

2014

Environmental and Social Report

Our Commitment to CSR



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Editorial Policies

- This is our fifth report in English (we have published 13 reports in Japanese since 2002) in which we have emphasized both readability and ease of understanding for all our stakeholders.
- We include the results of an objective third-party evaluation of our Responsible Care initiative undertaken by the Japan Chemical Industry Association.

Scope of This Report Organization

NIPPON SHOKUBAI CO., LTD.
 Osaka Office, Tokyo Office
 Himeji Plant, Kawasaki Plant, Suita Plant, Advanced Materials Research Center, Strategic Technology Research Center, Superabsorbents Research Center, Fine & Specialty Chemicals Research Center, E&I & Performance Materials Research Center, GSC Catalyst Technology Research Center, Process Technology Center
 (Unless otherwise stated, all data on business performance refers solely to Nippon Shokubai Co., Ltd.)

Main Group Companies

In Japan
 NIPPOH CHEMICALS CO., LTD.,
 NIPPON POLYESTER CO., LTD.,
 Tokyo Fine Chemical CO., LTD.,
 CHUGOKU KAKO CO., LTD.,
 NIPPON POLYMER IND. Co., Ltd.,
 NIHON JYORYU KOGYO CO., LTD.,
 NIPPON NYUKAZAI CO., LTD.,
 Nisshoku Butsuryu Co., Ltd.

Outside Japan
 NA Industries, Inc.
 PT. NIPPON SHOKUBAI INDONESIA
 NIPPON SHOKUBAI EUROPE N.V.
 SINGAPORE ACRYLIC PTE LTD
 NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD.
 SINO-JAPAN CHEMICAL CO., LTD.

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The “Reborn Nippon Shokubai” Emerges.

On September 29, 2012, our Himeji Plant experienced an explosion and fire in its acrylic acid production facility that resulted in one fatality and 36 injuries. I extend my heartfelt condolences to the bereaved family and pray for the soul of the deceased, and I wish for the earliest possible recovery of those who suffered injuries. Moreover, to the residents of the affected neighborhood and to the authorities concerned, I deeply apologize for the disruptions you have experienced.

As a chemical company, we are firmly resolved to restore public trust in Nippon Shokubai by restating our commitment to never allow such an accident to recur. We remain dedicated to implementing facility safety measures and to improving safety awareness, knowledge and skills by reviewing and strengthening our safety management structure and culture of “safety prioritization.”

Strengthening CSR management through “Reborn Nippon Shokubai 2020,” our new long-term business plan

The Nippon Shokubai Group has launched “Reborn Nippon Shokubai 2020,” our new long-term business plan spanning the seven years from fiscal 2014 to fiscal 2020. This plan takes a renewed approach to clearly defining our corporate credo — “Safety takes priority over production” — from the outset and underpins both our Group Mission and Management Commitment.

With that in mind, we will strive to manufacture and sell our products with confidence in order to become an innovative chemical company that provides new value for people’s lives. In addition, we will remain focused on developing products that meet the needs of society while providing greater comfort and convenience.

Furthermore, we will strive as a team to become the “Reborn Nippon Shokubai” — a company that promotes work safety and peace of mind; that rewards those who make their best efforts and achieve results; and that people can be proud to work for.

In this report, we present the corporate social responsibility (CSR) initiatives of the Nippon Shokubai Group, which also encompass our Responsible Care plan. We welcome your continued support and frank opinions, and we greatly appreciate your cooperation with our initiatives.

June 2014

M. Ikeda
 Masanori Ikeda, President

In the aftermath of the explosion and fire that occurred at our Himeji Plant, we have strengthened our commitment to our corporate credo, "Safety takes priority over production." We are now working to implement company-wide measures to prevent a recurrence and ensure that no such accident ever happens again. In this way, we are truly underpinning our commitment to restoring public trust in Nippon Shokubai as a responsible chemical company.

Initiatives to Prevent Recurrence of the Accident

In accordance with the recommendations of the Accident Investigation Committee issued on March 29, 2013, we have expressed our determination to vigorously implement measures to prevent a recurrence as stated below. On April 8, 2013, we established a Safety Reinforcement Team to actively promote and validate measures to prevent a recurrence.

(1) Deployment of preventive measures

- Assured implementation of risk assessments
- Collection, sharing, and effective application of information on safety technology
- Enhanced education and training programs

(2) Strengthening a culture of safety prioritization

(3) Verifying the implementation of safety measures

1. Deployment of preventive measures

(1) Assured implementation of risk assessments

- We investigated existing conditions such as temperature management of the reactive substance tank and the management method, and we strengthened safety measures as necessary.
- The Japanese Acrylic Ester Manufacturers revised their publication, Safety Guidebook for Handling of Acrylic Acid and Acrylic Esters, to raise customer awareness of the reaction risk of acrylic acid.
- We introduced safety measures applicable to the acrylic acid tank that were disseminated to relevant companies as well as our customers.
- We improved our crisis management manuals in order to strengthen our ability to manage abnormal situations.
- We strengthened our various management systems by clarifying the roles of each division and reinforcing our verification system applicable to irregular work management and change management.

(2) Collection, sharing, and effective application of information on safety technology

We re-examined our methods of collecting and sharing information on safety technology such as accident data and reaction risk data. We also strengthened our collection and application system.

(3) Enhanced education and training programs

We clarified the skills and abilities required for safe operation and reviewed the content of training programs in order to strengthen operation safety training for our production division.

2. Strengthening a culture of "safety prioritization"

To strengthen our emphasis on safety, we re-examined our culture of "safety prioritization" using the safety culture assessment checklist of the Japan Safety Competency Center.* As a result, we clarified existing issues and systematically implemented needed measures. These measures are also reflected in the 9th Medium-term Responsible Care Basic Plan.

As accident prevention initiatives tend to fade over time, we adopted our own "safety oath." In order to familiarize employees with this initiative, we compiled and distributed our Safety Handbook, which outlines our safety oath. In addition, we commemorated our safety oath by unveiling a monument on September 26, 2013, with a prayer ceremony dedicated to safety.

* A third-party organization established in April 2013 by the Japan Society for Safety Engineering in order to disseminate safety competence assessment systems within the industry.

Safety Oath

We remain committed to never again causing a tragic accident. Under our corporate credo, "Safety takes priority over production," we have taken to heart the lessons learned from the accident we have experienced, and we vow to continue improving our safety skills in unison.



Safety Oath Monument



Prayer ceremony dedicated to safety



Safety Handbook

3. Verifying the implementation of safety measures

We undertook an in-house inspection in order to verify the status of implementation of our safety measures, received safety diagnoses from the Hazardous Materials Safety Techniques Association, and underwent a third-party verification by outside experts.

In-house verification

Between October and November 2013, top management conducted an inspection and our in-house verification team performed a workplace verification to confirm the status of implementation of our safety measures.

Safety diagnoses by the Hazardous Materials Safety Techniques Association

We underwent safety diagnoses conducted by the Hazardous Materials Safety Techniques Association.

The first diagnosis, in April 2013, addressed our planning stage while the second diagnosis took place in January 2014, after measures had been implemented, to confirm details of our safety measures and their status of implementation.

Third-party verification by external experts

On March 6, 2014, we underwent a third-party verification performed by Masamitsu Tamura, professor emeritus of Tokyo University who served as chair of the Accident Investigation Committee, and Masayoshi Nakamura, visiting professor of the Graduate School of the Innovation Management Department of the Tokyo Institute of Technology, who served as a committee member. This verification confirmed the directionality of our initiatives and the status of implementation of our accident recurrence prevention measures.



Nippon Shokubai's CSR Concept

Group Mission
Management Commitment

Corporate Credo

Group Mission / Management Commitment

Nippon Shokubai Group Mission **TechnoAmenity**

Providing affluence and comfort to people and society,
with our unique technology.

Management Commitment

We conduct all of our corporate activities based upon a deep respect for humanity.

We aim at coexisting with society, and working in harmony with the environment.

We pursue technologies that will create the future.

We act on the global stage.

Corporate Credo

Safety takes priority over production.

Nippon Shokubai Code of Conduct

In the belief that it is our social responsibility to conduct business based upon the principles of compliance and self-responsibility for the sake of proper social development, we have set forth the following basic corporate behavior guidelines as the "Nippon Shokubai Code of Conduct."

1. Guided by our Group Mission of **TechnoAmenity**, we will conduct all of our actions as a good corporate citizen.
2. We will comply with relevant laws both inside and outside of Japan, and act in accordance with in-house regulations.
3. We will create and nurture a sound, vibrant workplace, where each individual can hone their professional competence and find fulfillment in their career.
4. We will develop and market products and services that are both safe and useful, based upon an accurate understanding of social demands.
5. We will commit ourselves to eliminating labor hazards and accidents, and constantly strive to protect the global environment.
6. We will conduct business based on fair and open competition.
7. We will take a firm stance when dealing with unlawful or antisocial groups.
8. We will ensure frequent communications with our shareholders and members of society in general, and guarantee the appropriate disclosure of corporate information.
9. With respect for the culture and customs of every nation/region we serve, we will contribute to their development and wellbeing through community-based business undertakings.
10. We will ensure the solid and sustainable development of the company through business undertakings based soundly upon the above action guidelines.

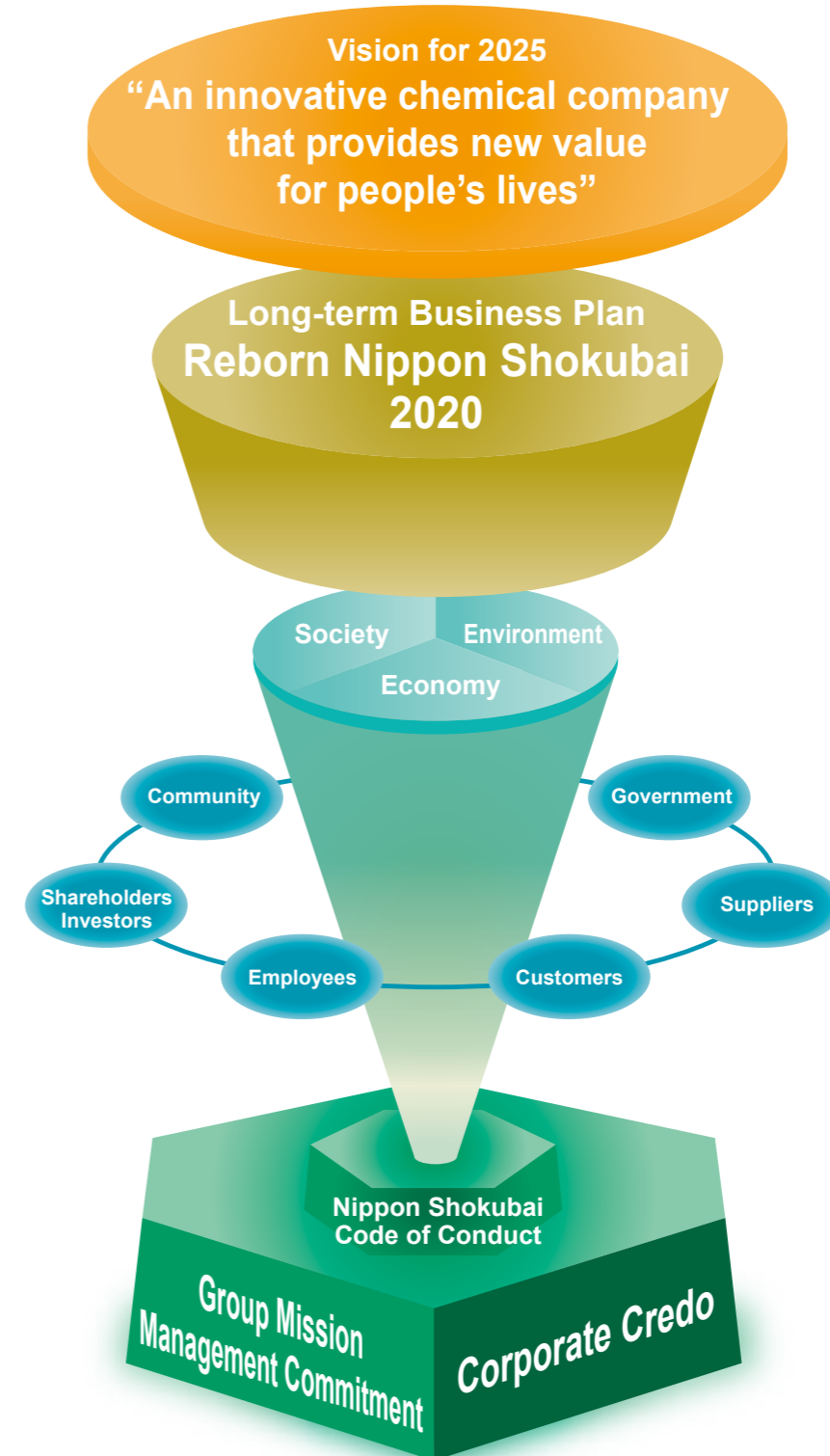
CSR Implementation Structure

In an effort to embody our CSR management with a high degree of effectiveness, the CSR Management Committee, chaired by the president, provides overall coordination while carrying out inspections and monitoring the implementation of the policies, and action plans as well as the achievements of each committee.



Since 1973, Nippon Shokubai has been advocating the spirit contained within our corporate credo, "Safety takes priority over production." In accordance with **TechnoAmenity**, our Group Mission, we have established a Management Commitment and Code of Conduct to comprehensively view our corporate behavior from economic, social, and environmental perspectives, setting out our corporate ethics, Responsible Care (RC), human rights & labor, information disclosure, social contribution, and corporate governance as our management's top priority issues and implementing our activities to enhance our corporate value via continuing dialogue with various stakeholders, including our customers, business partners, shareholders/investors, public administration, employees, and local communities.

In keeping with our approach to corporate social responsibility (CSR), we will continue to contribute to the emergence of a sustainable society by implementing "Reborn Nippon Shokubai 2020," our long-term business plan, with the goal of adopting our vision for 2025.



Contributing to Society and Earning Public Trust

Social Contribution

In order to impart a deeper understanding of our company, we strive to actively communicate with all stakeholders through environmental protection initiatives, involvement in local communities, and by supporting the development of the next generation. We contribute to society by focusing on maintaining harmony with society and the local community through our business activities.

Environmental Protection Initiatives

Forest Development Initiatives

In an effort to help mitigate the threat of global warming, which presents a challenge for the 21st century, we are promoting our forest development initiative among employees who participate as volunteers in forest protection and regeneration. Through this awareness-raising effort, we aim to cultivate personnel who can think for themselves and act on the environment.

◆ Contributing to Our Forests and Water Resources

The Akasai Valley is part of the headwaters of the Ibo River, which faces our Himeji Plant. In order to enhance conservation of the headwater forest that extends to that area, we are undertaking maintenance work in order to leave a beautiful forest for future generations. In addition, we have undertaken an initiative to offer "forest tours" to impart the importance of biodiversity.

Location: Akasai Valley, Hara-chinai, Haga-cho, Shiso-shi, Hyogo prefecture

Activity: Forest improvement, river biological surveys, and other activities

Start date: November 2008



Photo taken in August 2013

Photo taken in October 2013

◆ Contributing to the "Yugawara Myriad Leaves Forest"

The headwater forest of Yugawara-machi is located in western Kanagawa. We utilize this forest as a place for learning about the natural environment by familiarizing ourselves with the forest and immersing ourselves in it. In addition, we are cultivating a richer forest through our forest preservation and improvement initiatives.

Location: Kajiya, Yugawara-machi, Ashigarashimo-gun, Kanagawa prefecture

Activity: Forest improvement, nature observation tours, and other activities

Start date: November 2013



Photo taken in November 2013

Photo taken in November 2013

◆ Japan-China Friendship Forest Development and Global Warming Prevention

Acknowledging the serious problem of global desertification, we are working to prevent desertification in inland China. We are planting trees with local residents and intend to restore the forest throughout the area where it once existed on this land.

Location: Ejina Horo Banner, Inner Mongolia Autonomous Region, China

Activity: Afforestation, maintenance, management, and the like

Start date: October 2008

Note: The forest development initiatives of Nippon Shokubai were undertaken in cooperation with the National Land Afforestation Promotion Organization and NPOs.



