CSR REPORT 2009
Corporate Social Responsibility

ZEON

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ZEON CORPORATION

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Message

Introducing the 2009 CSR Report

ZEON Corporation's 3-year mid-term management plan known as PZ-3 which covers the years 2005 to 2007 acknowledged the importance of CSR*1 (Corporate Social Responsibility) and established a shared awareness of this importance across the entire ZEON group. The company has worked to spread CSR through its business activities and regional and social involvement by strengthening its compliance systems, achieving reliable and safe plants, and coexisting harmoniously with local communities.
The IZ-60 (Innovation Zeon 60) 3-year mid-term management plan for 2008 to 2010 looks forward to the 60th anniversary of the company's founding. The plan aims to produce products and factories that are friendly to the environment and generate value that will please both our customers and wider society through our activities as a manufacturer that emphasizes CSR, is rigorous about compliance, and puts safety first based on a recognition that the company is a social organization. Despite revisions to IZ-60 resulting from the rapid changes in economic conditions triggered by the current worldwide financial crisis, the plan retains both these core concepts and the objective of conducting our business in such a way that the emphasis on CSR is an unquestioned prerequisite.
Although it is anticipated the current difficult business climate will continue, we intend to continue to work hard to contribute to society, primarily through our core business, by establishing flexible organizational structures and mechanisms that allow us to satisfy the demands and expectations of shareholders and other stakeholders associated with the ZEON group.
We hope that this report will help improve understanding of the CSR activities carried out by the ZEON group. If you have any comments or questions, please do not hesitate to contact us.

September 2009

Report Policy

This report was created in line with the following basic policy.
(1) The number of photographs and comments from individuals were increased to enhance the statement of employees.
(2) This report is issued annually.
(3) The report was collated with reference to the 2007 Environmental Reporting Guidelines of the Ministry of the Environment and the 2006 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI).

Organizations Covered

ZEON and the following subsidiaries and affiliates are included:
Japan: ZEON Kasei Co., Ltd., ZEON Polymix Co., Ltd., Optes Inc., ZEON Chemicals Yonezawa Co., Ltd., RIMTEC Corp., Tokyo Zairyo Co., Ltd., ZEON Environmental Materials Co., Ltd., ZEON Medical Inc., ZEON Yamaguchi Co., Ltd., ZEON North Co., Ltd., Okayama Butadiene Co., Ltd.
Overseas: ZEON Chemicals LP. (USA), ZEON Chemicals Europe Ltd. (UK), ZEON Chemicals Thailand Co., Ltd. (Thailand), ZEON Advanced Polymix Co., Ltd. (Thailand)

Period Covered

April 2008 to March 2009 (also includes some new information from April 2009 and later)

*1 CSR is an abbreviation for "Corporate Social Responsibility".

Head Office (Shin-Marunouchi Center Building)

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President's Message

Our corporate name ZEON is an amalgamation of the Greek words "GEO" (meaning the "EARTH") and "EON" (meaning "ETERNITY"). It represents a direct statement of our corporate mission.

ZEON Corporation's 3-year mid-term management plan for 2008 to 2010 (IZ-60) published in May 2008 reinforced our evolving commitment made in the 2005 to 2007 management plan (PZ-3) to emphasize CSR in our activities, and we have operated our business with the aims of improving corporate value and producing factories and products that are friendly to the environment through our activities as a manufacturer for whom an emphasis on CSR, rigorous compliance, and a safety-first approach is an unquestioned prerequisite, and in our role as a chemicals company that aims, based on a recognition that the company is a social organization, to contribute to society by using advanced innovation to deliver in a timely manner products that will please our customers around the world.
Although some revisions were made to the IZ-60 plan amidst the rapid changes in economic conditions triggered by the worldwide financial crisis that started in autumn 2008, the revisions were limited to adjustments to our corporate targets in accordance with the changed economic circumstances. The changes left the core concepts unchanged and it was made clear that these will be our top priorities for the remaining two years covered by the plan. Accordingly, the core strategy for 2009 to 2010 identified three key issues on the basis of our all-encompassing emphasis on CSR and that "difficult times provide an opportunity for fundamental change and build the foundation for future development".

1. Move to a business model that remains profitable at 70% utilization.
2. Place an emphasis on cashflow and reduce interest-bearing debt.
3. Improve the quality and speed at which research and development is transformed into production technology.

Although the difficult business conditions look likely to continue for the foreseeable future, ZEON Group aims to continue operating our business in a way that is friendly to the global environment in order to protect the global environment, contribute to society, and achieve sustainable progress of the company and society based on our corporate philosophy of "contributing to the global environment and the prosperity of the human race".

ZEON Group has worked on numerous product developments that contribute to environmental protection through "original technology that does not imitate others and cannot itself be imitated".

Some examples of these products include rubber for fuel conserving tires, latex for gloves that eliminate protein allergies, and "Zeoglobule®" polymerized toner that helps reduce energy use in copiers.

The excellent optical characteristics of the "ZEONOR®" and "ZEONEX®" cycloolefin polymer products help to improve the energy efficiency of LCD TVs and make them even thinner. The environmentally friendly characteristics of these products is demonstrated by their use in applications such as in medical containers and equipment and in the substrates for organic EL, the next-generation energy-efficient lighting technology demonstrated at the G8 Summit at Toyako.
"ZEONOR Film®" received technical awards in two different categories of the 2008 "Katashi Aoki" prize awarded by the Japan Society of Polymer Processing and this method of producing optical film by molten extrusion without the use of solvents has made a significant contribution to the environment. Similarly, the Zeorora® next-generation fluorochemical cleaning agent that won the Stratospheric Ozone Protection Award in the US also helps protect the ozone layer and prevent global warming.

In addition to supplying these products to society through reliable and safe production methods established through our past Responsible Care activities, our aim is to operate our business with even greater efficiency and reliability through production innovation, NPS, and business innovation. To strengthen our Responsible Care activities further, we also signed up to the Responsible Care Global Charter in January 2009.

Regarding compliance issues and corporate ethics, our aim is to uphold sincerely the values and ethics required of a corporate member of society, not just those obligations imposed by regulation, and by so doing maintain fair business practices and conduct our business in harmony with the local community and the general public.

In terms of information disclosure, we have always strived to supply as much information as possible in an easily understood form and, in a survey that ranked the corporate web sites of all listed companies carried out by Nikko Investor Relations in 2008 based on how comprehensive they were, our web site was placed 18th out of a total of 3,920 companies rated and 2nd amongst companies in the chemical industry. In the future, we will continue working to improve even further our information disclosure.

Based on a recognition that the company is a social organization, ZEON Group aims to continue contributing to the sustainable development of society and meeting the demands and expectations of all our stakeholders, including the local community, customers and shareholders, through speed, dialogue and by contributing to society. We aim to establish ourselves as a group with a strong emphasis on CSR that the public can trust and of which our employees can be proud by strengthening our compliance systems, achieving reliable and safe plants, and coexisting harmoniously with the community and wider society.

Finally, I would like to take this opportunity to say thank you for reading this report, and we welcome your opinions and suggestions

September 2009

President and CEO
古河直純
Naozumi Furukawa

ZEON makes an important contribution to society with unique technology

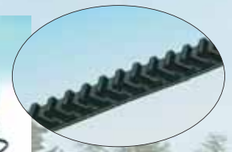
ZEON boasts a range of products including synthetic rubber especially designed for timing belts and other safety-critical components in automobile engines, green note aroma chemicals (leaf alcohol) for perfumes and food flavors, and environmentally friendly products such as lightweight, transparent cycloolefin polymer resins and etching gases for semiconductors that do not harm the ozone layer.
At ZEON, we strive for innovative and revolutionary new technology that "does not imitate others" and "cannot itself be imitated" and continuous improvement in our core strengths. Our ultimate aim is to establish a leading presence in society.

ZEON's Business Sectors

Elastomer Business

- **Synthetic Rubber**
  Styrene-butadiene rubber, butadiene rubber, isoprene rubber, high-styrene rubber, acrylonitrile-butadiene rubber, acrylic rubber, epichlorohydrin rubber, hydrogenated nitrile rubber, carbon master batch, etc.
- **Synthetic Latex**
  Styrene-butadiene latex, butadiene latex, acrylonitrilebutadiene latex, acrylate latex
- **Chemical Products**
  C5 petroleum resin, thermoplastic elastomer SIS, concrete fluidizer, water-based dispersing agent, epoxy hardener, etc.


Gaskets


Timing belt using synthetic rubber


Gloves using synthetic latex

Specialty Material Business

- **Chemicals**
  Aroma chemicals, organic synthesis chemicals, etc.
- **Electronics Materials**
  Photoresist, etching gas, toner products, binder resin for electromagnetic tape, etc.
- **Specialty Plastics**
  Cycloolefin polymers and processed products.


Cycloolefin polymer


Raw film


Cellular phone using specialty plastics


Perfumes using aroma chemicals

Other Businesses

- **RIM**
  Combined septic tank, building equipment components, RIM (reaction injection molding) combination liquid, construction and agricultural equipment components, game console cases, etc.
- **Medical Devices**
  Various therapeutic catheters, etc.
- **Other Products**
  Vinyl chloride compounds, butadiene extraction technology, isoprene extraction technology, butane-1 extraction technology, synthetic rubber and latex manufacturing technology, packaging and distribution materials, building and construction materials

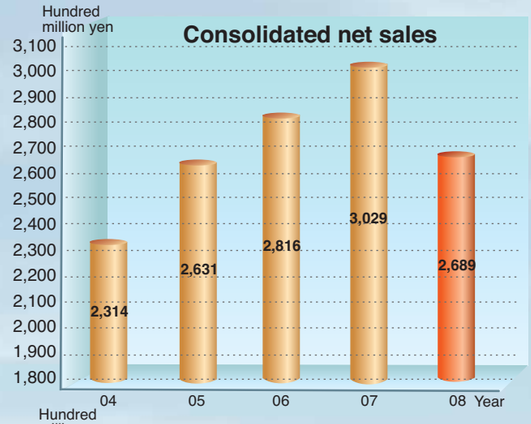

Construction equipment exterior covering made by RIM (Reaction Injection Molding)

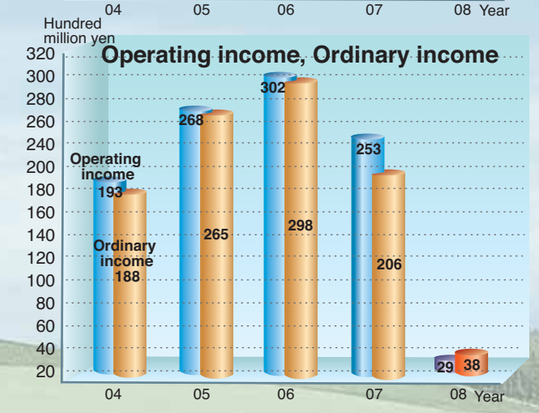

Returnable metal box pallet


Medical equipment (IABP balloon)

Company Profile

- **Company name** Nippon Zeon Co., Ltd. (ZEON CORPORATION)
- **Established** April 12, 1950
- **Capital** 24.2 billion Yen (as of March 31 2009)
- **Employees** 2,882 (consolidated), 1,693 (ZEON Corporation only) (as of March 31 2009)
- **Description of Business**
  Elastomer Business
  Manufacture and sale of synthetic rubber, synthetic latex, and chemical products
  Specialty Materials Business
  Manufacture and sale of chemical products, electronic materials, and specialty plastics.
  Other Businesses (including ZEON group businesses)
  RIM combination liquid/molded items, medical equipment materials, butadiene extraction technology, vinyl chloride compounds, packaging and distribution materials, and building materials, etc.
- **Head office**
  Shin-Marunouchi Center Building, 1-6-2 Marunouchi, Chiyoda-ku, Tokyo 100-8246 Japan
  TEL: 03(3216)1772 (reception)
  FAX: 03(3216)0501





Corporate Philosophy and CSR Activities

Corporate Philosophy

"ZEON will contribute to the preservation of the Earth and the prosperity of the human race."

In keeping with its name which derives from the Greek words "geo" (meaning the "earth") and "eon" (meaning "eternity"), ZEON will contribute to the sustainable development of people, society and the global environment through innovative world-class technologies.

CSR Concept

Recognizing our role as a social organization, ZEON aims to be a company that is trusted by society and at which its employees are proud to work.

(1) In recognizing that the company is a social organization, we will always keep our corporate social responsibilities (CSR) in mind.
(2) We will create a group that is trusted by society and that is a rewarding place to work of which our employees are proud.
(3) We will each take responsibility for implementing CSR through measures such as enhancing compliance systems, achieving reliable and safe plants, and coexisting harmoniously with the local community and society.
(4) We will contribute to the sustainable development of people and society and the global environment by implementing CSR with an emphasis on speed, dialogue, and contributing to society.

ZEON's 7 Articles (Code of conduct for ZEON executives and regular employees)

Article 1 ZEON embraces corporate ethics and acts as a socially responsible organization.
Article 2 ZEON values the environment and safety.
Article 3 ZEON contributes to society with innovative technology.
Article 4 ZEON delivers products that satisfy the customers.
Article 5 ZEON values an organization that makes the best use of individuals.
Article 6 ZEON overcomes challenges through full participation and distributes the benefits fairly.
Article 7 ZEON values speed of decision-making and delivery date of work.

3-Year Mid-Term Management Plan (IZ-60)

IZ-60 Concepts

Core Strategies and Key Issues for IZ-60 in 2009 and 2010

Difficult times provide an opportunity for fundamental change and build the foundation for future development.

1. Move to a business model that remains profitable at 70% utilization.
2. Place an emphasis on cashflow and reduce interest-bearing debt.
3. Improve the quality and speed at which research and development is transformed into production technology.

Environment Philosophy and Safety Philosophy

Environment Philosophy and Safety Philosophy

Environment Philosophy

1. Environmental protection is a mission for socially responsible organizations.
2. Our basic belief is that environmental protection can be achieved with innovative technology.
3. Environmental protection will be achieved when all employees work together with a sense of mission to overcome challenges.

Safety Philosophy

1. Safety is the foundation of all business activities and the greatest priority.
2. Our basic belief regarding safety is that we can prevent all accidents.
3. Safety will be achieved by performing the 5S* and when everyone takes responsibility for their own actions.

*5S: Seiri (neatness), Seiton (order), Seisou (cleanliness), Seiketsu (hygiene), and Shitsuke (discipline)

*Responsible Care Policy

1. Prioritize the environment and safety
Protecting the environment and ensuring safety are preconditions for all business activities and are the most important priorities. We will work continuously and uncompromisingly to enact accident prevention countermeasures, and provide education and training for all employees to prevent safety and environmental accidents.

2. Collect and distribute the latest information on chemical products
We will collect, store and manage the latest information required for the appropriate handling, use and disposal of chemical products, and distribute this information to employees and users.

3. Minimize the discharge of toxic chemicals and waste
We will work to reduce the discharge of toxic chemicals, minimize waste, and develop technology for recycling and reusing materials.

4. Promote activities for conserving resources and energy
We will aim to dramatically reduce the amount of energy we use and help alleviate global warming by developing innovative technology and actively promoting resource and energy conservation activities that involve all employees.

5. Take the environment and safety into account when developing new processes and products and performing quality assurance
We will perform thorough environmental and safety evaluations from the initial stages of research, develop technology and products that take the environment and safety into account, and work to maintain and improve the quality of our technology and products.

6. Live together with society
We will strictly observe regulations related to the environment and safety, whether the regulations come from the local community, the national government, overseas, or organizations to which we belong. While cooperating in these activities, we will work to enhance our communication with the local community and society in order to receive a better understanding of ZEON's activities and further strengthen the trust that society has in our company.

