

## Corporate Social Responsibility



The Nippon Kayaku Group stands firmly committed to fulfilling its responsibilities to society and maximizing corporate value by providing excellent products to its customers that were developed with all of society in mind.

### ▶ Message from the President



Read an important message from President Akira Mandai.

### ▶ Fundamental CSR Activities



Learn about the role KAYAKU spirit plays in our CSR management.

- [Corporate Vision and CSR Activities](#)
- [CSR Action Plan](#)

### ▶ Special Feature



Read about two of our initiatives implemented in the wake of the Great East Japan Earthquake.

- [Special Feature 1 Reducing Our Consumption of Energy](#)
- [Special Feature 2 The Nippon Kayaku Group's Business Continuity Plan Initiatives](#)

### ▶ Corporate Governance



Learn about our management transparency and self-directed governance system.

### ▶ Compliance



Find out about our measures to strengthen compliance globally as part of our efforts to gain greater trust from society.

### ▶ CSR Activities Fulfilling Economic Responsibilities



Read about our departments involved in CSR and our R&D initiatives.

### ▶ Fulfilling Our Responsibility to Society



Learn about our initiatives with our customers, for society and for our employees.

- [Initiatives with Our Customers](#)
- [Initiatives for Society](#)
- [Initiatives for Employees](#)

### ▶ Fulfilling Our Responsibility to the Environment



Find out about our organized activities under the Nippon Kayaku Group Declaration on Health, Safety, Environmental Protection and Quality.

- [Environmental, Health, Safety and Quality Assurance Management System](#)
- [Health, Safety, Environmental Protection and Quality Assurance Initiatives](#)
- [Reducing Our Environmental Impact](#)

### ▶ Third-Party Opinion



Read a third-party review on our CSR report.

## Message from the President



The Nippon Kayaku Group continues to actively pursue CSR management around the world

The Nippon Kayaku Group's vision for the future is articulated in its corporate motto of the KAYAKU spirit, which refers to the vision of "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences." Each and every employee and senior executive of the Nippon Kayaku Group strives to realize the KAYAKU spirit in everything they do. This enables us to fulfill our responsibilities to the environment, society and the economy as well as empowers us to take a CSR-centric approach in our management that fosters the trust of every stakeholder.

In June 2010, we established the CSR Management Committee, which consists of all executive officers responsible for each of our business divisions. This organization enables us to gauge all of our business activities from a CSR perspective. We have also established a CSR department within the Corporate Planning Division and continue to implement an interorganizational CSR project in order to raise awareness across the entire group about CSR management. The CSR activities of each business division are determined by a CSR Action Plan, which ensures that the entire group works as one toward achieving its vision for CSR management. Today, we have group companies located in eight countries around the world that engage in a wide range of businesses. We recognize that as our business becomes even more global our responsibilities to society become even greater.

Our greatest mission is continuously providing products that help enrich the livelihoods of people around the world. Last year's Great East Japan Earthquake served as an important reminder of just how important it is to assure business continuity during a disaster. As a result, we took steps to improve and strengthen our business continuity plan (BCP). As a permanent fixture of society, we recognize the importance of utilizing our planet's limited resources effectively. This report introduces our activities by highlighting our BCP and our initiatives aimed at becoming a company that consumes less energy.

Similar to last year, this report serves as a digest that provides a concise summary of the Nippon Kayaku Group's CSR activities. More detailed data and articles on the group can also be found on our website. Through this report and our website, I sincerely hope that readers will be able to gain a deeper insight into our CSR activities as well as feel motivated to assist us in our efforts as we move forward.

President



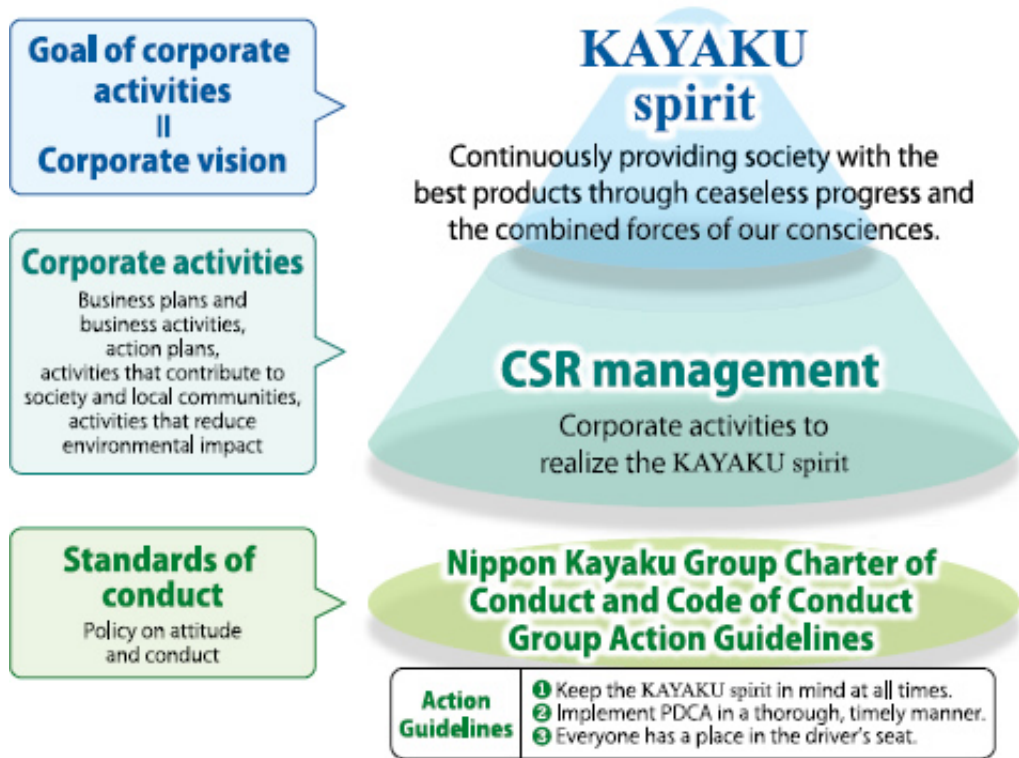
# Nippon Kayaku's CSR

## Corporate Vision and CSR Activities

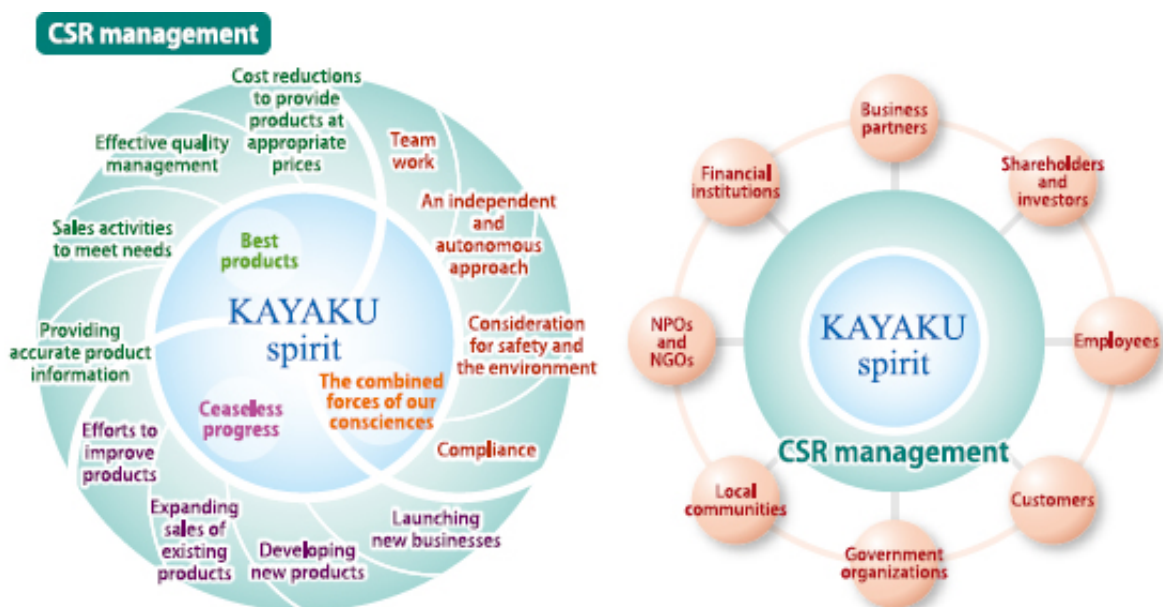
Nippon Kayaku is implementing CSR management that fosters trust among all stakeholders through its focus on the KAYAKU spirit, or "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences."

### KAYAKU spirit and CSR management

We engage in a wide range of businesses in locations around the world, but one constant is our shared approach to fulfilling Kayaku spirit as part of our global vision. We have defined Kayaku spirit in our management philosophy and company rules as well as made it thoroughly known to all of our executives and employees. This encourages action and unity in our efforts to achieve our goals. By engaging in corporate activities that realize the vision outlined in the KAYAKU spirit, we will fulfill our economic, social and environmental responsibilities as well as attain CSR management that fosters trust with each and every one of our stakeholders, from shareholders, customers and partners to employees and the local community.



CSR management is positioned as a key corporate activity for achieving the vision outlined in the KAYAKU spirit



All of our business activities are grounded in the vision embodied by the KAYAKU spirit. We will foster trust among all of our stakeholders through CSR management that aspires to fulfill this Kayaku spirit.

## Initiatives to achieve CSR management

In June 2010, Nippon Kayaku established the CSR Management Committee chaired by its President. This committee, whose members consist of executive officers in charge of each of our business divisions, ensures that we have a structure that can monitor all of our business activities from a CSR perspective.

Beginning in 2009, we launched an organizationwide internal project aimed for strengthening our CSR promotion structure that has enabled us to promote company-wide initiatives.

We also hold dozens of CSR and compliance training sessions throughout the year in order to spread our corporate vision and CSR-focused mindsets to all of our employees. These themes are incorporated particularly into our training programs given to new hires, mid-career hires and managerial employees.

In fiscal 2011, we began an article series in each edition of our internal newsletter that covers specific case studies that embody the KAYAKU spirit. In addition, we distributed a pamphlet and portable card—both localized into six languages—that provide commentary on our corporate vision to employees at Group companies. We also created corporate vision boards localized into six languages that illustrate KAYAKU spirit and Nippon Kayaku Group Action Guidelines. Today these boards are displayed in the offices of all of our Group companies.



Corporate vision board



Kayaku Safety Systems de Mexico, S.A. de C.V.



Nippon Kayaku Korea Co.,Ltd.



Wuxi Advanced Kayaku Chemical Co., Ltd.



Fostering awareness in daily operations by displaying the board on the assembly line and in the records room.

### Initiatives at Kayaku Safety Systems(Huzhou) Co., Ltd.

Kayaku Safety Systems (Huzhou) Co., Ltd. was the first Group company to create a Chinese language version of KAYAKU spirit. As part of its efforts to raise awareness, the company displays the corporate vision board in its office, assembly line, GG line, warehouse and cafeteria. A briefing was also given on the board to mid-level employees at a managerial meeting. However, it found that Chinese employees had a difficult time comprehending the corporate vision board. This is why the company decided to focus on explaining details in meetings and training sessions held in each department as well as on the job in order for employees to first understand the basic essence of the vision.

For example, employees are taught about complying with laws on dangerous substances, how to respond to danger during various work processes, appropriate procurement practices, and protection of confidential corporate and personal information. This ensures that they will be able to identify in advance and strictly respond to any compliance violations.

Going forward, the company plans to share which case study applies to which part of the Nippon Kayaku Group Action Guidelines on KAYAKU spirit. This will foster greater awareness and empower employees to naturally follow the guidelines in their everyday work processes.

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## Nippon Kayaku's CSR

### CSR Action Plan

The Nippon Kayaku group pursues CSR management through the KAYAKU spirit. Here we introduce our CSR Action Plan coordinated with our business activities. From FY 2010, we have reformatted the information into a chart that clearly illustrates the functions of the PDCA cycle.

**CSR Philosophy**  
Continuing to provide the best products to society  
through the combined force of technological  
innovations and our consciences

#### Best products

Fulfilling the needs of society is part of fulfilling our social responsibility. Accordingly, our definition of "best products" encompasses Nippon Kayaku Group's commitment to provide products that will best meet the needs of, and provide value to our society. And, we are conscious of the fact that it is the customer (or society), not us, that decides whether a product is "the best."

#### Technological innovation

There is no question that technological innovation is vital to a manufacturer. At organizations such as Nippon Kayaku Group, where there are multiple lines of business, technological innovation can come in the form of integrating technologies across different lines of business. Leveraging such advantage is our way of utilizing technological innovation to provide the "best products" to society.

#### Our consciences

At Nippon Kayaku Group, our conscience is summarized in KAYAKU spirit. It embraces our commitment to listen to the valuable opinions of our customers, to insist on only the best products, to be proud of our 90-plus-year history, and to fulfill our responsibility as an organization and as individual members of society.

- [Action Plan](#)

# CSR Action Plan

This table lists the Nippon Kayaku Group's CSR Action Plan as it relates to the Group's activities. Also included are self-assessments of those activities. Plans are in place next fiscal year to formulate a Mid-term CSR Action Plan synchronized with the Group's Three-Year Mid-term Business Plan.