Photo taken in September 2013

Photo taken in September 2013

■ Conserving and Popularizing the "Nojigiku" Chrysanthemum

In order to rescue, conserve, and popularize the endangered "Nojigiku" chrysanthemum, the Hyogo prefectural flower, we began cultivating it in 1972. We have been distributing seedlings every year since 1974 in cooperation with Hyogo Prefecture. In April 2013, we distributed 30,000 seedlings to 311 organizations, including local governments.

Today, 160 varieties of Nojigiku, including foundation stock, have been conserved and cultivated in a 2,000-square-meter green yard at the Himeji Plant.



Nojigiku in a conservation garden

Seedlings being distributed

Our Policy on Social Initiatives

In keeping with the Nippon Shokubai Group Mission of **TechnoAmenity** and our commitment to protecting biodiversity, we intend to adopt initiatives focused on benefitting and increasing the prosperity of our stakeholders, including local communities, while maintaining clear communication with society as a good corporate citizen.

Assisting the Community

Cleanup Campaign

We promote regular community cleanup campaigns, and all our plants participate in the periodic cleaning of their environs. The Suita Plant also participates in the riverbed cleaning effort along the Kanzaki River as part of the Kanzaki River Adopt-a-River Program. We are also collaborating with various community beautification activities.



Kanzaki River riverbed cleanup at the Suita Plant

Sweet Potato Harvest Party

We grow sweet potatoes in the potato fields we have created in the green yard of the Himeji Plant. Each autumn, we invite neighborhood kindergartners to enjoy harvesting sweet potatoes. In fiscal 2013, about 700 parents and children visited together.

We have been holding this activity since 1971 and it has become rooted in the community. In fact, some of the children who harvested potatoes in the past are now employed with us.



Kindergartners harvest potatoes

Volunteer Initiatives

Employee volunteers participate in events held at the Nukachan Welfare Workshop (a support facility for the disabled) located near the Himeji Plant.

We hope to further expand our circle of volunteerism in the future.



Summer gathering

Initiatives to Help Raise Future Generations

Hosting Internship Trainees

Each year from July to September, our various plants host trainees from technical colleges. In fiscal 2013, a total of 27 students from 21 colleges gained experience through this program.



Exhibit at Children's Chemistry Experiment Show in Kobe

In January 2014, we held workshops that enabled children to experiment with our superabsorbent polymer we called "superabsorbent polymer, the mysterious powder" at the Children's Chemistry Experiment Show in Kobe (sponsored by the Dream Chemistry 21 Committee). All who attended clearly enjoyed the thrill of experimenting with chemistry. We welcomed more than 200 participants during that period.



Contributing to Society and Earning Public Trust

Corporate Ethics / Information Disclosure

Corporate Ethics

We remain committed to various group-wide initiatives intended to further improve and strengthen our corporate ethics and legal compliance systems.

Corporate Ethics Training

Rank-based Training

Every year we provide training in corporate ethics targeted to specific employee ranks.

From September to November 2013, we provided training for mid-career employees. About 300 employees participated in the 17 training sessions offered.

In this training, we highlighted crimes committed by individuals and companies from the perspective of origins and conduct. We considered the behavioral aspects required to uphold corporate ethics, including the elimination of crimes of negligence and omission as well as crimes of deliberate intent. In addition, the training covered methods of communication in the workplace based on case histories and emphasized the level of awareness of corporate ethics that a mid-career employee is expected to exhibit as a workplace leader.



Rank-based training

Training in Specific Laws and Regulations

Training in Foreign Anti-Bribery Laws

In light of the growing attention being given to foreign anti-bribery laws recently, we provided training for executive officers and managers on this topic.

In January 2014, we invited Yoshihiro Kai, an attorney from the law office Anderson Mori & Tomotsune, to deliver a lecture and management training session for members of the board and executive officers. Focusing mainly on the Bribery Act 2010 of the UK and the Foreign Corrupt Practices Act of 1977 of the U.S.A., which represent applications of similar laws in other countries, Mr. Kai's lecture summarized these laws, their backgrounds, and their basic concepts as well as corporate governance considerations and implications based on specific cases.



Management training session

In March 2014, we provided training in specific laws and regulations for managers working in the sales division and other divisions outside Japan. Through this training, participants learned the historical background and recent trends regarding foreign public employee bribery regulations; were given a summary of the laws and regulations of major countries; were presented with cases of Japanese-affiliated companies; and were given notes on appropriate business conduct and measures.

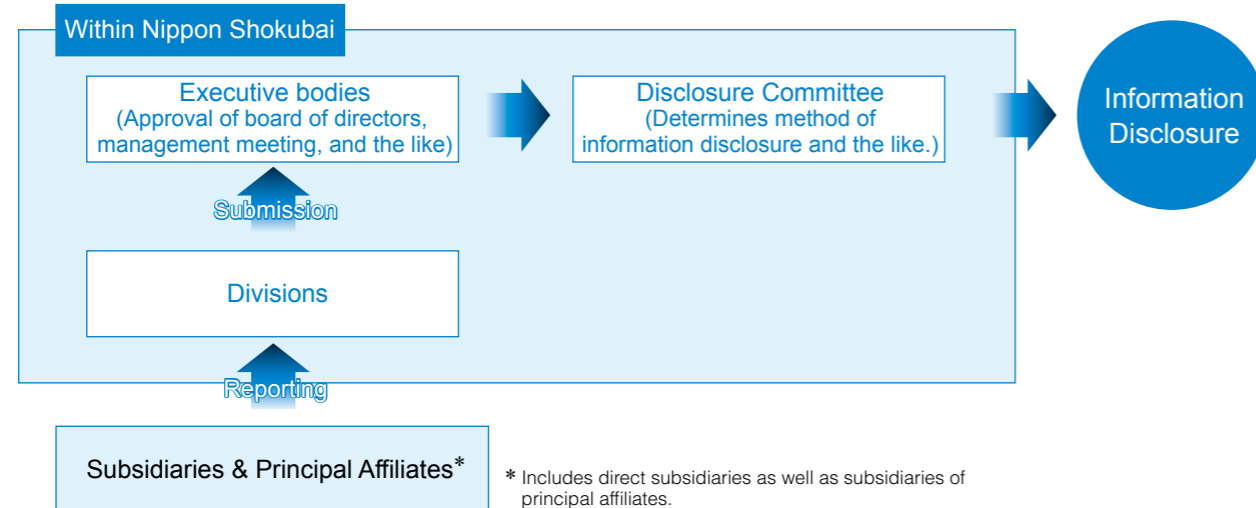


Training in specific laws and regulations

Information Disclosure

In order to fulfill our social responsibility and ensure full management transparency while promoting a better understanding of our company among all stakeholders, we shall fairly disclose relevant corporate information regarding Nippon Shokubai, our subsidiaries, and our major affiliates on a timely basis.

Flow of Information Disclosure



* Includes direct subsidiaries as well as subsidiaries of principal affiliates.

Contributing to Society and Earning Public Trust

Our Relationship with Our Employees

We are committed to maintaining a healthy work environment and respecting the human rights of each of our employees. We support all our employees by providing a positive working environment that contributes to a high level of job satisfaction.

An Environment That Contributes to Job Satisfaction

We seek to revitalize our employees and the organizations as the foundation for achieving our medium- and long-term business plans.

With the understanding that responsibility for oneself equates to self-direction, and with the goal of forming a corporate structure with the dynamic flexibility to respond quickly to changing times, we are striving to design and manage a system framework that can develop autonomous workers and awaken the ambitions of individual employees.

Human Resources Management System

We have introduced a human resources management system based on management by objectives, which is applicable to all employees, and we are creating a substantial system that is both open and transparent.

1. Basic approach
 - Create a substantial system that is both open and transparent.
 - Implement a fair employee reward mechanism based on roles, performance, and competency.
 - Structure a system capable of responding to diverse values.
2. Framework
 - Multiple avenues to rewards (Rewards can be accrued for performance or for demonstrated skills and proficiency.)
 - Clarification of job grade criteria and evaluation criteria (Roles and required performance and competency are specified.)
 - Feedback focused on human resources development (Advice is provided according to management by objectives and an appropriate evaluation system.)

Human Resources Development

1. Personnel objectives
 - Independently minded personnel capable of taking the initiative in identifying and resolving issues
 - Personnel capable of flexibly adapting themselves and their organizations
 - Personnel capable of demonstrating sophisticated expertise
 - Personnel capable of working with a diverse international community
2. Characteristics of the human resources development system
 - Development according to section
Emphasis on improving organizational and management skills, level of expertise, and competency by section
 - Self-directed development
Emphasis on self-directed development to boost career development
 - Development according to corporate hierarchy
Emphasis on strengthening management leadership

A Positive Working Environment

In an effort to provide our employees with the opportunity to achieve "the good life," we offer a wide-ranging employee welfare system for the benefit of our employees and their families. This initiative includes wealth building, emergency preparedness, support for daily life activities, planning for a stable retirement, positive use of personal time, and maintenance of health and wellness. Our company will continue to support a good life for our employees through self-help as we enter the era of a low birth rate and an aging population.

Supporting the Positive Use of Personal Time

We advise our employees on the positive use of their time away from work by offering guidance in maintaining a balanced work, family, and social life, thus contributing to life enrichment.

Providing Balanced Assistance for Child Care and Nursing Care

Japan's low birth rate and aging population remain pressing issues; therefore, it is essential that all sectors of society continue to support child care and nursing care. Private enterprises are also required to create an environment that supports a balance among work, child care, and nursing care. We are responding to these social realities by striving to create an environment and infrastructure that provides a variety of systems for supporting employees with their parenting and nursing responsibilities while employed. We also published a guidebook that summarizes our balanced support system, and we continue to keep our employees broadly informed and educated.



Ski tour held as an employee welfare event

Re-employment System

This system corresponds to measures addressing the rescheduling of pension eligibility age and is intended to help stabilize the lives of retired employees through re-employment. The period of employment extends until the age of 65. This initiative contributes to an employee's sense of security, self-worth, job satisfaction and motivation, as it provides ongoing employment in a familiar work environment.

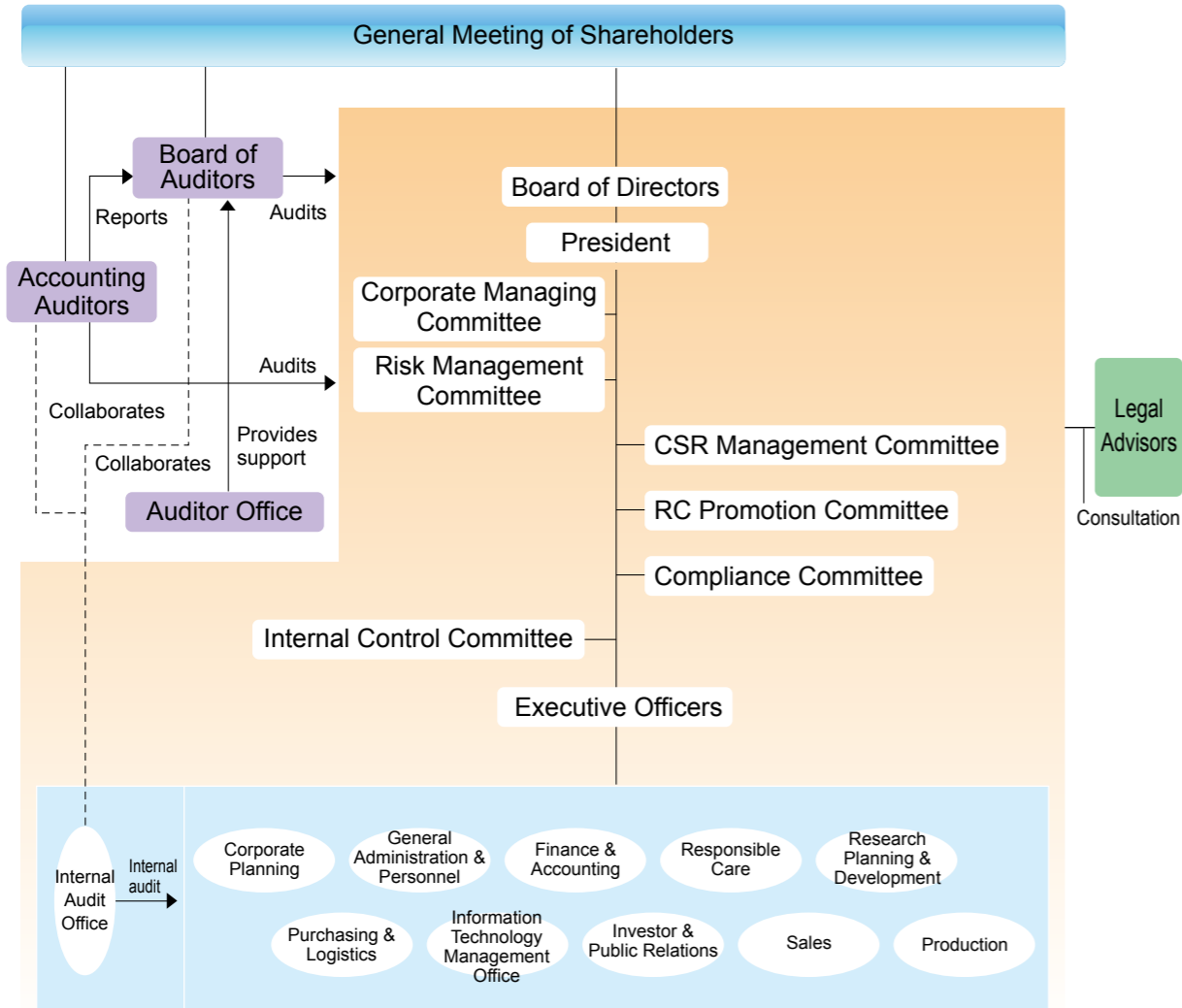
Toward a Sound Labor-Management Relationship Based on Mutual Respect

Nippon Shokubai and the Nippon Shokubai Labor Union maintain a dialogue based on mutual respect. Through our good labor-management relationship based on mutual understanding and trust, we are addressing the resolution of various issues and achievement of goals through cooperation. Under the union shop agreement, all our employees — except for managers — are required to join the union.

Corporate Governance Management Structure

We are working to improve our corporate culture and strengthen our competitiveness in order to respond to global trends. Our approach to corporate governance therefore establishes our foundation. Using the system illustrated in the following diagram, we are taking steps to revitalize our board of directors, strengthen our audit system, improve the efficiency of our management structure, and improve and strengthen our compliance system.

Our Corporate Governance System



Board of Directors

Supervises the execution of duties of each director and reports, deliberates on, and resolves matters related to execution of duties. In general, the board of directors convenes monthly.

CSR Management Committee

Chaired by the president, this committee determines the company's CSR direction and promotes CSR initiatives that contribute to the interests of stakeholders while maintaining coordination with the other committees.

Corporate Managing Committee

As an advisory body to the president, this committee deliberates on basic management policies and related matters. It also consults on the execution of important divisional matters.

RC Promotion Committee

Chaired by the president, this committee promotes the company's Responsible Care activities. It formulates the RC Promotion Basic Plan and works to further improve safety, quality, and environmental issues.

Board of Auditors

Comprising two external auditors and two internal auditors, this board convenes monthly in general, submits reports, and engages in discussions and deliberations on important matters.

Compliance Committee

Chaired by the president, this committee improves and strengthens the company's overall corporate ethics and systems for compliance with laws and regulations.

Risk Management Committee

Chaired by the president, this committee implements periodic measures in response to various wide-ranging risks to which the company is exposed.

Internal Control Committee

This committee, in full operation since April 2008 under the chairmanship of the president, has established a system to ensure the reliability of financial reporting as enforced by the Financial Instruments and Exchange Act. It also seeks to process company operations more efficiently and effectively.

Responsible Care Activities

All companies in the chemical industry responsible for handling various chemical substances voluntarily agree to protect the environment and human health and safety in all processes ranging from the development of chemical substances to their manufacture, distribution, use, end consumption, disposal, and recycling. The results of these activities are publicly disclosed and the companies engage in dialogue and communication initiatives with the public. This effort is part of the initiative known as Responsible Care (RC). The RC Global Charter was developed by the International Council of Chemical Associations (ICCA), which promotes Responsible Care worldwide.