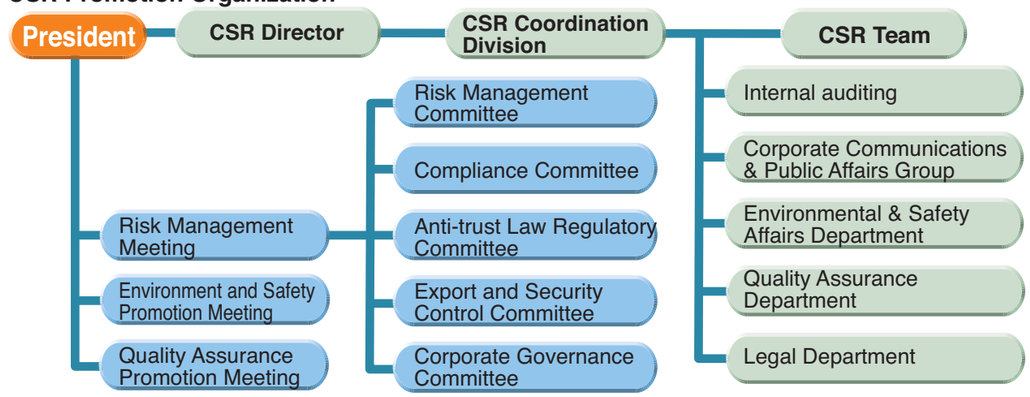
7. Perform continuous improvements
We will continuously improve our environmental and safety management and technology by operating a Responsible Care Audit, a Safety Management System, an Environment Management System based on ISO14001, and an Occupational Health and Safety Management System.

***Responsible care**
Activities undertaken voluntarily by companies involved with chemical substances to maintain the environment, safety, and health in all processes from the development of chemical substances through their production, distribution, use and ultimate end use to their disposal, and to make public the results of these activities and enter into dialogue and communication with the public.

CSR Promotion System

A CSR Coordination Diviston was established to oversee the company's social responsibilities as part of organizational changes that occurred in June 2008.

CSR Promotion Organization



CSR Promotion Organization

Meetings

Risk Management Meeting (twice a year)
Discussion and decision-making concerning the progress reports from the five committees (Risk Management, Compliance, Anti-trust Law Regulatory Committee, Export and Security Control Committee and Corporate Governance Committee)
Chairman: President

Environment and Safety Promotion Meeting (twice a year)
Discussion and decision-making concerning company-wide policies and actions on the environment and safety.
Chairman: President

Quality Assurance Promotion Meeting (twice a year)
Discussion and decision-making concerning fundamental, company-wide issues related to chemical safety and product liability.
Chairman: President

Environment and Safety Meeting (four times a year)
Problem assessment, planning, reporting and proposals related to the environment and safety.

Plant Safety and Environment Meeting (every month)
Discussion and decision-making concerning plant environment and safety.

Quality Assurance Meeting (twice a year)
Proposal, discussion and reporting concerning specific measures and actions relating to chemical safety and product liability throughout the company.

Environment improvement and other committees

(1) Reduce discharges of toxic chemicals
(2) Reduce waste and reuse materials
(3) Conserve resources and energy

Audits

Company-wide Audits
(1) Review by top management
(2) Business audits
(3) Responsible Care audit
(4) PL audits of operational departments and affiliated group companies
(5) Voluntary safety audit
(6) Plant technology audit
(7) Safety inspection of affiliated group companies
(8) Information security audit

Internal Plant Audits
(1) Review by plant manager
(2) Environment ISO internal audit
(3) Quality ISO internal audit

Corporate Governance and Internal Controls

Our Basic Philosophy Regarding Corporate Governance

The company focuses on increasing profits and constantly aiming to enhance its corporate value while balancing various interests, focusing on the shareholders and other diverse stakeholders. To achieve this, we have continued to put effort into corporate governance, building a system to allow efficient and sound corporate management.
In addition, by establishing an internal controls system, we are clarifying the functions and roles of each organization within the company, enabling speedy decision-making and implementation. We are also conducting appropriate monitoring and information disclosure in respect of the progress and outcomes of our activities to improve business transparency. In order to carry out these functions effectively, we are determined to enhance our corporate governance system.

Internal controls system

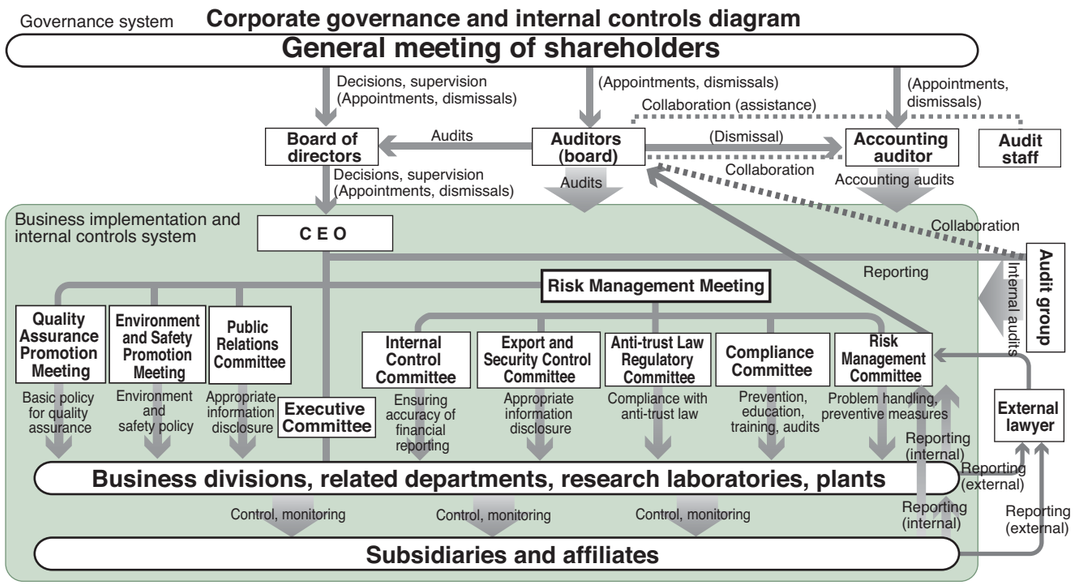
A “Basic Policy for Implementing an Internal Controls System” was authorized at the directors’ meeting in April 28, 2006 and a decision to revise the policy was made at the directors’ meeting on March 26, 2008 and March 23, 2009 based on subsequent progress in streamlining the internal controls system.
In accordance with this basic policy, a "corporate governance and internal controls system" was created and activities are under way throughout the ZEON group aimed at ensuring rigorous risk management and compliance with regulations.

Operating officers structure

The operating officers group structure was established to improve management efficiency and speed up execution of operations.

Governance system

Corporate governance and internal controls diagram

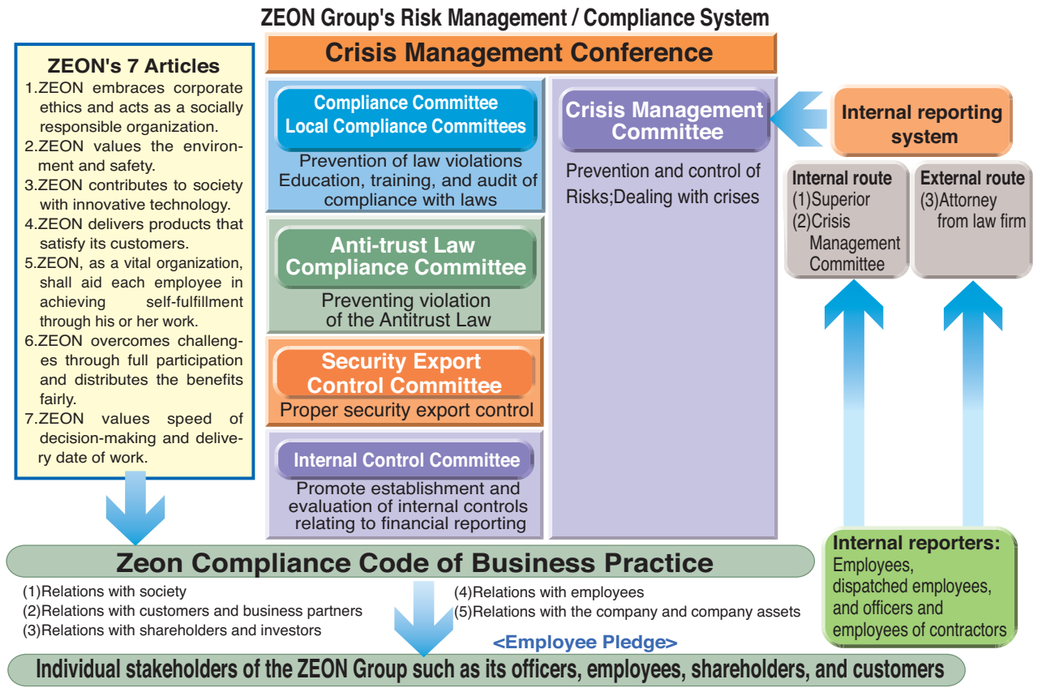


Strengthening the Risk Management and Compliance System

Work on risk management and compliance activities in the ZEON group is currently progressing primarily through five committees under the supervision of the Risk Management Conference chaired by the President. These committees are the Risk Management Committee, Compliance Committee, Anti-trust Law Regulatory Committee, Security Export Control Committee, and Internal Control Committee.

- The Crisis Management Committee is responsible for taking precautionary measures against potential risks, handling any actual incidents when they occur, and implementing measures to prevent recurrence.
- The Compliance Committee is the body in charge of prevention, education, training and auditing activities to prevent violations of laws and regulations. In 2008, workplace training on compliance with laws and regulations was continued from the previous year, with new initiatives including a revision of the compliance textbook and proclaiming November as "compliance month". Activities undertaken to improve awareness of compliance issues by ZEON Group executives and employees during "compliance month" included a call for people to submit compliance slogans, publishing of messages from top management at the various sites and group companies, and e-learning courses.
- The Anti-trust Law Compliance Committee is the body established to prevent any breaches of anti-trust law by executives or employees of ZEON and ZEON group.
  Numerous price changes were made during 2008 in response to the rising cost of oil, and the committee performed strict assessments of these changes before they were put in place. The group's external lawyer was also invited to run a training session on international anti-trust law.
- The Security Export Control Committee is the body responsible for ensuring that export-related laws and regulations are complied with and applied appropriately. Activities in 2008 included revising internal company rules and holding training sessions on the revisions to deal with the partial amendments to the Export Trade Control Ordinance.
- Internal Control Committee aims to establish and review internal controls relating to financial reporting and administer the company’s internal reporting regulated by the Financial Instruments and Exchange Law. The committee's activities with regard to the company’s internal reporting system in 2008 are described on the next page.

ZEON Group's Risk Management / Compliance System



Corporate Governance and Internal Controls

Business Continuity Planning

There is a need to establish business continuity plans (BCPs) to minimize the impact on neighboring communities, customers, suppliers, and other affected groups by ensuring that our business can continue to operate and recover quickly if risks such as the new H1N1 influenza, natural disasters, or accidents become a reality.
ZEON Group started work on developing such plans from a CSR perspective in 2007, with specific measures being put in place beginning from last year. Specific plans are to be collated during 2009 for five potential risks, these being a large earthquake in the Kanto region, an explosion at a production plant, an outbreak of a new strain of influenza, disruption of product distribution or supplies of raw materials, and product liability problems.

Ensuring Information Security

Along with work on establishing a comprehensive information technology framework for improving operational efficiency and quality, ZEON Group is also working on ensuring information security. A company-wide anti-virus system was installed in 1997, security policies were established in 1999, a ZEON information security code was established in 2002, and comprehensive internal rules were established for affiliated group companies in Japan in 2005. An information systems committee chaired by ZEON Corporation's head of IT meets regularly as the top-ranked decision-making body for matters relating to information security.
As improving the level of information security requires not only organizational and technological measures, but also the understanding and action of everyone involved, updated e-learning training courses were conducted during 2008 as part of a regular training regime. Also, internal audits were conducted to ensure that policies are being put into practice correctly in the workplace and to reinforce awareness amongst staff of the importance of information security.
The information systems department has also worked with an affiliated company (ZIFTEC) that performs development, operation, and maintenance work to revise and improve business processes and to introduce and deploy ITIL (Information Technology Infrastructure Library) as part of a strengthening of internal controls and information security. ZIFTEC received ISMS (Information Security Management Systems) accreditation in 2004 and this accreditation was renewed after a review audit in 2008.

J-SOX Compliance

A company-wide project to comply with the internal reporting regime (known as J-SOX, the Japanese version of the Sarbanes-Oxley Act) was launched in April 2006 to prepare for full-scale implementation (in April 2008). The primary focus of the project has been documenting how the ZEON Group should go about ensuring the accuracy of its financial reporting. Since J-SOX came into full force in the 2008 financial year, the J-SOX regime has been administered based on the operational standards and in cooperation with the audit personnel, with the Internal Control Committee established as the body responsible for administering the regime, an internal audit team set up in the Audit Group to evaluate the effectiveness of the controls, and the staff responsible for the work at each company site appointed as coordinators.
As a result, at the time of the review carried out as of March 31 2009, an internal controls report was submitted to the Financial Services Agency in the President's name stating that the company had effective internal controls for financial reporting. The company also received a favorable internal control audit report from auditor Ernst & Young ShinNihon LLC on June 26.
Now that the J-SOX regime is into its second year of operation, we will work to ensure that the administrative systems become established smoothly and to adopt measures for improving the efficiency with which the work is carried out in the field.

Audits

ZEON Corporation carries out a wide variety of audits to check on how its business, Responsible Care, and other activities are being carried out.

ZEON and Affiliate Audits

Business audits

We conduct audits to determine whether all of our business activities are carried out appropriately and correctly in accordance with laws and regulations. These audits cover the administrative departments, plants, and laboratories of ZEON Corporation itself as well as affiliated group companies. In most cases, these audits involve visiting the department concerned to perform an on-the-spot inspection. Audits were carried out at 26 departments or affiliates during 2008, including at our US subsidiary.

Scene at business audits

Responsible Care audits in the workplace

Every year, an audit team led by the director in charge of environment and safety visits company workplaces to perform a Responsible Care audit. The progress of improvements is checked for issues specified in the audit using the “Specified Issue Improvement Plan and Implementation Report”.

On-site audit

Plant technology audits

A plant technology auditor is appointed to audit the plant equipment for safety and stability during operation at the four plants and at ZEON Chemicals Yonezawa Co., Ltd. at least once a year.

Affiliate safety inspections

A team led by the head of the Safety Environmental Affairs Department performs a review and offers guidance on the implementation status of Responsible Care activities at affiliates at least once a year.

PL audits

An audit team led by the head of the Quality Assurance Department performs an annual audit focusing on PL (product liability) and chemical safety at the operational departments and affiliate companies.

Information security audit

An annual information security audit is conducted for all departments that handle information assets to check whether information security rules are being observed correctly and offer guidance. In 2008, measures to improve the level of security were conducted in the form of "self-diagnosis" with individuals conducting self-evaluations using a questionnaire and the person in charge of security in each department using a security audit sheet to conduct a security evaluation of their department.

Internal Plant Audits

Diagnosis by the Plant Manager

All the plant managers review the implementation status of Responsible Care measures at their own plant at least once a year.

Internal QMS and EMS audits

Regular internal audits are performed to check the implementation status of the QMS (Quality Management System) and EMS (Environment Management System) based on the ISO9001 and ISO14001 manuals respectively. Both internal and external courses are provided at each plant to train employees to be internal auditors.