CSR Activities		Action Plan	FY 2011 Targets	FY 2011 Results	Assessment	FY 2012 Targets
Foundational CSR Activities		Assure business continuity	<ul style="list-style-type: none"> <li>Complete company-wide business continuity rules and a business continuity manual for major business units</li> <li>Address infrastructure/facility issues (communication methods and electricity procurement during a natural disaster)</li> </ul>	<ul style="list-style-type: none"> <li>Formulated 4 company-wide or division-specific procedures related to the BCP and a total of 6 procedures dedicated to emergency resumption of head office functions</li> <li>New infrastructure (procured satellite phones and began regular transmission tests)</li> </ul>	○	<ul style="list-style-type: none"> <li>Enhance BCP procedures and manual</li> <li>Implement instruction and training</li> </ul>
		Promote our corporate vision and CSR	<ul style="list-style-type: none"> <li>Continue with training sessions and enhance content</li> <li>Combine and follow through with corporate vision- and CSR-related projects</li> <li>Continue with promotional activities through meetings and internal company magazine</li> </ul>	<ul style="list-style-type: none"> <li>Implemented 13 CSR educational training sessions</li> <li>Displayed the Corporate Vision bulletin board at all Nippon Kayaku Group companies and business offices</li> <li>Continued carrying out promotional activities through meetings and our internal company magazine</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue with training sessions and enhance content</li> <li>Manage organization of CSR-related projects in a trans-divisional fashion</li> <li>Continue promotional activities through meetings and the internal company magazine</li> </ul>
		Promote compliance	<ul style="list-style-type: none"> <li>Hold 65 compliance training sessions for 2,300 employees</li> <li>Enhance compliance survey (revise questions; achieve 95% or better return rate)</li> </ul>	<ul style="list-style-type: none"> <li>Implemented compliance training (82 sessions with 2,870 participants)</li> <li>Conducted compliance survey (revised questions; 97.3 % return rate)</li> </ul>	○	<ul style="list-style-type: none"> <li>Implement compliance training in pharmaceutical sales offices (not covered in FY 2011) as part of compliance training for all employees</li> <li>Further update the compliance survey (enhance question and answer choices)</li> </ul>
		Resolve business issues proactively	<ul style="list-style-type: none"> <li>Register 110 or more themes for creative group activities</li> </ul>	<ul style="list-style-type: none"> <li>Registered 96 themes for creative group activities</li> </ul>	△	<ul style="list-style-type: none"> <li>Register 110 or more themes for creative group activities</li> </ul>
Social Responsibility CSR Activities	Customers	Gain trust	<ul style="list-style-type: none"> <li>Set transparency guidelines for product promotion</li> <li>Establish methods for disclosing cost data</li> </ul>	<ul style="list-style-type: none"> <li>Formulated a Guide for Transparency between Nippon Kayaku and Health Care Institutions</li> <li>Refined our expense processing system, adding new aggregate accounting and disclosure features</li> </ul>	◎	<ul style="list-style-type: none"> <li>Confirm cumulative statistics for each category disclosed</li> <li>Implement practice simulation in preparation for disclosure</li> </ul>
			<ul style="list-style-type: none"> <li>Continue conducting onsite instruction efforts for safe agrochemical use</li> </ul>	<ul style="list-style-type: none"> <li>For safe use of agrochemicals, conducted onsite instruction; increased the number of instruction briefings over last year</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue conducting onsite instruction efforts for safe agrochemical use</li> </ul>
	Society	Contribute to the health of society	<ul style="list-style-type: none"> <li>Continue Pink Ribbon activities</li> <li>Set up an internal Pink Ribbon website</li> <li>Distribute Pink Ribbon awareness products to all employees</li> <li>Promote Pink Ribbon awareness through a video on the Company website</li> </ul>	<ul style="list-style-type: none"> <li>Employees wore Pink Ribbon badges; Pink Ribbon Campaign awareness products distributed outside the company; Pink Ribbon bumper stickers made available</li> <li>Brought on line an internal Pink Ribbon website (received 3,000 views)</li> <li>Distributed campaign awareness products to all employees, including Group companies</li> <li>Promoted efforts through videos displayed on the Nippon Kayaku website</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue Pink Ribbon activities</li> <li>Expand distribution of campaign awareness products company-wide (3 additional business offices)</li> <li>Continue internal Pink Ribbon website</li> </ul>
			<ul style="list-style-type: none"> <li>Continue managing and operating Asunaro House</li> <li>Review facilities and equipment (A/C, kitchen area, etc.) and operations (staff) to ensure the highest usability</li> </ul>	<ul style="list-style-type: none"> <li>133 families used Asunaro House in the 2011 calendar year</li> <li>Re-equipped all guest rooms with new AC units</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue managing and operating Asunaro House</li> <li>Review management practices in order to make the House as user-friendly as possible</li> </ul>
		Implement local area exchange activities	<ul style="list-style-type: none"> <li>Factory festival visitors: 10,000</li> <li>Enthusiastically promote public lectures and open house tours</li> </ul>	<ul style="list-style-type: none"> <li>Factory festivals: 6 events; 9,900 visitors</li> <li>Public lectures and open house tours: 7 events</li> </ul>	○	<ul style="list-style-type: none"> <li>Factory festival visitors: 10,000</li> <li>Enthusiastically promote public lectures and open house tours</li> </ul>
		Provide a safe workplace environment	<ul style="list-style-type: none"> <li>Confirm earthquake resistance status of all business locations nation-wide and relocate any that do not meet prescribed standards</li> <li>Have zero major accidents, zero lost worktime accidents, and 1 or less non-injury-related accidents (5 or less non-lost worktime accidents)</li> <li>Achieve a work-related vehicle accident rate of 3% or less</li> <li>Continue implementing instruction by employing safety instruction check sheets, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Finished relocating business locations that did not meet earthquake resistance standards (2 branches, 6 sales offices)</li> <li>0 major accidents; 1 lost worktime accident; 0 non-injury-related accidents</li> <li>0.55 non-lost worktime accident rate (3 accidents)</li> <li>Work-related vehicle accident rate: 10.5%; 42 accidents</li> </ul>	○	<ul style="list-style-type: none"> <li>Expand disaster preparation measures at each business location</li> <li>Have zero major accidents, zero lost worktime accidents, and zero non-injury-related accidents; a non-lost worktime accident rate of 1 (5 accidents) or lower</li> <li>Achieve a vehicle accident rate of 4% or lower during work tasks or commuting by pharmaceutical MRs</li> </ul>
		Work-life balance	<ul style="list-style-type: none"> <li>Expand half-day paid-leave system (e.g., the number of times employees take part; bringing re-hired employees into the system)</li> </ul>	<ul style="list-style-type: none"> <li>Held regular monthly explosive handling instruction carried out by the explosives safety maintenance team targeting all non-office workers</li> <li>Offered the half-day paid leave system to our 'senior partners'</li> <li>Increased, from 24 to 30, the number of times the half-day paid leave system can be utilized</li> <li>Increased the number of paid leaves days utilized per employee</li> </ul>	○	<ul style="list-style-type: none"> <li>With an aim to raise the level of safety, continue implementing explosives safety instruction through the education program in place to promulgate safety awareness</li> <li>Raise the utilization rate of paid leave days</li> <li>Implement well-designed programs for staggered work schedules and no-overtime days</li> </ul>
	Employees	Create a healthy workplace	<ul style="list-style-type: none"> <li>Mental health training: achieve 100% participation in lectures as per the 3-year plan</li> <li>Health check-ups: continue 100% participation rate</li> <li>High workload employees: achieve 100% participation rate in consultations</li> </ul>	<ul style="list-style-type: none"> <li>Mental health training: completed the 3rd year of a 3-year plan encompassing all employees</li> <li>Health check-ups: 100% participation rate</li> <li>High-workload employees: 100% received consultations with an occupational physician</li> </ul>	○	<ul style="list-style-type: none"> <li>Mental health training: achieve 100% participation in lectures as per a newly commenced 3-year plan</li> <li>Health check-ups: continue 100% participation rate</li> <li>High workload employees: achieve 100% participation rate in consultations</li> </ul>
			<ul style="list-style-type: none"> <li>Improve hiring rate for workers with disabilities</li> <li>Promote diversity</li> </ul>	<ul style="list-style-type: none"> <li>Began collaboration with a special school for the disabled in order to hire workers with disabilities</li> <li>Achieved a near 100% re-hiring rate for retirees who elected to stay on after retirement age</li> </ul>	○	<ul style="list-style-type: none"> <li>Actively continue hiring workers with disabilities</li> </ul>
		<ul style="list-style-type: none"> <li>Improve usage rate through greater recognition of the Next Generation Childcare Support program</li> </ul>	<ul style="list-style-type: none"> <li>Formulated third Next Generation Childcare Support program plan</li> <li>Met qualification standards to carry the Kurumin mark</li> <li>Held a children's visitation tour of Company facilities (Tokyo business office and Head Office)</li> </ul>	○	<ul style="list-style-type: none"> <li>Use a working committee for the Act on Advancement of Measures to Support Raising Next-Generation Children to increase awareness inside the workplace of related programs and possible work environment improvements</li> </ul>	
		<ul style="list-style-type: none"> <li>Implement training on rankism/abuse of authority</li> <li>Continue to respond professionally to reports to the whistleblower hotline</li> </ul>	<ul style="list-style-type: none"> <li>Implemented training on power harassment as part of compliance training seminars</li> <li>Responded appropriately to 10 reports to the whistleblower hotline</li> </ul>	○	<ul style="list-style-type: none"> <li>Post whistleblower hotline Q&amp;A entries in the internal company magazine and work to spread understanding of the hotline</li> <li>Respond appropriately to future reports to the whistleblower hotline</li> </ul>	
		Share information internally	<ul style="list-style-type: none"> <li>Internal company magazine: review measures to increase readership</li> <li>Use the Intranet and other avenues to disperse information and share news within the Company</li> </ul>	<ul style="list-style-type: none"> <li>Internal company magazine: reviewed content and redesigned layout to improve its appeal</li> </ul>	○	<ul style="list-style-type: none"> <li>Communicate information and share internal company news using the internal company magazine and Intranet</li> </ul>
Environmental Responsibility CSR Activities	Customers	Expand green procurement	<ul style="list-style-type: none"> <li>Review aggregate accounting results and set targets</li> </ul>	<ul style="list-style-type: none"> <li>Results from 'green procurement' through the indirect materials purchasing system (FY 2011): ¥24 million of materials purchased; 5% purchasing rate</li> </ul>	○	<ul style="list-style-type: none"> <li>Implement aggregate accounting for quantities of raw materials and indirect materials acquired through green procurement</li> </ul>
	Society	Strictly adhere to regulations on chemical substances	<ul style="list-style-type: none"> <li>Proceed with early adoption and stable use of the updated GHS version for our MSDS authoring system</li> <li>Establish rules for constructing and managing an RC system with MSDgen and R3</li> <li>Review communication tools for further enhancing green procurement within our supply chain</li> </ul>	<ul style="list-style-type: none"> <li>Upgraded MSDgen (the MSDS document issuing system) and promoted automation of sorting products into GHS categories</li> <li>Employed a Chemical Substances Management System and submitted notifications for general chemical substances, etc. as per the Chemical Substances Control Law</li> <li>Participated in the OR2IS Project for the REACH supply chain information transfer system, and introduced the system in-house</li> </ul>	○	<ul style="list-style-type: none"> <li>Spearheaded by the newly formed Chemical Management Office, enhance instructional programs related to chemical substance regulations and promote chemical substance compliance from the bottom up</li> <li>Advance the effective use of MSDgen and respond swiftly to issuing and revising MSDSs for products on the market and products under development</li> <li>Further encourage suppliers and users to share REACH importer information by using OR2IS within the supply chain</li> </ul>
		Reduce environmental impacts of overseas production bases	<ul style="list-style-type: none"> <li>Implement measures to remove pigments from waste water while reducing COD</li> <li>At Zhaoyuan Advanced Chemical Co., Ltd. (China), install waste water electrolysis equipment with Japanese proprietary water treatment technology</li> <li>Test waste water samples to verify the effectiveness of a similar treatment method at Wuxi Advanced Kayaku Chemical Co., Ltd. (China)</li> </ul>	<ul style="list-style-type: none"> <li>Zhaoyuan Advanced Chemical Co., Ltd. (China): installed electrolysis equipment from Japanese manufacturers and are currently monitoring the conditions of waste water treatment</li> <li>Wuxi Advanced Kayaku Chemical Co., Ltd. (China): testing of waste water samples put on hold due to the time required for waste water treatment at Zhaoyuan Advanced Chemical Co. Process steps allocated to allow for monitoring of waste water treatment necessitated by new products</li> </ul>	△	<ul style="list-style-type: none"> <li>Continue to further implement measures to remove pigments from waste water while reducing COD</li> <li>Zhaoyuan Advanced Chemical Co., Ltd. (China): commence operation of waste water electrolysis equipment</li> <li>Wuxi Advanced Kayaku Chemical Co., Ltd. (China): expand scale of activated sludge treatment equipment and prepare for the introduction of new products</li> </ul>
		Reduce emissions of chemical substances	<ul style="list-style-type: none"> <li>Set new Mid-Term Environmental Targets out to FY 2020</li> <li>VOC emissions: reduce annual aggregate emissions of all organic chemical compounds released into the atmosphere to 45 t or less (applicable not only to those compounds stipulated by government or Japan Chemical Industry Association regulations)</li> <li>COD emissions: newly add this target category and keep emissions to 180 t or less annually</li> </ul>	<ul style="list-style-type: none"> <li>VOC emission: 92 t (13% YoY reduction); substances subject to government reporting requirements: 22 t; substances subject to JCIA reporting requirements: 18 t</li> <li>COD emissions: 123 t (23% YoY reduction)</li> </ul>	○	<ul style="list-style-type: none"> <li>Mid-term environmental targets out to FY 2020</li> <li>VOC emissions: reduce annual aggregate emissions of all organic chemical compounds released into the atmosphere to 45 t or less (applicable not only to those compounds stipulated by government or JCIA regulations)</li> <li>COD emissions: hold to 180 t or less annually</li> </ul>
		Minimize production of wastes	<ul style="list-style-type: none"> <li>Set new Mid-Term Environmental Targets out to FY 2020</li> <li>Total waste produced: 30,000 t or less</li> <li>Total landfill waste produced: 3% or lower zero emission rate</li> <li>Improve recycling rate: 70% or better</li> </ul>	<ul style="list-style-type: none"> <li>Total waste produced: 22,298 t (15% YoY reduction)</li> <li>Total landfill waste produced: 13% zero emission rate (1% increase YoY)</li> <li>Recycling rate: 63.5% (1.4% YoY increase)</li> </ul>	○	<ul style="list-style-type: none"> <li>Mid-term environmental targets out to FY 2020</li> <li>Total waste produced: 30,000 t or less</li> <li>Total landfill waste produced: 3% or lower zero emission rate</li> <li>Improve recycling rate: 70% or better</li> </ul>
		Prevention of global warming	<ul style="list-style-type: none"> <li>Set new Mid-Term Environmental Targets out to FY 2020</li> <li>Achieve a 15% or greater reduction (over FY 1990 levels) of energy-derived CO<sub>2</sub> emissions, including business office divisions</li> </ul>	<ul style="list-style-type: none"> <li>Energy-derived CO<sub>2</sub> emissions: 21.2% reduction over FY 1990 levels (75,800 t emitted)</li> </ul>	◎	<ul style="list-style-type: none"> <li>Mid-term environmental targets out to FY 2020</li> <li>Achieve a 15% or greater reduction (over FY 1990 levels) of energy-derived CO<sub>2</sub> emissions, including business office divisions</li> </ul>
		Reduce exhaust emissions	<ul style="list-style-type: none"> <li>Achieve a 100% low-emission vehicle adoption rate for medical representatives, except in colder climate areas</li> </ul>	<ul style="list-style-type: none"> <li>Low-emission vehicle adoption rate for MRs (except in colder climate areas): 100%</li> </ul>	○	<ul style="list-style-type: none"> <li>This goal has been achieved, so no future additions are necessary</li> </ul>
	Develop products that benefit patients	<ul style="list-style-type: none"> <li>Begin phase III trial of polymeric micelle anti-cancer drug NK105 and start phase I trial for NK012 in another indication</li> <li>Biosimilar antibody drugs: implement phase I/II comparative clinical trials</li> <li>Embolitic microsphere products: complete clinical trials and submit New Device Approval</li> </ul>	<ul style="list-style-type: none"> <li>Decision made on the start of phase III trials for NK105; started phase I trial for NK012 in another indication</li> <li>Biosimilar antibody drugs: completed registration for phase I/II comparative clinical trials</li> <li>Embolitic microsphere products: completed clinical trials and applied for approval</li> </ul>	◎	<ul style="list-style-type: none"> <li>NK105: start phase III trial; NK012: complete phase I and plan phase II design</li> <li>Biosimilar antibody drugs: prepare for application and plan phase I/II comparative clinical trials</li> <li>Embolitic microsphere products: follow up on New Device Approval</li> </ul>	
Financial Responsibility CSR Activities	Customers	<ul style="list-style-type: none"> <li>Increase number of environmentally friendly products</li> </ul>	<ul style="list-style-type: none"> <li>Functional chemical products: achieve a 2% year-on-year increase in net sales of ecofriendly semiconductor encapsulation materials</li> <li>Automotive safety parts: continue with development aimed at inflator weight reduction in line with our mid-term plan</li> <li>Agrochemicals: take steps to begin agrochemical application of our physical pest control agent under development</li> </ul>	<ul style="list-style-type: none"> <li>Sales of epoxy resin declined due to the weakness in the semiconductor market, and proportionate sales of ecofriendly epoxy resins fell slightly</li> <li>Currently developing mass market versions of the above ecofriendly epoxy resin and a curing agent</li> <li>Automotive safety parts: proceeded with weight reduction to increase fuel efficiency and lessen environmental impacts; development progressed according to plans</li> <li>Reviewed physical pest control agent (spiral-blocking agent); currently undertaking steps to register it as an agrochemical</li> </ul>	△	<ul style="list-style-type: none"> <li>Functional chemical products: achieve a 2% year-on-year increase in net sales of ecofriendly semiconductor encapsulation materials</li> <li>Automotive safety parts: set targets for weight reduction for each part and continue moving forward with development</li> <li>Review new agrochemicals that use food additives for ingredients</li> </ul>
		<ul style="list-style-type: none"> <li>Enhance information disclosure practices</li> </ul>	<ul style="list-style-type: none"> <li>Restructure and upgrade the cancer-specialist MR system</li> <li>Respond promptly to questions from medical institutions by introducing new information devices</li> </ul>	<ul style="list-style-type: none"> <li>Restructured the cancer-specialist MR system and started a new training system</li> <li>Responded promptly to queries from medical institutions through the introduction of new (tablet) information devices</li> </ul>	○	<ul style="list-style-type: none"> <li>Use the new cancer-specialist MR system and boost the level of MR competency</li> <li>Establish a framework for promptly responding to drug side effect issues using the new information devices</li> </ul>
		<ul style="list-style-type: none"> <li>Provide the best products to customers</li> </ul>	<ul style="list-style-type: none"> <li>Achieve zero high-level (those of ¥10,000,000 or more) customer complaints</li> <li>Achieve zero high level (those of ¥10,000,000 or more) quality process mishaps</li> </ul>	<ul style="list-style-type: none"> <li>High-level (those of ¥10,000,000 or more) customer complaints: 2</li> <li>High-level (those of ¥10,000,000 or more) quality process mishaps: 1</li> </ul>	△	<ul style="list-style-type: none"> <li>High-level (those of ¥10,000,000 or more) customer complaints: zero</li> <li>High-level (those of ¥10,000,000 or more) quality process mishaps: zero</li> </ul>
	<ul style="list-style-type: none"> <li>Develop products gentle on the users</li> </ul>	—	—	—	—	<ul style="list-style-type: none"> <li>Contribute to enhancing technology for further safeguarding vehicle passengers and pedestrians through the development of gas projection devices for use in pop-up engine hoods and seat lifting mechanisms</li> </ul>
Shareholders	Boost information dissemination and continue information disclosure	<ul style="list-style-type: none"> <li>Continue with these activities: earn the confidence of shareholders through appropriate financial results briefings, responses to interview requests, and disclosure of information</li> </ul>	<ul style="list-style-type: none"> <li>Held bi-annual financial results briefings with institutional investors</li> <li>Responded to 179 requests for IR interviews</li> <li>Updated information displayed on our website 17 times</li> </ul>	○	<ul style="list-style-type: none"> <li>Continue holding appropriate financial results briefings, responding to interview requests, and disclosing information to further earn the confidence of shareholders</li> </ul>	

◎ target achieved ○ almost achieved △ under-going efforts toward improvement

## Special Feature 1 Reducing Our Consumption of Energy

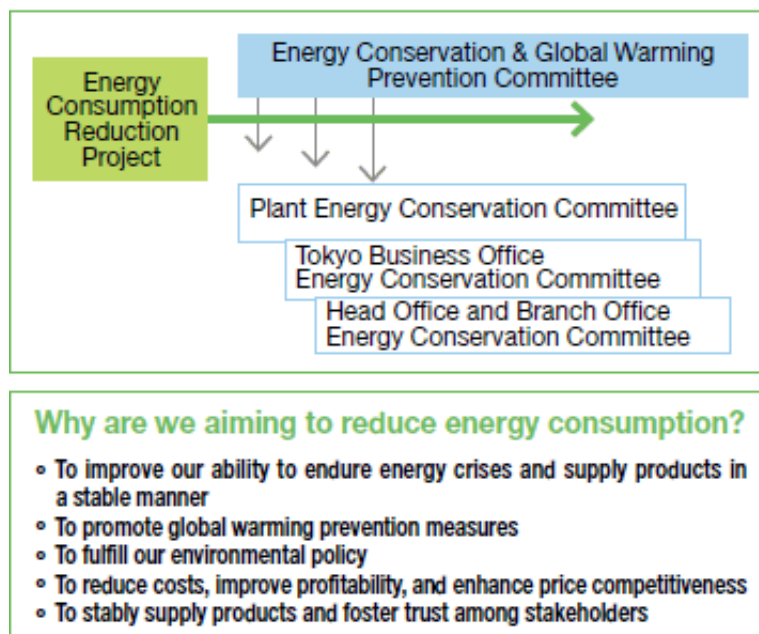
Utilizing the lessons learned from Japan's major earthquake and tsunami that struck in March 2011, Nippon Kayaku took measures to reduce its use of energy and revised its business continuity plan in fiscal 2011.

### Aspiring to Become a Company that Can Better Tolerate Energy Risk

Nippon Kayaku has been actively involved in energy conservation and the prevention of global warming at each of its business sites since prior to the revision of Japan's Act on the Rational Use of Energy (below, Energy Conservation Act).

Since this law was revised in fiscal 2008, we have taken company-wide steps to reduce our use of energy, which has included setting up a committee chaired by the president to address energy conservation and global warming measures. Starting in fiscal 2011, we established the mid- to long-term environmental target of achieving a 15% reduction in greenhouse gas emissions compared to 1990 levels by fiscal 2020, and initiated even greater efforts to reduce greenhouse gas emissions from energy sources.