Nippon Shokubai has participated in the Japan Responsible Care Council (JRCC; currently known as the Japan Chemical Industry Association Responsible Care Committee) since it was established in 1995. We actively promote Responsible Care by focusing on our main pillars: environmental protection; process safety and disaster prevention; occupational safety and health; chemical safety; quality; and communication with society. We are determined to continue contributing to society and fulfilling our corporate social responsibility through our group-wide commitment to Responsible Care.

RC Policy

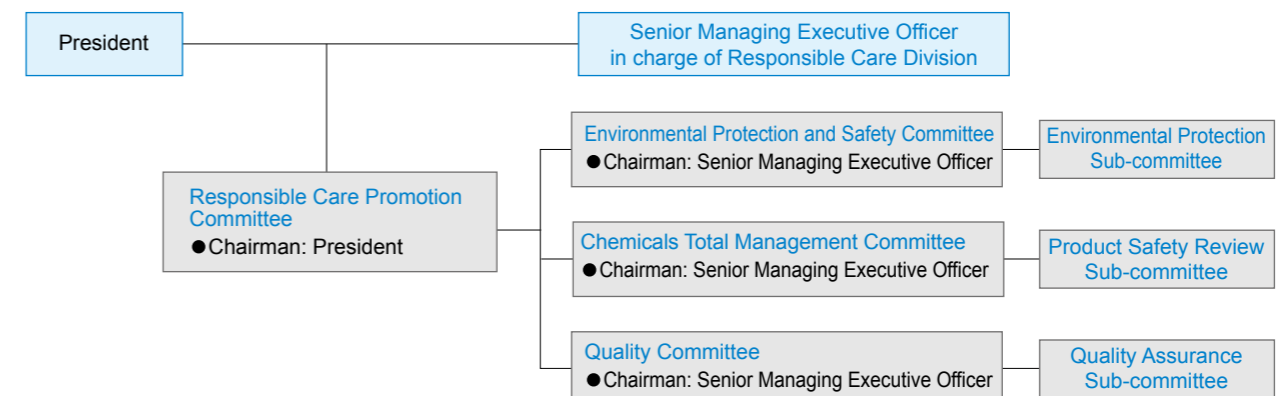
In conformity with our Group Mission, Management Commitment and the Nippon Shokubai Code of Conduct, we rank it as an important management measure to provide products and technologies that contribute to society and environmental protection. In addition, while paying due respect to the principle of Sustainable Development, we are determined to conduct all activities in accordance with the following policy related to environmental protection, safety and product quality that will bring our business operations into harmony with the global environment.

- Aim at environmental protection and reduction of negative environmental impact throughout the entire life cycle of a product, from development to disposal.**
- Ensure the safety of our employees and our communities by targeting zero accidents and zero disasters with a commitment to the principle "Safety takes priority over production."**
- Confirm the safety of chemical materials, intermediates and products, and consider the health of our customers, employees of our logistics subcontractors, our employees, and others.**
- Stably supply products and associated services that meet customer satisfaction and inspire their trust.**
- Publicly announce the results of these activities and make an effort to communicate for proper understanding.**

We will implement this RC Policy in all our business operations by ensuring all employees have a thorough understanding and awareness of its importance. The president shall be the person with the ultimate responsibility for implementing this policy.

RC Promotion Organization

The president is chairman of the RC Promotion Committee, and technical committees and sub-committees are established to promote company-wide Responsible Care activities.



Responsible Care Activities

Results of Our 8th Responsible Care Basic Plan

In the wake of the Himeji Plant accident of September 29, 2012, we focused on preventing a recurrence of the accident in fiscal 2013 and formulated the 8th RC Basic Plan, a program applicable to a single year.

In fiscal 2013, our environmental protection initiatives succeeded in lowering our energy intensity thanks to our energy-efficiency initiatives and resumption of production at the Himeji Plant. We maintained our achievement of zero emissions¹ and reduced our emissions of substances subject

to the PRTR Law by 10% compared with the results for fiscal 2010.

In the area of occupational safety, we registered two injuries with loss of workdays² and seven injuries without loss of workdays.³ In the areas of process safety and disaster prevention, chemical safety, and quality, we encountered one facility accident,⁴ five quality problems, and no chemical problems.

Evaluation: Achieved Partially Achieved Not Achieved

	Objectives for Fiscal 2013	Results for Fiscal 2013	Self-evaluation
Environmental Protection	<ul style="list-style-type: none"> To reduce energy intensity and CO₂ emissions intensity: Steady promotion of energy conservation initiatives To maintain zero emissions Emissions of substances subject to the PRTR Law: To reduce by 10% from fiscal 2010 levels (102.2 tons/year) 	<ul style="list-style-type: none"> Energy intensity: 124.8 l/t (Previous fiscal year: 128.7 l/t) CO₂ emissions intensity: 0.498 t/t (Previous fiscal year: 0.478 t/t) Zero emissions achieved and maintained. Emissions of substances subject to the PRTR Law: 10% reduction 	
Process Safety and Disaster Prevention	<ul style="list-style-type: none"> Zero facility disasters Zero facility accidents 	<ul style="list-style-type: none"> Zero facility disasters occurred. One facility accident occurred. 	
Occupational Safety and Health	<ul style="list-style-type: none"> Zero injuries with loss of workdays (including contractors) Zero injuries without loss of workdays (including contractors) 	<ul style="list-style-type: none"> Two injuries with loss of workdays occurred. Seven injuries without loss of workdays occurred. 	
Chemical Safety	<ul style="list-style-type: none"> Zero problems related to chemical safety (legal or social problems) 	<ul style="list-style-type: none"> Zero problems related to chemical safety occurred. 	
Quality	<ul style="list-style-type: none"> Zero serious customer complaints Zero quality nonconformities⁵ 	<ul style="list-style-type: none"> Zero serious customer complaints were filed. Five quality nonconformities were discovered. 	
Communication with Society	<ul style="list-style-type: none"> To maintain a dialogue with stakeholders and implement reasonable information disclosure 	<ul style="list-style-type: none"> The Kawasaki Plant participated in the community dialogue. 	
Developing RC among Our Group Companies ⁶	<p>Measures Common to Our Group Companies</p> <p>(1) Environmental Protection</p> <ul style="list-style-type: none"> To reduce energy intensity To reduce disposal at off-site landfills (Group companies in Japan) To reduce the amount of waste (Group companies outside Japan) To reduce emissions of substances subject to the PRTR Law <p>(2) Process Safety and Disaster Prevention</p> <ul style="list-style-type: none"> To achieve zero disasters and zero accidents <p>(3) Occupational Safety and Health</p> <ul style="list-style-type: none"> To achieve zero injuries with loss of workdays <p>(4) Chemical Safety</p> <ul style="list-style-type: none"> To achieve zero problems related to chemical safety (legal or social problems) <p>(5) Quality</p> <ul style="list-style-type: none"> To receive zero serious quality complaints <p>(6) Communication with Society</p> <ul style="list-style-type: none"> To maintain a dialogue with stakeholders and implement reasonable information disclosure <p>(7) Management System</p> <ul style="list-style-type: none"> To effectively implement the management system 	<ul style="list-style-type: none"> Eight of 14 Group companies reduced their energy intensity. Waste subject to final disposal at off-site landfills was reduced by 40% compared with the level of the previous fiscal year. Reduced the amount of waste by 6% compared with the level of the previous fiscal year. Emissions of substances subject to the PRTR Law increased by 3% compared with the level of the previous fiscal year. Zero facility disasters occurred. • One facility accident occurred. Six injuries with loss of workdays occurred. Zero problems related to chemical safety occurred. Two serious customer complaints were filed. Published an Environmental Report and participated in community events. EMS: All group companies have already introduced an EMS. Risk assessment: All group companies have already introduced risk assessments. 	

Definitions: ¹ Zero emissions: Reducing the quantity of waste subject to final disposal at off-site landfills to less than 0.1% of the total amount of waste generated (In the calculation of total waste, the amount of sludge subject to activated sludge treatment is calculated before dehydration.)
² Injury with loss of workdays: Injury requiring at least one lost workday for medical treatment
³ Injury without loss of workdays: Injury requiring no loss of workdays for medical treatment
⁴ Facility accident: Any problem accompanied by at least a two-day shutdown but with no impact on any third party
⁵ Quality nonconformities: Involving a minimum loss of ¥1 million ⁶ Refers to group companies inside and outside Japan, unless otherwise specified.

9th Medium-term Responsible Care Basic Plan (Fiscal 2014–2016)

We formulated our 9th Medium-term Responsible Care Basic Plan as a three-year plan commencing in April 2014.

As a continuation of our 8th plan, this plan enhances our initiatives to eliminate facility disasters, facility accidents, and occupational accidents. In addition, we have maintained our environmental impact

reduction initiatives in the interests of sustainable development, and we are continuing to implement the priority initiatives intended to improve customer satisfaction and meet customer needs for functional products and the like. Moreover, we are enhancing our comprehensive chemical management system.

	9th Medium-term Responsible Care Basic Plan (Fiscal 2014–2016)	Priority Initiatives
Environmental Protection	<ul style="list-style-type: none"> To reduce energy intensity by 25% from fiscal 1990 levels (96.2 l/t) To maintain zero emissions Emissions of substances subject to the PRTR Law: To reduce by 20% from fiscal 2010 levels (Fiscal 2016 level: 90.8 tons/year) 	<p>To promote continuous improvement through our environmental management system</p> <ol style="list-style-type: none"> To promote energy conservation initiatives and technical reviews in order to reduce waste and release of PRTR-controlled chemical substances To promote development of technology to reduce CO₂ emissions by improving process catalyst and utilization of plant-derived raw materials To evaluate by means of c-LCA¹ how all our products contribute to the avoidance of CO₂ emissions throughout their life cycles and publicly disclose the reductions achieved
Process Safety and Disaster Prevention	<ul style="list-style-type: none"> Zero disasters Zero accidents 	<p>In the wake of the accident, we will improve our process safety capabilities by fostering a culture of safety and operating our process safety management system with diligence.</p> <ol style="list-style-type: none"> To conduct thorough risk assessments <ul style="list-style-type: none"> To thoroughly manage, inspect and monitor reactive substances To steadily implement irregular work management and change management To improve risk identification through HAZOP enhancement To reduce risk by collecting and sharing safety technical information (including information on internal and external accidents and hazardous substance risk) To enhance education and training <ul style="list-style-type: none"> To review the educational content and method for each rank and implement it To ensure "know-why" knowledge and design ideas are carried forward To strengthen suppositions and responses when failures occur To strengthen the "safety first" mindset <ul style="list-style-type: none"> To ensure that employees of each rank dutifully fulfill their roles To strengthen the inspection system related to process safety To promote earthquake response measures and measures for aging facilities To strengthen the support system for logistics safety
Occupational Safety and Health	<ul style="list-style-type: none"> Zero injuries with loss of workdays (including contractors) Zero injuries without loss of workdays (including contractors) 	<p>To foster a safety culture and promote continuous improvement through the Occupational Safety and Health Management System</p> <ol style="list-style-type: none"> To conduct thorough risk assessments <ul style="list-style-type: none"> To steadily implement irregular work management To reduce risk by collecting and sharing safety technical information (including information on internal and external accidents and hazardous substance risk) To improve knowledge and sensitivity to risk prediction through enhanced education and training <ul style="list-style-type: none"> To review the educational content and method for each rank and implement it To ensure "know-why" knowledge and design ideas are carried forward To strengthen the "safety first" mindset <ul style="list-style-type: none"> To ensure that employees of each rank dutifully fulfill their roles To enhance communication across all ranks To enhance support for safety initiatives among our contractors
Chemical Safety	<ul style="list-style-type: none"> Zero problems related to chemical safety (legal or social problems) 	<ol style="list-style-type: none"> To collect, share, and effectively apply information on hazardous substance risk To improve the function of the chemical substance management system through central management of the information To appropriately comply with the laws and regulations on chemical substances both inside and outside Japan (by collecting information on laws and regulations, keeping our employees informed, and providing information to our Group companies both inside and outside Japan) To promote Global Product Stewardship (GPS) (by participating in the Japan Initiative of Product Stewardship (JIPS) launched by the Japan Chemical Industry Association)
Quality	<ul style="list-style-type: none"> Zero serious customer complaints Zero quality nonconformities 	<ol style="list-style-type: none"> To promote initiatives to prevent quality issues and complaints To strengthen the quality assurance system for functional products and products of new businesses To strengthen the quality assurance initiatives of Group companies in Japan To strengthen the quality assurance system of locations outside Japan To conduct continuous quality training and raise awareness
Communication with Society	<ul style="list-style-type: none"> To maintain a dialogue with stakeholders and implement reasonable information disclosure 	<ol style="list-style-type: none"> To promote RC community dialogue and plant tours while participating actively in community social activities To disclose the status of RC initiatives to stakeholders through the company website and the Environmental and Social Report
Developing RC among Our Group Companies	<p>Measures Common to Our Group Companies</p> <p>(1) Environmental Protection</p> <ul style="list-style-type: none"> To reduce energy intensity To reduce disposal at off-site landfills (Group companies in Japan) To reduce the amount of waste (Group companies outside Japan) To reduce emissions of substances subject to the PRTR Law <p>(2) Process Safety and Disaster Prevention</p> <ul style="list-style-type: none"> To achieve zero disasters and zero accidents <p>(3) Occupational Safety and Health</p> <ul style="list-style-type: none"> To achieve zero injuries with loss of workdays <p>(4) Chemical Safety</p> <ul style="list-style-type: none"> To achieve zero problems related to chemical safety (legal or social problems) <p>(5) Quality</p> <ul style="list-style-type: none"> To receive zero serious quality complaints <p>(6) Communication with Society</p> <ul style="list-style-type: none"> To maintain a dialogue with stakeholders and implement reasonable information disclosure <p>(7) Management System</p> <ul style="list-style-type: none"> To effectively implement the management system 	<ul style="list-style-type: none"> To support their implementation of accident countermeasures To improve the RC level of the entire Group by strengthening support of all Group companies

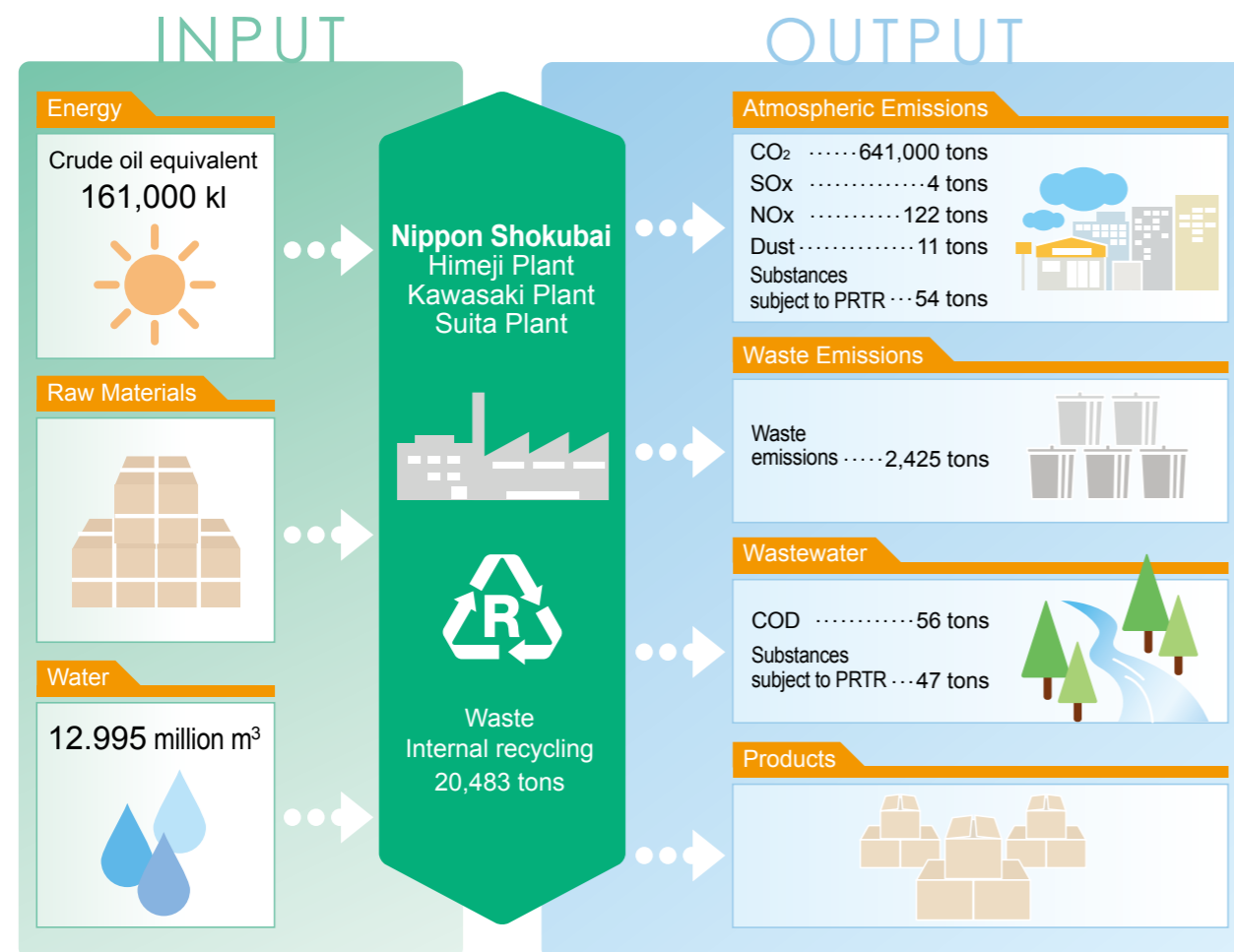
Definition: ¹ A method of comparing greenhouse gas emissions throughout the life cycle of a finished product incorporating chemical products and a comparison product containing no such chemical products when used by consumers and in other industries. The evaluation method calculates the chemical products' net contribution to GHG emissions reduction by determining the increased emissions when no such chemical product is used.