Relationship with Customers

Quality Assurance

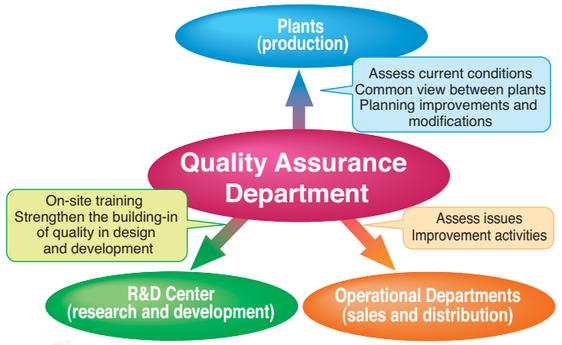
Article 4 of "ZEON's Seven Articles" states that "ZEON delivers products that satisfy our customers". We put this into practice by providing a reliable supply of products that satisfy our customers.

Quality Management

We are working to continue strengthening the links between the plants, operational departments and research units (R&D Center) in order to improve quality management on a company-wide basis and create an integrated organization for production, sales and technology.

The Quality Assurance Department at head office maintains close communication with the quality assurance units at the plants in order to solve any issues that arise at the plants. The Quality Assurance Department works continuously to identify the causes of defects, evaluate the suitability of countermeasures and resolve issues from a customer perspective in order to reduce any ongoing problems in production processes that have the potential to lead to claims affecting production sites across the group with the ultimate aim of reducing customer claims to zero.

Quality management that links production, sales and technology



Quality Assurance Mechanisms

In order to ensure the reliable supply of high-quality products to our customers, we have implemented various quality assurance mechanisms based on the ISO9001 international standard for quality management systems.

Status of ISO9001 Accreditation

At ZEON, all four plants and the operational departments hold current accreditation under ISO9001. At our affiliates, ISO9001 certification registration has been performed primarily for production departments. Further, some affiliates have undertaken combined audits that include assessment under ISO14001 (environment management systems) as they move to adopt comprehensive management systems. A table listing our current ISO accreditation status is given at the end of this document.

Main mechanisms supporting quality assurance at ZEON

Mechanism	Objective
Mechanism for developing policy	Mechanism for identifying the issues at each organizational layer based on the President's policy, and then carrying out the required measures.
Mechanism for management planning and review	Mechanism for continuous improvement in the organization's quality management whereby unit managers (plant managers and operational department heads) evaluate the level of achievement in relation to the issues in each organizational layer and identify strategies for the next round of improvements.
Design reviews for the design and development of products	Mechanism for reviewing whether each stage of the product design and development process is being performed appropriately.
Mechanism for product safety evaluations	Mechanism for performing a multifaceted safety check for the product in which product safety is evaluated at all stages, from initial research through product sale and ultimate disposal.
Mechanism for modification management	Mechanism for preventing problems before they occur by establishing rules relating to process modifications associated with product improvements and so on.
Mechanism for dealing with abnormal situations	Mechanism for eliminating quality problems by pinpointing the causes of process abnormalities in production equipment and removing the cause to ensure the problem never recurs.
Mechanism for dealing with complaints	Mechanism for responding quickly and openly to customer complaints and improving quality by preventing recurrence.
Mechanism for internal quality monitoring	Mechanism for internal monitoring whereby staff monitor each other to ensure that the company's quality management systems work efficiently and effectively.

Chemicals and Product Safety

Considering the safety of the products we deliver to our customers from the design stage, we take active measures to ensure the supply of safety information such as handling procedures and hazard and toxicity information so that appropriate safety precautions can be taken when using the products.

World-wide Product Safety Activities Including Reviewing the Safety of Chemical Substances

We are actively involved on a voluntary basis in the following research and evaluation programs on hazardous chemical substances, their safety and their effect on the environment, including ongoing funding and information provision.

(1)We perform our own safety evaluations through participation in the HPV Initiative.

- We sponsored the registration of one compound under the Japan Challenge Program and submitted a safety information collection report.
- In association with European and American counterparts, we participate in a consortium (HSJP) of companies producing hydrocarbon solvents to collect safety-related information.

*HPV (High Production Volume) Initiative: An initiative for assessing the hazards of existing chemical substances that are produced in high volume.
*Japan Challenge Program: A joint initiative between the Japanese Government and industry for collecting and publishing safety information on existing high production volume chemical substances.
*HSJP (Hydrocarbon Solvent Japan Panel): The domestic panel of the IHSC (International Hydrocarbon Solvent Consortium)

(2)We give our approval and provide ongoing financial support to the Long-range Research Initiative (LRI) for research into the effect of chemical substances on health and the environment which is proceeding with cooperation from chemical industry bodies in Japan, the USA, and Europe (Japan Chemical Industry Association, American Chemical Society, and European Chemical Industry Council).

*LRI:Long-range Research Initiative

(3)We support investigation into understanding and countering the environmental impact of synthetic rubbers through participation in the Far East subcommittee of IISRP.

*IISRP: International Institute of Synthetic Rubber Producers

Domestic and International Chemical Regulations

(1)Progress on complying with European Union REACH rules

The EU's (European Union) new REACH regulation for the management and regulation of chemicals went into force on June 1 2007, with pre-registration closed on November 30 2008. The requirements imposed by the regulation include that all products imported into the EU be registered on a substance-by-substance basis and that safety information be supplied throughout the supply chain. ZEON Corporation has initiated a number of measures aimed at complying with the REACH regulation including submitting provisional registrations for affected substances and participating in the Joint Article Management Promotion Consortium to establish appropriate mechanisms for providing information along the supply chain.

*REACH regulation: EU rules for the Registration, Evaluation, Authorization and Restriction of Chemical Substances
*Joint Article Management Promotion Consortium (JAMP): A consortium of upstream and downstream businesses (manufacturers of materials, parts, finished products, and so on) dedicated to creating concrete frameworks for the administration and disclosure of product chemical content information.

(2)Support for green procurement

The RoHS directive prohibits the use of some substances and conducts checks on the substances contained in products on the stage of the raw materials purchasing. In addition to establishing mechanisms to ensure the supply of products that do not contain specific substances that have been prohibited by the customer or by laws such as the RoHS directive, ZEON also works actively to promulgate information about what substances are contained in our products.

*RoHS directive: This stands for the restriction of the use of certain hazardous substances (An EU directive that limits the use of specific toxic substances contained in electrical and electronic products.)

Other Initiatives Relating to Chemicals and Product Safety

(1) Implementation of product safety reviews

We strive to ensure product safety from every possible perspective by conducting reviews using checklists we formulated that consider product safety at every stage of the product lifecycle from initial research through development, manufacturing, sales, to disposal. Five risk assessments were conducted during the 2008 year.

(2) We publish MSDSs for all products

Information regarding product safety is supplied to customers in the form of MSDSs (Material Safety Data Sheets). ZEON has published MSDSs for all our products and a portion of waste materials, not just for the hazardous materials required by law (notifiable substances under the Occupational Health and Safety Act, substances specified in the Pollutant Release and Transfer Register (PRTR) Law, and toxic substances under the Poisonous and Deleterious Substance Control Law).

MSDS

(3)We are considering unified management of chemical substances

We have initiated study into the use of IT to perform unified management of chemical substances with objectives that include [1] sharing information about chemical substances, especially products and raw materials handled within the company, [2] more precise promulgation of MSDSs and other forms of safety information for chemical substances, and [3] being able to respond quickly to new domestic and international regulations relating to chemical substances through unified management of the substances contained in products.

Relationship with Shareholders and Other Investors

Communication with Institutional Investors and Analysts

We respond positively to media coverage and visits by institutional investors and analysts from both within Japan and abroad.
ZEON held briefing sessions for analysts in May and November 2008. In addition to summarizing financial results, the May session also included the announcement of IZ-60, our mid-term management plan for the three years commencing in 2008. However, because of the major changes in the environment in which our business operates due to deterioration of economic conditions, the November session included a briefing by top management on "our outlook for the market" in place of the progress report for the 3-year mid-term management plan.
In June 2008, ZEON held a factory inspection tour with a highlight being the Integrated Production Center (IPC) as the base for "monozukuri" manufacturing that was completed at the Mizushima Plant on June 4 as part of our introduction of the Daicel methodology for production innovation. The tour was attended by 21 analysts.

Communication with shareholders

To make it easier for shareholders to understand our business, on the day of the annual general meeting we stage an exhibition that includes staff giving explanations along with display panels and other presentations showing actual commercial products or models of products that use our manufactured goods.
On our web site, we have also posted audio of the financial results presentation at our analyst briefing and video of the 3-year medium-term management plan presentation given by top management. (Currently we are posting the "2008 financial results presentation (audio)" and "progress of the 3-year medium-term management plan (video)" from the May 2009 briefing.)
We are also posting video of the "Reporting Items" segment of the annual general meeting on the Shareholders Meeting page of our IR Information site.

http://www.zeon.co.jp/ir/stock/meeting.html

Attendance at IR Technology Forum 2008 for Private Investors

Date: December 7, 2008 (Sunday)
Venue: Roppongi Hills Academy (40F Roppongi Hills)

ZEON attended the IR Technology Forum 2008, an event for private investors organized by Nikko Investor Relations. The forum provided an opportunity for private investors and shareholders to gain a better understanding of companies by interacting with them directly. This was the first time that ZEON had attended such an event aimed at private investors.

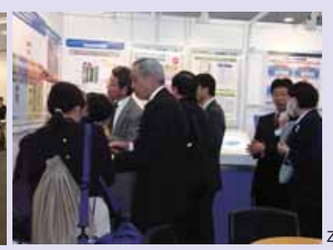
The event was attended by a total of 12 companies including ZEON. In addition to operating a company booth, ZEON also staged an hour and a half long IR briefing.

The booth was based on the theme "Surprisingly ZEON" and presented examples of ZEON products in a very wide range of different applications, with timing belts and other rubber products, perfumes, LCD televisions, and mobile phones on show along with presentation panels showcasing the range of ZEON products that make comprehensive use of C5.

The IR seminar was entitled "Surprisingly ZEON: Contributing to Society Through Innovative and Original Technology". It presented top-rated products produced using original technology and described research and development aimed at creating products that will contribute to society.

With private investors making up a steadily growing proportion of ZEON shareholders, the company intends in the future to be more proactive about conducting IR activities aimed at this type of investor.

Scene from IR seminar



ZEON booth

Relationship with the Local Community

Our relationship with the local community is also described in the site reports.

Dialogue with the Local Community

Tokuyama Plant

The "Sixth East Yamaguchi Responsible Care Regional Dialogue" (organized by the Japan Responsible Care Council) held on November 7 2008 was the biggest such gathering yet, being attended by 201 people including administrative officials and people from regional government and citizen groups.
Professor Ori of Kanto Gakuin University College of Law was invited to give the keynote address which was entitled "Environmental Issues from a Family Perspective" and the event also included a panel discussion which produced a lively exchange of views.

Shunan Community Dialogue

Kawasaki Plant

We run an ongoing program of activities aimed at being a plant that is open to the community, including accepting visits from students, companies and organizations from Japan and overseas, and inviting nearby companies and neighborhood associations to join our plant welfare activities.

Plant visit

Mizushima Plant

Each year in August, the ZEON Summer Festival is held in the company condominium car park at Sasaoki in Kurashiki City. In addition to staff and their families, the invited guests include people who live nearby and people from associated companies.
Plant employees plan and run stalls and events and do their best to ensure that everyone who attends from children to adults has an enjoyable day. Many people look forward to the annual summer festival and attendance is growing each year. Last year's event was attended by about 800 people. ZEON plans to continue holding this big event to help deepen its involvement with the local community.

Summer festival

Internship

R&D Center

Five pupils from Tsuruoka National College of Technology, Asahikawa National College of Technology, and Tomakomai National College of Technology took up an internship that lasted from July 29 to August 8, 2008

Group photograph
(The interns are the five young people in the front row)

Relationship with Universities

SPSJ (the Society of Polymer Science, Japan) Award for the Outstanding Paper in Polymer Journal sponsored by ZEON

This award promotes research and encourages young researchers from Japan and overseas by presenting awards for technical papers of particular excellence chosen from amongst the papers published in the Polymer Journal of the Society of Polymer Science, Japan.

Relationship with Employees

ZEON strives to be a company that inspires pride in each and every employee.

Relationship with Employees ~ Basic Philosophy

Encourage Employees to Keep Challenging Lofty Goals Under Their Own Initiative

ZEON's concept of "being who we want to be" is about people who can act on the basis of thinking rigorously for themselves and who can continue to change in order to achieve lofty goals. The company aims to foster people who can take a rigorous approach to challenges, work autonomously, and undertake ongoing change and improvement toward the achievement of these goals.

For each management level and department, ZEON maps out each individual's objectives in the form of an "image of what we want to be", and has revamped its education and training practices to make them relevant to specific daily activities and not just to filling the gap between these objectives and current reality. The aim is that employees can go on to accept the challenge of even loftier goals by conducting a fair evaluation of the results achieved by performing these tasks that can then be reflected in that employee's terms of employment.

The end result of each employee challenging lofty goals and accumulating the benefits of these efforts is to build up the "workplace strength" of the company as a whole.

Education and training at ZEON is broadly divided into core education that is targeted at all employees and focuses primarily on raising awareness and acquisition of common knowledge, specialist education for various specific jobs, and on-the-job training conducted in the workplace.

In particular, the way training was conducted was revised in 2007 so that, rather than being something that occurs on a temporary basis, the knowledge and skills obtained from this training could be utilized to deal with practical issues in the workplace, and that by dealing with issues in this way, better retention of the benefits of this training could be achieved. In 2008, the handling of capability evaluations and education and training at each site was made consistent under the coordination of a meeting of the people responsible for training. A systematic approach was adopted with plans established to identify clearly the "by whom", "to whom", "what", and "when" of company training.

[Overview of the education program]

Hierarchy	Business leader training	Training for different levels of the organization	Career design training	Common knowledge training	Self-development	Global employee training	Specialized training	On-the-job training (OJT)
Directors	MOT/MBA Manager and supervisor training	Line managers	(30/40/50 year) age ranges	Environmental safety, quality, production, CSR, compliance, information systems, accounting	Communication training, support for obtaining qualifications	Overseas study, English language training courses, TOEIC	Manufacturing, engineering, business, commerce, research, technology, planning and control	Coordination with off-site training, technology transfer
Department managers		Deputy line managers						
Line managers		Mid-career staff						
Deputy line managers		New entrants						
Mid-career staff								
New entrants								

Monozukuri Training Center established

ZEON undertakes production innovation activities at each of its plants aimed at taking a rigorous approach to achieving reliable and safe production. During 2008, at a conference of training staff and elsewhere, ZEON investigated how to go about establishing a staff training regime that could support production innovation. The result was the establishment of the Monozukuri Training Center to take up the role of providing operator education and hands-on training for the entire company. An inauguration ceremony for the new center was held on June 1 2009. (The term "monozukuri" refers to the Japanese concept of a manufacturing ethos.)

Having organized its curriculum and textbooks, the new center commenced in 2009 by offering training for people with beginner and intermediate level skills.

Global employee training

To provide ongoing training for the staff who deal with the company's increasing global expansion, practical work programs that run inside and outside the company have been expanding since 2007. Two advanced English language training courses were held during 2008 to equip staff with practical skills that would be of immediate value in various different business situations. These courses covered not only English conversation but also skills such as presentation, negotiation, and business writing, and the students completed the courses with a high level of achievement.

Attendance at advanced English language training course

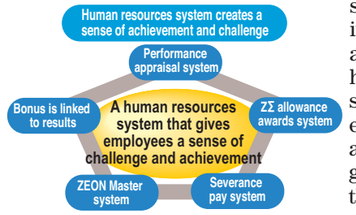
I attended a 16-month long advanced English language training course as part of my work. The course content was not limited just to conventional English conversation and instead focused on areas relevant to actual business situations, including presentation skills and role-playing in meeting situations. A particularly significant feature of the course material was that it included things like theory work on how to construct a speech.