However, following the energy supply shortages that occurred after the Great East Japan Earthquake, we stepped up these activities as part of our stated commitment to become a company that uses less energy in order to endure an energy crisis. In conjunction with this, we reduced our use of purchased electricity and revised our core power system in order to avoid the impact of electricity supply shortages from power companies as well as to ensure that we are a company that can better tolerate energy risk and continually produce our products in a stable manner.



### Examining Ways to Reduce Energy Consumption Using Five Themes

1. Change power systems to build a stronger foundation for energy conservation

We will change over facilities at our plants and business sites to accommodate electricity supply shortages and will install back-up generators and secondary power sources where needed. This will enable us to achieve stable production and continually implement energy conservation measures.

2. Promote existing energy conservation and global warming prevention themes

We will prepare plans based on the Energy Conservation Act and implement actions under existing themes ahead of schedule. We will strive to realize further reductions in order to improve our specific energy consumption by 1%.

3. Achieve ideal vision for plants

We are preparing master plans on energy conservation and global warming prevention measures for each of our plants to demonstrate our stance toward reducing future energy usage at each of our sites aimed at our environmental target set for 2020. We will also revise and update these plans on a regular basis.

4. Fundamentally reduce the energy we use

In order to achieve significant reductions in energy usage, we will need to fundamentally change the way we manufacture products to fundamentally reduce our consumption of energy by modifying reaction processes and developing manufacturing processes that result in less waste by-products.

As advanced preparation for this, we plan to make a clear distinction between fixed energy consumption regardless of production

volume and fluctuating energy consumption directly related to production volume.

Currently, the Tokyo Plant is analyzing energy consumption trends. These results will be shared with other plants going forward.

5. Develop new products that are energy efficient and have less of an impact on the environment

We have initiated a review on systems that evaluate energy usage during the product development stage in order to develop new products that use less energy and create manufacturing methods that result in fewer greenhouse gas emissions.

Currently, we are aiming to raise awareness toward energy conservation among our researchers in order to estimate and assess energy consumption in our manufacturing processes when performing scale-up assessments.

## Initiatives and Results in Fiscal 2011

Nippon Kayaku's energy usage in fiscal 2011 (April 1, 2011 to March 31, 2012) totaled 35,943 kl on a crude oil equivalent basis, which was 94.7% of the total seen in fiscal 2010. As a result, we were able to achieve a 21.2% reduction in greenhouse gas emissions compared to fiscal 1990. Going forward, we forecast that energy usage and emissions will rise as a result of increases in production volume, but we will nevertheless strive to reach our targets.

Our specific energy consumption also improved, as the figure for fiscal 2011 was 94.9% that of fiscal 2010.

In fiscal 2011, we decided to switch boiler fuel used at our Asa Plant (Kawahigashi Plant) from Heavy Fuel Oil A to LNG\*1. Changes are currently being made at the plant for this transition, with work scheduled for completion in January 2013.

In addition, the Takasaki Plant will install a gas co-generation system (CGS)\*2 in fiscal 2012, with work slated for completion in June 2013.

\*1 LNG: liquefied natural gas

\*2 CGS: Co-generation system that produces electricity using gas as well as collects and reuses resulting heat emissions

## The Nippon Kayaku Group's Energy Conservation Activities in Fiscal 2011

The Nippon Kayaku Group proactively undertakes energy conservation activities, which are led primarily by each of its subsidiaries.

### Energy Conservation Activity Led by Employees of Nippon Kayaku Group Companies – My Family's Environmental Impact Budget

Fiscal 2011 marked the fifth year of the My Family's Environmental Impact Budget program, which was launched in order to help employees uncover energy waste in their daily lives and to foster greater awareness toward energy conservation.

The results of these environmental impact budgets are presented below.

● Summary of Results for the My Family's Environmental Impact Budget Program

(unit: kg)

	Implementation	Period	Participating households	Average CO <sub>2</sub> emissions per Nippon Kayaku Group employee household		Average CO <sub>2</sub> emissions per household in Japan
				Overall	1-month average	1-month average *3
1 <sup>st</sup> Program	March 2009 to May 2009	3 months	517 households	1,453	484	387*4
2 <sup>nd</sup> Program	October 2009 to December 2009	3 months	267 households	1,735	574	
3 <sup>rd</sup> Program	January 2010 to March 2010	3 months	268 households	1,490	497	
4 <sup>th</sup> Program	April 2010 to March 2011	1 year	191 households	6,836	570	380*5
5 <sup>th</sup> Program	April 2011 to March 2012	1 year	177 households	6,148	512	Yet to be released *6

\*3 Source: Greenhouse Gas Inventory Office (Japan Center for Climate Change Actions: <http://www.jccca.org/>)

\*4 CO<sub>2</sub> emissions resulting from heat, light oil and waste were subtracted from publicly disclosed data, with average CO<sub>2</sub> emissions calculated using the fraction 1/4.

\*5 CO<sub>2</sub> emissions resulting from heat, light oil and waste were subtracted from publicly disclosed data, with average CO<sub>2</sub> emissions calculated using the fraction 1/12.

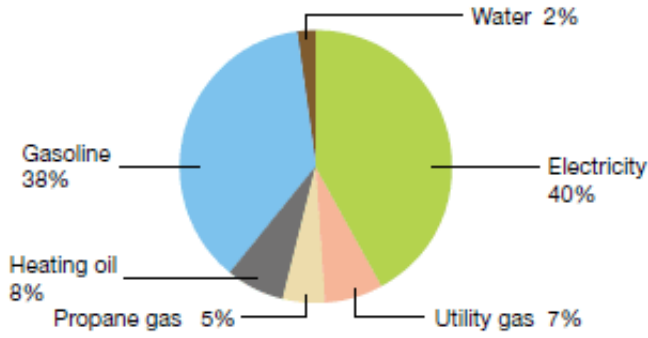
\*6 Data had yet to be released as of August 2012.

#### Fiscal 2011 Energy Usage Breakdown per Participating Household

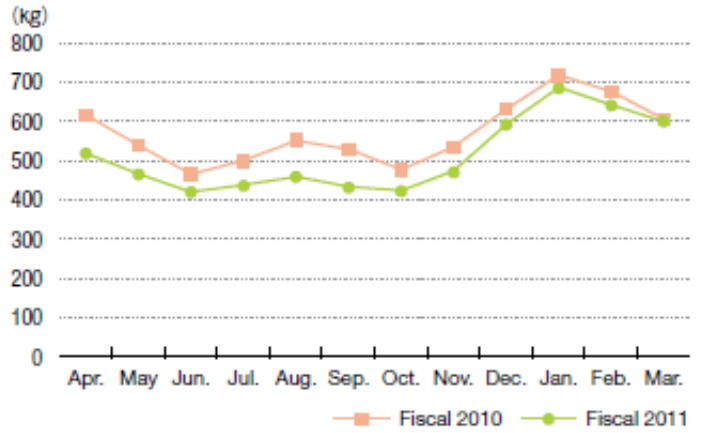
The fifth program saw a total of 177 Nippon Kayaku Group employee households participate. Results showed that employees had around 50% more CO<sub>2</sub> emissions per household compared to the average CO<sub>2</sub> emissions per household in Japan for fiscal 2010. This is because many of our employees drive to work, which resulted in a much larger use of gasoline when compared to ordinary households in Japan.



**Fiscal 2011 Energy Usage Breakdown per Participating Household**



**Fiscal 2011 CO<sub>2</sub> Emissions per Participating Household**



**Degree of Energy Conservation at Nippon Kayaku Group Employee Households**

We calculated the Nippon Kayaku Group's overall degree of energy conservation by comparing the results of the fourth and fifth My Family's Environmental Impact Budget held in fiscal 2010 and fiscal 2011 respectively.

There was a 10% reduction in CO<sub>2</sub> emissions in participating households in fiscal 2011 compared to fiscal 2010, which indicates we are making progress in our homes. A colder than usual winter and more households increasing their use of heating oil, while reducing their use of electric heaters to curb energy use, can be cited as reasons for the increase in heating oil consumption seen in fiscal 2011.

**Fiscal 2010 vs. Fiscal 2011**

Electricity	Utility gas	Propane gas
15% reduction	31% reduction	21% reduction
Heating oil	Gasoline	Water
14% increase	0% reduction	25% reduction
<b>CO<sub>2</sub> emissions 10% reduction</b>		

## Special Feature2 The Nippon Kayaku Group's Business Continuity Plan Initiatives

Utilizing the lessons learned from Japan's major earthquake and tsunami that struck in March 2011, Nippon Kayaku took measures to reduce its use of energy and revised its business continuity plan in fiscal 2011.

### Changes to Our Business Continuity Plan

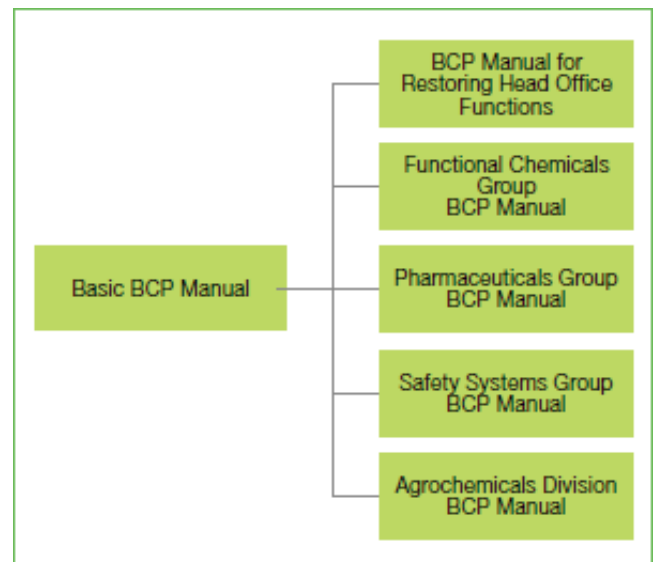
The Nippon Kayaku Group in Japan has formulated a Risk Management Manual and Natural Disaster Response Rules that define responses for safeguarding the company's assets and employees' lives during the occurrence of a natural disaster or outbreak of a new influenza virus. The Risk Management Manual was used to immediately establish a Disaster Response Central Headquarters in the wake of the Great East Japan Earthquake. Through this organization, we were able to swiftly confirm the safety of our employees as well as check and report on damages suffered in the earthquake and tsunami. At the same time, this disaster also taught us the importance of establishing new disaster response measures and determining more detailed recovery protocols in advance, in order to ensure that normal operations can be quickly restored following the occurrence of a major emergency.

As a result, in fiscal 2011 we launched an interorganizational business continuity plan (BCP) project led by the Internal Control Management Division. This project also involved every business division as well as outside consultants. Participants helped to craft a Basic BCP Manual, BCP

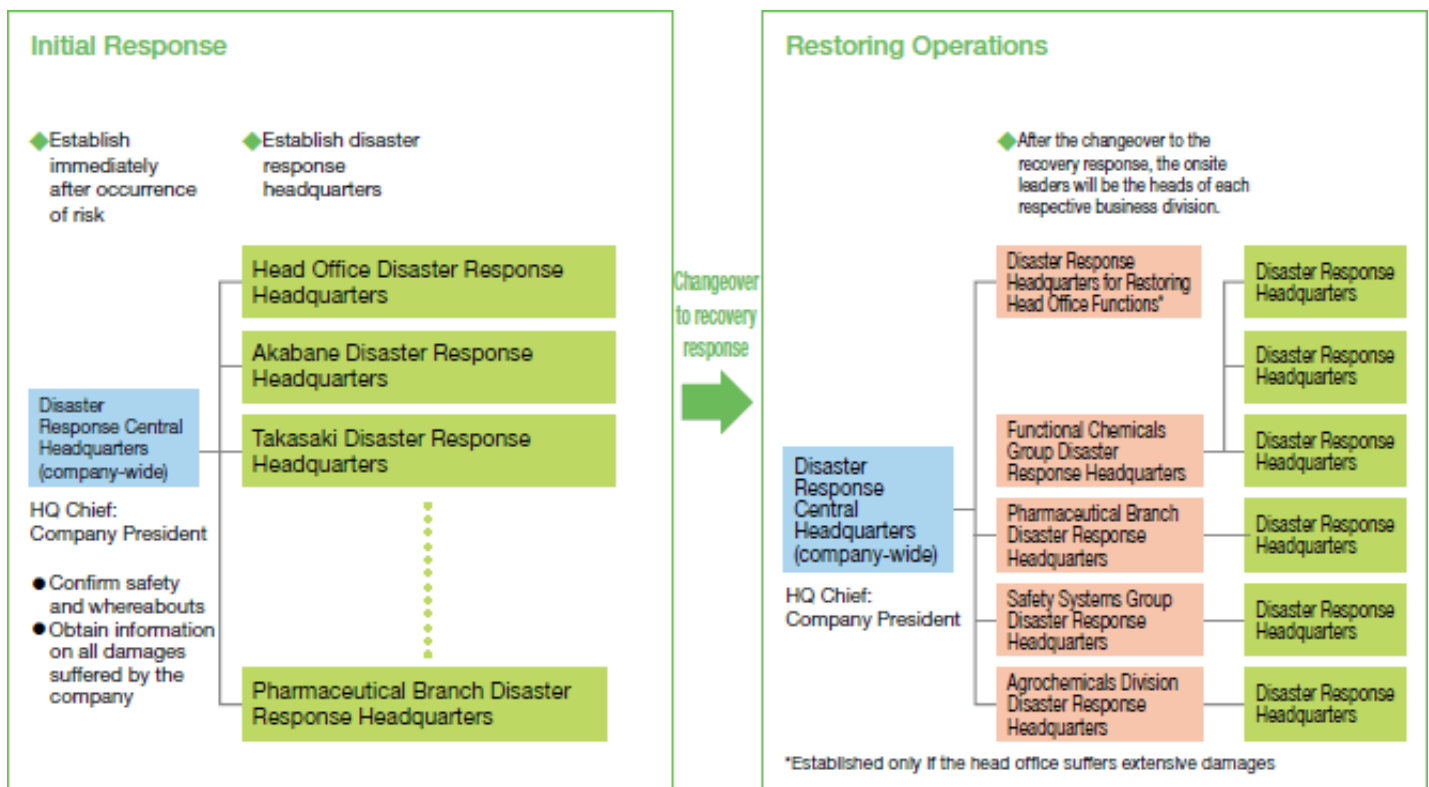
Manual for Restoring Head Office Functions and BCP manuals for each of our four business divisions. These six manuals include additional content not found in the Risk Management Manual and make it possible to restore organizational and functional activities in the event of an emergency. In addition to the purpose of reducing damages and enhancing preparedness, they also define emergency response headquarters to be established for each business division in order to restore operations using the most ideal format and stipulate that operations be restored within the given target time frame (i.e., RTO:Recovery Time Objective). Furthermore, the core operations of each business division are specified, with rules dictating that resources be concentrated to restore these operations first.

Several disaster measures were also started as a result of these changes. For example, satellite phones have been installed and communication drills held to assure prompt communication during an emergency. We have also designed our information systems to mitigate damages from a disaster and to ensure they can be immediately restored after an emergency. Moreover, in addition to our management of inventory for business purposes, we have formulated and manage a separate strategic inventory from a BCP standpoint.

We recognize the important roll employee training plays in our ability to execute this new BCP promptly. As such, we will continue to train all employees in this regard.



Basic BCP Manual



## The Nippon Kayaku Group's Disaster Preparedness Drills in Fiscal 2011

The Nippon Kayaku Group regularly conducts disaster preparedness drills, which are led by each of its subsidiaries. Our group companies located outside of Japan organize drills as needed based on conditions in each particularly country.



Gathering on the top floor of Agro No.1 Plant for roll call

### Tsunami Drill – Kashima Plant

Rather than the earthquake itself, the ensuing tsunami is what caused the most damage following the Great East Japan Earthquake that struck on March 11, 2011. The Kashima district of Ibaraki Prefecture also suffered damage primarily along its coastal industrial belt. Fortunately, the tsunami did not reach the Hasaki district where our Kashima Plant is located. Nevertheless, following this disaster the Kashima Plant examined ways to secure a tsunami evacuation site that is available at anytime to help safeguard the lives of its employees as well as the people in the surrounding community.

The Kashima Plant is located at an elevation of 9 meters and about 1.8 km from the coast. There is no high ground in the area, and as such, it is vital to secure a safe location ahead of time for evacuation within 10 minutes of a tsunami warning being issued. As a result, the top floor of the Agro No. 1 Plant, which is highest point onsite, was designated as the evacuation location for employees and local community members.

The Kashima Plant's evacuation drill held on March 11, 2012, which envisioned a tsunami higher than 15 meters, saw employees evacuate to the top floor of the Agro No. 1 Plant. The results of this drill showed that all employees can evacuate safely within five minutes of a tsunami warning being issued. Additionally, emergency supplies of food, water and blankets are stored on the top floor of the plant, while an emergency transceiver has been provided as a mode of communication.

Going forward, the Kashima Plant will continue to hold a tsunami evacuation drill every March 11 as part of its Earthquake Preparedness Day. These drills will help it to pass on the important lessons learned from last year's earthquake and tsunami disaster.



Emergency generator

### Assuring an Uninterrupted Supply of Products – Takasaki Plant

Following the Great East Japan Earthquake on March 11, 2011, electricity supply shortages occurred in the areas served by the Tokyo Electric Power Company (TEPCO), rolling blackouts were initiated, and users were asked to reduce electricity usage by 15% during peak hours.

Blackouts and electricity shortages wreaked havoc on society and the daily lives of everyone in Japan, and production at factories was no exception. Located within the service area of TEPCO, the Takasaki Plant, which manufactures pharmaceuticals, needed to sustain its operations in order to provide an uninterrupted supply of its products. As a result, the plant obtained emergency generators from affiliates and from lease companies immediately following the nuclear accident at the Fukushima Daiichi Nuclear Plant to prepare for the rolling blackouts. Furthermore, it modified its production plan, changed employee shifts and operated on holidays in order to assure that an uninterrupted supply of its important pharmaceutical products were manufactured and supplied to the market.