Responsible Care Activities

Environmental Protection Initiatives

Environmental Impacts of Our Business Operations

We are engaged in various initiatives to reduce the environmental impacts of our business operations and to provide better products and services.



RC Training

We systematically provide training in Responsible Care in recognition of the important benefits of establishing a Responsible Care spirit for fostering a safety culture and improving our process safety capabilities.

In keeping with our training curriculum for fiscal 2013, we provided this training to new employees entering our company; to those being promoted to the position of subsection chief (in research centers); and to those being promoted to manager throughout the company.

We intend to continue improving our training capabilities in the future.



RC training for recently hired employees (university and technical college graduates)

RC Community Dialogue Meeting

We participate in the community dialogue meetings held by the Responsible Care Committee of the Japan Chemical Industry Association and introduce our company's RC initiatives. Participants include members of residents' associations, administrators, NPOs, trade groups, and companies located in the same districts as our plants. This communication initiative is helping to promote mutual understanding.

In fiscal 2013, the Kawasaki Plant introduced its RC initiatives as the representative lead company in the Kawasaki district.

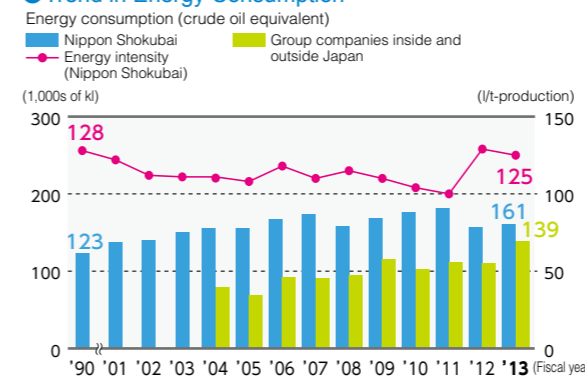


Initiatives for Preventing Global Warming

Promoting Energy Efficiency

In an effort to achieve the goals of the Kyoto Protocol, the Japan Chemical Industry Association has adopted the goal of reducing the chemical industry's energy consumption rate per unit of production ("energy intensity") to 80% of the fiscal 1990 level as an average value for the period fiscal 2008–12. In order to contribute to global warming mitigation without pause after fiscal 2012, the industry is pushing forward with energy efficiency and CO₂ reduction initiatives

Trend in Energy Consumption

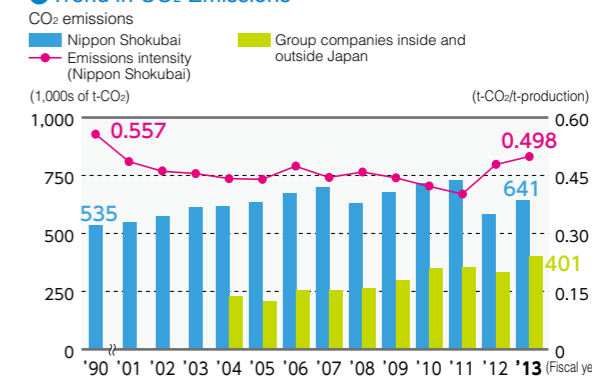


through Keidanren's Commitment to a Low Carbon Society.

With the goal of further improving energy efficiency, we will promote energy conservation initiatives at each of our plants in view of the goals included in the Action Plan for a Low-Carbon Society adopted by the Japan Chemical Industry Association.

In fiscal 2013, our energy intensity declined by 3% and our CO₂ emissions intensity declined by 11% from the fiscal 1990 level.

Trend in CO₂ Emissions



* Excludes head office, research centers, plant administration buildings and employee welfare facilities.
* The amount of energy consumed and CO₂ emissions in fiscal 2013 totaled 3,800 kiloliters and 7,900 tons, respectively, for the head office, research centers, plant administration buildings, and employee welfare facilities of Nippon Shokubai.

Initiatives for Eco-friendly Distribution

Promoting Modal Shift

As a means of fighting global warming through our logistics operations, we are taking steps to reduce our CO₂ emissions intensity.

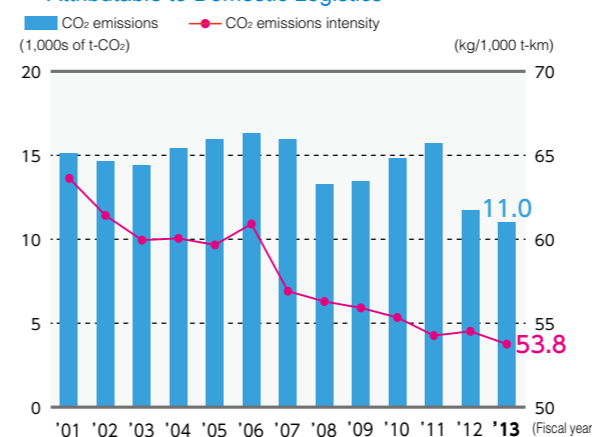
Although changing economic conditions can affect the amount of goods we ship and our CO₂ emissions, we are implementing initiatives to reduce CO₂ emissions intensity. These include modal shift, improved transport efficiency, introduction of digital tachometers (including GPS and drive recorders), and energy-efficient vehicle operation such as minimized idling and the installation of energy-efficient tires. Furthermore, we are pursuing a shift to rail transport in response to the increased

shipping volume of ethylene oxide, our main product line.

As an air pollution control measure, we adopted the Kawasaki Eco-Transport System* (effective April 1, 2010) and began promoting three initiatives: eco-friendly driving and display of "eco-drive" stickers; elimination of vehicles that do not comply with laws regulating NO_x and PM emissions; and widespread adoption of low-emission and energy-efficient vehicles.

* An environmentally friendly transportation system established with the partial amendment of the "Kawasaki City Ordinance for Conservation of Life Environment, including Pollution Prevention."

Trend in CO₂ Emissions and Emissions Intensity Attributable to Domestic Logistics



Modal Shift

By changing our shipping method toward bulk transport using railways and ships, we are optimizing our transport method to conserve energy and reduce our environmental impact.

Ton-kilometer

Transport ton-kilometer is a unit of transportation measurement referring to freight transport volume. As an index for precisely expressing transport as an economic activity, it is the multiple of freight haul distance (in kilometers) and the transported freight weight (tons).



Sticker of the Kawasaki Eco-Transport System

We increased the use of container cargo packing equipment and rail transport containers for ethylene oxide, our main product line.



Increased use of compliant low-emission vehicles at Nissshoku Butsuryu Co., Ltd.

Responsible Care Activities

Environmental Protection Initiatives

Pollution Control Initiatives Targeting Air and Water

To handle the increased volume of wastewater resulting from our expanded plant, we installed a new waste liquid combustion facility.

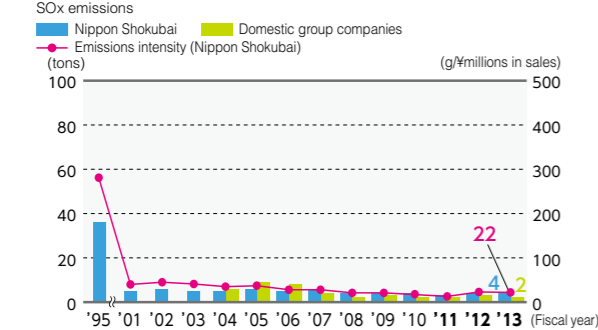
To control air pollution, we are taking steps to reduce consumption of fuel oil and are converting fuel sources to natural gas while monitoring our emissions of SOx, NOx and dust.

In addressing water pollution control, we are endeavoring to reduce the environmental impact (reduction in chemical oxygen demand, or COD) of our wastewater by recovering wastewater

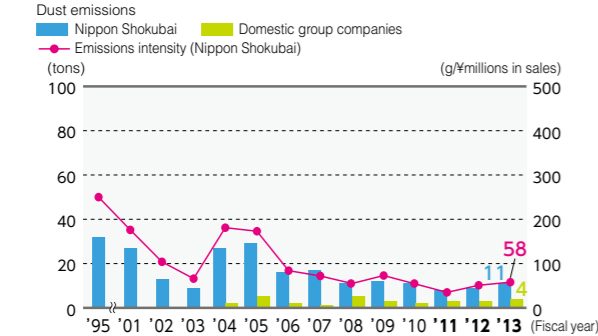
from the production process and reusing it. We have also installed an activated sludge treatment system and a waste liquid combustion furnace.

In 2013, we installed a new waste liquid combustion facility in order to ensure stable treatment of the increased wastewater generated by our expanded plant.

Trend in SOx Emissions

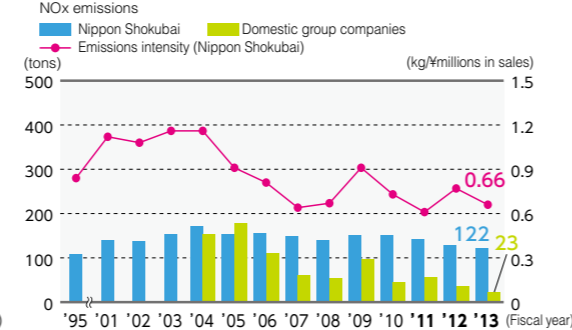


Trend in Dust Emissions

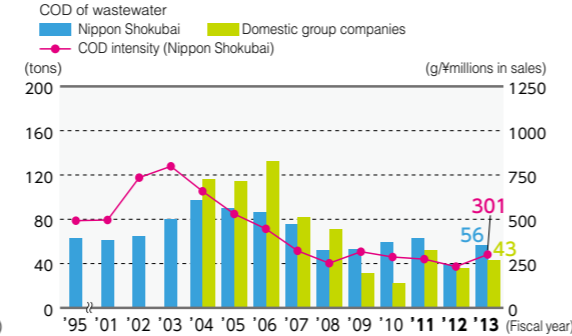


Note: Regarding the values agreed to by the city and prefecture, SOx emissions total 1/50th and dust emissions total 1/10th. NOx and COD totals are below the agreed values.

Trend in NOx Emissions



Trend in COD of Wastewater



Waste Reduction Initiatives

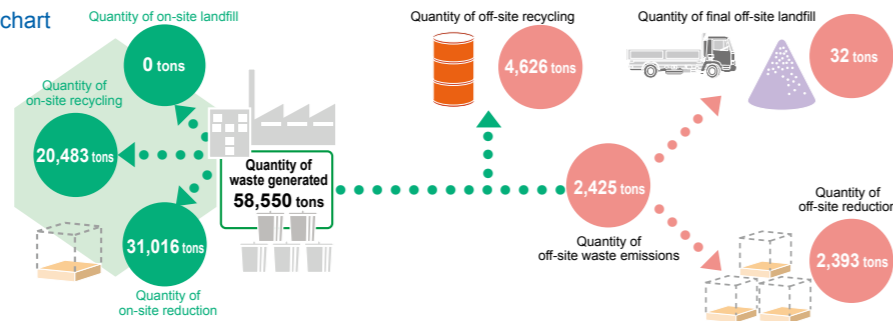
We are striving to reduce the amount of waste subject to final disposal at off-site landfills.

Addressing waste reduction is a necessary initiative to support the emergence of a society committed to recycling. By achieving and continuing our initiative toward zero emissions (defined as "reducing the quantity of waste subject to final disposal at off-site

landfills to less than 0.1% of total amount of waste generated"), we are promoting the sorting for recovery and recycling of our waste.

In fiscal 2013, we continued to implement our zero emissions policy by reducing the amount of waste subject to final disposal at off-site landfills through on-site treatment of production residues and by implementing thorough sorting for recovery and recycling.

Waste Flowchart



SOx

A hazardous air pollutant. This is a general term for sulfur oxides such as sulfur dioxide (SO₂) and sulfur trioxide (SO₃), which are generated mainly from the burning of fossil fuels.

NOx

A general term for nitrogen oxides such as nitric oxide (NO) and nitrogen dioxide (NO₂), which are generated mainly from the burning of fossil fuels.

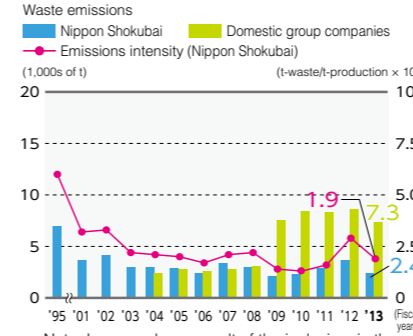
Dust

Fine particles generated through incineration of materials and other processes

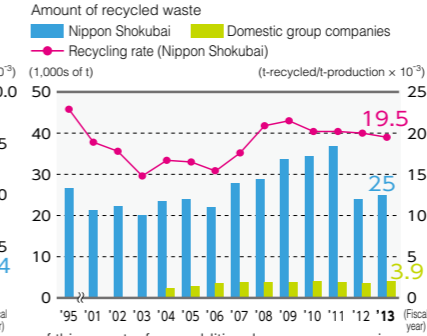
COD (Chemical Oxygen Demand)

An index of water pollution caused by an organic substance. It represents the volume of oxygen consumed when an organic substance is oxidized.

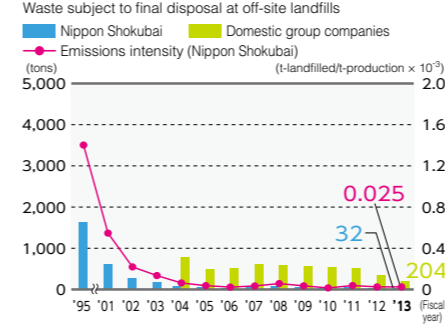
Trend in Waste Emissions



Trend in Amount of Recycled Waste



Trend in Amount of Waste Subject to Final Disposal at Off-site Landfills



Chemical Substances Control Initiative

We are focused on reducing our chemical emissions.

In 1995, we participated in a voluntary PRTR survey undertaken by the Japan Chemical Industry Association and have set out to reduce our emissions of chemical substances into the environment.

In fiscal 2013, we released 102 tons of chemical substances, which represents a 10% decrease in emissions compared to fiscal 2010 levels.

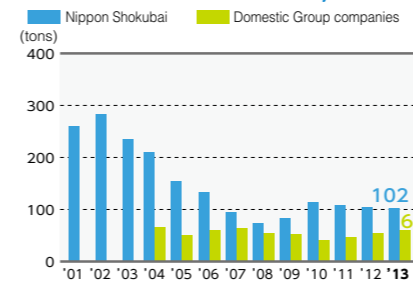
We remain focused on further reducing emissions toward our fiscal 2016 target of a 20% reduction from fiscal 2010 levels.