Shotaro Suzuki
(Third from left)
Head Office

I want to work hard while keeping up my study so that I will be ready to put the benefits of the training to good use in overseas assignments.

A Human Resources System That Gives Employees a Sense of Challenge and Achievement

ZEON believes that a truly competitive company is the sum of the skills of its employees and we aim to create a human resources system that gives employees a sense of achievement by giving each employee the opportunity to challenge lofty goals, to act on these goals, and to have the outcomes reflected fairly in their employment terms, with the entire organization pointing in the same direction.



In particular, timely reviews are conducted on the basis that "there is no such thing as a 100% mark in an employee performance appraisal scheme in which people rate other people". Following discussion at various levels of management during 2008, the scheme is to be revised from 2009 onwards to place more emphasis on process and team performance.

Also a ZΣ allowance has been introduced to act as an incentive for action as part of the company-wide ZΣ program for the comprehensive elimination of loss and waste.

The severance pay system takes account of performance appraisals over the ten years prior to retirement age and reflects this in the lump sum payment on retirement with the expectation that employees will remain motivated and feel a continuing sense of achievement right up to retirement age.

After retirement, former employees have the opportunity to remain involved with the company by becoming a "ZEON Master" to help pass on skills and train their successors.

Reforming the performance appraisal system to encourage personal development and foster teamwork while challenging even loftier goals in an effort to "be who we want to be"

The performance appraisal system used at ZEON has been based on objectives management, seeking to have all employees challenging lofty goals. Also, annual training has been provided both for those doing the assessing and those being assessed so that the appraisals are done in a fair and balanced way.

A particular emphasis is put on giving employees a sense of ownership of the appraisals and the aim is to create a corporate culture overflowing with a sense of achievement and aspiration (a sense of challenge and creative desire) by making the expectations, work duties and target results for each person clear at the start of each period and sharing these between superiors and subordinates, and by making a fair appraisal of work and results (contribution to the organization) at the end of the appraisal period.

The revisions to this system have been made based on the following considerations.

- Standardize the key concepts associated with appraisal and with medium to long-term plans and management policies (innovation, improvement, human development and self-improvement, sense of challenge, contribution to the team, and well thought out action plans) and get all employees working in the same direction.
- Ensure the system places an emphasis on process and on contribution to the team to correct potential results-oriented problems.
- From the perspective of employee development, oblige all managers and supervisors to take responsibility for identifying issues relating to organizational activities and training for their subordinates.
- Review feedback methods to increase the sense of ownership of the appraisal system and encourage dialogue and sharing.

Other significant features include:

- Details of the appraisal system are made clear to all employees.
- Each department and workplace holds appraisal meetings at the start and end of the appraisal period that bring together a number of appraisers. The beginning of period meeting assigns priorities and agrees on common objectives and issues, and the end of period meeting carries out a review by a number of different people.

The union carries out a questionnaire on the appraisal system every year. The results of the 2008 questionnaire indicated that more than 80% of employees agreed with their appraisals.

In the future, ZEON will continue to work at establishing systems that allow everyone to perform creative work that adds more value, and that distribute opportunity and rewards fairly and impartially.

Awards system (ZEON Challenge Award)

Awards schemes include the Employee of the Month (bestowed by department managers on a monthly basis) and the annual President's Award, whereby individual employees and departments nominate a specific challenge at the start of the year and are judged on their progress in the nominated area. A new initiative adopted at the 2008 awards ceremony was to link all sites together via a videoconferencing system to allow more people to attend. The ceremony honored the award recipients and heralded the challenges for the year to come.

Winners of President's Award, 2008

ZEON Master system (Reemployment system)

A reemployment system has been introduced that allows retired employees who have valuable skills and a desire to remain involved with the company to continue working after retirement age. As a mark of respect, reemployed staff are referred to as "master (employees)".

Of the 127 employees who retired in 2008, 87 (69%) are active as master employees.

Relationship with Employees

ZEON strives to be a company that inspires pride in each and every employee.

An Easy Working Environment That Emphasizes Dialogue

With compliance with regulations as a prerequisite, ZEON strives to achieve flexible working practices based on the company's key words of "motivation", "reliability", "achievement", "stability and safety", and "security". In terms of health and welfare programs, the company has an ongoing commitment to "creating an easy working environment" centered around the four perspectives of "better workplace environments", "encouraging dialogue", "improving your health" and "supporting self-reliance (based on a life plan)".

Support for raising the next generation

The "Law for Measures to Support the Development of the Next Generation" came into force in 2005 as part of government policy for dealing with the low birth rate and ZEON has established an action plan up to March 2010 for supporting the raising of the next generation. To date, the company has introduced measures such as the "expansion of reasons for allowing employees to take a half-day holiday" and a new support system called the "part-time work system" to help employees manage childcare and support work-life balance. All female employees who gave birth took child-care leave and two male employees also took child-care leave.

Proactive use of our female staff (Waste Elimination Committee)

Our zero-base and waste elimination policies have been responsible for significant changes in people's attitudes in the past. In line with these policies and against the background of the current difficult environment, a Waste Elimination Committee, made up entirely of women reporting directly to the President, was established. The committee has set to work at eradicating waste and inefficiencies throughout the business from a female perspective that does not hold any special areas as being beyond consideration.

Measures to encourage dialogue

ZEON places a high value on teamwork and emphasizes dialogue (communication) as a way to create a common understanding between all employees and a workplace in which everyone shows concern for each other, and to improve "workplace strength".

Not only dialogue between management and employees, but dialogue between the company and the overall workforce and between separate workplaces are all critical to overcoming the barriers between different departments, getting the entire company working in the same direction, and building a sense of satisfaction and pride amongst employees.

[Organizational structure and practices aimed at realizing an easy working environment]

Flexible working practices		Flexi-time scheme, recognition for work performed outside the workplace, discretionary work hours scheme for specialist and planning work, special holiday encouragement days, half-day holidays, no-overtime days, self-improvement activities, training for managerial and supervisory staff, survey of actual conditions, instruction form for out of hours work, labor/management committee, labor/management patrol
Support for combining work and childcare		Maternity leave before and after birth, child care/care giver leave system, part-time work system, limits on out-of-hours work and elimination of late night work, breast feeding time, leave to care for a sick child, child care/care giver leave support payment system, babysitting system
Health and welfare	Asset accumulation	Financial planning seminars, employees' savings scheme (incentives for retirement savings), employee share scheme (with financial incentives), defined-contribution (DC) pension
	Housing assistance	Housing assistance system (dormitory and company housing, rent subsidy system, home ownership allowance, home rental for employees on transfer), housing loan system
	Marriage	Marriage cash payment, honeymoon leave, spouse allowance
	Childbirth	Childbirth cash payment, maternity leave, dependents and tuition allowances
	Holidays and business shutdown	Carry-over of holiday entitlements, My-life holidays, refresh holidays (Master employees), public-service leave (jury duty)
	Recreation facilities, training site	Hakone Gora Facility, Izu Ippeki Facility
	Loans and self-help	Bereavement condolence payment, bereavement leave, study loan, disaster assistance, medical indemnity, compensation for absence from work (ZEON health insurance cooperative association), optional group insurance, group life insurance, etc.

(1) Dialogue with management

ZEON takes active measures such as holding policy explanation meetings where managers from the President on down visit the workplace to give explanations and provide an opportunity for exchanges of opinion.

(2) Dialogue between management and labor

Numerous opportunities for exchanges of opinion are provided including formal and informal meetings between management and labor, RC audits, and joint management and labor patrols.

Consultative meetings between management and labor provide ample opportunity for forthright discussion and both sides enter into this with a forward-looking attitude and a mutual spirit of friendly rivalry based on an underlying trust between management and labor.

The company and labor union need to work together to rally the strengths of everyone in the ZEON Group toward proactive engagement so that policies aimed at the expansion of the company can be implemented in a comprehensive manner based on the company's basic policy that "difficult times provide an opportunity for fundamental change and build the foundation for future development". To this end, the parties agreed on a "joint declaration by labor and management aimed at the growth of the company" that is tailored to the new era.

ZEON intends to work proactively to provide opportunities for dialogue with the labor union and to proceed with a number of policies aimed at making ZEON a "company of which its employees can be proud" through a beneficial partnership between labor and management based on mutual respect for each other's positions.

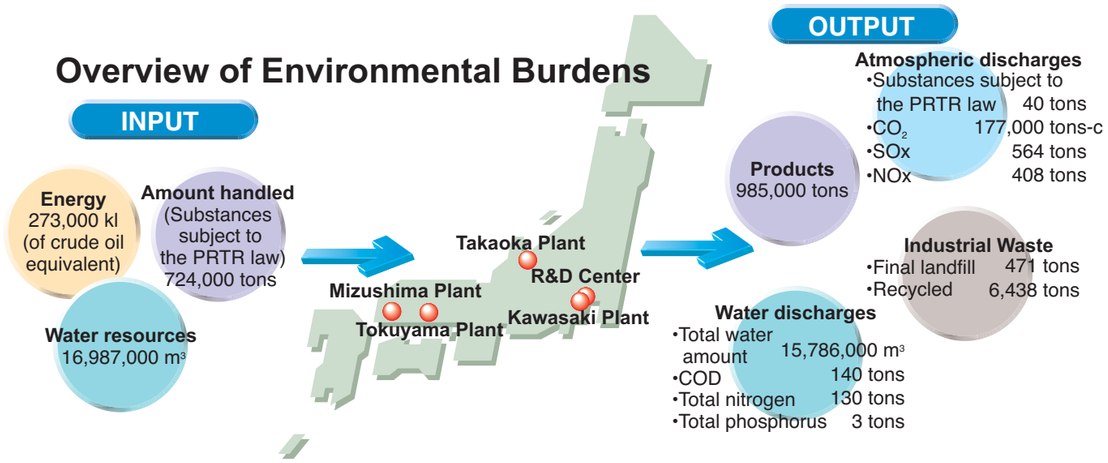
Scene following the signing ceremony for the "joint declaration by labor and management aimed at the growth of the company"

Achievements

Overview of 2008 Plan and Results

	Item	2008 Plan	2008 Results	Self evaluation
1	Eliminate environment and safety abnormalities	(1) Full implementation of plant safety evaluations	40 investigations performed	☆☆☆
		(2) Enhance the 5S safety program and expand to affiliates	The same 5S safety audit was performed company-wide at 45 workplaces (once a year). 5S safety audits were also performed at affiliated group companies.	☆☆☆
		(3) Training to raise awareness of accident prevention	Implemented at all four plants (also implemented at head office and one affiliated company)	☆☆☆
		(4) Zero environment incidents, zero safety incidents	No environment incidents, two safety incidents	☆
2	Promote occupational health and safety	(1) Use risk assessment to eliminate dangers	Risk assessments of workplace operations are conducted an average of 5.4 times/workplace each year	☆☆☆
		(2) No lost-time accidents, no serious non-lost-time accidents	One lost-time accident, no serious non-lost-time accidents	☆
3	Reduce environmentmetal burdens	(1) Implement a voluntary management plan for air-polluting toxic substances Reduce the butadiene air discharge from the 2008 level of 21.6t to 15.2t	Butadiene: 18.4t (15% reduction from previous year)	☆
		Reduce the acrylonitrile air discharge from the 2008 level of 20.7t to 13.7t	Acrylonitrile: 14.2t (31% reduction from previous year)	☆
		(2) Implement a zero emissions plan for industrial waste Reduce the volume of waste sent to landfill from the 2008 level of 1,522t to 603t	Final landfill amount: 471t (1,051t reduction from previous year)	☆☆☆
		(3) Strengthen the company-wide energy conservation project Reduce unit energy consumption to 90.0% of the 1990 level Collect information on energy used in distribution	Unit energy consumption was 100.4% of the 1990 level	☆
		Collect information on energy used in distribution	Reported in fiscal 2008	☆☆☆
4	Promote chemical safety and product safety	(1) Implement product safety reviews for new products and new applications	5 reviews performed	☆☆☆
		(2) Provide customers with environmental and safety information (MSDS)	Issued MSDS for all products and implemented corrections (implementation rate: 100%)	☆☆☆
		(3) Report new substances (laws related to chemical substance investigation and production regulations, Occupational Health and Safety Law)	Performed correctly	☆☆☆
		(4) Zero law violations	No law violations	☆☆☆
5	Promote distribution safety	(1) Full operation of the yellow card	Training performed through the logistics council	☆☆☆
		(2) Reduce burden on the environment	Simplifications to packaging and containers and improved liquid product transport efficiencies are currently being implemented	☆☆☆
		(3) Zero logistics accident	No logistics accidents	☆☆☆

☆☆☆Target achieved, ☆☆Target was almost reached, ☆Requires improvement



Eco-friendly Product Development

Automobile tire made of fuel-efficient synthetic rubber

Products that Promote Energy Saving

Synthetic rubber for fuel-efficient tires

Synthetic rubber is the primary material used in the car tires that contribute to the safety and comfort of vehicles. As growing concern about global environmental problems brings with it demand for more fuel-efficient tires, ZEON has succeeded in developing synthetic rubber that reduces energy losses by 20%. Tires produced using this rubber can improve fuel consumption by 1.5% (estimate by ZEON), saving on fuel use and reducing CO_2 emissions.

Zeoglobule® polymerized toner

Pulverization is the conventional method for producing the toner used in copiers and other printing equipment. However, it is also known that using polymerization for toner production reduces energy consumption during production and results in finer toner particles.

Toner electron microscope image

The microcapsule toner produced using a polymerization method developed by ZEON contributes to better print quality and allows the fixing temperature to be lowered. This in turn allows faster printing speeds, smaller printers, and better energy efficiency.

Products that Help Eliminate Use of Organic Solvents

BM-400B binder for use in batteries

Because ZEON's binder for aqueous lithium-ion secondary batteries uses water as a dispersant, it eliminates the cost of solvent recovery and reprocessing that is required for the alternative material PVDF (polyvinylidene fluoride) which uses NMP (N-methyl-2-pyrrolidone) as a solvent. This also helps meet working condition standards at battery production plants and contributes to lower capital investment and running costs in these plants.

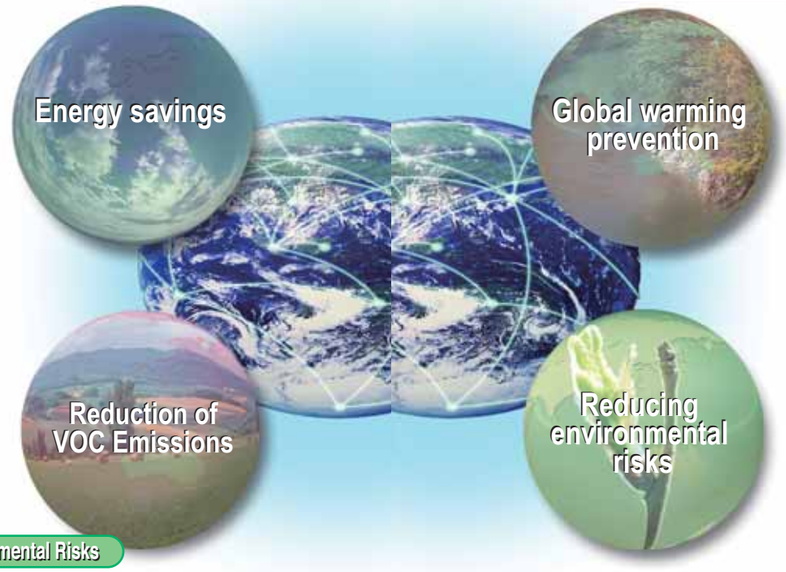
* NMP: The recommended permissible concentration published by the Japan Society for Occupational Health is 1ppm or less.