## Disaster Measures in Place at Sites Across Japan

Following the Great East Japan Earthquake that struck in March 2011, water stations were set up at all 55 of our sales office nationwide in Japan with three days' supply of water for all of the employees at each site.

Additionally, a disaster kit has been placed in all of the company's sales vehicles used by MRs to assure that they have access to food and water in the event of a disaster during their sales activities. Going forward, we plan to store more food at each of our pharmaceutical branches for employees' well-being during an emergency and to ensure that the office can continue with its operations.



Disaster kit placed in sales vehicles (left) and water reserves at each site (right)

## Corporate Governance

As a company entrusted with the support and high expectations of society, the Nippon Kayaku Group has put in place an autonomous corporate governance system that recognizes the vital importance of preserving business transparency and of timely, impartial information disclosure to our investors and shareholders.

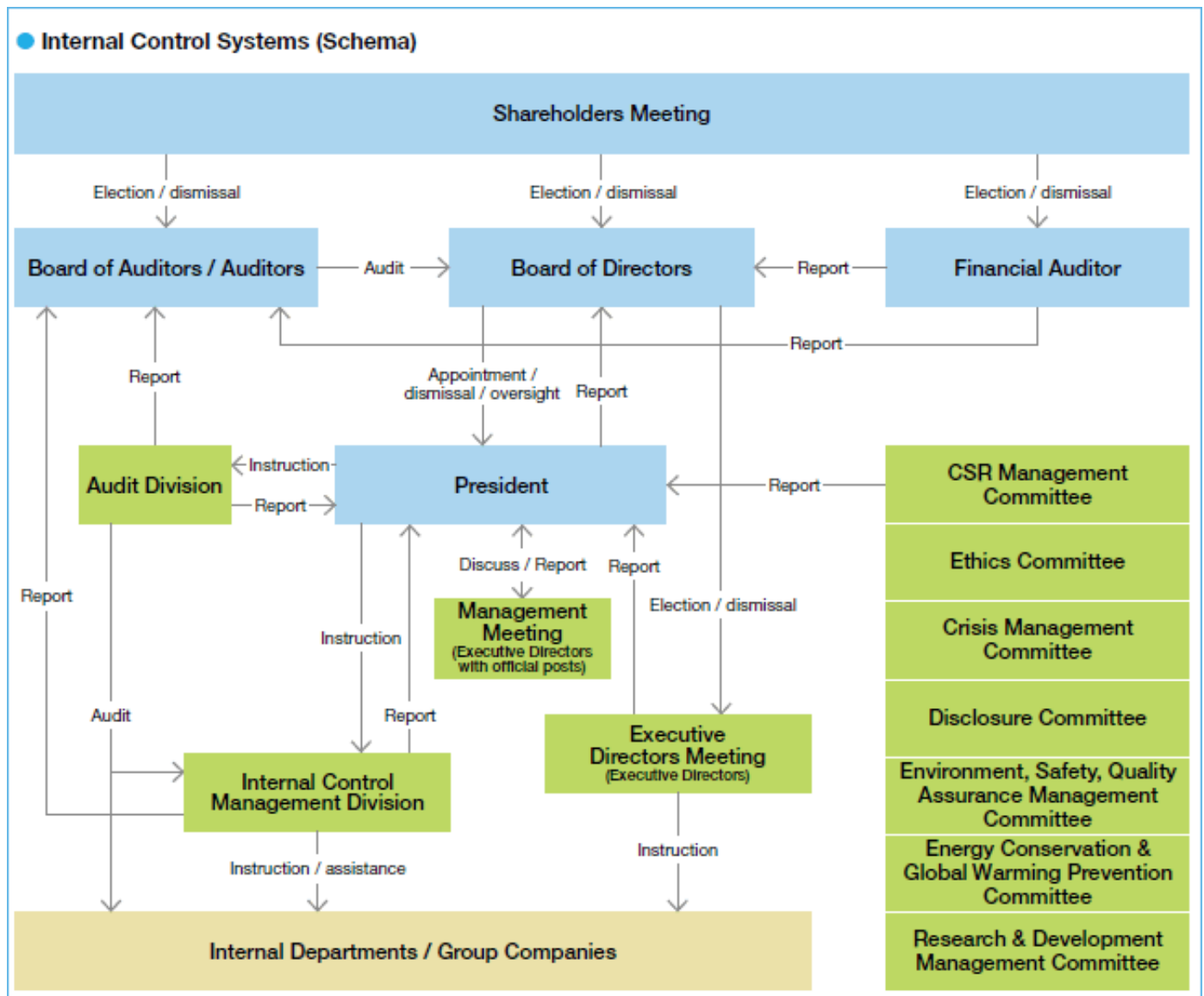
### The Nippon Kayaku Group Corporate Governance and Internal Control System

Through group decision-making and auditor oversight measures effected by the council system of our Board of Directors, the Nippon Kayaku Group believes that its system of corporate governance effectively supports management functions. Moreover, the Group has introduced an Executive Directors System for prompt responses to changes in the business and for flexible execution of operations. This approach distinctly separates the functions of business execution from oversight and decision making, strengthening both and enabling each function to ensure effective decision-making and agile operations.

The Internal Control Management Division, consisting of the Compliance Department, the Risk Management Department, and the J-SOX Department, is in charge of overseeing the internal controls of the entire Nippon Kayaku Group, including financial affairs, and maintaining and improving our internal control system.

The Compliance Department formulates a compliance action plan for each business location and implements that plan in step with Group companies. The Risk Management Department is tasked with assessing departments responsible for developing a specific action plan for each risk factor. Whenever new risk factors are identified, a relevant department will be promptly assigned to address such factors. The J-SOX Department works to ensure that a structure is in place to facilitate reliable financial reporting and assesses the design and application of this structure, reporting findings to the President.

- [Summary of Internal Control Systems](#) [PDF](#)



# Internal Control System and Risk Management System

The Internal Control Management Division, consisting of the Compliance Department, the Risk Management Department, and the J-SOX Department, is in charge of overseeing the internal controls of the entire Nippon Kayaku Group, including financial affairs, and maintaining and improving our internal control system.

The Compliance Department formulates and implements a compliance action plan. The Risk Management Department is tasked with assessing risks for the entire company and designating a department responsible for developing a specific action plan for each risk factor. Whenever new risk factors are identified, a relevant department will be promptly assigned to address such factors. The J-SOX Department works to ensure that a structure is in place to facilitate reliable financial reporting and assesses the design and application of this structure, reporting findings to President.

## Risk Management System

The Nippon Kayaku Group performs comprehensive risk management activities in order to prevent the occurrence of risk and minimize losses if risk does occur.

We have built up our risk management system around the Risk Management Manual compiled in the year 2000 and the Crisis Management Committee Rules and Regulations formulated in 2004.

In addition to our system that notifies senior management promptly about the occurrence of risks, we have also designated a department to be in charge of each factor requiring risk management as part of our efforts to avoid and prevent individual risk factors as well as take remedial measures.

Individual risk factors being addressed on the department-level include natural disaster risk such as earthquakes, environmental destruction risk, environmental pollution risk, accident (production / logistics)-related risk, product-related risk, loss of credibility risk, risk of crimes against the company and senior management, risk of crimes against employees and their families, risk related to expatriate workers and foreign business travel, litigation risk, personnel and labor-related risk, patent litigation risk, and infectious disease risk, among others.

## Activities Promoting Risk Management

The Nippon Kayaku Group has a designated department in charge of risk management that each year develops a Risk Management Action Plan, which in turn is approved by the Crisis Management Committee, as part of the company's efforts to raise risk awareness, promptly report risk to senior management and engage in risk reduction activities. In fiscal 2010, we launched a company-wide business continuity plan (BCP) project following the Great East Japan Earthquake and began a full-scale review of our company-wide BCP used to respond to emergencies.

## Summary of each Meeting

### **Board of Directors Meeting (Held Monthly)**

To ensure prompt decision-making, the Board is limited to 10 members. Decisions related to important business matters are made through the stipulations of the Board of Directors in conformity with relevant laws and our articles of incorporation. Operational oversight functions also are being strengthened.

### **Management Meeting (Held Weekly)**

The Management Meeting deliberates important matters related to management and business affairs and receives reports from business divisions. The President, as the chairman, makes decisions after thorough deliberation among the Management Meeting members.

### **Executive Directors Meeting(Held Quarterly)**

The Executive Directors Meeting is chaired by the President, and attended by all Executive Directors (up to 25) appointed by the Board of Directors. Executive Directors report on the status of the businesses they have been entrusted with from the Board of Directors and the President as well as other necessary matters.

### **Management Strategy Meeting(Held Semi-Annually)**

Important management matters at the Board Meeting such as basic policy of our group and management strategy are distributed to management personnel through the Management Strategy Meeting to ensure thorough understanding and awareness.

### **Board of Auditors Meeting(Held Monthly)**

The Board of Auditors consists of five auditors (three external). The members monitor and oversee the duties of Directors from an independent position based on the stipulations of the Board of Auditors..

In addition, the Company clarifies authority and responsibility by management position, segregation of duties and company organization structure, setting rules that stipulate duties and powers. This promotes organized and efficient operations and establishes a framework of accountability.

## Establishment of Various Committees

### **CSR Management Committee**

Decides CSR action policy and mid-term action plan as well as confirms the validity of the measures based on KAYAKU spirit and CSR philosophy to undertake corporate social responsibility sustainably.

### **Ethics Committee**

Works to formulate policies and measures for compliance and implementation of the Charter of Business Conduct and Code of Business Conduct and to evaluate companywide compliance.

### **Risk Management Committee**

Develops and maintains a risk management structure for risk preventive measure, damage control and damage remediation over the full range of management issues.

### **Disclosure Committee**

Scrutinizing important managerial information of the company and maintains and improves the structure for timely and proper external disclosure.

### **Environment, Safety, and Quality Assurance Management Committee**

Presents its fiscal year policies on environment, safety, and quality assurance matters. Assesses results, and devises plans for improvement.

### **Energy Conservation and Global Warming Prevention Committee**

Makes mid- and long-term plans, confirms each activity and discusses measures to problems based on the policy about energy conservation and global warming prevention.

These results are disclosed to inside and outside the company.

### **Research & Development Management Committee**

Develops company-wide research and development policies and strategies. A forum to report, discuss and make decisions on important research and development matters.



## Compliance

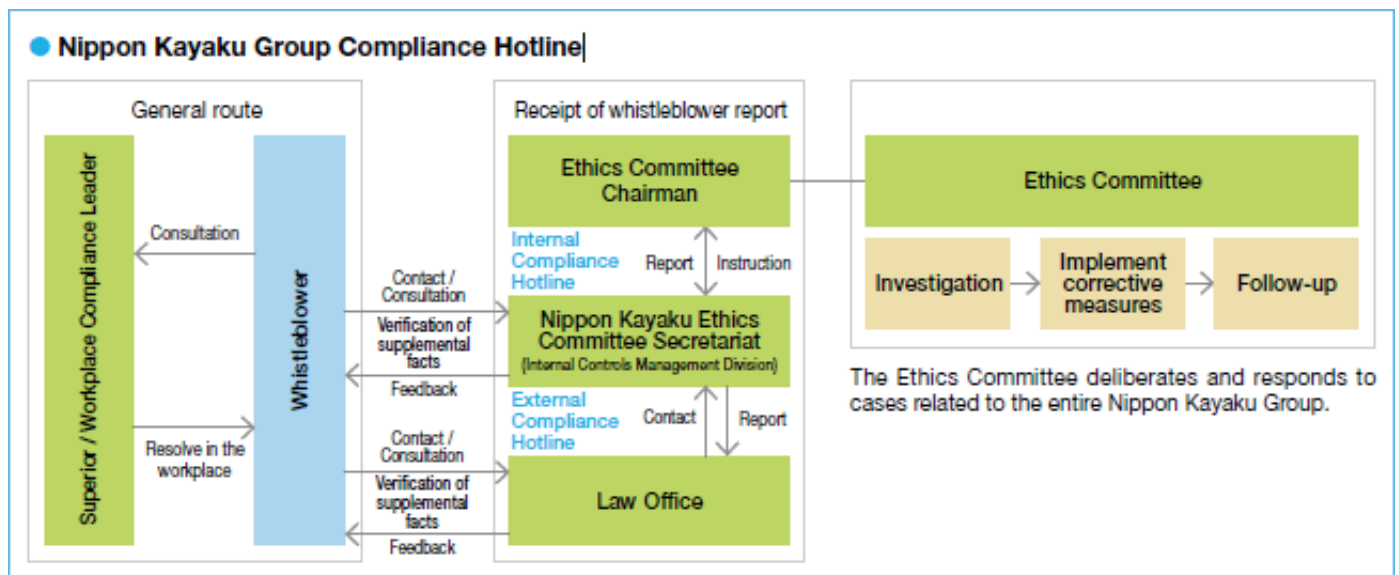
The Nippon Kayaku Group believes that compliance (the strict observation of laws, internal regulations, and also corporate ethics) holds a position of the utmost importance in our business activities. The diagram on this page details our compliance management implementation.

### Compliance Management System and its Promotion

In June 2011 the Nippon Kayaku Group Charter of Conduct and the Nippon Kayaku Group Code of Conduct were put in place.

These two policies are steadfastly advanced by the personnel responsible for and in charge of ethics matters at each business location of domestic Group companies. These personnel work to promote compliance in close cooperation with an Ethics Committee. October has been designated Compliance Promotion Month to raise awareness of compliance issues among all executives and employees. In conjunction with Compliance Promotion Month, all Nippon Kayaku Group employees in Japan are asked to complete a compliance survey (which includes questions on CSR). Overall results of this survey are published in the internal company magazine. The results are also aggregated for the entire Group, emerging trends are highlighted prominently, and feedback is given on analysis of Group strengths and weaknesses evidenced by each trend. This analysis is used as a reference when drafting the next fiscal year's Compliance Action Plan, and the PDCA cycle is employed to improve compliance awareness.

An Internal Compliance Hotline and External Compliance Hotline have been set up to respond to compliance issues occurring in the course of our business activities and as a means to prevent violations as well as ensure compliance best practices.



### Compliance Promotion Activities

The Nippon Kayaku Group implements compliance promotion activities based on the annual Compliance Action Plan drafted by the Ethics Committee Secretariat and approved by the Ethics Committee.

#### 1. Compliance Promotion Month

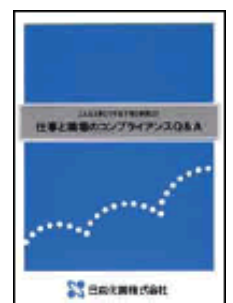
October has been designated Compliance Promotion Month to raise awareness of compliance issues among all executives and employees.

In conjunction with Compliance Promotion Month, all Nippon Kayaku Group employees in Japan are asked to complete a compliance survey to confirm their awareness of compliance issues.

Also, in fiscal 2010, revision of the survey contents was carried out to better reflect the voices of those in the workplace

#### 2. Activities in Fiscal 2010

- Each division drafts a Compliance Activity Action Plan and conducts compliance promotion activities independently according to this plan
- Continuous education and training for all members of management and employees
- Periodic publication of "Compliance News"
- Job and Workplace Compliance Q&A is a booklet highlighting specific case studies both internally and externally that is utilized in department-level training sessions in order to raise awareness of compliance



Compliance Q&A on Work and the Workplace

matters.

Moving forward, we will engage in compliance promotion activities so that all executives and employees of the Nippon Kayaku Group (including temporary and part-time workers) share an awareness of compliance and help to achieve our goal of earning the trust of all of our stakeholders.

**Certified as a 'type 1 business entity' by Jiangsu Province – Wuxi Advanced Kayaku Chemical Co., Ltd.**

In August 2011, Wuxi Advanced Kayaku Chemical Co., Ltd.(WAC) was assessed by the Jiangsu Import/Export Inspection and Quarantine Branch Office as performing appropriate business operations and earned the designation of a 'type 1 import/export business entity.' As of May 2012, 40 businesses have earned this designation within Wuxi city and WAC is the first chemical manufacturer to do so. With this certification, WAC is no longer subject to on-site inspections before a shipment for export leaves its facilities. The process has been expedited through inspection of shipping/application documents only and the time required has been reduced from seven days to just two.



Manager Mei Li, pictured in front row, right side

WAC also received, in 2010, an evaluation from the customs authority that named it a 'type A firm.' With this and the above designation, the inspection process at the Customs Office can now be expedited and logistics costs reduced during import and export, enabling more systemic shipping practices. Going forward, the goal is to further emphasize compliance and to ensure that this mindset is reflected in each and every employee's actions.

## Each Department's Initiatives

The Nippon Kayaku Group adopted a corporate slogan called Global "sukima" ideas. We are striving to develop Nippon Kayaku into a company that the world truly needs, by accumulating unique technologies that stand out in niche markets and elsewhere. Here, we introduce four of our core businesses to show readers some of the ways in which our products are used on a daily basis.

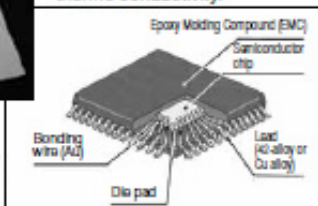
### Functional Chemicals Business

Nippon Kayaku Group's technology is being used in the semiconductors and other components of electrical products such as cell phones, smartphones, PCs, etc. In addition, efforts are being dedicated to developing next-generation environmentally friendly products and products related to energy efficiency.

- Thermal conductive bonding sheet



◀ KTM Series – high thermo resistant curable resin with high thermo conductivity.



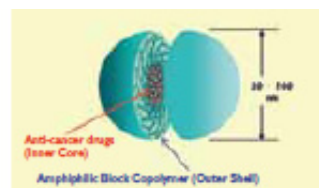
▶ Semiconductor packages that employ eco-friendly epoxy molding compound.

Thermal conductive bonding sheet Functional Chemicals Group

### Pharmaceuticals Business

In a fusion of the small molecule synthesis technology of pharmaceuticals and the polymeric technology of resins, Nippon Kayaku Group's technology is also being used in the formulation of a polymeric micelle anticancer drug that is currently under development.