Top 10 Substances Subject to the PRTR Released in Fiscal 2013

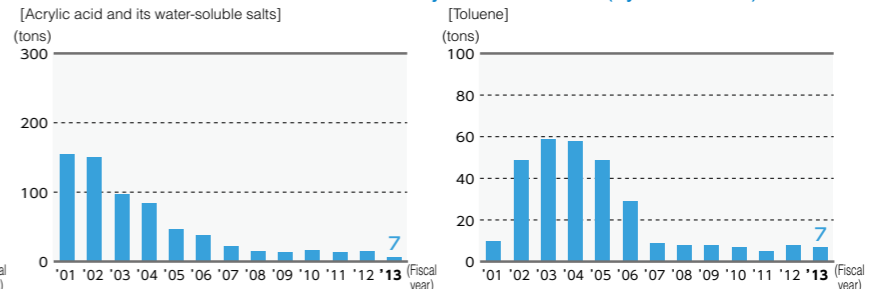
No.	Government Designation No.	Substance Subject to PRTR	Released into Atmosphere	Released into Water	Total Emissions
1	405	Boron compounds	0.00	32.75	32.75
2	400	Benzene	13.20	0.00	13.20
3	321	Vanadium compounds	0.00	8.66	8.66
4	300	Toluene	7.45	0.00	7.45
5	4	Acrylic acid and its water-soluble salts	6.60	0.00	6.60
6	56	Ethylene oxide	5.20	0.00	5.20
7	80	Xylene	4.65	0.00	4.65
8	58	Ethylene glycol monomethyl ether	3.67	0.00	3.67
9	414	Maleic anhydride	3.37	0.00	3.37
10	7	Butyl acrylate	2.57	0.00	2.57

Note: In fiscal 2010, acrylic acid water-soluble salts, vanadium compounds, and other substances were included in the PRTR.

Trend in Emissions of Substances Subject to the PRTR



Trend in Emissions of Substances Subject to the PRTR (by Substance)



PRTR
(Pollutant Release and Transfer Register)

A regulatory system that requires the reporting of emissions of designated chemical substances into the air, water and soil as well as the volume of waste transferred. Data compiled and submitted to governmental agencies are disclosed to the public.

Interview



Our new waste liquid combustion facility contributes to stable, safe, and effective wastewater treatment.

Daisuke Maeda
Chemicals Production Dept.
Himeji Plant

As a member of the project team formed to establish a waste liquid combustion facility for our Himeji Plant, I was responsible for developing the design and safe operation method. This facility has sufficient capacity to handle the increased volume of wastewater generated by the expanded plant. And by achieving stable operation at a higher load than handled by conventional facilities, it also provides improved safety and environmental conditions. The facility is operating smoothly after entering operation in March 2014. We remain committed to maintaining safe, stable, and effective wastewater treatment.

Responsible Care Activities

Environmental Protection Initiatives

Environmental Accounting

The values determined in our environmental accounting were aggregated according to the *Environmental Accounting Guidelines* published in 2000 by the Ministry of the Environment of Japan and the *Environmental Accounting Guidelines for the Chemical Industry* published in 2003 by the Japan Chemical Industry Association and the Japan Responsible Care Council. We also made reference to the 2007 Edition of the *Environmental Accounting Guidelines* published by the Ministry of the Environment of Japan.

● **Environmental Protection Costs & Environmental Protection Benefits** (millions of yen)
 Applicable period: April 1, 2013–March 31, 2014
 Scope: Nippon Shokubai (nonconsolidated)

Classification	Main Initiatives	Amount Invested	Expenses	Effects	Relevant Page
Environmental protection cost related to control of the environmental impacts of our production and service business operations (Business area cost)	1. Pollution Control Cost	1,263	1,854	No pollution problems occurred.	P18, 19
	2. Global Environmental Protection Cost	124	2,106	Energy efficiency efforts resulted in a 11% reduction in CO ₂ emissions intensity from fiscal 1990 level. ● CO ₂ emissions intensity Fiscal 2012: 0.478 t/t → Fiscal 2013: 0.498 t/t (14% reduction) → Fiscal 2013: 0.498 t/t (11% reduction)	P17
	3. Resource Recycling Cost	23	507	We achieved zero emissions by continuing to sort and recycle our solid waste. ● Amount of waste subject to final disposal at off-site landfills Fiscal 2012: 31 tons → Fiscal 2013: 32 tons	P18
Cost of controlling the environmental impacts of production and service operations occurring upstream & downstream (Upstream/downstream cost)	Reuse of drum containers	0	20	Some of drum containers are reused.	—
Environmental protection cost related to management activities (Environmental management cost)	Operation of environmental structure; acquisition and maintenance of ISO 14001 registration	12	544	All our plants successfully acquired certifications, and we enhanced our environmental management systems.	—
Environmental protection cost related to R&D activities (R&D cost)	Reduction of the environmental impact through development and manufacturing of green products	0	1,682	Conducting R&D of catalysts for treating wastewater containing organic substance(s) and catalysts for dioxin decomposition	—
Environmental protection cost related to social activities (Social activity cost)	Environmental-related contributions	0	46	Forest development initiatives	P8
Cost of dealing with environmental remediation (Environmental damage cost)	—	0	7	—	—
Total		1,422	6,766		

● **Economic Effects (Monetary Benefits) Resulting from Environmental Protection Initiatives** (millions of yen)

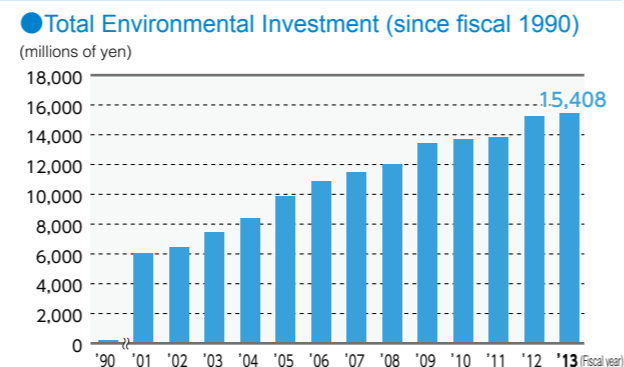
Effect	Amount
Income	12
Cost saving	1,565
	1,288
Total	2,865

● **Reference**

Total investment for the period: 15,951 million yen
 Total R&D expenses for the period: 10,477 million yen

Environmental Investment

Every year, we actively invest in environmental protection measures. Beginning in fiscal 1990, we began to calculate our total investment in environmental protection.



Environmental Accounting This system collects and analyzes the costs and effectiveness of environmental protection in business activities, quantitatively and to the maximum extent, and makes the data available to the public. It is focused on sustainable development for companies with the goal of efficiently and effectively promoting environmental protection initiatives while maintaining a good relationship with society.

Responsible Care Activities

Process Safety and Disaster Prevention Initiatives

Basic Approach to Safety Issues

We recognized that our company could not achieve true sustainable development without maintaining a focus on ensuring safety and upholding the trust of the community. Thus, in 1973, we adopted our corporate credo "Safety takes priority over production."

In the aftermath of the explosion and fire that occurred in the acrylic acid production facility of our Himeji Plant in 2012, we published our Safety Handbook under the direction of the president. This publication contains our corporate credo above, our safety management regulations, and our "safety oath." We have taken care to distribute it to all our employees.



Our corporate credo, "Safety takes priority over production," is posted at every plant.

Promotion of Voluntary Safety Initiatives

Since our company was established, we have been promoting voluntary safety initiatives as we have incorporated our own proprietary technologies in our production operations. As we continue to strengthen our safety initiatives, our entire company remains committed to implementing preventive measures to regain public trust and ensure that such an accident never recurs.

■ **Achieving Continuous Improvement with a Safety Management System**

All our plants have introduced our safety management system. Under this system, we have been continuously improving our safety management practices by diligently adhering to the PDCA (Plan-Do-Check-Act) cycle.

■ **Assessing the Safety of Facilities**

Whenever we update work procedures or expand, renovate or construct new facilities, we conduct safety assessments to ensure safety. In fiscal 2001, we began employing HAZOP and other methods when re-evaluating existing plants to ensure safety.

■ **High-Pressure Gas Safety Certification Renewed**

The Ministry of Economy, Trade and Industry has certified our Chidori Plant and Ukishima Plant at our Kawasaki Plant as "Certified Completion Inspector and Certified Safety Inspector" for high-pressure gas. We undergo a recertification inspection every five years. In fiscal 2012, the seven facilities of the Chidori Plant underwent successful recertification inspections, and in fiscal 2013, the seven facilities of the Ukishima Plant also underwent successful recertification inspections.

■ **Earthquake Preparedness**

In fiscal 1995, following the Great Hanshin-Awaji Earthquake, we conducted a review of our earthquake countermeasures. After the Great East Japan Earthquake struck, we again reviewed earthquake preparedness by adding a focus on the potential for tsunamis. We are now using this plan to guide the measures we are implementing in order to further improve safety from the perspective of both the tangible and intangible.

In addition, to ensure our initiative adheres to seismic standards for high-pressure gas facilities, we confirmed that all intersecting portions of steel tube bracing for tank towers and spherical reservoirs meet the seismic standards. As for piping facilities, we intend to confirm the level of conformity in fiscal 2014.

■ **Implementation of Various Emergency Drills**

Having established emergency response systems at each plant, we systematically conduct various types of emergency drills annually.

Using the lessons learned from the accident at the Himeji Plant, we are upgrading our in-plant training programs while also conducting joint emergency drills with the Himeji City Fire Department and joint emergency drills with the Himeji Coast Guard Office.

At the Kawasaki Plant, we conducted local emergency drills after opening a new production facility in the Higashi district of our Chidori Plant.

We give thorough consideration to the problems identified in our various drills so that we can review and strengthen our emergency response system as well as our education and training programs.



Himeji Plant: Emergency drill jointly conducted with the Himeji City Fire Department



Himeji Plant: Emergency drill jointly conducted with the Himeji Coast Guard Office



Integrated emergency drill at the Ukishima Plant in the Kawasaki Plant



Emergency drill in the Higashi district of the Chidori Plant in the Kawasaki Plant

■ **Trend in the Number of Facility Disasters**

Fiscal year	'08	'09	'10	'11	'12	'13
Number of disasters	0	0	0	0	1	0

■ **HAZOP (Hazard and Operability Study)**

A safety evaluation method for systematically evaluating the adequacy of safeguards in plants and eliminating latent risks in plants through comprehensive detection.

Responsible Care Activities

Occupational Safety and Health Initiatives

Continuous Improvement through the Occupational Safety and Health Management System

In fiscal 2003, we introduced our Occupational Safety and Health Management System (OSHMS) and have been implementing it continuously since then. Using this system, we have been improving occupational safety and health by seeking to eradicate industrial accidents, reduce potential risk factors, and promote health and the creation of pleasant work environments.

Also, we are committed to achieving zero industrial accidents by systematically implementing "KY" (*kiken yochi*, or "risk prediction") campaigns, "close-call" incident (*hiyari hatto*) reporting campaigns, our "5S" campaigns, and a variety of drills and training classes.

On-site Training Sessions

We hold a variety of on-site training sessions that provide operators and workers with hands-on training in the following:

- donning of safety belts
- valve opening and closing, and
- flange disassembly and reassembly

Training also includes dealing with exposure to liquids, electrical hazards, and risks of working at height as well as demonstrations of the pinching and entanglement hazards of rotating machinery.



Dealing with the risks of working at height



Demonstration of entanglement hazards of rotating machinery

Risk Assessment

Since the introduction of the Occupational Safety and Health Management System, the company has undertaken risk assessments of each workplace, reducing or eliminating the sources of risks associated with work. With the recent increase in the number of young employees, we have re-evaluated risks from the perspectives of young employees, evaluated risks by segmenting work processes, and evaluated examples of risks from close-call incidents (*hiyari hatto*) and low-frequency work. We are fully engaged in improving safety in the workplace.

Commendation

An employee of the Kawasaki Plant was recognized as having contributed to improved occupational safety and health for a long time as a member of the explosion-proof division of the Kawasaki Minami branch office. This employee was awarded the "Safe Work Merit Medal" at the Kanagawa Labor Safety and Health Meeting, an event sponsored by the Association of Kanagawa Labor Safety and Health.



Commendation awarded at Kanagawa Safety and Health Meeting

KY Campaign

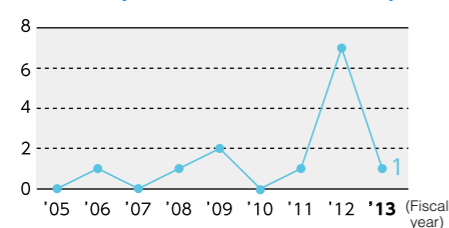
In an effort to prevent industrial accidents, we are committed to daily safety initiatives targeting work-related risks and have maintained a focus on our KY risk prediction campaign. We have been implementing group KY before work, KY for individual workers, and radio (Mobix) KY coordination between workers and the control room. Thus, we are enhancing our sensitivity to risk.

We also carry out systematic drills and KY-focused training, such as KY training with case sheets and holding KY workshops.

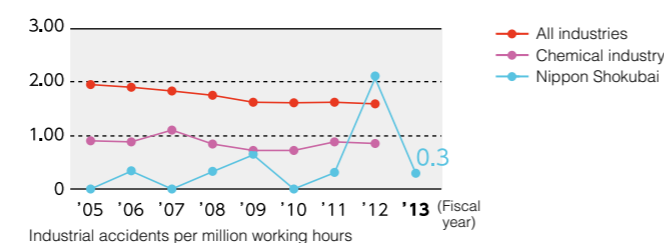
Occurrence of Industrial Accidents

In fiscal 2013, we experienced one injury with loss of workdays and two injuries without loss of workdays. Our contractors experienced one injury with loss of workdays and five injuries without loss of workdays. We are focused on preventing recurrence of these incidents by ensuring thorough company-wide adoption of measures and information at each plant.

Trend in Injuries with Loss of Workdays



Trend in Frequency of Injuries with Loss of Workdays



Responsible Care Activities

Occupational Safety and Health Initiatives

Addressing the Asbestos Issue

Since our establishment, we have never manufactured asbestos products; however, because we used insulation and sealing materials containing asbestos, we have handled asbestos-containing products on occasion. Therefore, we are contacting employees and retirees regarding health issues and are implementing a phase-out of asbestos-containing products.

In 2006 and 2009, we sent out information about asbestos-related medical examinations to retirees, offering them an annual medical examination at our expense. To date, a total of 73 retired employees have been issued a Health Check Note. Six persons were awarded industrial accident compensation benefits under the Industrial Accident Compensation Insurance Act. Two persons were awarded special compensation benefits for bereaved families under the Act on Asbestos Health Damage Relief.

In the future, we will continue to support our retirees and employees with asbestos checkups and consultations. Information regarding medical examinations has been posted on our website (www.shokubai.co.jp/ja/news/pdf/20090528.pdf).

Regarding substitutes for asbestos-containing products, we have adopted substitutes in cases where the asbestos was at risk of becoming airborne or wherever the potential existed for human contact with the product. As for other asbestos-containing parts, we are systematically phasing them out whenever the opportunity arises.

Responsible Care Activities

Logistics Safety Initiatives

We are committed to improving our ability to respond to accidents on transportation routes by periodically conducting drills at all our plants. Through this effort, we are helping to prevent accidents during product shipments while minimizing damage should an accident occur.

Moreover, we installed GPS units in all tanker trucks transporting our ethylene oxide products. This initiative enables us to accurately monitor the locations of these trucks so that we, as the shipper, can promptly respond when required.

We conduct annual audits of the logistics safety of our distribution contractors and seek to achieve continuous improvements in logistics safety.



Disaster-response drill for shipping accidents occurring en route



Disaster-response drill for shipping accidents occurring en route

Close-call Incident (*Hiyari Hatto*) Reporting Campaign

Through this campaign, we are implementing safety measures in our day-to-day activities with a focus on our facilities and initiatives in order to clarify the reason for a close call and how we can avoid experiences involving similar tense or alarming occurrences that do not necessarily involve an accident.

KY (*Kiken Yochi* or Risk Prediction) Campaign

This campaign seeks to prevent accidents and disasters by identifying and correcting risk factors (unsafe behaviors or unsafe conditions) that are not readily apparent at the meeting or the like before work gets under way.