Environmentally Friendly Products that Conserve Energy

QUINTIER™ EV

Although metal packaging materials such as cans or aluminum foil are typically used for air-tight packaging of perishable goods, these have been recognized as a problem for many years because they use considerable energy for transportation and are difficult to separate during disposal. The new QUINTIER™ EV series of oxygen-impermeable resins developed by ZEON facilitate a move to all-plastic packaging because their impermeability with respect to oxygen is equivalent to that of metallic materials. They are also more easily disposed of and their lighter weight reduces energy use in transportation.

ZEON booth at TOKYO PACK

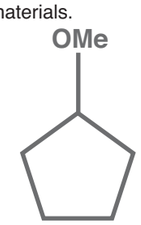


Products with Low Environmental Risks

New ether solvent
Cyclopentyl methyl ether (CPME)

CPME is a new ether solvent with properties that make it suitable for use around the world as a solvent in manufacturing processes (reaction, extraction and crystallization processes) for products such as pharmaceuticals, perfumes, and electronic materials.

Potential benefits from using CPME include cost reductions from faster processing times, reduced environmental burden (fewer waste products) and energy savings, and the solvent has attracted attention from the American Chemical Society for its use in green chemistry.



Products that Help Protect the Ozone Layer and Prevent Global Warming

Next-generation fluorocarbon detergent
Zeorora® H
Etching gas
Zeorora® ZFL-58

ZEON was presented with an excellence award at the Eleventh Ozone Layer Protection and Global Warming Prevention Awards sponsored by Nikkan Kogyo Shimbun Ltd. in September 2008. The award was for the company's Zeorora® H fluorocarbon detergent and Zeorora® ZFL-58 dry etching gas used in semiconductor manufacturing. Having gained initial recognition through the Stratospheric Ozone Protection Award from the US Environmental Protection Agency in 1998, Zeorora has since won a total of five awards including the GSC Environmental Award from the Green & Sustainable Chemistry Network (GSCN) which was awarded in 2003.

With awareness of the importance of protecting the global environment being heightened by events such as the Toyako Environmental Summit held in Japan, we believe that winning this award is of deep significance. Zeorora is a product that represents ZEON to the world as a company that places great importance on the environment and we aim to continue helping to protect the global environment by promoting its sale in the future.

EPA Ozone Protection Award

Detergent Objects

Products that Take Account of the Environment

ZEON Johkaso: GPCN

ZEON's GPCN johkaso is sophisticated processing units that removes nitrogen.

The johkaso removes the nitrogen content from domestic waste water to prevent the eutrophication of enclosed waterways such as lakes and bays, and thereby to prevent the occurrence of algal blooms and similar.

The johkaso has a high level of recyclability, and its outer case is made from PENTAM® dicyclopentadiene resin which has excellent shock-resistance.

As domestic johkaso become more widely used, this product is contributing to the protection of our waterways.

Johkaso

Johkaso that produce clean water from sewage makes excellent waste water treatment systems that can be installed quickly and at low cost. We are working to encourage the wider use of sophisticated processing-based johkaso so that we can hand on our limited water resources to the next generation in good condition.

Toru Niitsu
Technical Manager
ZEON Environmental Materials Co., Ltd.

Products produced using ZEONEX® and ZEONOR®

Lenses and prisms

Products with Low Environmental Risks
Products that Promote Energy Saving

Cycloolefin polymer
ZEONEX®
ZEONOR®

ZEONEX® and ZEONOR® are new thermoplastics that are already used in optical lenses and optical film. Utilizing their superior properties, ZEON is developing materials for use as pickup lenses in blue-laser optical disks.

Also, even amongst the many different types of plastics, these materials combine a low specific gravity with heat tolerance and a high level of transparency. This opens up the potential for their use as a replacement for materials such as glass or high-specific-gravity engineering plastics where they could help improve energy efficiency by, for example, making automotive parts lighter.

Safety and Accident Prevention/Occupational Health and Safety

A manufacturer's starting point is the plant. Our management and plants work together every day on the following key issues in accordance with our environmental and safety policy of "pursuing stable and safe production at minimum cost".

1. Take rigorous measures that put top priority on ensuring the safety of everyone who enters our plants.
2. Achieve stable and safe operation through the ongoing implementation of our master plan for improving safety management and through risk reduction and by identifying the source of potential new threats.
3. Make steady progress by undertaking measures to reduce the burden on the environment and achieve our zero emissions and energy efficiency targets.

Dialogue Between Management and Plants

ZEON conducts an active program of management visits to each plant to ensure ongoing robust dialogue between management and plants.
With easily understood slogans such as "good judgments save money" as our key principles, we enter into direct dialogue with the plant staff who work at the front line to discuss how best to make the plants even safer and more stable. The President made 43 such plant visits in 2006, 46 in 2007 and 62 in 2008.

The President Takes the Lead in Promoting Safety Management

Recognizing that safety takes priority over all other management issues, the President is at the forefront of strengthening efforts across the whole company to take the safety management system to an even higher level.

1. Introduction of an equipment information management system to prevent omissions ("Never rely on 'maybe' or 'should'")
We are making effective use of the reporting, inspection planning, inspection recording and inspection omission detection functions of the new system that was introduced in 2004. Ongoing upgrades are also being made, such as enhancements to the system for storing drawings.

2. Plant deterioration countermeasures and foolproofing measures ("Good judgments save money")
The essential elements with the highest priority for a safe and stable workplace are people, equipment and money. We formulate systematic countermeasures on a scientific basis, such as estimating the remaining life of equipment. We are advancing fool-proofing to prevent accidents by involving all employees in brainstorming.

3. Review of past accidents and recurrence prevention ("Never rely on 'maybe' or 'should'")
To eliminate safety incidents and prevent worker accidents, we regularly use modern technology to review past accidents, determine whether current countermeasures are effective and consider whether technology is available to provide even better recurrence prevention.

4. Review of standards ("Always follow the rules. Change any rules that cannot be followed.")
We constantly try to improve our standards by making them easier to observe and easier to understand. We work systematically to eliminate unnecessary standards, simplify the contents of others, and make full use of pictures and diagrams to make the standards easier to use.

Accreditation of Certified Safety Inspectors at all Sites

Certification under the new law has been obtained for the certified safety inspectors at our Takaoka, Kawasaki, Tokuyama and Mizushima plants and at all other workplaces. Also, staff at our Kawasaki and Mizushima plants have been certified to perform completion inspections.
We work to achieve a higher level of certainty in safety assurance and have established safety management systems at all our sites to ensure that the potential hazards in our plants are identified and that systematic measures, from both hardware and software aspects, are taken to reduce the associated safety risks.

Plant Safety Evaluation

When we commission a new plant or an upgrade to an existing plant, we evaluate the plant's safety in five stages from the basic design through to the start of production. This involves setting up detailed check lists for safety evaluation with the aim of creating a more reliable and safe plant. We performed 54 such checks in 2006, 75 in 2007, and 40 in 2008.

Plant Safety Diagnosis and Plant Technology Audits

In addition to the safety evaluations we carry out when commissioning a new plant or an upgrade to an existing plant, we have also initiated a safety diagnosis program for our existing plants with the aim of preventing serious accidents or injury by having experienced technical staff from a different department provide technical support and undertake checks of the production technology to improve the safety level of our plants even further.
Also, section managers and other staff from different plants are appointed as technical auditors to provide support and assistance for improving the plant's production technology from a technical and safety management perspective.

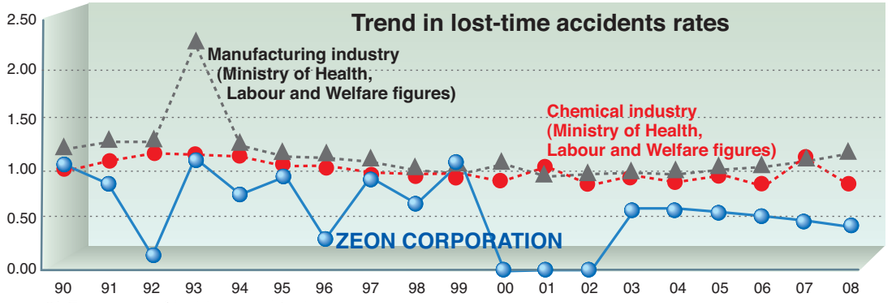
All ZEON Safety Conference

April of each year is ZEON Safety Month during which we increase our emphasis on safety activities. This year, the focus was on "achieving tidiness and orderliness" which is one of the principles of safety. There was a heightening of safety-related activity in Safety Month with achievements during this period being evaluated and prizes awarded for examples of excellence.
The All ZEON Safety Conference is also held during the month. This year's conference, which included affiliated companies, gave the various sites an opportunity to make presentations that show off the best examples of their safety activities.
Something new at this year's conference was a special presentation about the safety activities of one of our partner companies with operations on a ZEON site. This provided the opportunity for a mutual exchange of opinions.
The conference recognized the people working on ongoing safety activities in the field and the President distributed commendations and prizes to each participant to help foster a culture of safety awareness.
The Safety Conference was a large and lively event, being attended by approximately 100 people from various ZEON sites and affiliated companies. For those unable to attend, scenes from the conference were broadcast to all ZEON sites to heighten safety awareness.

Measures to Prevent Workplace Accidents and Maintain Employee Health

In striving to achieve a stable and safe production system that increases "workplace strength", ZEON puts considerable effort into 5S safety audits, risk assessments and caring-for-each-other activities. Other initiatives are identifying near-miss incidents, hands-on learning, supervisor training for production managers, foremen and others, and running safety training at affiliated companies.
In addition to physical exercise such as a healthy walking relay aimed at promoting employees' physical health, ZEON also seeks to encourage mental health by providing support to industrial physicians in the form of psychiatrists and psychotherapists.

Walking relay (Tokuyama)



*1 Frequency of lost-time accidents
An indicator of the frequency of workplace accidents, calculated using the following formula:
Frequency of lost-time accidents = No. of workers who experienced a lost-time accident ÷ total actual working time × 1,000,000 hours

KY ("Kiken Yochi") Risk Assessment

To prevent workplace accidents and deal with the potential for human error, ZEON has adopted the "4RKY" ("four-round kiken yochi (risk assessment)") practice whereby employees check for any unsafe situations before starting a task to avoid placing themselves in danger. Workers who have received external training to learn the correct methods are deployed as "KY trainers" in accordance with the size of each workplace. The number of these trainers was increased further during 2008 and a KY Conference was held to promote KY activities at which competitions were held between selected teams from each workplace.

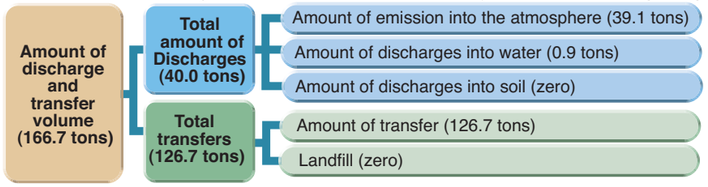
Scene from KY Conference

PRTR Activity

The entire company is making an effort to reduce discharges and transfer of substances subject to PRTR.

The PRTR (Pollutant Release and Transfer Register) law applies to 38 substances used at ZEON.
Total discharges reduced from 57.6 tons in 2007 to 40.0 tons in 2008.
ZEON is working vigorously to reduce discharges.

Amount of Discharge and Transfer of PRTR Subject Substances (2008)



Discharge and Transfer Data for Substances Restricted by Law

Government Adherence Control Number	Substance Name	Amount Used (tons)	Discharges to Atmosphere (tons)	Discharges to Water (tons)	Total Discharges (tons)	Transfer Volume (tons)
2	Acrylamide	48.2	0.1	0.0	0.1	0.0
3	Acrylic acid	69.1	0.0	0.0	0.0	0.0
4	Ethyl acrylate	1,149.5	1.4	0.0	1.4	0.0
	Butyl acrylate	602.2	0.0	0.0	0.0	0.0
6	Methyl acrylate	543.4	0.2	0.0	0.2	0.0
7	Acrylonitrile	21,838.5	14.2	0.0	14.2	0.0
12	Acetonitrile	1.4	0.0	0.0	0.0	0.0
22	Acryl alcohol	35.0	0.0	0.0	0.0	0.0
23	1-allyloxy-2, 3-epoxy propane	63.4	0.0	0.0	0.0	0.0
24	Linear alkylbenzenesulfonate and salt thereof	1,120.5	0.0	0.0	0.0	0.0
28	Isoprene	136,964.3	0.8	0.0	0.8	0.0
42	Ethylene oxide	813.2	0.9	0.1	1.1	0.0
46	Ethylene diamine	2.7	0.0	0.0	0.0	0.0
47	Ethylenediamine tetraacetic acid	57.2	0.0	0.0	0.0	0.0
54	Epichlorohydrin	459.7	0.0	0.0	0.0	0.0
56	Propylene oxide	5.4	0.0	0.0	0.0	0.0
63	Xylene	1,299.6	0.1	0.0	0.1	0.0
102	Vinyl acetate	237.2	0.0	0.0	0.0	0.0
159	Diphenylamine	6.9	0.0	0.0	0.0	0.0
172	N, N-dimethylformamide	219.9	0.0	0.0	0.0	0.0
177	Styrene	40,381.0	1.5	0.0	1.5	0.3
179	Dioxins*	0.8	0.0	0.0	0.0	0.7
227	Toluene	3,586.8	0.3	0.7	1.0	125.6
231	Nickel	34.0	0.1	0.0	0.1	0.0
232	Nickel compound	49.7	0.0	0.0	0.0	0.0
256	2-vinylpyridine	155.7	0.3	0.0	0.3	0.0
266	Phenol	80.0	0.0	0.0	0.0	0.0
268	1, 3-butadiene	507,543.4	18.4	0.0	18.4	0.0
272	Bis phthalate (2-ethylhexyl)	176.5	0.0	0.0	0.0	0.0
299	Benzene	3,735.5	0.0	0.0	0.0	0.0
307	Poly(oxyethylene) alkylether	49.3	0.0	0.0	0.0	0.0
309	Poly(oxyethylene) nonylphenyl ether	205.9	0.0	0.0	0.0	0.0
310	Formaldehyde	2.6	0.0	0.0	0.0	0.0
313	Maleic anhydride	204.1	0.4	0.0	0.4	0.0
314	Methacrylic acid	2,070.1	0.2	0.0	0.2	0.0
316	Methacrylic acid 2,3-epoxy propyl	5.3	0.0	0.0	0.0	0.0
320	Methyl methacrylate	579.5	0.2	0.0	0.2	0.0
321	Methacrylonitrile	2.9	0.0	0.0	0.0	0.0
	Total	724,399.3	39.1	0.9	40.0	126.7

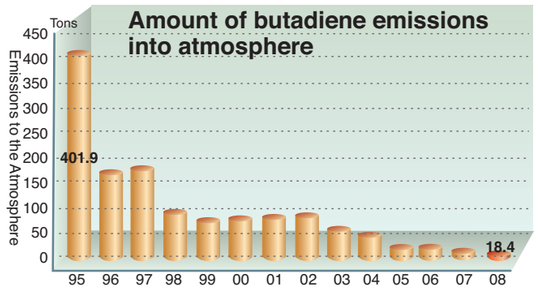
* Units of dioxins are mg-TEQ
Note: The PRTR Law specifies the amount in units of "kg" with fractions to 2 significant digits, but the table above shows values in units of tons.

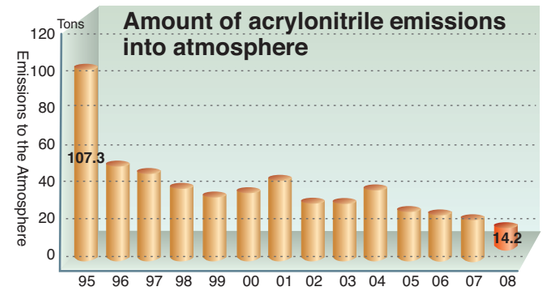
Hazardous Chemical Substances and Industrial Waste

Reduction of Hazardous Chemical Substance Emissions into the Atmosphere

We are working actively to reduce emissions, particularly of butadiene and acrylonitrile.