- Polymeric micelle anti-cancer drug (under development)



Polymeric micelle anti-cancer drug (under development)

Pharmaceuticals Group

### Safety Systems Business

Nippon Kayaku Group's technology is also used in automobile safety components that are deployed during an accident. These components are found in airbags to protect passengers from an unexpected traffic accident, seatbelt pre-tensioners, and pop-up engine hoods designed to lessen the impact of a collision with a pedestrian.

- Airbags that operate using proprietary Nippon Kayaku technologies



Airbags that operate using proprietary Nippon Kayaku technologies

Safety Systems Group

### Agrochemicals Business

Agrochemicals work to protect crops from pests and weeds, as well as to lighten the labor involved in agriculture. Nippon Kayaku Group's technology is being put to use in these agrochemicals that assist in growing our food.

- Nereistoxin pesticides

▶ Leaf Guard – effective against major insects on Welsh onions and cabbage.



Leaf Guard – effective against major insects on Welsh onions and cabbage.

Agrochemicals Business

### Research and Development

We constantly strive to create new business ventures for the future. One example of this is our focus on the development of dye-sensitized solar cells using our proprietary dye technologies in order to help make society more environmentally-friendly.



[Click here to learn more about our research laboratories](#)

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## Initiatives with Our Customers

The Nippon Kayaku Group continually strives to develop sound products and services that are both safe and reliable in order to provide the best possible solutions to its customers around the world.

### From Green Procurement to CSR Procurement

Nippon Kayaku is aggressively working to reduce the environmental impact from its procurement activities.

Our green procurement activities involving raw materials and other goods now enable us to select relevant items, tally results for each item and business, as well as set targets. Moving forward, we will continue to work with our partners to ensure that the entire supply chain is able to reduce its impact on the environment.

Our electronic purchasing system for indirect materials enables us to display green labeled products as well as products compliant with Japan's Law on Promoting Green Purchasing in our electronic catalogue. It also makes it possible to search only for target products from among indirect materials to be purchased. We are committed to promoting the use of this electronic purchasing system and to further increasing our ratio of green procurement going forward.

We also recognize the importance that practicing CSR throughout the entire supply chain plays in our broader promotion of CSR. As a result, Nippon Kayaku will examine the promotion of CSR procurement together with its suppliers by setting specific CSR procurement standards going forward.

#### Developing Products that Promote Energy Conservation and Moving into the Photovoltaic Power Generation Market

Nippon Kayaku displayed a dye-sensitized solar cell (DSC) at the PV Japan 2011 trade show held at Makuhari Messe outside Tokyo in December 2011 in order to conduct market research.

This DSC is an all new type of solar cell that consists of many organic materials, unlike the current mainstream silicon-type cell, while it boasts a high power generation performance for indoor light. DSC can also be customized in terms of color tone and transparency to meet the needs of specific applications.

PV Japan, a trade show for photovoltaic technologies in the spotlight today, is attended by large numbers of visitors from various sectors. As such, we recognized the event would offer a great platform to discuss our DSC and differentiate it from existing products.

Nippon Kayaku is currently moving forward with the development of unique DSC-related products that combine its highly competitive dye and resin technologies with its long-researched DSC modularization technologies. In particular, we have been developing cutting-edge sensitized dye, the key material that largely determines performance, to help improve photovoltaic power generation performance. We are also partnering with companies and universities that possess technologies for manufacturing modules related to the various elements used in DSC. By actively engaging in the photovoltaic power generation market through the development of new cell-related products, we hope to further revolutionize technologies aimed at achieving greater energy conservation as well as those aimed at playing a lead role in the development of a renewable energy-based society.

Moving forward, we will continue to solicit information and feedback from visitors to various trade shows, such as PV Japan, which will help align our development with the needs of international markets.



Dye-sensitized solar cell

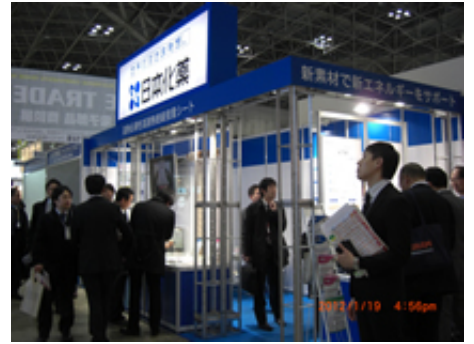
#### Heat Release Sheet Displayed as a Product that Promotes Energy Conservation

Nippon Kayaku's Functional Chemicals Group displayed and introduced the KTM series

thermal conductive bonding sheet at the Internecon 2012 trade show, held at Tokyo Big Sight in January 2012, as a product that promotes energy conservation.

The semiconductor sector has seen a further acceleration in demand for high speed and high integration production. As a result, the question of how best to manage the large amount of heat involved in these processes has become more important than ever.

Many visitors to the trade show demonstrated a strong interest in our products that help promote energy conservation, which made the event an important opportunity to hear feedback directly from our customers. Moving forward, we plan to participate in even more trade shows as part of our commitment to help society develop by creating products that meet the needs of our customers in the areas of the environment and energy conservation.




Exhibition booth

## Inflators Exhibited at TEPIA

The Nippon Kayaku Group has sponsored an exhibit of its proprietary developed inflators at the exhibition space in the Advanced Technology Exhibition Hall @TEPIA run by the Association for Technological Excellence Promoting Innovative Advances (TEPIA).

This particular kind of inflators is used in automobiles to instantaneously inflate airbags. The Nippon Kayaku Group's long-time experienced explosive technologies are utilized in these inflators to inject gas into an airbag faster than a blinking eye once activated, or just 0.04 seconds. Once inflated, airbags help to cushion vehicle occupants from serious collisions. The Nippon Kayaku Group began by developing inflators for driver and passenger airbags, but has since expanded its reach to include side airbags, curtain airbags and even knee airbags. This demonstrates our steadfast commitment to helping make vehicles safer.

We hope to teach consumers about how our inflator systems work through this exhibition and also make further contributions to the safety of vehicle occupants going forward.

- [Advanced Technology Exhibition Hall @TEPIA](#) 

## Chemical Substance Information Management and Provision

A Material Safety Data Sheet (MSDS\*1 ) provides information necessary for the safe handling of chemical substances and is required under laws such as the Pollutant Release and Transfer Register (PRTR) Law and the Industrial Safety and Health Law of Japan. We use a database to manage the distribution of MSDSs and records of such distribution to ensure that the latest information is made available at all times.

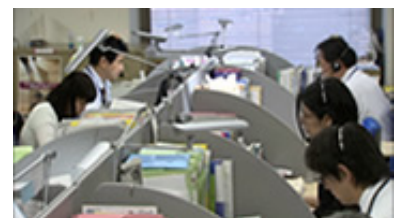
Following efforts in 2009, Nippon Kayaku continued to work toward the institutionalization of various countries' MSDSs and use of the GHS\*2 in labels again in 2010. In addition, we utilized our newly rolled out Chemical Substance Management System to aggregate and report our manufacture, import quantities and shipment volume of general chemical substances under Japan's Amended Chemical Substances Control Law.\*3

- \*1 MSDS (Material Safety Data Sheet): A document issued by the supplier of a chemical product to the user to ensure its safe handling. The MSDS includes detailed information on the danger and hazardousness, safety measures, and emergency countermeasures.
- \*2 GHS (Globally Harmonized System of Classification and Labeling of Chemicals): The danger and hazardousness of chemical substances are classified according to certain international standards and labeled in an easily understandable way. Product labels and MSDSs follow these rules to prevent accidents and to protect human health and the environment.
- \*3 Amended Chemical Substances Control Law: Requires companies to report the manufacture, import quantities and uses of all chemical substances annually.

## Ethical Drug Information

As of September 2010, Nippon Kayaku supplies a total of 74 ethical drug products and medical devices.

The Medical Information Service Center received a total of 24,000 inquires from customers over the last year. The Center addresses each call in a professional manner so as to provide the most appropriate drug product information to ensure that our products are the best possible solution. Feedback received from our customers is also reported to relevant divisions. Our motto is to strive to raise the bar for customer satisfaction and promote the appropriate use of our ethical drug products.



Medical Information Service Center

## Initiatives for Society

With operations located around the world, the Nippon Kayaku Group stands committed to actively communicating with the local communities in which it operates because they represent one of its most important stakeholders.

### Ambulance Donated to the Municipality of Salinas Victoria – Kayaku Safety Systems de Mexico, S.A. de C.V.

Kayaku Safety Systems de Mexico, S.A. de C.V.(KSM) is located in the municipality of Salinas Victoria outside Monterrey in Northern Mexico. As an overseas subsidiary of Nippon Kayaku's Safety Systems Group, KSM has been manufacturing micro gas generators for vehicle seatbelts since 2009.

During the meeting with city officials to receive approval for the construction of KSM's factory, the company learned that the municipality needed to replace its aging ambulance but could not secure the budget for this outlay. As a result, KSM decided to donate an ambulance to the municipality as part of its contributions to the local community. The ambulance was donated in November 2011 at a presentation ceremony attended by the Mayor of Salinas Victoria.



Ambulance donated by KSM and the presentation ceremony

### Initiatives for Japan's Aging Society – Nippon Kayaku Medical Care Co., Ltd.

Nippon Kayaku Medical Care Co., Ltd. is a provider of nursing care services that was established in April 2003. Today, the company operates four daytime nursing care service centers in Tokyo's Shinjuku Ward, with monthly users totaling about 2,000 seniors. Because it was founded by Nippon Kayaku, a manufacturer of pharmaceuticals, the company's service programs that seek to improve motor skills and mouth function were developed in a tie-up with research institutions affiliated with a university and other organizations.

Since the start of its long-term care insurance system, Japan has been in need of high-quality, efficient nursing care services. For service providers, this means the development of more leaders capable of managing outlets has fast become an important task facing the sector.

In fiscal 2009, the Japanese Consumers' Cooperative Union, Kawajuku Educational Institution Group, and Nippon Kayaku Medical Care were selected to participate in a research program for improving employment management of care workers run by Japan's Ministry of Health, Labour and Welfare called Improving the Skills of Onsite Managers and Promoting Career Advancement. As part of the program, the three companies created human resource development programs for managers in the sector. Later, Nippon Kayaku Medical Care's Manager Development Program became highly sought after by care service providers located across Japan. To date, more than 6,000 managers of care centers have taken part in this program, illustrating that the company has achieved strong results in the development of human resources working in the field. Nippon Kayaku Medical Care believes its mission is to focus on its core business of daytime care services as well as to offer this program to managers of care centers in every corner of Japan to help improve and evolve their management abilities.

- [Nippon Kayaku Medical Care Co., Ltd.](#) 

### Donation of Large Intestine Endoscopes for the Early Detection of Cancer – INDET SAFETY SYSTEMS a.s.

INDET SAFETY SYSTEMS (ISS) is a subsidiary of the Nippon Kayaku Group situated in the city of Vsetin in the Czech Republic that manufactures safety components for the auto industry. In November 2011, ISS donated self-propelled large intestine endoscopes to Vsetin Hospital. These particular endoscopes are highly manoeuvrable and are capable of detecting even very small early stage cancers. Over the years ISS has also donated portable gastrofiberscopes, pulse oximeters, and portable ultrasound devices. The

recent donation of large intestine endoscopes was featured in a local newspaper.

Vsetin Hospital shared the following statement, "These new large intestine endoscopes have enabled us to design surgeries better tailored to patient conditions, which helps reduce impacts on the body and minimizes the amount of large intestine we need to remove. Although we are using these devices for the first time, we have used them on a number of occasions since they were donated. For example, during the follow up period, we discovered changes in the condition of a patient who had undergone surgery a year and a half earlier. We used one of the donated endoscopes to find and remove a cancerous tissue using a minimally invasive procedure. Such procedures are very advantageous to our patients."



Donated endoscopes

ISS recognizes that hospital facilities are critical for not only the local communities where it operates, but also for its employees and their families using them. ISS stands committed to maintaining its sound partnerships with Vsetin Hospital going forward and making further contributions to the local community.

- [INDET SAFETY SYSTEMS a.s.](#) 

### Involvement in Children's Chemistry Experiment Show 2011 – Showcasing the Wonders of Chemistry to the Next Generation

The Nippon Kayaku Group took part in the Children's Chemistry Experiment Show 2011 event for elementary and junior high school students held at the National Museum of Emerging Science and Innovation (Odaiba, Tokyo) on November 26 and 27, 2011.

Experiments during the show, which was held during the International Year of Chemistry, focused on the theme, "Know, see and immerse yourself in the adventure of color."

Experiments taught participants about color and how inkjet printers are able to print a variety of different colors. They also included dyeing an illustration on an actual bag. The event welcomed 200 participants over the two day period. These children took part in experiments and listened intently to the presentations given by Nippon Kayaku Group employees.



An experiment during the event

The Children's Chemistry Experiment Show was started in 1993 in order to educate children and the general public on the wonders of and contributions chemistry has made to society. The year 2011 was the International Year of Chemistry to commemorate the 100th anniversary of Marie Curie winning the Nobel Prize for Chemistry and the Nippon Kayaku Group once again took part in this event as part of its commitment to being a member of the chemical industry.

This engagement also forms part of our commitment to actively teach children about the interesting nature of chemistry and in the process develop the future leaders of the industry.


### Involvement in the Wakachiai (Sharing) Civic Charity Fair in Remembrance of 3.11 – Nishiminato Driving School

On Sunday, June 10, 2012, the first Wakachiai (Sharing) Civic Charity Fair in Remembrance of 3.11 was held in the Kokurakita Ward of Kitakyushu City at Nippon Kayaku Group company Nishiminato Driving School, which is a member of the fair's executive committee that consists of companies and organizations from the city.



The day of the fair featured a variety of events and performances. These included the collection of donations to help serve people in need for a decade after the Great East Japan Earthquake as well as panel displays and lectures on the earthquake and tsunami. There were also booths selling specialty items and gourmet food items from the Tohoku region, food vendors selling local specialty meals, a charity raffle and a Kokura Gion Taiko drum performance. More than 3,000 people attended, making the event quite a success. The executive committee plans to make the fair an annual event going forward.

Donations provided at the fair will be used to benefit children orphaned by the earthquake and tsunami.

- [Nishiminato Driving School Co., Ltd.](#) 

### Sponsor of the 66th National Sports Festival and the 11th National Sports Festival for the Disabled

The 66th National Sports Festival and the 11th National Sports Festival for the Disabled were held between October 1 and 11 and October 22 and 24 in Yamaguchi Prefecture, respectively, in support of the Great East Japan Earthquake recovery effort. Both events ended in great success after heated competition across the entire prefecture.



Nippon Kayaku's Asa Plant made a 5 million yen cash donation to both these events and also donated 40 multi-function wheelchairs. The plant also hosted a booth at the main venue tent for both events to provide support and aid each.

## Asunaro House – Supporting Families of Children with Intractable Diseases

The Nippon Kayaku Group, as part of the commemorative projects marking its 80th anniversary and under the motto of providing a helping hand to children with intractable diseases



Asunaro House features self-locking doors making it possible for users to leave and enter the facility during holidays and nighttime hours.

and their families, owns and operates Asunaro House, an extended-stay facility for caregivers in Saitama City, Saitama Prefecture. Asunaro House, which first opened in December 1998, provides caregivers of children fighting intractable diseases, such as childhood cancer, with a safe haven to live while their child undergoes treatment or a bone marrow transplant at nearby specialist medical institutions. In fiscal 2010, Asunaro House was used by 178 families.

Asunaro House is equipped with everything needed for extended stays. Together with safeguarding the privacy of users, the facility also features a shared kitchen, cafeteria and living space so that parents of children battling disease can meet and support one another, as the other goal of the facility is to alleviate the mental stress on caregivers. A playroom is also made available for children.

The Nippon Kayaku Group, through its business activities and social contribution activities, is committed to fulfilling its role toward society as a good corporate citizen.

## The Pink Ribbon Campaign

While cases of breast cancer are increasing each year on a worldwide basis, the death rate from the illness is falling in the US and Europe yet rising in Japan. Early and proper diagnosis, as well as treatment, is critical to lowering the death rate.

With a goal to improve the quality of healthcare and to disseminate information on the appropriate use of our products, Nippon Kayaku assists in organizing study groups throughout Japan on diagnostic imaging (mammography and sonography, etc.) and treatment methods for medical staff.

In addition, during each October, which is designated as Pink Ribbon Campaign Month, we hand out various campaign-related items at our business establishments in order to educate the general public on the importance of early detection, early diagnosis and early treatment. In 2010, we displayed a mascot stuffed toy together with posters in the reception area of each of our business locations as well as used Pink Ribbon bumper stickers to raise awareness among our stakeholders.



Kayami  
– the Nippon Kayaku Pink Ribbon Campaign character



Breast Cancer Info Navi  
– An informative website supported by the Nippon Kayaku Group (Japanese only)

## Providing Support for LRI Activities

The Long-range Research Initiative (LRI) is a joint initiative of the chemical industries of Japan, the United States and Europe. Part of the voluntary activities of International Council of Chemical Associations (ICCA), LRI supports long-term research into the effects of chemicals on human health and the environment, with focus on endocrine disrupting effects, neurotoxicity, chemical carcinogenesis, immunotoxicity and elaborating risk factors.

Nippon Kayaku has actively backed LRI from its start in 1999 by offering financial support for LRI activities.

[LRI] <http://www.i-lri.org/english/>

## Community Relations

Interacting with the Local Community at the Childrearing Kannon Festival and Summer Bon Odori Dance Festival – Takasaki Plant

Nippon Kayaku's Takasaki Plant actively takes part in the Childrearing Kannon Festival and Summer Bon Odori Dance Festival, both

local traditions of the Iwahana neighborhood of Takasaki City, as a member of the local community. The Childrearing Kannon Festival is an annual event that was held at the Kannon Temple located in the Iwahana neighborhood. During the festival held on August 20, 2011, many people visited the temple to pray for the healthy development of their children, and they also especially offered their prayers for a speedy recovery following the Great East Japan Earthquake. The event also has a parade carrying the temple's mikoshi, or portable shrine. Many Takasaki Plant employees, including new hires, carried the company mikoshi along the parade route, enlivening the festival.