OSHMS (Occupational Safety and Health Management System)

This management system, undertaken in collaboration with workers, sets out the organization, responsibilities, practical issues, procedures, processes, and management resources required for business operators to continuously implement potential risk reduction in the area of safety and health. This management framework aims to improve workplace safety and health standards.

"5S" Campaign

An activity promoting the "5S" (*seiri, seiton, seiketsu, seiso* and *shitsuke*) targeting sorting, tidying, hygiene, cleaning, and discipline.

Risk Assessment

This technique identifies various risks in the workplace, estimates the extent of the risk from the seriousness of the anticipated industrial accident, and implements countermeasures beginning with those targeting the greatest risk.

Responsible Care Activities Chemical Safety Initiatives

We have established a Chemicals Total Management Committee and have implemented a variety of initiatives to work toward our goal of zero legal and social issues related to the chemical substances contained in products. This effort applies throughout the product life cycle from the R&D stage to disposal at the end of the product service life.

We are upgrading our internal systems across the global operations of our Group in order to comply with national and international laws and regulations related to chemical products. Moreover, we are committed to providing our customers with information on relevant laws and regulations as well as product safety information.

Accommodating the REACH Regulation

Our Group manufactures, imports, and sells a variety of products in Europe, including superabsorbent polymer, and we carry numerous substances that are subject to REACH registration.

To expand our business under the terms of REACH, we are required to collect safety information, undertake risk evaluations, and register these substances. We are preparing to accommodate these requirements in collaboration with others in the same industry and throughout our supply chain.

Thus far, we have registered all substances subject to both registration deadlines of November 30, 2010, and May 31, 2013.

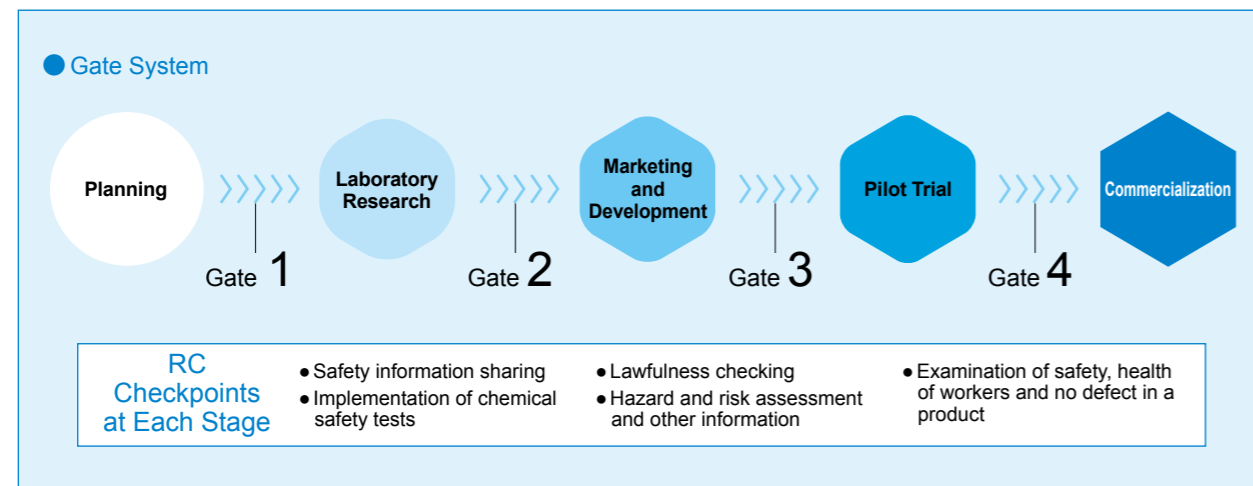
We will continue to promote such initiatives toward the May 31, 2018, registration deadline in order to ensure our Group in Europe remains in compliance with local laws and regulations.

Establishment of a Chemical Substance Management System

We are implementing a comprehensive chemical substance management system that can respond quickly to risk assessments, the issuance of SDS, and surveys from customers querying us on the chemical content of our products. We have created and launched this system by providing centralized management of various types of information encompassing chemicals, raw materials, hazardous materials, and regulations.

Ensuring the Safety of New Products

We have introduced a gate system at each stage from R&D to commercialization. In order to maintain safety throughout all processes including material procurement, processing, production, application, and disposal according to the terms of Responsible Care, at each stage we use technical expertise to determine whether to proceed to the next stage.



REACH

This European Union's chemical regulation is an acronym for Registration, Evaluation, Authorization and Restriction of Chemicals. While risk assessment of chemical substances had conventionally been carried at the initiative of administrative agencies, this responsibility was later transferred to companies. This legislative approach requires registrants (manufacturers and importers of chemicals) in the supply chain to assume the responsibility for maintaining human health and reducing environmental impacts. One of the objectives of this legislation is to strengthen the competitiveness of manufacturers within the EU.

Risk Assessment of Chemical Substances

Chemical risk assessment entails evaluation of the risk of various toxic hazards associated with chemical substances. Chemical manufacturers have the social responsibility to minimize the risk of chemical substances and are required to implement voluntary Responsible Care activities.

SDS

The Safety Data Sheet lists a chemical's properties as well as data on its safety, transportation requirements, applicable laws, proper handling, and specific emergency response measures in a prescribed format. We compile an SDS for each of the products we manufacture and develop, and we have implemented a system for distributing the latest versions to all employees through our chemical substance management system. In the future, we intend to compile a GHS-compatible version, an international version, and versions targeted to specific countries, such as an EU version and Chinese version.

Addressing Import/Export Controls

In order to ensure compliance with relevant laws and regulations regarding the import and export of our chemical products, we are promoting a variety of initiatives such as strengthening company regulations; determining whether a product is on a list subject to import/export restrictions; keeping our employees informed about whether a product has been listed as subject to import/export restrictions; recording applicable items on the SDS; and improving our shipping management system for coordination with our enterprise resource planning (ERP) backbone accounting system. We also conduct regular internal training on import/export management.

Accommodating Laws and Regulations Applicable to New Chemical Substances

In collaboration with specialized institutions and our Group companies outside Japan, we are responding appropriately to the laws and regulations both within and outside Japan that require us to issue notifications of new chemical substances. These include the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. and the Industrial Safety and Health Act of Japan; the Toxic Substances Control Act (TSCA) of the U.S.A.; REACH; Provisions on the Environmental Administration of New Chemical Substances in China; and the Toxic Chemical Control Act of South Korea.

Product Safety Initiatives

Our Product Safety Review Sub-committee verifies product safety, including compliance with the Product Liability Act. We prepare and inspect GHS-compliant warning labels, SDSs, and Yellow Cards for the logistics sector and provide information to customers while promoting training sessions for our employees.

Sample warning label



(for use outside Japan)



(for use within Japan)

GHS pictographs



Accommodating Green Procurement

For substances that are regulated or highly hazardous, we have independently assigned them to two categories: "prohibited substances (total ban on use)" and "restricted substances (handling restricted depending on product application)." We are promoting the development of green products and the procurement of raw materials with low environmental impact while determining and controlling the inclusion of such substances in our products. In response to customer requirements regarding the discontinuation and reduction of substances imparting an environmental burden, we are striving to eliminate these hazardous substances from our products and are disclosing appropriate information to customers.

Responsible Care Activities Quality Assurance Initiatives

We give the highest priority to providing products and services that fully satisfy our customers while earning their trust through continuous quality improvement.



Quality control meeting

Customer Satisfaction Initiatives

All our plants and all Group companies engaged in manufacturing and distribution both within and outside Japan have acquired certification of registration with ISO 9001, the international standard for quality management systems. We implement our quality assurance initiatives from the product development stage through to manufacturing and delivery.

We are dedicated to continuous improvement of our quality management system to ensure our customers are satisfied with the stable high quality of our products and services.

Promoting Initiatives to Address Quality Issues

We respond quickly to any quality issues that arise and share information throughout the company by compiling it into a database to visualize the progress of the response. At the same time, we are preventing quality issues from occurring through company-wide distribution of case histories.

In addition, we provide appropriate advice on quality issues to Group companies inside and outside Japan and always proactively strive to prevent the emergence of quality issues.

GHS

An abbreviation for Globally Harmonized System of Classification and Labeling of Chemicals, GHS reflects the risks and health and environmental hazards of chemicals determined in accordance with international standards. Under this system, products identified as presenting a risk or hazard are categorized according to test data and the information is displayed on labels on product packaging containers and in the respective SDS. Countries in Europe and Asia have also introduced this system on the recommendation of the United Nations. This system is enforced in Japan through the Industrial Safety and Health Act.

Yellow Card

Carriers who transport hazardous materials and toxic substances must carry a yellow card for reporting information about their cargo to fire squads in the event of an accident. The yellow card lists a chemical's hazards, first aid procedures in an accident, and emergency contact information. As part of its promotion of Responsible Care, the Japan Chemical Industry Association prepares and manages guidelines on the procedures for preparing a yellow card in order to strengthen first aid measures in the event of an accident.

Green Procurement

This initiative responds to the national policy to promote the purchase of products and raw materials with reduced environmental impact through recycling and the like. This initiative guides companies in their purchase of raw materials and parts for products from suppliers to promote the preferential selection of products with the least environmental impact.

Responsible Care Activities

Production Site Reports

Himeji Plant



Kenji Rakutani, Plant Manager

Plant Outline

Plant Manager: Kenji Rakutani, Executive Officer
 Location: 992-1 Aza-Nishioki, Okihama, Aboshi-ku, Himeji
 Number of employees: 939 at the Himeji Plant;
 176 at research centers in the Himeji district
 Products: Acrylic acid, acrylates, maleic anhydride, superabsorbent polymers, resin modifier, electronic information materials, De-NOx catalyst, dioxins decomposition catalyst, and other products

Fiscal 2013 Results of RC Activities

- On September 29, 2012, an explosion and fire occurred at the plant. We implemented preventive measures against recurrence and have since returned to full-scale production.
- Our employees suffered one injury with loss of workdays and two without loss of workdays; our contractors suffered one injury with loss of workdays and two without loss of workdays.
- We increased our energy intensity by 1%, increased our total emissions of substances subject to the PRTR by 12%, and reduced our total waste generation by 31%, all year-on-year.

We offer our deepest condolences for the loss of life due to a fatal explosion and fire accident two years ago. We sincerely apologize to the bereaved family and pray for the earliest possible recovery of the injured. Moreover, I deeply regret that neighboring residents and the authorities concerned suffered the consequences of this tragic event. Our plant received instructions from the relevant organizations; we implemented the necessary measures intended to prevent a recurrence and restarted full-scale production. We continue to

implement improvements with the intention of adopting future refinements, always aiming to further improve our process safety capabilities.

A new acrylic acid plant, steam energy recovery facility, and waste liquid combustion facility were completed this year. Our goal is to reduce our energy intensity, CO₂ emissions intensity, and dust emissions as a result of introducing these advanced facilities.

Kawasaki Plant



Yujiro Goto, Plant Manager

Plant Outline

Plant Manager: Yujiro Goto, Executive Officer
 Location: Chidori Plant
 14-1 Chidori-cho, Kawasaki-ku, Kawasaki
 Ukishima Plant
 10-12 Ukishima-cho, Kawasaki-ku, Kawasaki
 Number of employees: 351 (including Research Center employees)
 Products: Ethylene oxide, ethylene glycol, ethanolamine, higher-alcohol surfactants, polymers for concrete admixture, and other products

Fiscal 2013 Results of RC Activities

- In light of the accidents experienced by our company two years ago and by other companies, we took steps to implement specific safety measures and enhance our safety management practices.
- We implemented facility countermeasures against potentially large earthquakes and tsunamis. We also conducted regular disaster drills and have strengthened our emergency response measures.
- Our updated application for certification as an inspector of high-pressure gas was also approved.
- Two employees of our contractors suffered injuries without loss of workdays. We encouraged our contractors to carry out thorough safety training and prior confirmation.
- We proceeded with our planned initiatives to improve our energy efficiency, reduce waste, and reduce emissions of substances subject to the PRTR.

In light of the accidents experienced at the Himeji Plant two years ago and elsewhere, last year we took steps to implement specific safety measures and enhance our safety management. Furthermore, we are steadily incorporating safety drills and other facility countermeasures as a response to the potential for major earthquakes and tsunamis while strengthening our emergency response measures. In addition, our updated application for certification as an inspector under the High Pressure Gas Safety Act was also approved.

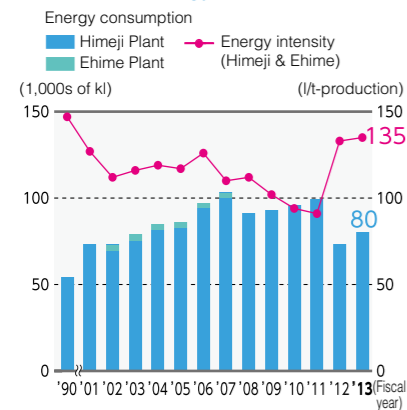
In terms of our safety record, two employees (contractors) suffered injuries

without loss of workdays. As a result, we conducted thorough safety training and prior confirmation. Moreover, we carefully conducted "KY" (*kiken yochi*, or "risk prediction") campaigns, "close-call" incident (*hiyari hatto*) reporting campaigns, and risk assessments while also taking steps to improve our operations.

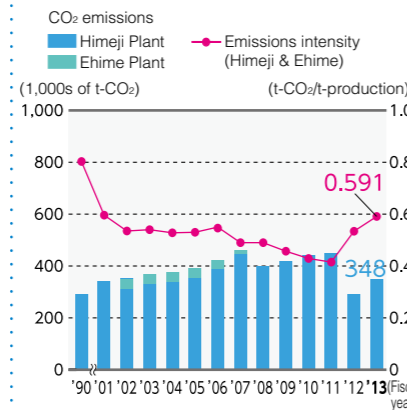
We are steadily implementing plans for waste recycling, improving our energy efficiency, and reducing our emissions of substances subject to the PRTR.

We will continue to promote our Responsible Care initiatives with the goal of ensuring our plant remains safe and reliable.

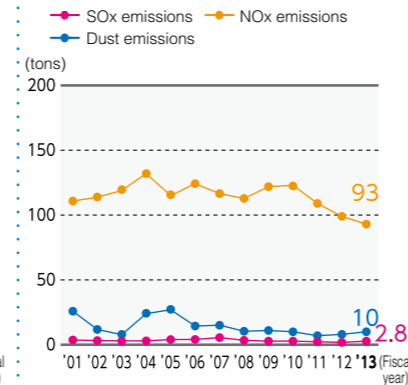
Trend in Energy Consumption



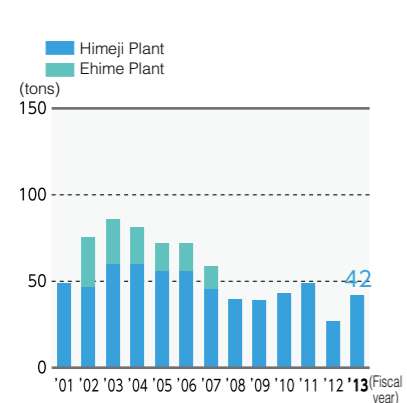
Trend in CO₂ Emissions



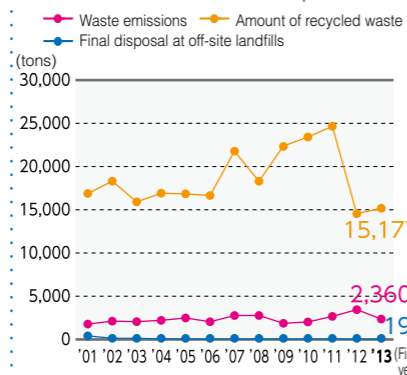
Trend in Emissions of SO_x, NO_x, and Dust



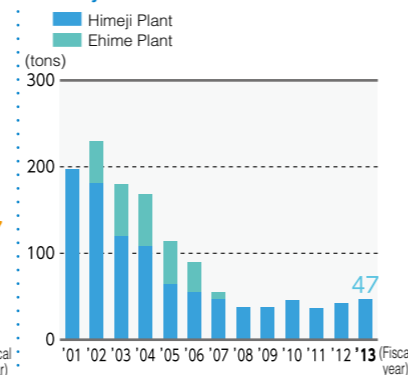
Trend in COD of Wastewater



Trend in Amount of Waste, Recycled Waste, and Waste for Final Landfill Disposal

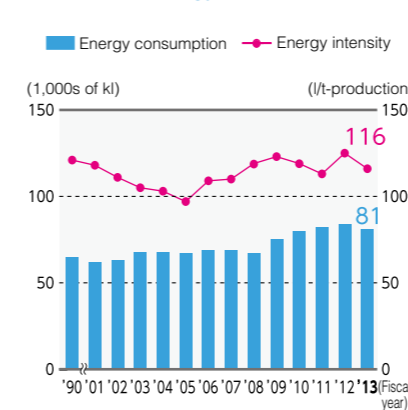


Trend in Emissions of Substances Subject to the PRTR

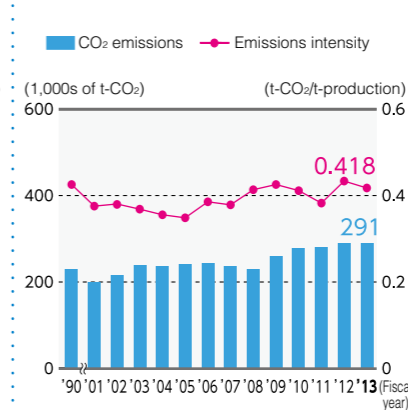


As of fiscal 2007, the Ehime Plant stopped production.