Efforts headed by the Chemical Industry Association of Japan are being made to understand and reduce the level of emissions into the atmosphere of the twelve substances with the highest priority. Meanwhile ZEON is working actively to reduce emissions of the three substances on this list that are used at the company.
Thanks to process improvements and technological developments over many years, ZEON completely eliminated the use of benzene in 2000 and consequently has achieved zero atmospheric emissions.

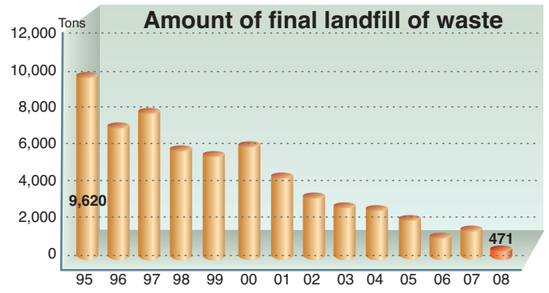




For butadiene, our Tokuyama Plant switched to a production process that burns the waste gas from monomer recovery in 2008 and a reduction of approximately 14 tons in annual emissions is anticipated in 2009.
We reduced acrylonitrile emissions by about 6 tons in 2008 compared to the previous year due to lower production volumes, revisions to the operating conditions for monomer recovery, and other changes. We intend to continue reducing acrylonitrile emissions through better recovery.

Reduction of industrial waste

Our improvement target for reducing the amount of industrial waste that is ultimately disposed of in landfills is 10% or less of the final landfill amount in 1995 (a target of 962 tons). This target was achieved in 2008 with disposal of 471 tons.
Measures adopted to achieve this reduction include greater incineration of activated sludge and recycling of waste plastic.
We are planning further improvements and our medium-term plan for 2015 has set an emphatic zero-emissions target of reducing the amount of industrial waste that is ultimately disposed of in landfills to 0.1% or less of the actual disposal volume in 2007 (a target of 33.4 tons).
ZEON is also working actively to improve sorting in order to encourage recycling and other ways of making effective use of industrial waste.

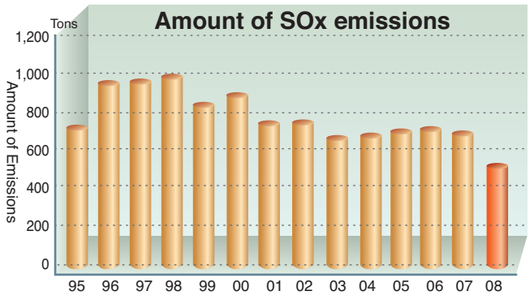


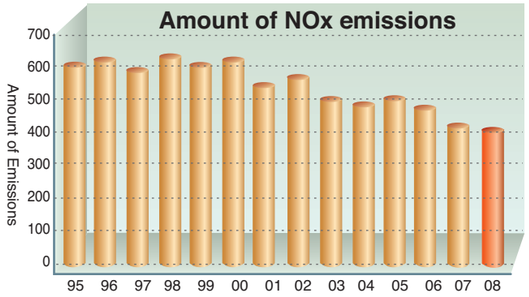
Note: This is the amount of waste generated in routine industrial activity that is disposed of in landfills.
(Does not include construction waste produced by non-routine engineering work.)

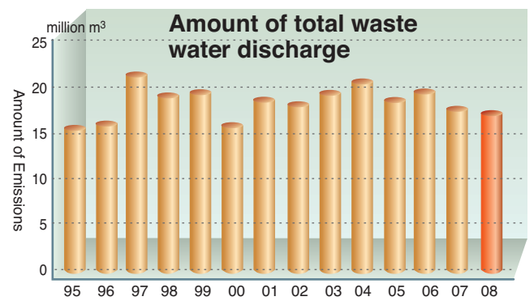
Air and Water Quality

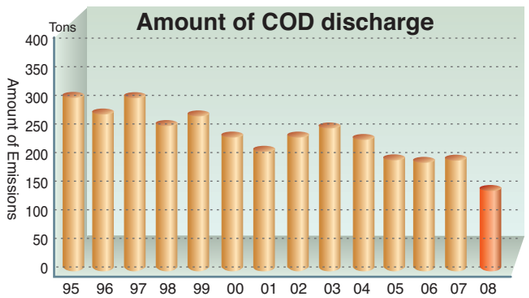
We are continuing our efforts to reduce the burden on the environment, and when installing a new plant or expanding a plant, we try our best to prevent any increase in this burden through technological improvements. We will continue to make additional efforts in the future.

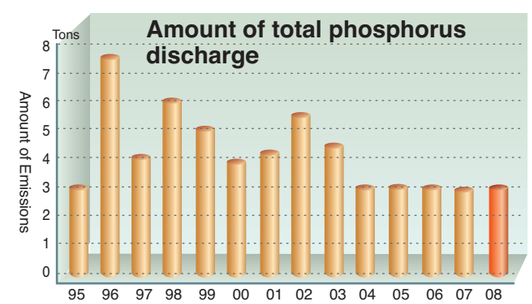
Progress on reducing atmospheric pollution includes improvements in SOx and NOx emissions. The Tokuyama Plant has achieved better SOx emissions through a switch to lower sulfur fuel for its boilers in 2008. Reductions in NOx emissions, however, are a consequence of lower production rather than improved technology.
In terms of water pollution, the shutdown of PVC production at Takaoka Plant has reduced the total volume of water discharges.
Waste water quality continues to meet the requirements of the Clean Water Act and agreements with local authorities.
COD is a measure of organic compounds contained in waste water and we have succeeded in reducing our emissions through operating practices that balance the load on activated sludge and because the shutdown of PVC production has reduced the load.
Regarding total nitrogen levels in waste water, new nitrogen elimination equipment was installed in 2007 to counter an increase in production at the Kawasaki Plant of products such as NBR (acrylonitrile and butadiene rubber) that are associated with high output of waste water by-products, and this showed results in 2008 in the form of a higher rate of nitrogen removal.
We are working on further improvements and tighter management.

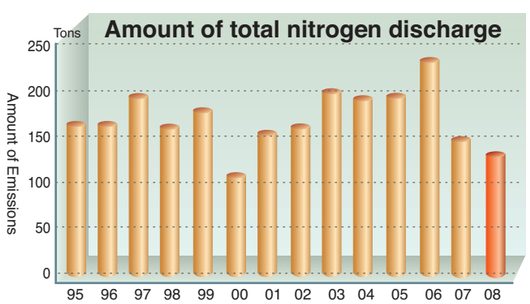








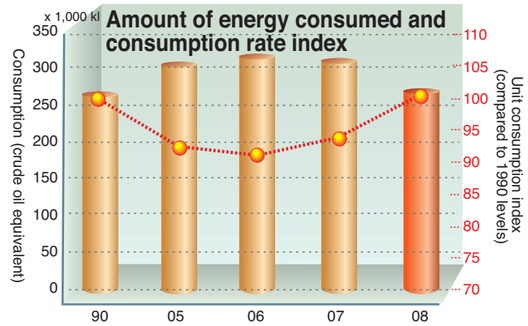


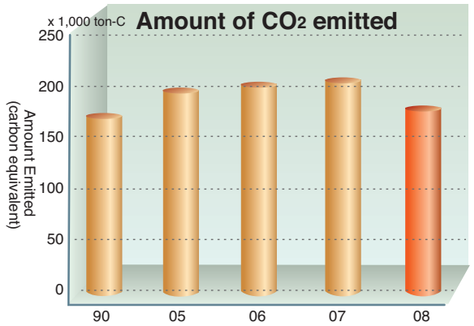


Resource and Energy Saving

In order to achieve the goal of "reducing the average energy consumption rate to 87% of the 1990 level by 2010" set by the Japan Chemical Industry Association, we have held energy conservation promotion meetings throughout the company and have actions in progress.

Plant utilization was down significantly in 2008 with production only 83.8% of the previous year. As a result, energy use measured in terms of equivalent consumption of crude oil was 88.7% of the previous year's level.
Unit consumption index (compared to 1990 levels)* went from 94.9% in 2007 to 100.4% in 2008.
The drop in production was due to operating at low utilization in order to adjust stock levels in response to the sudden fall in demand that occurred during the latter part of the 2008 financial year.
Although ZEON undertook various energy efficiency improvements such as waste heat recovery, these were not reflected in the unit consumption index because the benefits of this work was outweighed by the drop in utilization.
Major energy saving work is planned for the Mizushima industrial complex during 2009 and the company as a whole continues to work on further improvements.





* Note: Unit consumption index (compared to 1990 levels): Average energy consumption rate (consumption in crude oil equivalent ÷ production volume) for target year as a proportion of the average energy consumption rate in 1990 (where the 1990 index is 100)

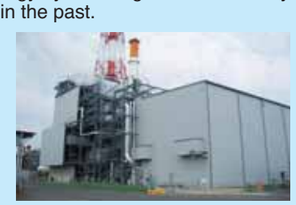
Energy Consumption Associated with Transportation

Under amendments to the Energy Conservation Law, responsibility for improving energy efficiency in transport has rested since 2006 with the party responsible for requesting transportation of the goods and raw materials (the consignor or owner of the goods and raw materials).
A company with an annual freight volume of 30 million ton-kilometers or more is defined as a designated major consignor under the amended law and is subject to additional requirements.
On the basis of its total freight shipping volumes (including the four production plants and the R&D Center), ZEON is a designated major consigner and the company submitted its regular declaration to the Ministry of Economy, Trade and Industry on June 30, 2007.
Transportation energy use for 2008 measured in terms of equivalent consumption of crude oil was 4,960 kl, which is about 18% of the 272,500 kl of energy used in manufacturing.
The 2008 unit consumption index was 100.6% of the previous year. This slight worsening in the unit consumption index occurred because the lower production volumes meant less maritime transportation of raw materials which has superior transport energy-efficiency. However, the unit consumption index for transportation of products did improve in 2008, to 97.3% of the previous year.

Energy conservation topics

Energy conservation plan for the Mizushima industrial complex

At the Mizushima industrial complex, Asahi Kasei Chemicals, ZEON and Nippon Petroleum Refining (the refining arm of ENEOS) have started work on a joint program to save energy by recycling petroleum residue.
The project has been adopted as part of the NEDO Energy Conservation Project Support Scheme. Nippon Petroleum Refining will build a new solvent de-asphalting line at the Mizushima Refinery for extracting raw material for kerosene and other light oil distillates from asphalt and other heavy oil distillates. The petroleum residue (or pitch) left over after this extraction process will be used as fuel for new boilers to be built by Asahi Kasei Chemicals and ZEON. This will save energy by reducing use of the heavy oil and other fuels used in the past.
It is estimated that this will deliver significant energy savings across the entire industrial complex (equivalent to approximately 98,000 kl of crude oil) and commercial operation commenced in August 2009.


Energy conservation plan for the Mizushima industrial complex

Environmental Economic Perspective

Environmental Accounting

Since 2002, ZEON has publicly released its environmental protection costs and environmental protection effects (physical effects and economic effects) in line with guidelines issued by the Ministry of the Environment.

Environmental Protection Costs

Capital investment for environmental protection

A major investment in pollution prevention during 2008 was the upgrade to the capacity of the aeration tanks at the Tokuyama Plant. Through introduction of aeration tubes, we have succeeded in and are continuing increasing dissolved nitrogen through improved aeration and thereby reducing total COD (chemical oxygen demand).

One example of an energy conservation measure was investment in optimizing the operation of the monomer production equipment at Mizushima Plant for energy reduction.

Also, ongoing improvements are made for stable operation of the new incinerator at the Kawasaki Plant in our industrial waste performance.

Environmental protection costs

We are developing technologies to minimize waste water and to reduce the level of volatile substances that remain in products. We are focusing in particular on reducing butadiene and acrylonitrile, both toxic air pollutants, and on developing technology, designing equipment and trialing operating procedures to reduce the level of contaminants such as T-N (total nitrogen) and COD (chemical oxygen demand) in waste water.

Meanwhile, our affiliated group companies have been concentrating on administrative and improvement activities to recycle waste and reduce disposal to landfill.

2008 Environment Accounting Sheet

Environment Protection Costs (Million Yen)		ZEON Corporation		Affiliated Group Companies	
Classification		Investment Amount	Expenses	Investment Amount	Expenses
1. Costs within the business area		246.2	2,837.2	277.6	2,979.6
Breakdown	(1) Pollution prevention costs	141.5	2,056.8	165.7	2,108.7
	(2) Global environment protection costs	60.5	194.8	66.7	198.6
	(3) Resource recycling costs	44.2	585.6	45.2	672.3
2. Upstream and downstream costs		75.8	3.1	75.8	78.0
3. Management activity costs		0.0	73.9	6.5	82.9
4. Research and development costs		196.1	1,741.8	196.1	1,758.3
5. Social activity costs		0.0	71.5	0.3	72.1
6. Environmental damage handling costs		0.0	46.4	0.0	48.4
Total		518.0	4,773.9	556.2	5,019.4

Amount (Million Yen)

Item	ZEON Corporation	Affiliated Group Companies
Total investment amount within applicable period	27,803	28,439
Total research and development costs within applicable period	10,664	10,885

Scope of accounts
ZEON Corporation
ZEON Head Office, R&D Center, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant
Affiliated Group Companies:
Okayama Butadiene Co., Ltd., ZEON Chemicals Yonezawa Co., Ltd., ZEON Logistical Materials Co., Ltd., RIMTEC Corp., ZEON Medical Inc., ZEON North Co., Ltd., ZEON Yamaguchi Co., Ltd., ZEON Polymix Co., Ltd. Otsu Plant and Kawagoe Plant, Optes Inc. Sano Headquarters Plant and Toyama Plant, ZEON Kasei Co., Ltd. Ibaraki Plant
Period Covered
April 1, 2007 to March 31, 2008

Environmental Protection Effects

Physical effects

In the area of atmospheric pollution, a decrease in SOx emissions has been achieved by switching the heavy oil used to fire the boiler at Tokuyama Plant to a low-sulfur fuel.

Waste water COD (chemical oxygen demand) has also been reduced significantly due to upgrades to the capacity of the aeration tanks at Tokuyama Plant and the shutdown of PVC production at Takaoka Plant.

The total volume of waste ultimately disposed of in landfill has been reduced significantly by better sorting and by encouraging measures such as incineration of sludge.

Environmental Protection Effects	ZEON Corporation	Comparison Index	Affiliated Group Companies	Comparison Index
Description of effects	Environmental burden index	Compared to previous year	Environmental burden index	Compared to previous year
SOx emissions (tons)	564	▲137	7565	▲138
NOx emissions (tons)	408	▲8	409	▲8
COD emissions (tons)	140	▲54	140	▲54
CO_2 emissions (amount of carbon) (tons)	177,136	▲27,164	186,192	▲25,390
Industrial waste sent to landfill (tons)	471	▲1,051	957	▲1,148
Total emission of substances subject to the PRTR law (tons)	40	▲18	47	▲19

Scope of accounts
ZEON Corporation
ZEON Head Office, R&D Center, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant
Affiliated Group Companies:
Okayama Butadiene Co., Ltd., ZEON Chemicals Yonezawa Co., Ltd., ZEON Logistical Materials Co., Ltd., RIMTEC Corp., ZEON Medical Inc., ZEON North Co., Ltd., ZEON Yamaguchi Co., Ltd., ZEON Polymix Co., Ltd. Otsu Plant and Kawagoe Plant, Optes Inc. Sano Headquarters Plant and Toyama Plant, ZEON Kasei Co., Ltd. Ibaraki Plant
Period Covered
April 1, 2007 to March 31, 2008

Economic Effects

ZEON aims to put the waste resulting from oil by-product production and similar to beneficial economic use through measures such as recycling or burning. Effort is also being put into recycling metal products such as empty drums and other containers.