The neighborhood's Summer Bon Odori Dance Festival was held on August 23, 2011. Prior to the event, the Takasaki Plant's team spent a lot of time practicing whistles and taiko drums for a local traditional song, which is popular as the song of the choreographed routine, Joshu Nidan-otoshi. The team also devoted itself to building a tall wooden stage. On the day of the festival they showed off what they had practiced atop the stage. Local residents also took part in their song and dance routine, helping make the festival fun for all. The Takasaki Plant takes part in these traditional events to broaden interaction with the local community and to maintain its commitment to engage in its operations with an eye on the local community.



### Joint Exercises with the Tokyo Fire Department

On June 8, 2012, the annual training exercises of the Tokyo Fire Department and Tokyo Hazardous Materials and Disaster Preparedness Joint Assistance Council were held at the offices of Nippon Kayaku in Tokyo.

The six blocks of the Tokyo Hazardous Materials and Disaster Preparedness Joint Assistance Council, which consist of between five and 11 companies, take turns hosting the location of this annual joint training exercise. Nippon Kayaku's Tokyo office is situated in Block B and 2012 was our turn to provide the site for the exercise. This proved to be a very valuable learning experience for us because we do not often get the opportunity to host such a large-scale training exercise.



On the day of the exercise, 17 fire department vehicles, including ladder trucks, hose trucks, water supply trucks, pump vehicles, chemical response units, emergency vehicles and command vehicles took part in the huge exercise. Through this important event, we were able to build up relationships with fire fighting officials, including local fire stations, strengthen our support framework among Tokyo Hazardous Materials and Disaster Preparedness Joint Assistance Council members and check the capabilities of our own onsite firefighting units.



#### • Overview of Training Drills

##### Stage 1:

Nippon Kayaku firefighting units launch start-up activities after the earthquake strikes

##### Stage 2:

Lifesaving activities for people unable to escape from a fire at the research building and activities by Nippon Kayaku firefighting units as well as the Tokyo Hazardous Materials and Disaster Preparedness Joint Assistance Council' team to secure facilities with hazardous substances following the issuance of a tsunami warning

##### Stage 3:

Firefighting and water supply activities to help put out vehicle fires



Drill in action

- [Letter of Appreciation from the Akabane Station Chief](#) PDF

## 平成24年度危険物施設合同消防演習を終えて

赤羽消防署長 小寺 徳雄

去る6月8日（金）、日本化薬株式会社東京事業所施設内において、地震による危険物施設の災害を想定した大規模な消防演習を実施しました。この演習は、危険物安全週間における主要行事の一環として、例年、東京消防庁と東京危険物災害相互応援協議会との合同により実施しているものです。今回は東京直下の強い地震が発生したとの想定のもと、日本化薬自衛消防隊による初期対応にはじまり、出火建物からの救出活動、津波による建物への浸水防止及び危険物の流出防止措置、タンクローリー火災の消火活動などの訓練が本番さながらに展開されましたが、参加した自衛消防隊員の皆さんの真剣な取り組みを目の当たりにし、管轄消防署長として大変に力強く感じたところです。

さて、昨年、東日本大震災では、千葉県市原市の製油所にあるLPG貯蔵タンクで爆発を伴う大規模な火災が発生しました。また、当庁管内でも屋外タンク貯蔵所の破損による危険物の流出被害等が9件発生しています。昨今、東京湾北部地震や東海、東南海、南海の三連動地震の切迫性が指摘される中、地震による危険物施設の火災や危険物の流出等の被害を防ぐためには、危険物の適正な貯蔵、取扱い等とともに、大地震を想定した自衛消防訓練を定期的に行うことが極めて重要です。

とりわけ日本化薬株式会社東京事業所は、当署管内でも有数の優良事業所のひとつであり、どうか今後とも高い防災意識のもと、安全第一に事業を展開されますことを大いに期待しております。

結びに、施設のご提供や多くの社員の皆様のご参加など、本演習にあたり多大なご協力をいただいた日本化薬株式会社東京事業所に対しまして、紙面をお借りして深く感謝の意を表しますとともに、事業が益々ご発展されますことを心からお祈り申し上げます。

## Initiatives for Employees

A company is nothing without its people. The Nippon Kayaku Group is committed to creating safe and secure workplaces where its employees can thrive and feel a greater sense of motivation by helping benefit society through their jobs. Our goal is to provide a wide range of systems and programs for our employees that fully take into account the changes taking place today.

### Training programs

Various training programs are provided to employees according to their jobs positions. These comprehensive training programs are conducted so as to develop the skilled workforce that will lead Nippon Kayaku in the next generation.

- **Mandatory programs**

In order to systematically develop the skills of the employees, training is imparted to the employees start immediately upon their joining the company. This is followed by mandatory programs after durations of one year and three years. Mandatory programs are also conducted as key employees are promoted to certain jobs and positions because of their improved work performance.

- **Voluntary programs**

A wide array of voluntary training programs is also available. These voluntary programs are tailored to specific employee characteristics and jobs. They facilitate self-improvement and boost the job-related problem-solving abilities of the employees.

- **Selective program**

A program providing special leadership and management training is also available for promising candidates who are recommended by the superiors.



Training programs

#### Lodging Facility Completed at Training Center

We completed construction on a new lodging facility at our training center in February 2012 to replace the previous facility that was first opened back in 1992.

The new lodging facility was designed to provide a place for learning, interaction and rest. It also features rooms for individual employees, compared to the previous facility where there were three employees to each room, to better accommodate new hires and other employees staying there for extended periods of time. The facility also has a lounge space for private gatherings during and after training as well as an exercise room to enable participants to keep in shape during their stay. In 2011, a total of around 5,000 employees used the training center during the year and we expect this number to increase in 2012 and beyond thanks to the addition of these brand new employee-centric facilities.



Training Center Lodging Facility

### Expanding Work-Life Balance Programs

We are making efforts to reduce overtime work, expand in-house programs, and encourage use of these programs in order to enhance our employees' work-life balance. As part of our Next Generation Childcare Support Program, we have introduced staggered work hour schedules and a program to support employees receiving fertility treatments. Through these programs, an employee caring for a child can shift their work start time, while an employee receiving fertility treatments can take a leave of absence or special paid holidays. A large percentage of our eligible employees take childcare leave, but going forward we intend to encourage more employees to take full advantage of our work-life balance programs.

#### Better Managing Employee Work Hours

The Nippon Kayaku Group strives to properly ascertain employee work hours and conditions, to take action where needed, and to foster an environment where employees and management work together, in order to follow compliance best practices and safeguard employees' mental health. We are also working to reduce employees' overtime hours from the standpoint of improving work-life balance. In fiscal 2011, we were able to reduce overtime hours by about four hours per employee compared to fiscal 2009. Going forward, we are committed to

further enhancing the workplace environment for our employees by creating added value, improving operational productivity and changing the way employees work.

## Special Paid Leave Program

We are actively supporting the work-life balance needs of our employees. Part of this support can be found in the Special Paid Leave Program where under certain circumstances employees can take paid leave that has been carried over from previous years. Typically this carried-over paid leave expires after two years.

Taking this special paid leave does not require any cumbersome application process; rather, employees simply have to provide either a medical certificate from their physician or some other document that verifies they require leave. In addition, even after taking part in the program once, employees can continue to accumulate paid leave to use in the future as part of this program.

### ● Special Paid Leave Program

Applicable Uses	No. of Days Allowed
To receive treatment of an injury or illness that requires at least 4 consecutive days of care To receive outpatient services for rehabilitation or aftercare (within the stated period on the physician-issued medical certificate)	Up to 60 days
To provide nursing care to an immediate family member, aunt or uncle	45 days
To participate in a training program or volunteer activities	30 days
Leave in conjunction with the use of active points from the Nippon Kayaku Cafeteria Plan	5 days
To take leave in order to receive a vaccination or medical exam for a child of preschool age	5 days
To receive fertility treatments	60 days
To allocate additional days to childcare leave	10 days
To allocate additional days to leave for providing care to a sick child	10 days

## Offering a Greater Selection of Development Programs for Employees

As part of our efforts to supporting the development of the next generation, we offer and have established various programs including a staggered work hour schedule for employees caring for a child or parent and a shortened work hour schedule for employees' childcare needs. We are also taking measures to encourage more employees to use these programs.

## Mental Health Care for Employees

In 2005, the Nippon Kayaku President initiated a mental health declaration in which managers across the entire group are to comply with the following four guidelines based on four key care principles.

1. Maintain correct understanding of mental health issues;
2. Constantly check staff working conditions to prevent overwork;
3. Detect changes in staff and encourage staff who are not feeling well to discuss any mental health issues they may have; and
4. Ensure staff are able to access industrial healthcare practitioners both inside and outside the company to receive appropriate care.

Starting in 2005 we began a three-cycle mental health training program for all Nippon Kayaku Group employees, including both managers and regular employees. A training plan is prepared for each three-year cycle during which time individual training sessions are held separately for managers and regular employees. In 2011, the training sessions for the second cycle were completed. These sessions will continue to be in the third cycle starting in 2012.

Our counseling system consists of supervisors, nurses and industrial physicians internally as well as employee assistance professionals contracted outside the company. Services include a telephone hotline or an in-person session with a counselor at a place designated by the employee. These two formats ensure everyone at the Nippon Kayaku Group has easy access to our mental health care system.

## General Business Operator Action Program under the Act for Measures to Support the Development of the Next Generation

On March 30, 2012, we submitted our third action plan, prepared on March 22, 2012 for the period from April 1, 2012 to March 31, 2015, to the Tokyo Labor Bureau for approval.



Kurumin logo

## Commendation Program for New Inventions

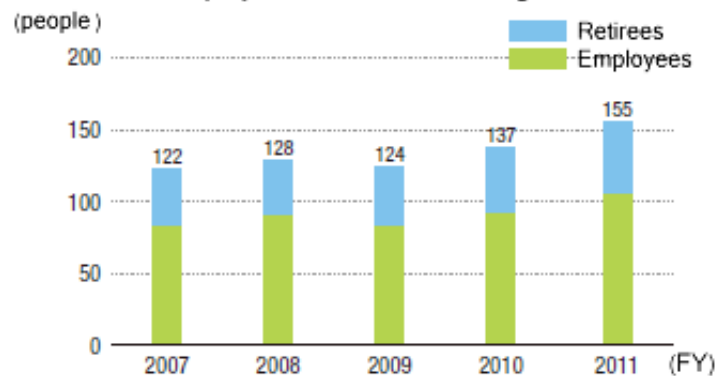
Nippon Kayaku has established several programs to commend and award employees for their inventions at work. These programs not only commend and award employees, but enable us to encourage our employees to come up with new and effective products that will benefit society as a whole. Our annual commendations are outlined below.

### 1. Performance Award Program

Our performance award program provides remuneration to employee patents that have contributed to sales. This program was initiated under the company's rule on the handling of employee inventions first prepared in 1963. This rule was created based on the provision of Japan's Patent Act and hence has been changed over the years with each modification to this law.

The figure below shows the number of employees that received a performance award over the past five years. Retirees are also eligible for a performance award, with between about 40 and 50 receiving recognition in any given year.

#### ● Number of Employee Inventions Receiving a Performance Award



### 2. Early Performance Contributions

Even for patents pending, if an invention has already made contributions to the performance of the Nippon Kayaku Group, the employee can receive remuneration known as an early performance contribution. This particular program was initiated in 2005 to properly recognize product inventions with a comparatively shorter lifecycle. This program, which is also intended to complement the performance award program from above, represents a truly progressive system in terms of providing remuneration for sales from a produce with a patent pending. Eighty-three employees received the remuneration for fiscal 2009, 67 for fiscal 2010 and 72 for fiscal 2011.

### 3. In-house Commendation for Excellent Technologies

This program seeks to commend patent applications for products for which technical innovations are being made at a fast pace over a one-year period. One invention received this commendation in fiscal 2009 and another in fiscal 2011. Employees recognized with an award are asked to give a lecture at an award ceremony.

Other annual commendations include best workplace and highest performance expectation, among others.

## Environmental, Health, Safety and Quality Assurance Management System

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.

### 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.

#### The Declaration on Health, Safety, Environmental Protection and Quality

Enacted November 7, 1995  
Amended September 1, 2010

We will exert efforts as part of our unwavering commitment to contribute to humanity by creating products and technologies that protect and enhance people's health, life and comfort.

Our activities will not threaten the health and safety of people or property, nor be harmful to the environment.

Under our corporate motto of "KAYAKU spirit", which calls for providing society with the best possible products that meet customers' needs, by means of endless innovation and real cooperation, based on our high-esteemed ethics, we will conduct ourselves according to the following fundamental policies.

#### Fundamental Policies

1. We will be cognizant of the entire product lifecycle—from research and development, through production and sales to disposal—by evaluating effects on health, safety and the environment.
2. We will bear responsibility for the quality of our products, and will strive to develop and improve products that satisfy our customers.
3. We will increase our awareness toward the preservation of health, safety, environmental protection and quality of our products, and will endeavor to achieve the goals of no pollution, no accidents and no unsafe products.
4. We will provide necessary information about how to use and handle our products safely.
5. We will continue to promote the conservation of physical and energy resources as well as global warming countermeasures in order to contribute to the protection of the environment.
6. We will actively work to develop environmental protection technologies, as well as applications for such technologies.
7. We will make efforts to deepen communication about our operations and products among communities and government authorities to assure that proper understanding is achieved.



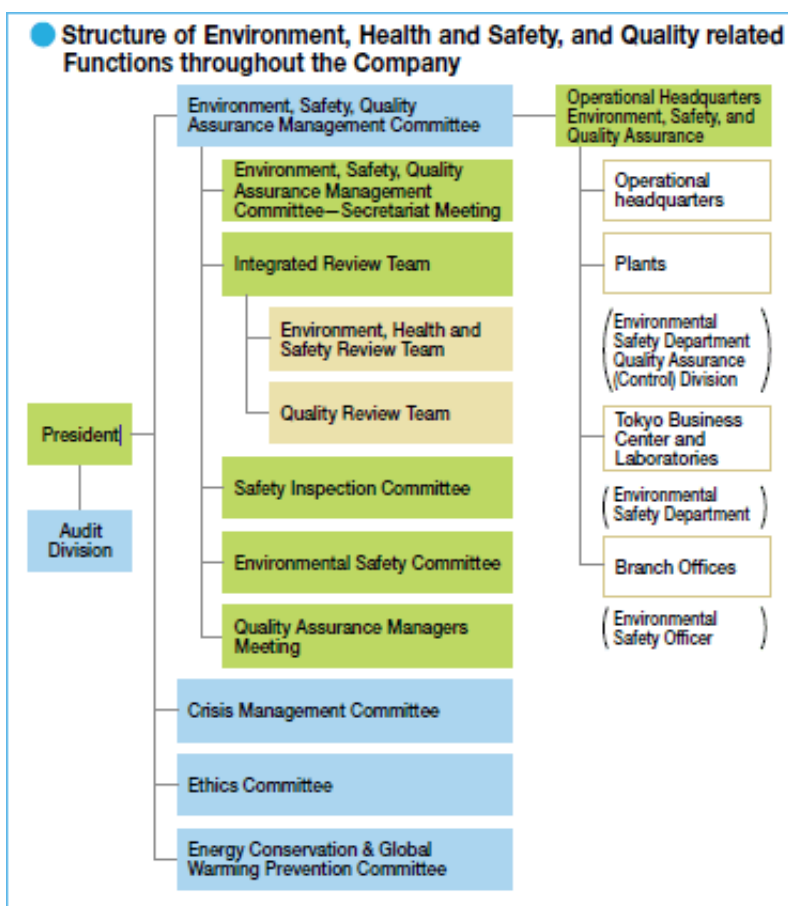
President & Representative Director  
Nippon Kayaku Co.,Ltd.

\*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.



## Management Structure at Our Business Sites

Each of our business sites has a committee on health and safety or the environment, health and safety headed by the head of that particular site. In addition, as a subordinate body, each business site also has a committee for promoting health and safety that consists of members representing each of the site's workplaces. Matters discussed by the Health and Safety Committee or the Environment, Health and Safety Committee are shared with all employees at roundtable meetings organized by the Health and Safety Promotion Committee. Conversely, matters discussed at roundtable meetings and by the Health and Safety Promotion Committee are communicated back to the Health and Safety Committee or the Environment, Health and Safety Committee as employee feedback.

Each business site's quality assurance (management) department leads Quality (Assurance) Committee meetings on a regular basis to check raw materials handled at each business site, examine customer complaints or quality issues concerning products made at that particular site, and deliberate on how to eliminate such complaints and quality issues. The committee also debates quality issues pertaining to new products, modified products and existing products to ensure that quality is constantly improved.



## 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.



● Quality Assurance Management / Environment Management System Certified Workplaces

Workplace	● ISO9001	ISO14001
	■ ISO / TS16949*4	
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

- \*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.

## 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.

### 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.

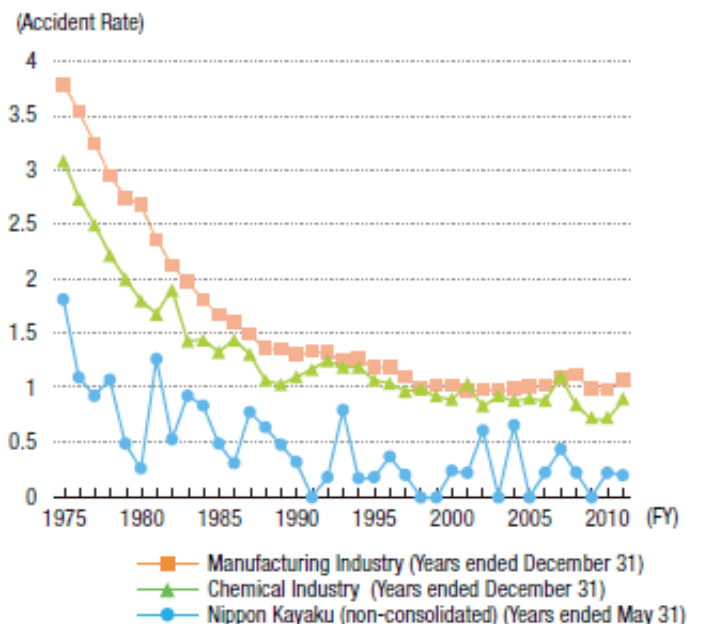
In terms of traffic safety, there were 42 traffic accidents involving company-owned vehicles, representing an increase of 20 compared to last fiscal year. As a result, we will continue with safe driving reviews of our MRs using a camera-equipped drive recorder as well as assure safer driving habits by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

#### Fiscal 2011 Safety Targets and Performance

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

#### Rate of Lost Worktime Accidents



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



Award presentation ceremony

#### 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 safetyfirst mentality at our plants by combining the Kashima Plant's culture of safety with new safety activities.