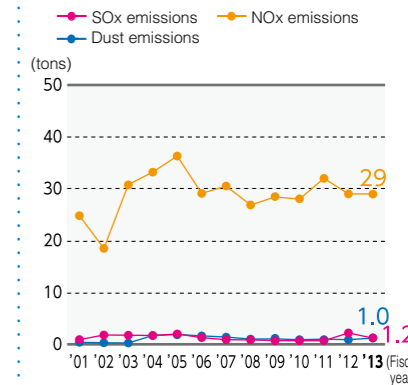
Trend in Energy Consumption



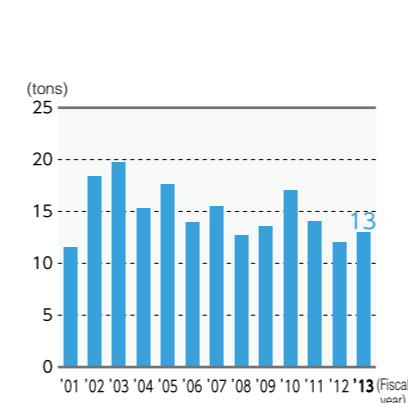
Trend in CO₂ Emissions



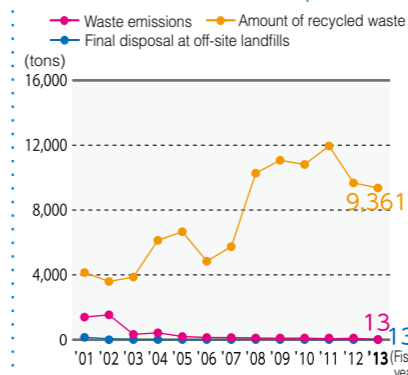
Trend in Emissions of SO_x, NO_x, and Dust



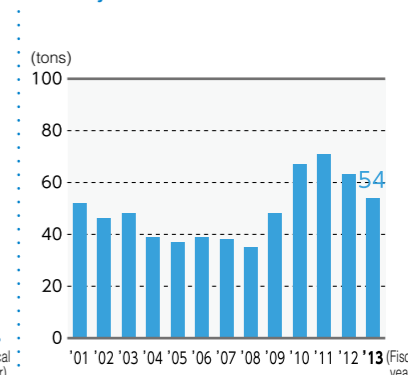
Trend in COD of Wastewater



Trend in Amount of Waste, Recycled Waste, and Waste for Final Landfill Disposal



Trend in Emissions of Substances Subject to the PRTR



In fiscal 2010, vanadium compounds were included in the PRTR.

Responsible Care Activities

Production Site Reports

Suita Plant



Hideyuki Nishibayashi, Plant Manager

Plant Outline

Plant Manager: Hideyuki Nishibayashi
 Location: 5-8 Nishi Otabi-cho, Suita
 Number of employees: 70
 Products: Acrylic resins for adhesives, resins for paints, and other products

Fiscal 2013 Results of RC Activities

- We registered zero industrial accidents, zero facility disasters, zero problems related to chemical safety, and zero serious quality complaints.
- We improved our recycling rate by continuing to recover sorted waste.
- We registered almost zero levels of emissions of substances subject to the PRTR as a result of having transferred our production of solvent acrylic resin.

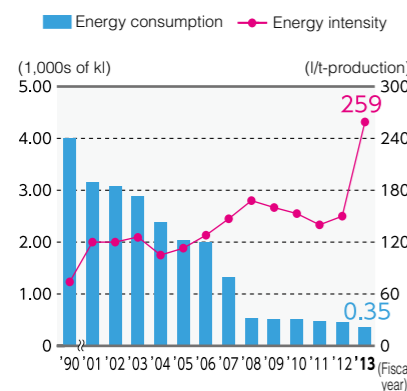
Continuing the performance we have demonstrated since fiscal 2007, the Suita Plant experienced zero industrial accidents (including injuries without loss of workdays) and zero facility disasters. Among our environmental protection initiatives, we have been implementing ongoing steps to improve our recycling rate through sorting of waste; this commitment had enabled us to further reduce the landfill disposal volume.

The Suita Plant has completed its transfer of production of solvent acrylic resin. This effort has greatly reduced the scope of the hazardous

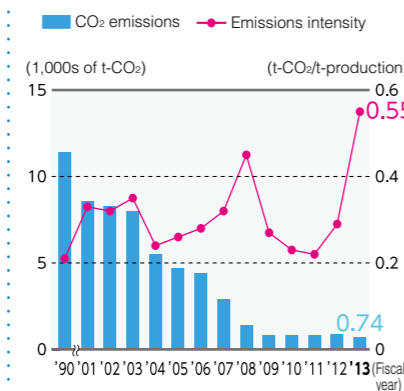
material manufacturing facility in the plant and also led to almost zero levels of emissions of substances subject to the PRTR.

As the plant is located in the middle of an urban area, we will continue to reduce our environmental impact by working in collaboration with our on-site research department. At the same time, we will maintain our targets of zero accidents and disasters, and strive to gain the greater trust of the local community by contributing to their peace of mind.

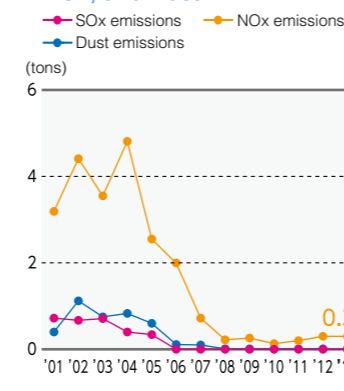
Trend in Energy Consumption



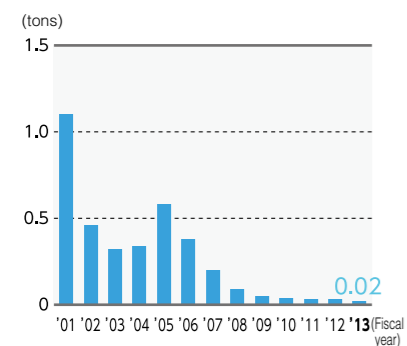
Trend in CO₂ Emissions



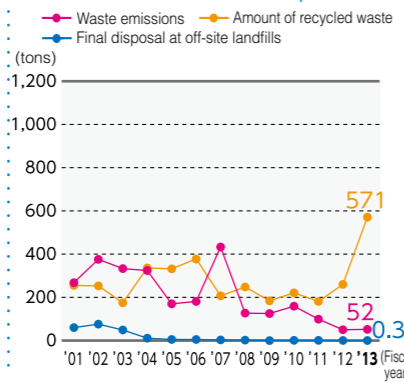
Trend in Emissions of SO_x, NO_x, and Dust



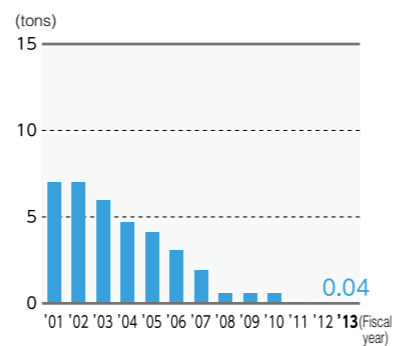
Trend in COD of Wastewater



Trend in Amount of Waste, Recycled Waste, and Waste for Final Landfill Disposal



Trend in Emissions of Substances Subject to the PRTR



Responsible Care Activities

Initiatives of Group Companies

Group Companies in Japan

Nisshoku Butsuryu Co., Ltd.

The Nisshoku Butsuryu Group continues to sharpen its focus on environmental protection, distribution safety, and distribution quality. At the same time, it aims to become an even better logistics company that warrants the full confidence of shippers and customers alike for implementing a management system according to ISO international standards. The following are examples of its initiatives.

- Reducing the threat of global warming and mitigating environmental impacts through eco-friendly logistics initiatives focused on energy-efficient driving methods (observing speed limits and minimizing idling by introducing eco-devices); green management; and modal shifts and transport efficiency.
- Introducing an OHSAS 18001-compliant Occupational Safety and Health Management System in fiscal 2012 and continuing to conduct risk assessments of hazardous and toxic tasks such as in-yard material handling operations.
- Proactively pursuing a commitment to safety management (transportation safety management) as a truck transport company and introducing a combination of digital tachometers, GPS units, and drive recorders (which comprise an advanced driving information system known as *Mimamorikun*) according to risk evaluations to support energy-efficient driving methods, safe driving, and accident response. Beginning this fiscal year, the company has been promoting the introduction of safety devices such as inter-vehicular distance management devices, lane departure warning devices, and supplemental rear view cameras.
- Systematically conducting voluntary checks of tankers in an effort to prevent leakage during transport.

Advanced driving information system
 An advanced driving information system incorporating a combination of digital tachometers, GPS units, and drive recorders.



Green Management
 Green management is intended to improve management effectiveness while promoting voluntary systematic environmental measures. The Ministry of Land, Infrastructure, Transport and Tourism of Japan teamed up with the Foundation for Promoting Personal Mobility and Ecological Transportation to publish a green management promotion manual focused on the transportation industry. The Foundation handles certification and registration by screening companies that have taken the initiative to exceed the specific levels outlined in this manual.

NIPPON POLYESTER CO., LTD.

Nippon Polyester has been promoting reduced environmental impacts through its EcoAction 21 initiative. Specifically, it updated aging exhaust gas treatment facilities for increased efficiency. The company experienced one industrial accident by entanglement in fiscal 2013. Taking this accident seriously, they are thoroughly improving their facilities and safety training and are taking steps to further improve safety awareness.



Exhaust gas treatment facilities

CHUGOKU KAKO CO., LTD.

In fiscal 2013, Chugoku Kako implemented a thorough examination of its compliance with the relevant laws and regulations as well as its environmental impact when it expanded and modified its facilities due to the start of production of fine chemical products. In addition, the company will establish an in-house framework for Responsible Care (RC) audits in fiscal 2014 and is making plans to put this new system into effect. In the future, the company will focus on upholding public trust and maintaining harmony with the local community while emphasizing safety, product quality, and the environment.



Clean room Detoxifying apparatus

Tokyo Fine Chemical CO., LTD.

In fiscal 2013, under our corporate credo "Safety takes priority over production," Tokyo Fine Chemical has been implementing Responsible Care according to the five pillars of occupational safety and health; process safety and disaster prevention; environmental protection; quality assurance; and chemical safety. This is in keeping with a policy of establishing a safe and efficient production system. As a result, in the area of process safety and disaster prevention, the company has registered zero facility disasters and accidents while also reducing energy consumption and greenhouse gas emissions in the interests of environmental protection.

In the area of quality assurance, the company identified container problems as a priority item to be addressed; as a result, container problems have been eliminated. As for occupational safety and health, the company experienced one industrial accident. The company is striving to institute improvements to both facilities and management by performing risk evaluations and identifying risk factors again.

The company is committed to implementing more aspects of Responsible Care in the future in order to maintain operational safety.



Safety display

Responsible Care Activities

Initiatives of Group Companies

Group Companies in Japan

NIPPON POLYMER IND. Co., Ltd.

As part of its process safety and disaster prevention initiatives, the company conducts an annual disaster response drill in June under its self-defense disaster response team. In fiscal 2013, after a five-year hiatus, the company carried out a joint comprehensive disaster response drill with the participation of Himeji City's Aboshi Fire Department, a local firefighting team, and the Nippon Shokubai Firefighting Team.

In addition, the company is reviewing and revising its disaster prevention regulations, preventive regulations, and firefighting plans; conducting fire extinguisher drills for new employees and emergency contact drills for all employees, as it has done in the past; and is incorporating improvements to its process safety and disaster prevention awareness efforts.

Joint disaster response drill



Municipal firefighters and self-defense disaster response team



Emergency vehicles



Casualty transport drill



Teams at assembly

NIHON JYORYU KOGYO CO., LTD.

Nihon Jyoryu Kogyo's environmental protection initiatives have been focused on waste generation, energy efficiency, and emissions of substances subject to the PRTR. Their goal is to reduce emissions intensity levels at their respective fiscal 2012 levels. As a result of their efforts, the company was able to reduce waste by improving the performance of in-house treatment of waste liquid. In addition, energy consumption has been reduced by about 20% due to the mothballing of energy-inefficient facilities, which were replaced with highly productive new facilities in November 2012.

In the area of occupational health and safety, the company experienced two injuries without loss of workdays in fiscal 2013, which unfortunately interrupted their roughly two-year-long record of zero injuries with and without loss of workdays. In fiscal 2014, the company will review existing operations once again and eliminate hazards while continuing to implement "KY" risk prediction, "HH" close-call incident reporting, and "5S" campaigns.



Presentation to a safety meeting



Off-premises cleanup under the 5S campaign

NIPPON NYUKAZAI CO., LTD.

Regarding the primary initiatives in fiscal 2013, in the area of occupational safety, Nippon Nyukazai worked on reductions in hazard level III by means of OSHMS. As an example of one improvement, the sleeper drum racks where several finger-pinching and other industrial accidents occurred in the past were replaced with a vertical access configuration providing safer access.

In terms of environmental protection, the Kashima Plant switched from kerosene to city gas for some plant operations, resulting in an 18% year-on-year reduction in CO₂ emissions intensity.

Beginning with this fiscal year, Nippon Nyukazai also conducted biannual RC audits under the president's supervision at each plant. The purpose of these audits is to validate the adequacy of Responsible Care initiatives on-site and to clarify the priority issues for the subsequent fiscal year.

In the future, the company will strive for greater operational safety while further promoting and enhancing its Responsible Care initiatives.



Responsible Care audit



NIPPOH CHEMICALS CO., LTD.

Among its Responsible Care initiatives addressing environmental protection for fiscal 2013, Nippon Chemicals continued to pursue waste reduction by recovering and recycling resources (iodine) and reusing waste solvents. The company also reduced its energy intensity by improving both productivity and yield. Furthermore, the company has improved its transportation method as an accident countermeasure for the transport of hazardous products.

The company has also enhanced its emergency preparedness, specifically its disaster first aid items (emergency food and drink supplies, restroom sets, etc.), which are stored in a dedicated warehouse in preparation for an emergency.

The company experienced 28 facility problems and 43 quality issues; in addition, four employees suffered injuries in fiscal 2013. As a priority for fiscal 2014, the company remains committed to strengthening its countermeasures against such problems.



Disaster preparedness warehouse



Accident response drill focused on transport carriers



Group Companies outside Japan

PT. NIPPON SHOKUBAI INDONESIA

The Indonesia Responsible Care Committee presented PT. Nippon Shokubai Indonesia with its Platinum Award, the top prize, for the third time in recognition of the success of its pledge to implement the seven codes of Responsible Care. In addition, the company president, Masakazu Tanaka, received the "Best CEO" award this year for his outstanding participation and effort to continue implementing Responsible Care initiatives as a top executive.