One energy saving measure is that ZEON pays special attention to thermal recovery in its energy-intensive distillation processes.

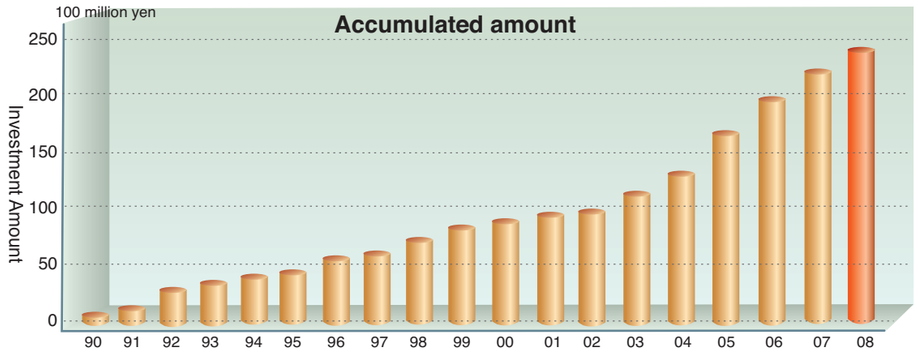
Economic Effects Associated with Environmental Preservation Measures (million yen)	ZEON Corporation	Affiliated Group Companies
Description of effects		
Benefits of reclaiming material and utilization as fuel	1,098.4	1,163.9
Cost reduction through energy savings	93.6	85.0
Reduction of industrial waste processing costs	0.0	11.0
Cost reduction through waste-elimination and recovery and reuse of solvents and catalysts	543.0	546.1
Total	1,735.0	1,806.0

Scope of accounts
ZEON Corporation
ZEON Head Office, R&D Center, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant
Affiliated Group Companies:
Okayama Butadiene Co., Ltd., ZEON Chemicals Yonezawa Co., Ltd., ZEON Logistical Materials Co., Ltd., RIMTEC Corp., ZEON Medical Inc., ZEON North Co., Ltd., ZEON Yamaguchi Co., Ltd., ZEON Polymix Co., Ltd. Otsu Plant and Kawagoe Plant, Optes Inc. Sano Headquarters Plant and Toyama Plant, ZEON Kasei Co., Ltd. Ibaraki Plant
Period Covered
April 1, 2007 to March 31, 2008

Environmental Economic Perspective

Not only are we making the environmental investments in pollution prevention equipment and resource and energy conservation equipment that appear in the environmental accounts, we are also working to improve safety through ongoing investment in improving safety and eliminating risks (safety investment).

The graph below shows the cumulative trend in total environmental and safety investment (environmental investment + safety investment).



Environment and Safety Investment Amount

2008 Investment Amount (100 million yen)	ZEON Corporation	Affiliated Group Companies	Total
Environment-related	3.2	0.3	3.5
Safety-related	15.3	0.8	16.1
Total	18.5	1.1	19.6

Scope of accounts
ZEON Corporation
ZEON Head Office, R&D Center, Takaoka Plant, Kawasaki Plant, Tokuyama Plant, Mizushima Plant
Affiliated Group Companies:
Okayama Butadiene Co., Ltd., ZEON Chemicals Yonezawa Co., Ltd., ZEON Logistical Materials Co., Ltd., RIMTEC Corp., ZEON Medical Inc., ZEON North Co., Ltd., ZEON Yamaguchi Co., Ltd., ZEON Polymix Co., Ltd. Otsu Plant and Kawagoe Plant, Optes Inc. Sano Headquarters Plant and Toyama Plant, ZEON Kasei Co., Ltd. Ibaraki Plant
Period Covered
April 1, 2007 to March 31, 2008

Environment and Safety in Logistics

ZEON works to ensure safety and reduce the burden placed on the environment by its distribution and logistics activities.

Logistics Safety

ZEON has instituted the “Yellow Card Management Rules” for transport of toxic or dangerous products. These rules require drivers to carry a yellow card when such products are being shipped.
Annual plans are also formulated at each plant to prevent logistics accidents by conducting training on product handling and similar topics through the Logistics Council.

Yellow Card

Environmental Countermeasures for Logistics

Improving transport energy efficiency

ZEON, like other designated consigners, places a particular focus on rationalizing the use of energy for transportation. It has made a "modal shift" whereby material previously transported by truck now uses more energy-efficient rail transportation. The proportion of product distributed as freight (measured in ton-kilometers) has increased from 8.0% in 2007 to 9.7% in 2008.

Environment and Safety Training

We are working on improvements in safety management across the company through training organized from head office.

Manager and supervisor training

"Production Manager Training" and "Foreman Training" programs for plant staff with front-line responsibility for safety management were jointly organized by the Human Resource Department and Environmental & Safety Affairs Department.
The training has covered environmental and safety laws, classroom work on basic safety, and education to improve safety awareness. Also, training is conducted annually for newly appointed line managers and environmental and safety managers and this training was held once during 2008.

Safety training by past plant managers

A trial using past plant managers with extensive knowledge and experience to provide safety training for employees that started in 2003 has been continued. This training involves group lessons for all plant employees. In 2008, this course studied a serious accident that occurred during construction work to improve awareness of the safety considerations required during design and provided an opportunity to reinforce details about safety management standards for non-routine work and related topics.

Training course using accident case study

●Special Feature 1●

Site Activities

Production Innovation Program

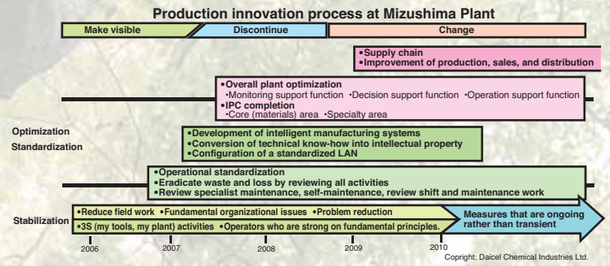
(1) Purpose of production innovation

The purpose of the program is to go back to the basics of "monozukuri" to establish innovative production systems, ensure that processes operate reliably, take a comprehensive approach to achieving 100% yield, and improve "workplace strength".

(2) Details of activity

The program commenced at Mizushima Plant in February 2005 with guidance from Daicel Chemical Industries Ltd. The program's activities followed a master plan that identified the issues after first shining a light on the current situation from different perspectives to those we have considered in the past and then comprehensively renouncing current practices. The plan also clarified what we are aiming for and how we intend to get there.
First, all of the work at the plant for preventing production impediments that were not considered a problem in the past was defined as being the responsibility of the operators and a target was set of halving this each year. In parallel with these reduction tasks, we aimed to kill three or four birds with one stone by steps that included improving logical reasoning and staff communication skills and undertaking fundamental organizational measures such as formulating consistent rules, administration practices for keeping drawings up to date, and easy to understand plant signage.
A characteristic of chemical plants is that, unlike assembly operations, they cannot shut down when a problem occurs and therefore they are constantly striving to find ways to sustain stable operation. Experienced operators put their knowledge and experience to use to make the necessary operational judgments based on information from sensors in reaction vessels, piping, and other pieces of equipment that provide little external indication of their status. This operational judgment is in itself a form of knowledge that needs to be passed on to others. The knowledge was formalized by undertaking comprehensive interviews with such staff to identify every last detail and then subjecting this information to scientific verification. Next, the division of responsibilities between individuals and the organization was reviewed and standardized in a way the allows operation to be performed in a consistent manner, and this was then systematized to prevent a return to the old ways of doing things.
Operation started for Mizushima Plant stage one at which this intelligent production system was introduced in April 2008.

This system supports decision making by operators by supplying information that has been processed to the required level to the people who require it, when they require it. Chemical plants change on a daily basis and the system needs to keep up to date. Problems have their origins in changes and a program of continuous improvement has been adopted whereby the system is kept in good condition by identifying the causes of these problems and taking countermeasures before they happen.
Following on from Mizushima Plant, the Tokuyama, Takaoka and Kawasaki plants have also started production innovation programs.



Mizushima Plant

Founded: 1956
Address: 630 Ogino, Takaoka City, Toyama Prefecture 933-8516
Tel: 0766-21-0252 Fax: 0766-21-4568

Mizushima Plant is ZEON's flagship site and represents the core of our in-house technology which is unrivaled by our competitors. It was established in 1968 as a part of the Mizushima Industrial Zone in Kurashiki City. Starting with the technology for our butadiene extraction facilities which has been licensed for use at 47 plants in 19 countries around the world, the plant works closely with our many customers to meet their diverse requirements with products derived from our "C5 Fraction Total Use Business" which include optical material resins (used in LCD displays, optical disks, camera lenses, CD pickups and elsewhere), aromatic chemicals (including jasmonic and green note chemicals), and petroleum resins (including binder for traffic paint and adhesive tape).

Toru Nishijima
Corporate Officer
Plant Manager, Mizushima Plant

Environment and Safety Activities

(1)Reduction of toxic chemical emissions

Following the adoption of closed processing systems with recovery, we have achieved zero emissions of butadiene since 2002. We are dedicated to the ongoing development of environmental strategies including measures to reduce VOC emissions.

(2)Reduction of industrial waste

ZEON is one of the investors in Mizushima Ecoworks(*1), a waste processing facility based on resource recycling that started operation in 2005. Since then, the volume of waste ultimately disposed of in landfill has been dramatically reduced from 1,032 tons in 2004 to only 19.3 tons in 2008.

Since last year, we have also worked on measures for recycling or utilization as fuel of waste plastics which have been disposed of by burning in manufacturing processes so far, and the measures are expected to be established.

We are continuing with 3R (reduce, reuse and recycle) initiatives in 2009 with a target of 10 tons of less of waste ultimately disposed of in landfill.

*1 A combined waste processing facility that handles both ordinary waste from the Kurashiki municipality and industrial waste from the Mizushima industrial complex.
The facility is jointly owned by ten companies from the industrial complex.

(3)Reduction of atmospheric and water pollution

ZEON takes every precaution to protect the natural environment. In terms of "atmospheric management", this consists of making regular measurements at designated locations and measuring soot levels. For "water quality management", it involves daily monitoring, water quality measurement, and periodic analysis of all the constituents in water. We will continue to undertake measures aimed at reducing the burden on the natural environment.

(4)Resource and energy saving

Although we made significant investment in energy conservation, our results for unit energy consumption were 93% of the 1990 level in 2007 and 96% in 2008. The cause was low plant utilization resulting from the sudden deterioration in economic conditions that occurred in 2008.

Living Together with the Local Community

(1)Plant visits and walking tours

We organize plant visits each year and invite local residents and high school students. We believe that these visits bring greater recognition for our close involvement with the lives of the local population and give the participants a better feel for what Mizushima Plant is doing about safety and the environment, and about what it is we produce and in what end-products it is ultimately used.

We place great importance on communication with the community and, in addition to the plant visits, we also organize walking tours that are followed by an imonikai (a party involving the cooking of a special potato and meat soup).

(2)Regional volunteering

We regularly participate in volunteer cleaning programs mainly around the Shionasu district surrounding Mizushima Plant. This is also an opportunity to make interesting discoveries about a place we normally only pass through by bus or car on our way to and from work. This is a regular activity and one we intend to continue in the future.

Walking tour departs ("kaze no michi" is one of the 100 best walks)

Local volunteer work

Achieving practical benefits for the environment by paying attention to the small things!

At Mizushima Plant, we make a habit of everything from the obvious through to small initiatives, including shutting down our computers when we finish for the day and turning off the office lights when we go out for lunch. Turning off the lights for 50 minutes during our lunch break not only reduces the burden on the environment, it also saves about 460 yen per month. Even new employees like myself want to be actively involved in these measures and keep doing things that help both the plant and the environment.

Kensuke Mizoguchi
Logistics Section

Takaoka Plant

Founded: 1956
Address: 630 Ogino, Takaoka City, Toyama Prefecture 933-8516
Tel: 0766-21-0252 Fax: 0766-21-4568

Takaoka Plant was established in 1956 to produce PVC. It began the production of a specialty synthetic rubber called hydrogenated nitrile rubber in 1983. After that, it began its foray into new areas and is expanding into the fields of medical products, environmentally friendly next-generation fluorine solvents that do not affect the ozone layer, and component fabrication, particularly optical component applications. Although production of its original product, PVC, shut down in March 2008, the plant has already carved out a new role for itself. This includes plans for expansion into new areas and the plant is enthusiastic about its transformation into an up-and-coming future-oriented plant.

Yoshio Umezawa
Corporate Officer
Plant Manager, Takaoka Plant

Environment and Safety Activities

(1)Reduction of toxic chemical emissions

Although in the past we have achieved the voluntary targets set by the PVC industry association through emissions reductions work that included the adoption of closed process methods and equipment upgrades for dealing with emissions of un-reacted monomer during PVC production, the shutdown of PVC production in March 2008 means that emissions of un-reacted monomer are no longer an issue. Meanwhile, work on emissions reductions continues elsewhere and we are conducting an ongoing technical investigation into further reducing emissions of the organic solvents used in other manufacturing processes.

(2)Reduction of industrial waste

The volume of industrial waste sent to landfill in 2008 was significantly lower than in 2007. In addition to the reduction that resulted from the shutdown of PVC production, we are also working to reduce landfill volumes by reviewing how we process waste that would previously have been sent to landfill to encourage greater reuse of resources. We are working with a recycling company to recover useful resources from waste plastic, glass, oil, and other materials and we are planning to make systematic reductions in the future.

(3)Reduction of atmospheric and water pollution

In 2008, a reduction in production volumes over and above those associated with the shut down of PVC production meant that both atmospheric emissions resulting from boiler operation and the total discharge of waste water into the environment were significantly lower. Emission of atmospheric pollutants can vary widely depending on how well boiler operation is integrated with steam requirements in the factory, and stable operation is maintained by managing the plant in such a way as to avoid sudden variations. We aim to prevent the discharge of water pollutants by maintaining appropriate active sludge treatment conditions to ensure the stable operation of our waste water treatment facilities. We are also working on emergency management measures including conducting drills for responding to abnormal situations and installing fault detection and emergency shut down equipment to prevent the discharge of pollutants if an abnormal situation arises.

(4)Resource and energy saving

Although energy saving efforts by everyone involved resulted in lower energy use during 2008, the main reason was lower production volumes. As a result, the unit energy consumption increased. Although unit energy consumption depends on production volume, we are working to get everyone to apply their collective knowledge in the area of energy conservation in order to make further reductions and become an energy-efficient plant by operating efficiently with the minimum energy use and by rigorous day-to-day operational management and an awareness of the need for incremental savings.

Living Together with the Local Community

(1)Cleanup activities in conjunction with local government

Each year on May 30th, the plant joins with the local government to hold a "zero trash" cleanup of the streets around the plant by removing weeds and collecting empty cans and other litter.

This year's cleanup was the fifth time this event has been held.

(2)Contributing to the community through volunteer work

A total of 264 people from ZEON Group in Takaoka, including family members, participated in the Himi Waterfront Cleanup which was held on June 1 2008 and organized by volunteer groups such as the Himi Chamber of Commerce. Similarly, 190 people joined the Fushiki Kokubu Waterfront Cleanup organized by the Takaoka City Fushiki District Beautification Volunteer Group on July 6 where they all worked up a good sweat under the clear blue skies.

Volunteers participating in the Fushiki Kokubu Waterfront Cleanup

Bright, Happy, and Spirited!

The entire ZEON Group in Takaoka comes together to undertake environmental and safety activities under the motto "achieving no accidents, no disasters, and no pollution!"