# 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".

## Occupational Health and Safety as well as Quality Assurance Initiatives

### 1. Safety and Quality Assurance Activities at Work Sites

We are undertaking a wide range of safety and quality assurance activities.

Safety Activities	Quality Assurance Activities
◦ Risk Assessment	◦ Quality Risk Assessment
◦ 5S Activity*2	◦ Quality Patrol
◦ Hiyari Hatto Activity	◦ Trend Management (Visualization)
◦ KYT Activity	◦ Campaign to Prevent the Reoccurrence of Quality Problem
◦ TPM Activity*3	◦ Quality Technology Training

\*2 5S Activity: An acronym of five Japanese words phonetically starting with the letter "S".

\*3 KYT Activity: Kiken Yochi Training Activity (Danger Prediction Training Activity).

### 2. Conducting Safety Assessments (Risk assessment, understanding potential risk factors)

Each of our business sites implements risk assessments. Risk factors in chemical reactions are analyzed primarily based on HAZOP.\*4

\*4 HAZOP: Hazard and Operability Study. A safety evaluation methodology used at chemical plants. Potential hazards associated with chemical reactions can be comprehensively extracted for evaluation.

#### Risk Assessment Training at the Takasaki Plant

At our Takasaki Plant we systematically conduct training programs based on age, rank and job type in order to enhance employee knowledge, skills and qualifications. As part of the plant's safety training regimen, a risk assessment course is held for mid-career employees. Risk assessments are an important safety tool used as part of the plant's health and safety activities. Each year training course curriculum is modified to enhance quality and understanding. Enhancing the knowledge and skill sets of mid-career employees is extremely important to heightening the entire plant's level of safety. The Takasaki Plant will continue to hold training on not only risk assessments, but also relevant laws and safety to upgrade the entire plant's awareness and prevent accidents.

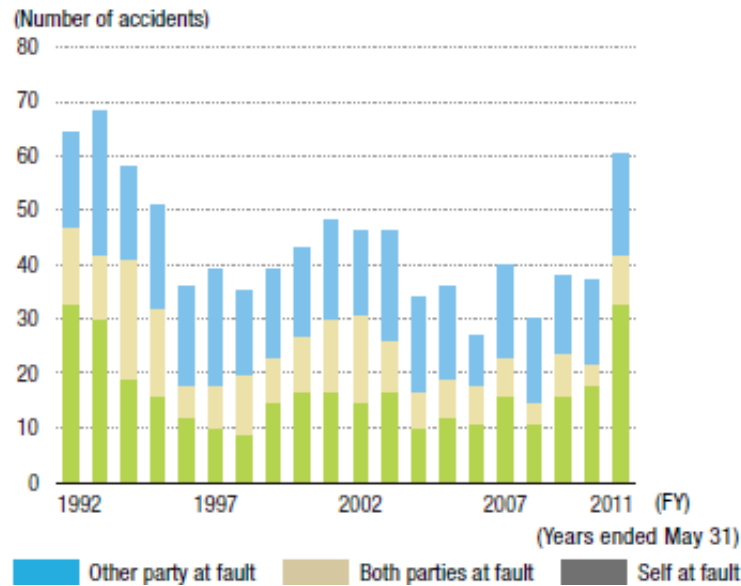
### 3. Elimination of Shortcuts and Omissions

Accidents that have occurred within the Nippon Kayaku Group in recent years have tended to result from shortcuts or omissions. As a result, the Nippon Kayaku Group is 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.

### 4. Traffic Safety Initiatives

Many Nippon Kayaku Group employees use automobiles on a daily basis for both work and commuting purposes. Our average rate of work-related traffic accidents to date is one-third the industry norm of the Japan Pharmaceutical Manufacturers Association, but there were a total of 42 work-related automobile accidents in fiscal 2011, resulting in a 10.5% accident rate, almost double that of the previous year. In order to further reduce traffic accidents, we have conducted a safe driving review of our MRs that combines a driving test approved by the National Policy Agency with a camera-attached drive recorder.

## ● Work Related Traffic Accidents



### 5. Promoting Health Management

Our employees undergo regular health checkups as well as special physical examinations because chemical substances are regularly handled on the job. Employees meet with an industrial physician following their regular health checkup to receive guidance and instructions on their health management and awareness. We also manage a database of information on the hazardous properties of chemical substances and utilize this information to prevent work related illnesses.

### 6. Deployment of AEDs

Nippon Kayaku has provided automatic external defibrillators (AEDs) to its plants, business sites and head office. Employees also regularly participate in internal CPR training sessions and external lectures in order to prepare for incidents of sudden cardiac arrest.

## Responding to Accidents and Disasters

### 1. Fire response

Each business location is equipped with a fire truck, fire hydrant, and fire extinguisher for chemical substances in preparation for potential fire hazards. In addition to holding on-site training, employees also participate in local fire fighting competitions at which they have achieved strong results.

### 2. Natural disaster response

As a precaution for earthquakes and other natural disasters at each workplace, we have compiled and distribute the Employee's Handbook of Disaster (Earthquake) Prevention to each and every employee. This handbook contains instructions on emergency response when an earthquake occurs, how to make contact and confirm one's safety, and alternative methods to reach home when public transportation is unavailable.

Employee safety during a disaster is monitored by a safety reporting and communication system that uses email. As an earthquake strikes, the disaster response headquarters will send out an instruction by email to all employees. Employees can reply to the email by a simple touch of a button, which allows data to be collected. This system will be used to confirm employee safety during an earthquake of a seismic intensity of 6 or higher in Japan.

## Management of Chemical Substances

### 1. Accident Prevention Measures for Spills during Shipment

#### The Yellow Card System

Whenever hazardous chemicals are transported, we require the driver of the vehicle to carry a Yellow Card\*6 as a precautionary measure for emergency situations.

\*6 Yellow Card: One of the voluntary activities proposed by the Japan Chemical Industry Association. A card that provides emergency instructions to the truck driver or any emergency service personnel who is at the scene of an accident that may occur during transport of chemical substances or high-pressure gases. The term "Yellow Card" comes from the color of the card.

#### Transportation of Chloropicrin

Chloropicrin is a highly irritant agrochemical which we transport with the utmost care. As a precaution against accidental spills, we stock emergency chemical-spill supplies at our business locations nationwide in Japan and conduct regular training. We have also concluded mutual support agreements with the members of the Japan Chloropicrin Manufacturers Association to collaborate during an emergency response.

#### Being Prepared for Chemical Spills

We have predetermined procedures in place that prepare us for a possible hazardous chemical spill, and conduct training to practice these procedures, including the use of self-contained compressed-air breathing apparatuses.

### 2 Collection of Chemical Substance Data

Since 1990, we have accumulated data on the risks of raw materials, intermediates, and products manufactured and used by our

company to ensure proper and safe handling of these chemical substances. This database can be accessed through our company's internal network.

### 3. Controlling Hazardous Substances

#### Controlling Hazardous Substances in Research Laboratories using a Tag System

The Integrated Research Building and Agrochemicals Laboratories have introduced a tag system\*7 to properly manage hazardous substances found on site, as our research laboratories handle a wide variety of dangerous chemicals including reagents and catalysts. The system affixes an IC tag to all hazardous chemical containers to identify degree of danger and quantity as a means to promoting safety and efficiency.

\*7 Tag system: A system of managing hazardous substances where a tag is affixed to the container that identifies the stored quantity as a score.

#### Management of Hazardous Materials at Our Plants

The receipt and shipment of goods, including raw and intermediate materials, is managed at each of our plants using a computer. This system allows us to track hazardous material volume for each storage location. In the event of a fire, the system can provide an accurate count on the quantity of hazardous substances stored on site, ensuring safer and more efficient fire fighting activities.

#### Handling of Narcotics

As one of our ethical drug products, we supply morphine preparations, a narcotic that can help relieve severe pain cancer patients can experience. The handling of this narcotic is managed very strictly with tight control over access, locks, inventory, shipments, disposal, and record keeping.

#### Handling of Radioactive Substances

Radioactive isotopes are used effectively for the screening, evaluation and pharmacokinetic testing of drug candidate compounds. In accordance with the Laws Concerning the Prevention from Radiation Hazards due to Radioisotopes and Others, the Pharmaceutical Research Laboratories use these substances only in approved facilities, and under strict observance of approved nuclides and quantities. To ensure safety, lab technicians undergo regular training and health exams, and the work environment is tightly controlled.

## 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 <sub>2</sub> Emission*3 (Production Divisions+ Operation Divisions)	More than 15% reduction	75,800 tons	CO <sub>2</sub> 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.

### Results of Our Efforts to Reduce Environmental Impacts

As part of its effort to reduce environmental impacts, Nippon Kayaku focuses on preventing air, water and noise pollution as well as stopping global warming and reducing waste.

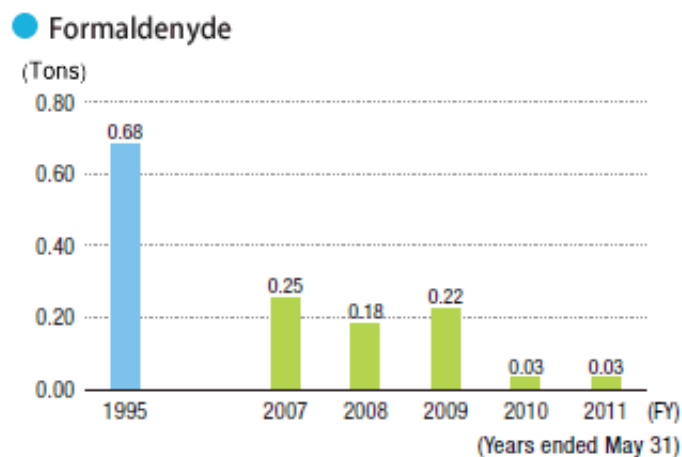
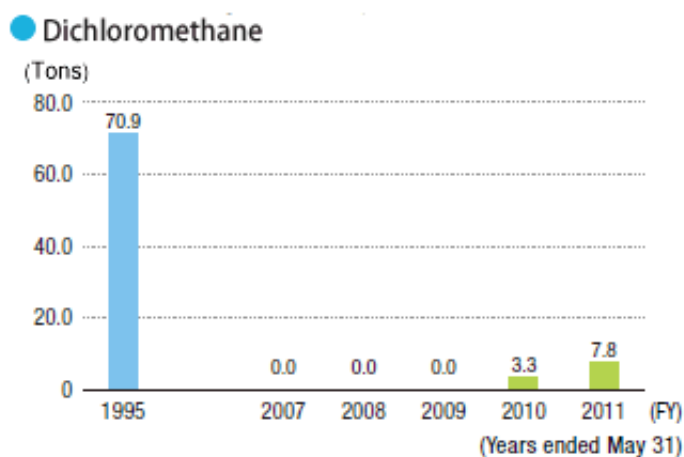
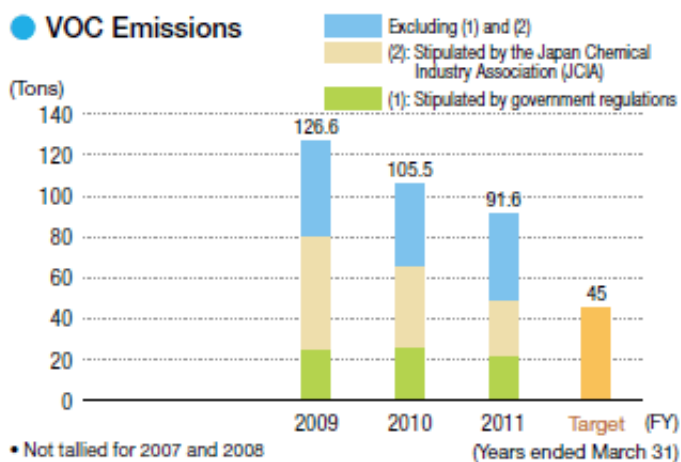
#### Preventing Air Pollution

To help prevent air pollution, we carefully manage substances subject to Japan's Air Pollution Control Act, hazardous substances released into the air and other air pollutants.

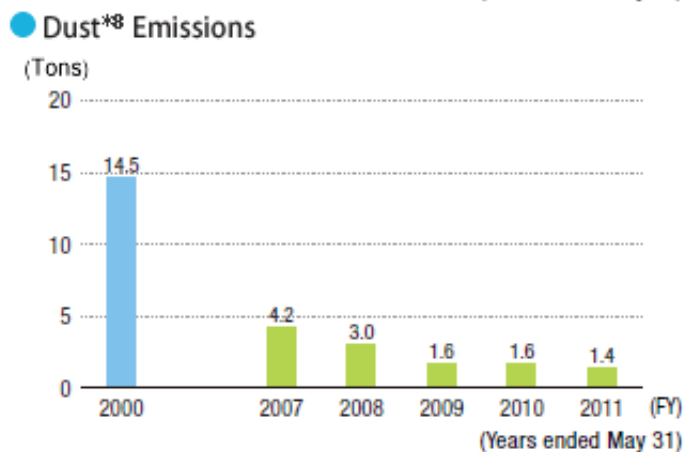
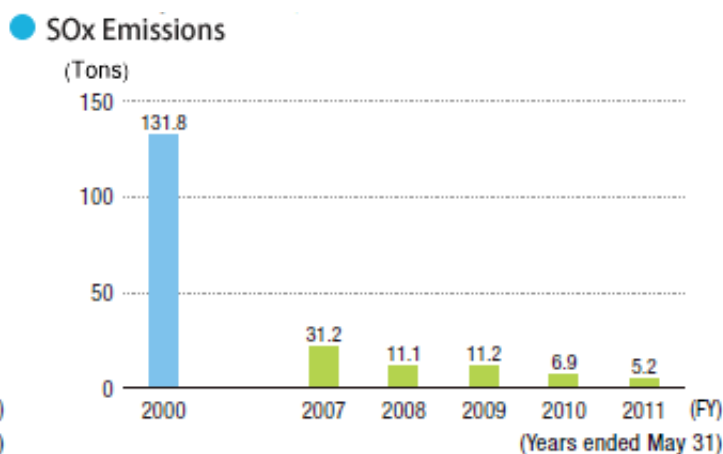
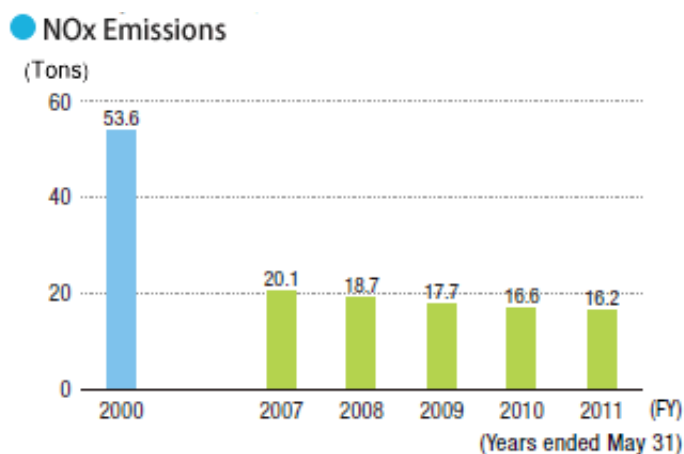
Our new medium-term environmental targets established in fiscal 2010 expand the scope of data compilation to include all chemical substances discharged into the atmosphere. The new scope includes chemical substances that are produced through reactions as well as the chemical substances conventionally subject to government ordinances and the Japan Chemical Industry Association voluntary standards. The target for VOCs is to reduce emissions into the atmosphere to less than 45 tons by fiscal 2020. The Nippon Kayaku Group stands committed to making the self-initiated efforts needed to achieve this target.

Under the initiative of the Japan Chemical Industry Association, the industry is taking action to voluntarily manage and reduce emissions of 12 control substances\*5 that are deemed to be harmful air pollutants. Of these 12 control substances, we still use five, but stopped the use of benzene in 1995. Emissions of chloroform and ethylene oxide, on the other hand, have been cut to zero since fiscal 2007. Emissions of dichloromethane had also been cut to zero since fiscal 2007, but in fiscal 2010, dichloromethane emissions amounted to 3.3 tons, which increased a further 7.8 tons in fiscal 2011. Formaldehyde emissions totaled 0.03 tons in fiscal 2010 and remained unchanged in fiscal 2011. Going forward we will focus particularly on reducing the use and emissions of dichloromethane and formaldehyde.

Air pollutants sulfur oxide (SOx)\*6 and nitrogen oxide (NOx)\*7 are emitted during boiler operations. To date, the Nippon Kayaku Group has gradually shifted the fuel for its boilers from Bunker C heavy oil with high sulfur content to other lower sulfur content fuels such as Bunker A, in addition to LPG and natural gas, which are sulfur free. We continued this transition in fiscal 2011 as well. Since fiscal 2008, we have successfully made significant reductions in our SOx emissions, and in fiscal 2011 we made further reductions. The Nippon Kayaku Group remains firmly committed to reducing its air pollutant emissions further through proper maintenance practices as well as regular inspections and upkeep.



\*5 12 control substances subject to voluntary controls: acrylonitrile, acetaldehyde, vinyl chloride monomer, chloroform, 1,2-dichloroethane, dichloromethane, tetrachloroethylene, trichloroethylene, 1,3-butadiene, benzene, formaldehyde, and ethylene oxide.



\*6 SOx (sulfur oxide): SOx is emitted when fossil fuels that contain sulfur are burned. SOx reacts with water in the atmosphere to form sulfuric acid and sulfurous acid, which are causes of air pollution and acid rain.

\*7 NOx (nitrogen oxide): NOx is produced when burned chemical substances react to nitrogen in the air and when fuels and chemical substances that contain nitrogen compounds such as coal are burned. Not only is it a major cause of air pollution including photochemical smog and acid rain, but NOx also has a harmful effect on the human respiratory system. In addition, NOx is also known to include the greenhouse gas dinitrogen monoxide.

