant for its daily safety activities and for achieving 10,000 consecutive operating days without a workplace accident since opening on December 1, 1982. We

are committed to promoting an even stronger safety-first mentality at our plants by combining the Kashima Plant’s culture of safety with new safety activities.

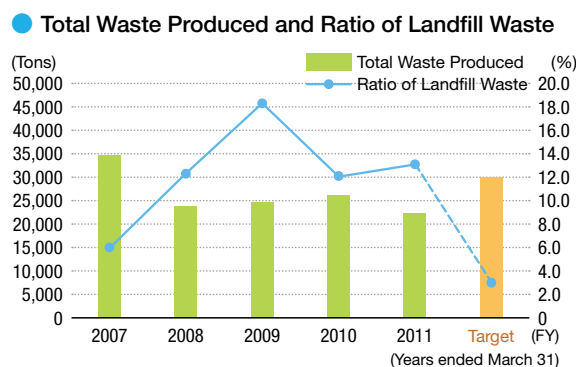
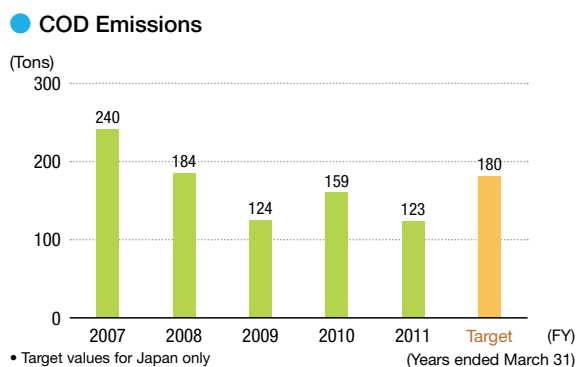
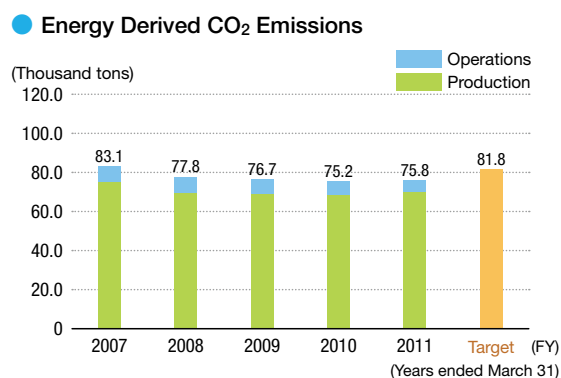
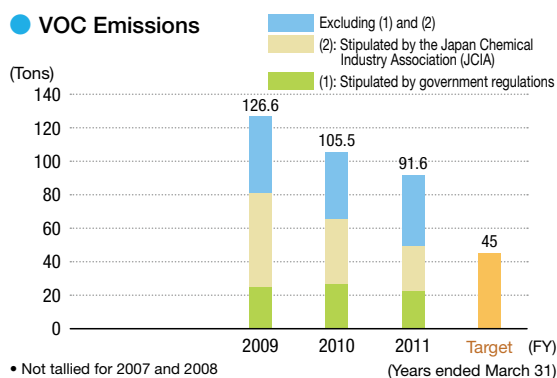


▶ Award presentation ceremony

Reducing Our Environmental Impact

Results of the Mid-term Corporate Plan for the Environment

Nippon Kayaku has established a mid-term corporate plan for the environment for the period running from fiscal 2011 to fiscal 2020 that consists of six items covering three areas. Fiscal 2011 was the first year of this plan.



Mid-term Corporate Master Plan for the Environment

Area	Item (FY 2011 – FY 2020)	Target value	FY 2011	Details
Reducing Our Chemical Substance Footprint	VOC* ¹ Emissions	Under 45 tons	92 tons	Reduced by 13% compared to fiscal 2010
	COD* ² Emissions	Under 180 tons	123 tons	Reduced by 23% compared to fiscal 2010
Prevention of Global Warming	Energy Derived CO ₂ Emission* ³ (Production Divisions+ Operation Divisions)	More than 15% reduction	75,800 tons	CO ₂ emissions increased by 0.8% compared to fiscal 2010, but have been reduced by 21.2% compared to fiscal 1990.
Reduction of Waste	Total Waste Produced	Under 30,000 tons	22,298 tons	Reduced by 15% compared to fiscal 2010
	Recycling Rate	More than 70%	63.5%	Increased by 1.4% compared to fiscal 2010
	Zero Emission Rate* ⁴	Under 3%	13.1%	We continue to strive to reduce the amount of waste we dispose of in landfills. In fiscal 2011, the Kashima Plant achieved zero net waste emissions.

*1 VOC: Volatile Organic Compounds (VOCs). This tally includes all chemical substances emitted into the atmosphere, including those derived from reactions involving chemical substances not subject to reporting regulations.

*2 COD: Chemical Oxygen Demand. An indication of the amount of oxygen needed to oxidize a subject compound by oxidizing subject compounds under a predetermined condition using oxidizing agents, then measuring the amount of oxidizing agents used in the process. A high COD level means that the water contains a large amount of organic chemical substances that consume oxygen. With lower oxygen content, the water cannot sustain biological life, which stops the natural purification process, leading to a muddied and odorous water environment.

*3 Fiscal 1990 has been set as the benchmark (96,200 tons)

*4 Zero emission rate: The amount of internal and external landfill waste produced as a percentage of total waste produced.