The company recorded 13 consecutive years of zero injuries with loss of workdays from July 1999 to 2013 thanks to its adoption of the Group Mission of **TechnoAmenity** and its continuous adherence to the slogan, "The person who noticed is responsible."

■ The company is committed to implementing the following initiatives through its environmental and occupational safety management systems:

- targeting zero landfill disposal of hazardous and toxic waste and promoting the "3 Rs" (reuse, reduce, and recycle); and
- turning off lights and air conditioners except when necessary as an energy conservation measure.

■ By adopting the following measures intended to overcome human error, the company will continue to uphold its record of zero industrial accidents:

- practicing "pointing and calling," "reply instruction," and "real time KY";
- improving safety awareness of all employees through training in Behavior-Based Safety (BBS) management;
- continuously evaluating the risks of transporting chemical substances under a product stewardship and distribution program based on distributor audits; and
- conducting annual firefighting drills in order to improve emergency response capability.



Presentation of the Platinum Award from the Indonesia Responsible Care Committee



Community cleanup campaign



Firefighting drill



Training in Behavior-Based Safety management

NIPPON SHOKUBAI EUROPE N.V. (Belgium)

In 2013, NSE underwent an inspection by an accredited external body regarding environmental laws and regulations. Although some issues were noted, the result was satisfactory, and the company's certifications of ISO registrations (9001, 14001 and 18001) were updated. NSE actively participated in the "Technopolis Project," a nationwide initiative to develop chemical companies in Belgium.

The company is scheduled to initiate its longest shutdown (five weeks) in early 2014. As a result, it has conducted various training programs. Because a compressor will be updated with improved refrigerant, training in extracting the refrigerant was provided in preparation for dealing with potential leakage.



Firefighting drill

SINGAPORE ACRYLIC PTE LTD

In 2013, the Government of Singapore disseminated energy-efficiency methods to achieve its goal of improving energy efficiency by 35% between 2005 and 2030. Companies in the industrial sector are obliged to register with the National Environment Agency and manage their energy consumption. Those among them that are large-scale energy consumers (accounting for more than 54 terajoules annually) are additionally required to meet the following requirements:

- appointing an energy manager;
- measuring and reporting the annual energy consumption and greenhouse gas emissions; and
- submitting an energy-efficiency improvement plan (reporting data from 2013)

Singapore Acrylic participated in an authorized training course provided by the government since the end of 2012, and three employees acquired certification as a Singapore Certified Energy Manager (SCEM Professional level). By applying the knowledge they have gained, these individuals are expected to contribute significantly to improved energy efficiency.



Certified Energy Managers

Responsible Care Activities Initiatives of Group Companies

Group Companies outside Japan

NA Industries, Inc. (U.S.A.)

Maintaining the health and safety of both the Houston Plant and Chattanooga Plant has become a daily priority. The Houston Plant started full operation in 2013 and the Chattanooga Plant was able to achieve No Lost Time Accidents for three years while engaged in the shutdown and restart of the absorbent polymer plant.

Both plants were able to achieve their goals through safety initiatives utilizing KY reports as well as the introduction of new occupational safety and health management system.

Additional initiatives are listed below:

- Introduction of a new online safety training program for appropriately conducting safety procedures and Occupational Safety and Health Administration (OSHA) requirements
- "5S" campaigns such as plant patrols by members of each division
- Open communication through active participation in local emergency plan committees
- Safety slogans prepared to promote active safety initiatives
- Introduction of a new line breaking station for the safety training program to help employees better understand Line Breaking and Lock-Out-Tag-Out Procedures
- Utilizing a firefighting training station to provide training so that all employees know how to respond when a fire breaks out.

Everyone at the company is committed to achieving and maintaining zero industrial accidents and zero facility disasters.



Results of safe slogan contest



Line breaking station



Training at the firefighting training station

SINO-JAPAN CHEMICAL CO., LTD. (Taiwan)

Because of an increase in the volume of raw materials handled in fiscal 2013, Sino-Japan Chemical submitted an application to the Bureau of Labor Affairs in Kaohsiung City for a Class C hazardous substance handling facilities permit, which was granted. The company is committed to strengthening its health and safety management, conducting safety evaluations, process change safety planning, and emergency preparedness.

Sino-Japan Chemical is located in the Ling Yuan Industrial Zone. Neighborhood inhabitants underwent health risk assessments after new China Petrochemical plants were opened in the zone. The company will promote initiatives to reduce waste emissions and emissions of chemical substances in response to future strengthening of regulations.



Pollution source operation permit

NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD. (China)

Nisshoku Chemical Industry has maintained its commitment to environmental, safety, and quality assurance initiatives. In April, an old activated sludge treatment facility was retired and a new facility was put into service.

The company also conducts disaster response drills annually in June and November in collaboration with local firefighting teams and emergency centers. In addition, the in-house disaster response team trains every two months in order to promptly respond to every possible disaster. With regard to occupational safety and health, the company holds safety and health meetings and measures noise, chemical concentrations, and particulate concentrations. In this way it maintains a work environment supportive to employee health.



In-house disaster response team



Local firefighting team



Emergency Center



Firefighting drill



New activated sludge treatment facility

Third-Party Review

The Japan Chemical Industry Association (JCIA) issued the "Independent Verification – Opinions" for our Environmental and Social Report 2014 (Japanese edition) in Japanese as below. It expresses verification on rationality and accuracy, and informed opinions of chemical industry specialists on the contents related to our RC activities and the characteristics of our report.



「2014 環境・社会報告書—CSR経営の実践—」

第三者検証 意見書

2014年6月9日

株式会社 日本触媒
代表取締役社長 池田 全徳 殿

一般社団法人 日本化学工業協会
レスポンシブル・ケア検証センター長

高瀬純治



■検証の目的

本検証は、株式会社日本触媒が作成した「2014 環境・社会報告書—CSR経営の実践—」(以後、報告書と略す)を対象として、下記の事項について、化学業界の専門家としての意見を表明することを目的としています。

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性
- 2) 数値以外の記載情報の正確性
- 3) レスポンシブル・ケア活動の評価
- 4) 報告書の特徴

■検証の手順

- ・本社において、各サイト(事業所、工場)から報告される数値の集計方法の合理性、及び数値以外の記載情報の正確性について調査を行いました。調査は、報告書の内容について各業務責任者及び報告書作成責任者に質問すること、及びそれぞれの責任者より資料提示と説明を受けることにより行いました。
- ・川崎製造所において、本社に報告する数値の算出方法の合理性、数値の正確性及び数値以外の記載情報の正確性の調査を行いました。この調査は、各業務責任者及び報告書作成責任者への質問とその資料提示及び説明を受けること、並びに証拠物件と照合することにより行いました。
- ・数値及び記載情報の調査についてはサンプリング手法を適用しました。

■意見

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性について
 - ・数値の算出・集計方法は、本社、川崎製造所において、合理的な方法を採用しています。
 - ・調査した範囲において、数値は正確に算出・集計されています。
- 2) 記載情報の正確性について
 - ・報告書に記載された情報は、正確であることを確認しました。原案段階では表現の適切性、文章の分かり易さについて若干の指摘をしましたが、現報告書では指摘事項は修正されています。
- 3) CSR 活動の評価について
 - ・本報告書で、株式会社日本触媒の CSR コンセプトは、分かり易く説明されています。社内各部署が一体感をもって更に活動を推進されることを期待します。
- 4) レスポンシブル・ケア活動の評価について
 - ・海外のグループ企業に対し、RC 活動をよく支援されています。その結果として、PTニッポンシヨクバイ・インドネシアが現地の RC 協会からベスト CEO 賞と3度にわたるプラチナ賞を受賞したことは、素晴らしいことです。
 - ・社内の RC 査察に於いて、細部に至るまで監査され、コメントもしっかりなされている点を評価します。
 - ・川崎製造所千鳥工場及び浮島工場は、高圧ガス認定完成検査実施者及び認定保安検査実施者としての法対応だけでなく、地震・津波対応、他事業所事故の水平展開等、幅広くもれなく保安防災活動に取り組まれている点を評価します。また、廃棄物管理システムは、電子化も含め良く整備されています。
- 5) 報告書の特徴について
 - ・2012年9月に姫路製造所で発生した爆発・火災事故に関し、特集を組んで再発防止策の進捗状況について報告されています。この中で、安全に関する風土を点検し、課題を明確化されています。そして、この課題が事業所できちんと対応されている点を評価します。

以上

Profile of the Nippon Shokubai Group

Outline

Established	August 21, 1941
Common stock	¥25,000 million
Net sales	¥302,100 million (consolidated) ¥185,700 million (non-consolidated)
Number of employees	3,955 (consolidated) 2,029 (non-consolidated)
Osaka Office	Kogin Bldg., 4-1-1 Koraibashi, Chuo-ku, Osaka 541-0043, Japan TEL: +81-6-6223-9111 FAX: +81-6-6201-3716
Tokyo Office	Hibiya Dai Bldg., 1-2-2 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100-0011, Japan TEL: +81-3-3506-7475 FAX: +81-3-3506-7598
Main Plants and Research Centers	Himeji Plant, Kawasaki Plant, Suita Plant, 6 Research Centers, Process Technology Center As of March 31, 2014

Major Product Lines

Basic Chemicals

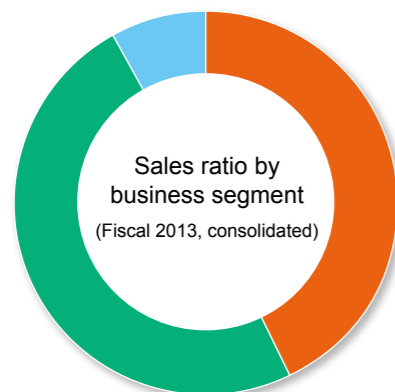
Acrylic acid, acrylates, ethylene oxide, ethylene glycol, ethanolamine, higher-alcohol surfactants, glycol ether

Functional Chemicals

Superabsorbent polymers, intermediates for pharmaceutical, polymers for concrete admixture, electronic information materials, iodine, maleic anhydride, resins for adhesives, resins for paints, plastic moldings, adhesive products

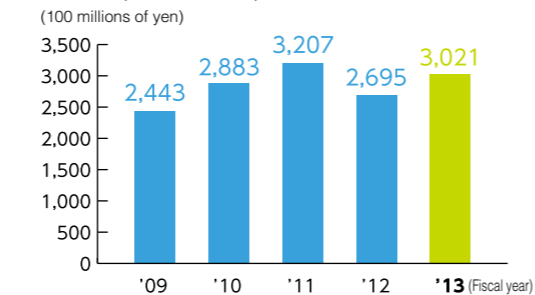
Environmental Products & Catalysts

Automotive catalysts, De-NOx catalyst, dioxins decomposition catalyst, process catalyst, waste gas treatment catalyst, materials for fuel cells

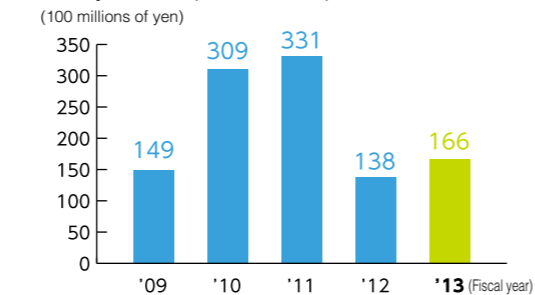


Basic Chemicals	43%
Functional Chemicals	49%
Environmental Products & Catalysts	8%

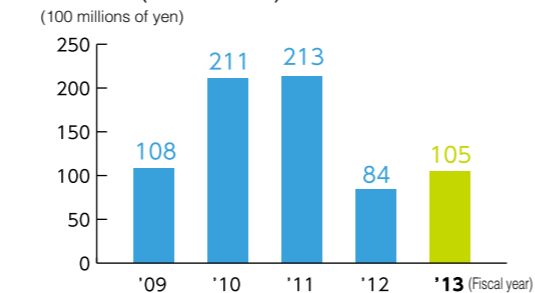
Net sales (consolidated)



Ordinary income (consolidated)



Net income (consolidated)



Group Companies

<In Japan>

NIPPOH CHEMICALS CO., LTD.*; NIPPON POLYESTER CO., LTD.*; NIPPON NYUKAZAI CO., LTD.*; Nisshoku Butsuryu Co., Ltd.*; Tokyo Fine Chemical CO., LTD.*; CHUGOKU KAKO CO., LTD.*; NIPPON SHOKUBAI TRADING CO., LTD.*; NIHON JYORYU KOGYO CO., LTD.*; Umicore Shokubai Japan Co., Ltd.; NIPPON POLYMER IND. Co., Ltd.*; Japan Composite Co., Ltd.

<Outside Japan>

NA Industries, Inc.*; NIPPON SHOKUBAI (ASIA) PTE. LTD.*; PT. NIPPON SHOKUBAI INDONESIA*; NIPPON SHOKUBAI EUROPE N.V.*; SINGAPORE ACRYLIC PTE LTD*; NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD.*; American Acryl L.P.; American Acryl NA, LLC; LG MMA Corporation; SINO-JAPAN CHEMICAL CO., LTD.; Umicore Shokubai S.A. (* Consolidated subsidiaries)

Our Product Lines

Nippon Shokubai — A Part of Your Daily Life



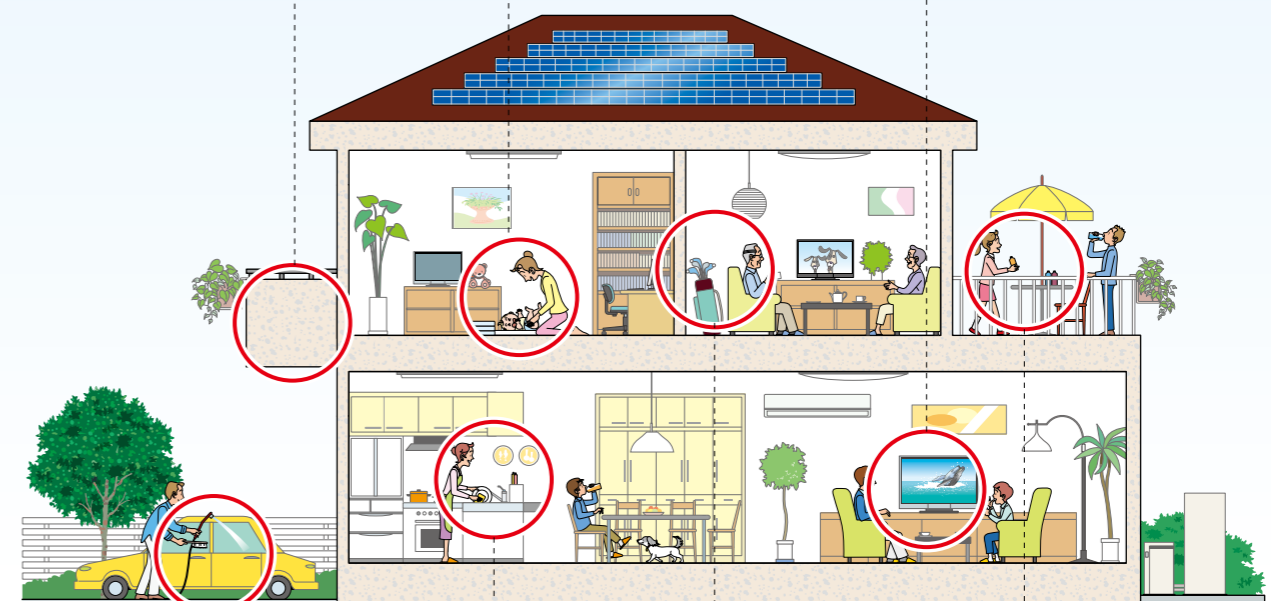
Acrylates are used as ingredients in eco-friendly water-soluble paints.



Superabsorbent polymers are used in sanitary goods such as disposable diapers.



Acrylic resins for optical materials and polymers for color resists are used in energy-efficient LCD TVs.



Catalysts are used for vehicle emissions control and for decomposing dioxins generated by incinerators.



Higher-alcohol surfactants and water-soluble polymers are used as ingredients in various detergents.



Acrylic acid derivatives are used as core materials in golf balls.



Ethylene glycol is used as a raw material in the manufacture of recyclable PET bottles.

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Providing affluence and comfort to people and society,
with our unique technology.