\*8 Dust: Dust mainly refers to fine particulate soot found in dust smoke produced when burning fossil fuels. In addition to a major

cause of air pollution, humans can contract pneumoconiosis or other harmful health conditions when breathing dust in high concentrations.

### Preventing Water Pollution

The Nippon Kayaku Group has set voluntary wastewater discharge control standards that are tougher than requirements laid out in national laws and local ordinances.

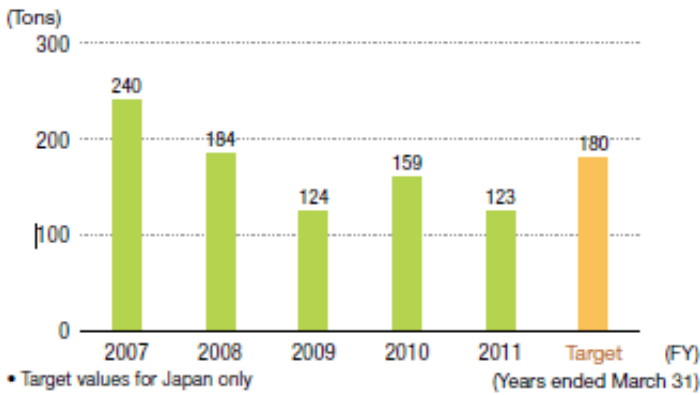
The Nippon Kayaku Group has made efforts to reduce its COD emissions by employing activated sludge treatment equipment at plants with high levels of COD emissions. During fiscal 2010 COD emissions increased to 159 tons due to the effects from changes in our production mix. In fiscal 2011, however, COD emissions returned to fiscal 2009 levels at 123 tons. At the same time, nitrogen emissions also increased to 170 tons in fiscal 2010, but thanks to our reduction efforts nitrogen emissions were reduced down to 138 tons in fiscal 2011.

The Nippon Kayaku Group produces color material-related products including dyes and ink jet printer ink, among others. Our Tokyo and Fukuyama plants, where color material-related products are manufactured, fully decolorize colored wastewater before it is discharged.

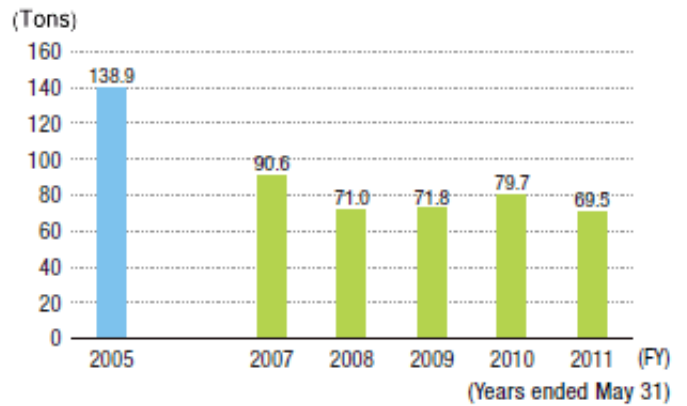
### PRTR\*9 Initiatives

Since 1995, the Nippon Kayaku Group has participated in the Japan Chemical Industry Association led initiative to reduce compounds identified in the PRTR regulation, working to reduce its emissions of PRTR controlled compounds into the environment. In fiscal 2011, our emissions of PRTR controlled substances totaled 32.5 tons, which marked a 17% decrease from 39.3 tons in the previous year. Although toluene continues to represent the largest source of PRTR controlled emissions, toluene emissions decreased from 17.4 tons in fiscal 2010 to 9.6 tons in fiscal 2011. The rate of toluene emissions also decreased from 43% of the total.

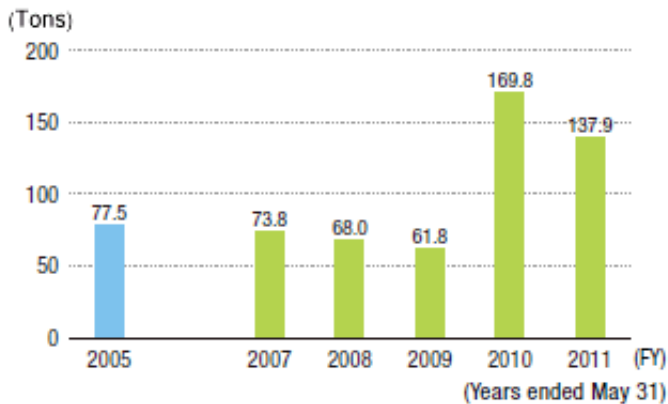
#### ● COD Emissions



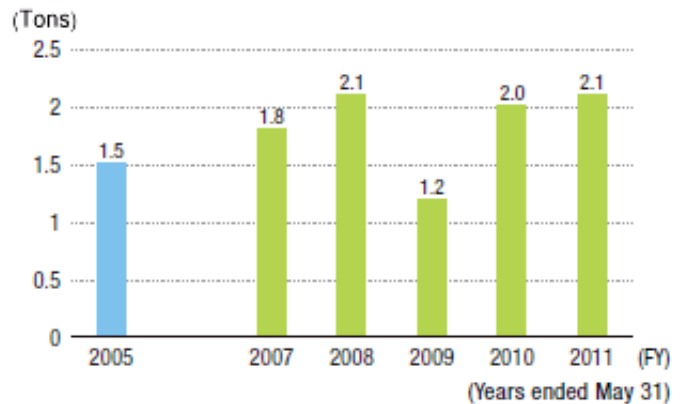
#### ● SS\*10 Emissions



#### ● Nitrogen Emissions

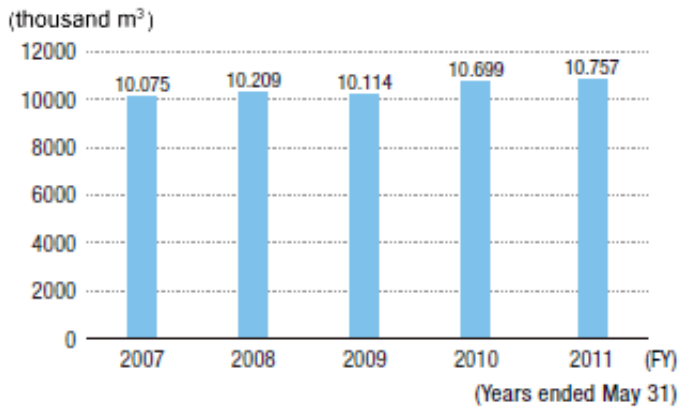


#### ● Phosphorous Emissions

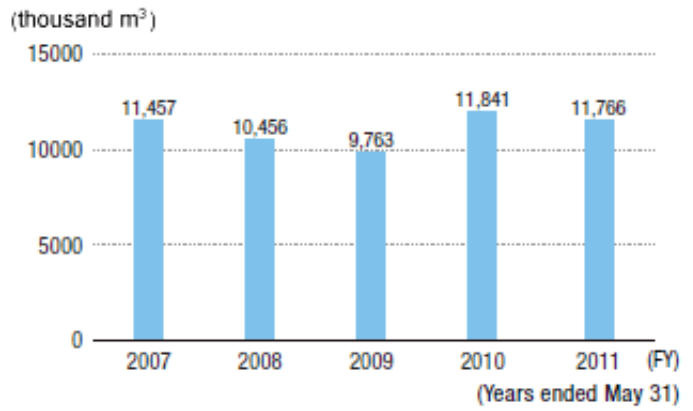




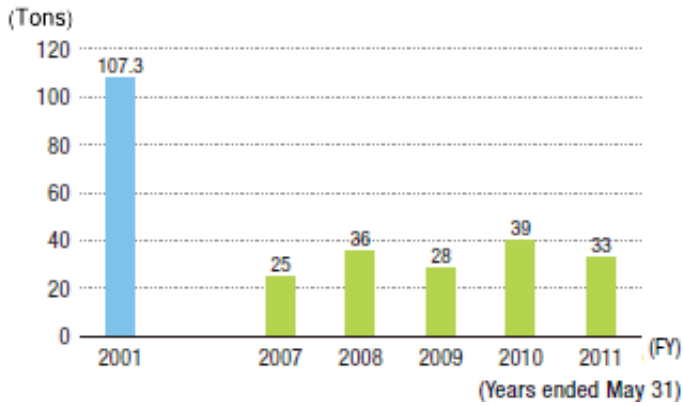
### ● Water Consumption



### ● Drainage



### ● Emissions of PRTR Controlled Substances



- \*9 PRTR: Pollutant Release and Transfer Register. The PRTR regulation is designed to prevent occurrences of environmental safety incidents by encouraging businesses to improve their own chemical substance management.
- \*10 SS: Suspended Solids. SS is a water-quality indicator generally referring to insoluble substances of 2 mm or less in diameter suspended in water. The organic matter and metal originating in particulate-like mineral, animals-and-plants plankton and its corpse, a sewer, factory effluent, etc. are contained. The increase in SS worsens transparency, and influences underwater photosynthesis by preventing light penetration.

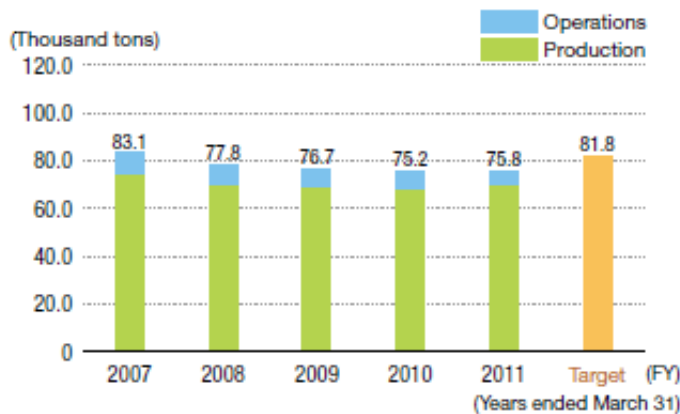
### Preventing Global Warming

Each of our plants has implemented various energy conservation activities that have helped to reduce our total energy consumption annually. This, in turn, has reduced our energy derived CO<sub>2</sub> emissions as well, with such emissions totaling 75.8 thousand tons in fiscal 2011, which can be broken down into 69.9 thousand tons from production divisions and 5.9 thousand tons from operating divisions. Overall emissions increased only slightly over fiscal 2010 due to the impact from an increase in the CO<sub>2</sub> emission coefficient.

Nippon Kayaku has instituted a third-party logistics system (3PL) as part of its distribution reforms started in fiscal 2003. Today, we are working closely with our 3PL provider to change the modes in which our products are transported. We also began collecting data on CO<sub>2</sub> emissions emitted during product transport in April 2009. This modal shift will enable us to continue to reduce our energy consumption as well as CO<sub>2</sub> emissions.

As part of its efforts to help reduce CO<sub>2</sub> emissions from homes, the Nippon Kayaku Group has established two programs to encourage employees to conserve energy at home called My Family's Environmental Impact Budget and My Home is Currently Conserving Electricity, which focuses exclusively on electricity usage.

### ● Energy Derived CO<sub>2</sub> Emissions



### ● CO<sub>2</sub> Emissions during Product Transport and Distribution Volume

	CO <sub>2</sub> Emissions (tons)	Distribution Volume (1,000 tkm)
fiscal 2010	3.3	18,407 18,407
fiscal 2011	3.1	16,692 16,692

• Ton-kilometer: weight (tons) x transport distance (kilometers)

- CO2 emissions are calculated according to the following methods.  
 Trucks Improved Ton-Kilometer Method  
 JR Containers Conventional Ton-Kilometer Method

### Rolling Out Eco-friendly Sales Vehicles

Information on efficacy and safety is essential to ensuring that patients use our pharmaceutical products correctly. Nippon Kayaku stations medical representatives (MR) throughout Japan in order to gather and provide information on our proprietary pharmaceuticals by visiting medical institutions in person. All of the 285 company-owned sales vehicles used by these MR in their daily visits were recently switched over to eco-friendly hybrid vehicles, with the exception of colder weather areas requiring all-wheel drive.

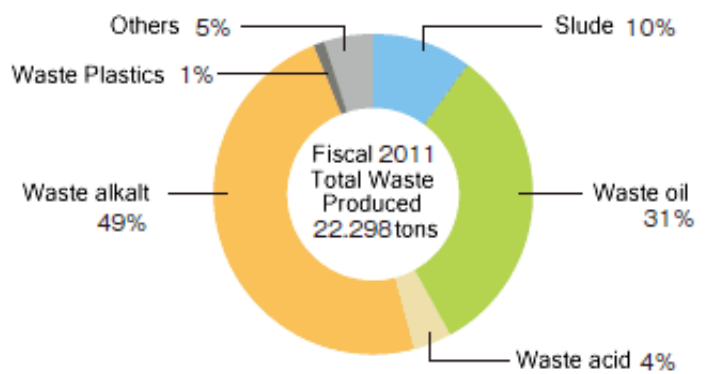
### Waste Reduction

In fiscal 2011 the Nippon Kayaku Group produced 22,298 tons of waste, which represents a 15% decrease compared to fiscal 2010. Landfill waste in fiscal 2011 amounted to 2,917 tons, an 8% reduction from fiscal 2010, which also means we have increased our zero emissions rate thanks to our waste reduction efforts. Going forward, the Nippon Kayaku Group will continue to reduce its output of waste as part of its new Mid-term Corporate Master Plan for the Environment running up to fiscal 2020. As part of this, targets have been set for activities aimed at increasing our recycling rate and achieving zero emission.

● Total Waste Produced and Ratio of Landfill Waste



● Breakdown of Waste by Type



### Noise Prevention

We conduct our business with a conscious effort toward minimizing noise pollution in the areas surrounding our factories. We regularly measure noise levels around our factories, making every effort to be a positive member of the local community. As such, any feedback or requests that we receive from local residents at company-sponsored events such as community round-tables are treated with the utmost priority. We also conduct regular work environment measurements in the factory to protect our employees from excessive noise.

## Third-Party Opinion

Masahiko Kawamura  
Chief Senior Researcher  
NLI Research Institute

### Profile

After completing his master's degree from the Faculty of Engineering of Kyushu University in 1976, Mr. Kawamura joined Mitsui Ocean Development & Engineering Co., Ltd. (MODEC). In 1988, he joined NLI Research Institute. Mr. Kawamura specializes in environmental management, CSR, SRI, business continuity plans, and environmental business practices.

Mr. Kawamura is a member of the Sustainable Management Forum of Japan (SMF), Environmental Auditing Research Group and the Network for Sustainability Communication (NSC), among other organizations. He is also a member of the Ministry of the Environment's Environmental Communication Awards Review Working Group Committee.



## About the CSR Reporting

This year marked the second in which Nippon Kayaku published an abridged print version (digest) as well as a more detailed online version of its CSR report. Last year, I recommended that Nippon Kayaku better clarify the relationship between both of these reports, and to that end, the company added to the print version a list of contents similar to that found in the online version. First, I would like to commend this change.

The special features of this report covered the topics of better tolerating energy risk and the group's Business Continuity Plan. Both topics address the timely theme of sustainability. Going forward, Nippon Kayaku will need to establish a more solid track record in Japan and implement measures at its major group companies outside of Japan.

I saw little progress in expanding the coverage of its reporting, despite pointing this out last year. In terms of the environment, the report covered Nippon Kayaku on a non-consolidated basis, while for society the coverage was expanded from a non-consolidated basis to include certain domestic and overseas group companies. Economically, the report covered the entire Nippon Kayaku Group on a consolidated basis. With advancements in globalization, I believe that the company should strive to expand its reporting coverage for the environment and society to include all consolidated subsidiaries. The report's message from the president clearly states the company will pursue CSR management around the world, and as such, I greatly look forward to Nippon Kayaku Group's future initiatives.

Individual CSR activities are reported according to the company's social responsibilities (to customers, society and employees) and environmental responsibilities, but the correlation between these activities and "the CSR Action Plan" remains somewhat vague. That is, individual activities tend to be overly enumerated within the main text. For example, as for employees, clearly stating at the start of the description that the fundamental goal for employees is to improve work-life balance will make individual reporting come alive.

In the context of the above, the fundamental goal of each CSR domain should be elucidated, while the order of how individual activities are published in the print version should be revisited. For example, as for customers, while it is important to introduce new products in the section on initiatives with customers, discussing the company's transparency guidelines with medical institutions or activities of the pharmaceuticals information center will go a long way toward heightening credibility and contributing to risk management practices. As for the section on the environment, the company should also mention its soil contamination investigations performed in conjunction with the building demolitions.

## About the Content of the CSR Report

The year 2010 represented the start to the Nippon Kayaku Group's CSR management. It was during this year when Nippon Kayaku launched its CSR Management Committee to examine CSR on the management level and established a CSR department within the Corporate Planning Division. Three years later, Nippon Kayaku formulated a CSR Action Plan as part of its efforts to rebuild its CSR philosophy and create a variety of systems during the first phase of its CSR management.

Nippon Kayaku has stated that it will formulate a new mid-term action plan in 2013 that is tied in with its new mid-term business plan. This marks the second phase of the company's CSR management, following the first phase when it established a solid foothold in Japan. As such, I would like to make several recommendations.

First, I would like Nippon Kayaku to re-examine the definition of CSR and its implementation items. ISO26000, which stands as the

international bible on CSR so to speak, defines CSR as “the responsibility of an organization for the impacts of its decisions and activities on society and the environment.” In particular, I would like Nippon Kayaku to recognize that human rights and employment issues will continue to grow in importance with the expansion of its businesses globally.

Secondly, I would like Nippon Kayaku to set its own unique key performance indicators (KPI) based on the seven core subjects and 37 issues of ISO26000 as well as run the plan-do-check-action (PDCA) cycle. This will also play a role in the re-examination of its CSR implementation items, but more importantly it will help visualize CSR by quantitatively assessing CSR activities that have until now tended to be viewed in qualitative terms. The company will also need to link this up with its Mid-term Corporate Master Plan for the environment running until 2020.

Finally, I would like the company to draw greater attention to enhancing stakeholder value. Ultimately, CSR management leads to this, which will help heighten corporate value as well. I believe that Nippon Kayaku’s CSR management is making steady progress toward this goal. As a result, I have high expectations for the entire Nippon Kayaku Group in the next stage and beyond.