Yasuo Kawaguchi,
Junko Matsuda
Environment and Safety Unit

Kawasaki Plant

Founded: 1959
Address: 1-2-1 Yako, Kawasaki-ku, Kawasaki City, Kanagawa Prefecture 210-8507
Tel: 044-276-3700 Fax: 044-276-3720

Mizushima Plant is ZEON's flagship site and represents the core of our in-house technology which is unrivaled by our competitors. It was established in 1968 as a part of the Mizushima Industrial Zone in Kurashiki City. Starting with the technology for our butadiene extraction facilities which has been licensed for use at 47 plants in 19 countries around the world, the plant works closely with our many customers to meet their diverse requirements with products derived from our "C5 Fraction Total Use Business" which include optical material resins (used in LCD displays, optical disks, camera lenses, CD pickups and elsewhere), aromatic chemicals (including jasmonic and green note chemicals), and petroleum resins (including binder for traffic paint and adhesive tape).

Yoshiyuki Mitsuhira
Corporate Officer
Plant Manager, Kawasaki Plant

Environment and Safety Activities

(1)Reduction of toxic chemical emissions

Kawasaki Plant is introducing new equipment in an effort to reduce emissions of butadiene and acrylonitrile, the main raw materials in synthetic rubber and synthetic latex. Butadiene processing volumes were increased through full-scale operation of a catalytic combustor installed in 2004 and the adoption of closed production processes. Emissions in 2008 reduced from 4.5 tons to 3.1 tons.

Full operation of a new acrylonitrile recovery process commenced in 2005 and we have made further improvements in recovery system utilization. Emissions in 2008 reduced from 20 tons to 13.5 tons. We aim to achieve even greater reductions in emissions of both butadiene and acrylonitrile through ongoing technical improvements.

(2)Reduction of industrial waste

The plant is working to reduce the volume of industrial waste by sorting waste for collection and by improving reuse of resources (recycling and heat recovery). Through a range of measures that included more recycling and processing of sludge and greater use of sorting to separate out glass, ceramics and waste plastic, the volume of waste sent to landfill in 2008 was reduced from 400 tons to 120 tons. We intend to continue our efforts to reduce industrial waste through rigorous sorting of waste and by encouraging more recycling and processing of sludge and disposal in our own new incinerator.

(3)Reduction of atmospheric and water pollution

We completed installation of a new incinerator in May 2007 and are working to maintain reliable operation to reduce atmospheric pollution. As a result, we have made good progress in reducing emissions of nitrogen oxides, carbon monoxide, soot and other pollutants.

To reduce water pollution, we have been studying how to operate the new waste water treatment tanks we added in 2006. As a result, we succeeded in improving the total nitrogen removal rate from 30% to more than 50% in 2007 and 65% in 2008. Our aim is to optimize our operating practices further to maintain and improve this removal rate.

(4)Resource and energy saving

Although we have been working hard to meet our target of reducing the average unit energy consumption rate for the 2008 to 2012 period to 87% of the 1990 level or better, unit energy consumption deteriorated during 2008 due to the large fall in production volume. Improvements in unit energy consumption are anticipated for 2009 and 2010, however, thanks to the full-scale operation of new refrigeration equipment installed in 2008 and the purchase of steam from a highly efficient external source. In addition, we intend to draw on the know-how of all plant employees to work towards achieving our goal.

Living Together with the Local Community

(1)With the aim of being a plant that is rooted in the local community, we conduct cleanups of the area around the plant as part of our program of beautification work. In 2008, these were conducted in cooperation with neighboring companies.

Cleanup in the area around the factory

(2)Twice a year, we carry out emergency drills in cooperation with public fire fighting and other emergency services to practice dealing with accidents and injuries. During 2008, we also assisted in the training of emergency response personnel by allowing the elite squad of the Kawasaki Fire Department to use a building planned for demolition as a training site.

Aiming to be an urban plant that is kind to the environment

With global warming coming to be recognized as a new environmental problem, we are doing everything we can to conserve energy and reduce emissions of greenhouse gases, while at the same time we are working to make ourselves into an urban plant that is kind to the environment in order to achieve our aim of zero emissions by reducing emissions of toxic chemicals.

Mitsuru Sugawara
Group Leader
Environment Improvement Group
Quality Engineering Section

Tokuyama Plant

Founded: 1965
Address: 2-1 Nachi, Shunan City, Yamaguchi Prefecture 745-0023
Tel: 0834-21-8501 Fax: 0834-21-8793

Tokuyama Plant

Tokuyama Plant started operations in 1965. The plant produces butadiene using the "ZEON Process of Butadiene" (GPB), an extraction distillation technology developed by ZEON. The butadiene is used as a raw material in the manufacture of synthetic rubber and synthetic latex that is then sold on the global market. The plant was the first in the world to produce polymerized toner commercially and has successfully expanded production.

Given our close proximity to residential areas, we place considerable importance on maintaining a dialogue with the local community and the entire workforce is committed to making Tokuyama Plant an environmentally friendly factory that is trusted by the community for its stable, safe and reliable operation.

Hiroshi Asahina
Corporate Officer
Plant Manager, Tokuyama Plant

Environment and Safety Activities

(1)Reduction of toxic chemical emissions

Equipment to burn waste gas produced by the plant has been installed as a means of significantly reducing emissions of toxic substances to the atmosphere. The plant is currently working earnestly on further reduction measures with the aim of minimizing emissions.

(2)Reduction of industrial waste

We have established plans for reducing the volume of waste disposed of in landfill and are making improvements year by year.

For the future, we have formulated a zero emissions plan that aims to reduce landfill disposal to one ton or less and will expand activities.

(3)Reduction of atmospheric and water pollution

Investment in environmental enhancements to our boiler has succeeded in reliably reducing SOx and NOx emissions.

We are planning further improvements and will strengthen management to ensure that these low levels are maintained in the future.

Improvements in waste water treatment and elsewhere have seen a year-by-year reduction in COD and total nitrogen emissions. We completed an upgrade of our waste water treatment equipment in February 2008 and expect to be able to make further reductions in emissions in the future.

Living Together with the Local Community

(1)Waraku Odori (Japanese dance)

Japanese dance has become a regular feature at the Tokuyama Plant and more than 3,000 people gathered at the 2008 event, the highest number ever.

The event is an opportunity for plant employees and their families to mix with local residents and features stalls run by plant staff along with goldfish scooping and dancing. Everyone from kindergarten children to grandparents enjoyed dancing around the platform and spending some fun times with neighborhood residents.

Scene from dance festival

(2)Higashi-gawa river cleanup campaign

A total of 67 people participated in the 2008 clean-up campaign.

An annual cleanup is held for the Higashi-gawa river that runs past the plant. The river clean-up (which involves 400 to 500 people) is organized by the local government and ZEON has been volunteering its help for the last four years. Much sweat has gone into working alongside local residents to tidy up the river. Many thanks were received from the local residents which helped refresh the volunteers. Even the river's carp were able to swim upstream with added vim.

Volunteers help with Higashi-gawa river cleanup

Already seven months have passed since I took over responsibility for the Administration Group. The factory is located near a residential area. I intend to continue doing my best to deepen interaction with the local community and gain their trust through safe and reliable operation.

Mitsuo Takeyasu
Administration Group Leader
Administration and
Human Resources Section

R&D Center

Founded: 1959
Address: 1-2-1 Yako, Kawasaki-ku, Kawasaki City, Kanagawa Prefecture 210-8507
Tel: 044-276-3721 Fax: 044-276-3720

The R&D Center undertakes research and technology development for ZEON Corporation. The Center's research work takes account of regulatory considerations from the earliest stages and, along with designing in product quality from the research stage, the center also develops production technology that takes account of safety and the environment, ensures the smooth introduction of new products in the production plants, and performs research and development work that delivers customer satisfaction.

No. 10 Building

Jun Hasegawa
Director and Corporate Officer
General Manager, R&D Center

Environment and Safety Activity

(1)2008 Environment and Safety Activity Policy

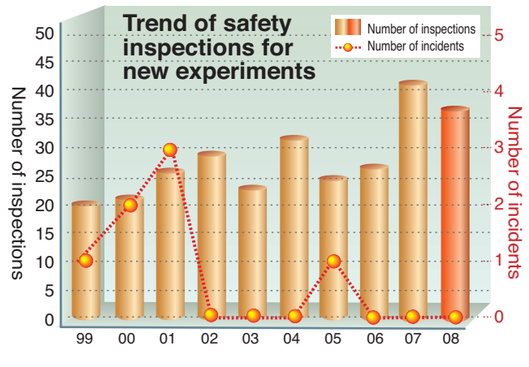
1. Establish safe and stable production technology
2. Encourage proactive safety measures and eliminate accidents and injuries
3. Take a rigorous approach to safety management of chemical substances and comply with relevant legal obligations
4. Proceed steadily with research and development on environment improvements

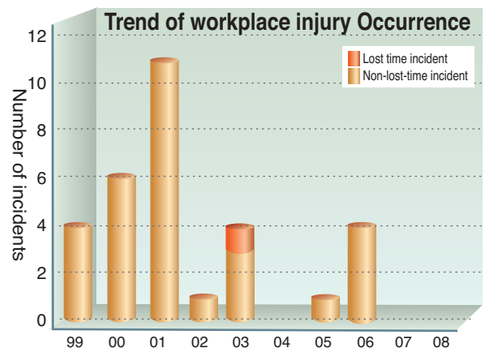
(2)Environment and safety activities

The following introduce some of the distinctive activities undertaken to implement the 2008 Environment and Safety Activity Policy.

Safety inspections for new experiments

Before commencing new research topics or installing new research equipment, the research department submits details of the planned research so that the safety and supervisory departments can jointly check for compliance with relevant laws and regulations and ensure the safety of the chemical substances and that appropriate resources are allocated so that the research or technical development work can get under way safely and quickly.





Five consecutive years without accidents or injuries

The R&D Center has achieved five consecutive years without accidents or injuries (no lost-time accidents) by utilizing the safety PDCA cycle in a top-down way to nip potential dangers and hazards in the bud through actions that include disseminating analysis of incident case studies across the organization through the Health and Safety Committee and proactive safety measures such as risk assessment and prediction of potential hazards or near-miss incidents.

Five consecutive years without accidents or injuries

The R&D Center is responsible for development of new products and technologies and, in performing this work, we incorporate safety and the environmental considerations from the earliest stages of our research. We also undertake environment and safety activities that relate to our research environment and the safety of the people who work at the R&D Center. One distinctive example of these activities is the safety inspections we carry out when planning a new experiment. These inspections look not only at product quality but also consider factors such as raw materials, products, waste, regulatory matters, and the environment for the experiment.

As a consequence of these activities, we have now gone for five consecutive years without any accidents or injuries. We intend to continue conducting our research and our environmental and safety activities in a way that makes avoiding accidents and injuries a matter of course.

Takehiro Oki
Environment and Safety Unit

Special Feature 2

Activities at Affiliated Group Companies

Improvement Activities

(1) Role of NPS Promotion Office

The NPS (New Product System) Promotion Office aims to create an improvement culture at ZEON Group companies by:

1) Establishing practices and processes for identifying improvement needs for marketable ideas.
2) Supporting improvement activities at each company by taking responsibility for nurturing human resources capable of improvement through practical measures.

(2) Catchphrases

"Steadily", "honestly", "rigorously"
Achieving "innovation and improvement" by "tirelessly taking up the challenge of market opportunities".

(3) Details of activity

1) Monthly guidance meetings

Facilitators visit group companies and work with the departments responsible for managing these improvement activities at each company to provide guidance based on actual local conditions and support human resource development through practical measures.

2) Autonomous cross-company study groups

ZEON Group operates a revolving process whereby each group company selects an improvement topic in turn and selected personnel from different companies are brought together to work on that topic for a short period of time. The NPS Promotion Office directs live training and exercises through practical workplace improvement activities and having the improvement team participants learn from each other.

3) First-principles diagnosis using 5S and 3Tei

These sessions are conducted twice yearly to create an environment that facilitates the performing of routine work.
The NPS Promotion Office provides guidance to these sessions to consider not only safety but also the flow of materials and movement of workers so as to make visible the way work is performed or any waste in the operation of the plant.
The Office also helps group companies learn from each other by disseminating case studies of actual improvements.

*5S: Seiri (neatness), Seiton (order), Seisou (cleanliness), Seiketsu (hygiene), and Shitsuke (discipline)
*3Tei: Teii (fixed orientation), Teihin (fixed product), Teiryo (fixed quantity)

ZEON Medical Co., Ltd.

ZEON Medical Co., Ltd. was established to take over the medical business of ZEON in 1989 and in the following year completed a production plant at Takaoka City in Toyama Prefecture. Since then, the company has supported medical facilities in Japan as a domestic manufacturer, primarily of products for the circulatory and digestive systems. The company combines development, manufacturing and sales to ensure it can deliver safe and high-quality products that can be used with confidence by the doctors, technicians and nurses who provide medical care to preserve the health of their patients.

Takaoka Plant and laboratory

Kei Ito
President

Company Profile

Name	ZEON Medical Co., Ltd.
Established	May 1, 1989
Capital	452 million yen (as of end March 2009)
No. of Employees	108
Head office	2-4-1 Shiba Koen, Minato-ku, Tokyo 105-0011(7th Floor, Shiba Park Building B) Tel: 03-3578-7727 Fax: 03-3578-7751
Locations	Takaoka Plant
Main business	Catheters for the circulatory and digestive systems

Environment and Safety Activities

Reducing the burden on the environment

Energy conservation trend charts are used to track monthly electricity usage at Takaoka Plant as part of efforts to save energy. The volume of waste from the plant is also tracked by month to reduce the amount produced.

NPS activities

In November 2007, Takaoka Plant became a full member of the NPS (New Product System) Association derived from Toyota production methods. Instruction meetings are held in the plant each month to always improve production practices based on the principle of "improving the efficiency of operation" by "eliminating all waste".

The three basic principles of improvement through NPS are: (1) Define standards (ways of distinguishing between what is right and wrong), (2) Organize the flow (coordinate timings), and (3) Establish standard procedures (standardize work practices). The aim of these principles is to reach the "desired outcome". The NPS concept is to make improvements by making problems visible and applying the PDCA (plan-do-check-act) cycle relentlessly to all processes as part of day-to-day work through adherence to these principles in a way that also leads to personal growth.

This year, NPS activities have been extended beyond the plant and have been initiated in development and administration departments also.

Corporate governance

As part of a program amongst all companies in the ZEON group to implement internal controls, ZEON Medical has continued to formulate and review the standards and rules that cover its basic business activities.

Instruction meeting attended by part leader

NPS instruction meeting (1)

NPS instruction meeting (2)

Working together as a single company

Everyone at ZEON Medical works together as a single company to supply medical equipment that satisfies our customers.

Noriyuki Ichige
Human Resources and Administration Group
Business Planning Department

ZEON Kasei Co., Ltd.

In 1981, Zeon Kasei Co.,Ltd. was established based on Manufactured Products Division of Zeon. The company, as a leading company in the fields of manufactured products within Zeon group,has grown with businesses that include plastic compounds, packing materials, housing materials, films, thermal conductive materials and deodorizer. The company acquired Zeon Logistical Materials Co.,Ltd. which manufacture and sale STEC® returnable and foldable container in July 2009.

Zeon Kasei intends to contribute to society with Ecology and Amenity as its keywords.

Yamaguchi plant

Ibaraki plant

Yoshiro Ogura
President

Company Profile

Name	ZEON KASEI CO.,Ltd.
Established	October 1, 1981
Capital	462.55 million yen
No. of Employees	92 (Ibaraki ZEON Kasei Co.,Ltd.*:84)
Head office	1-6-2 Marunouchi,Chiyoda-ku,Tokyo 100-0005(Shin Marunouchi Center Building) TEL:03-5208-5111 FAX:03-5208-5290
Locations	Ibaraki Plant(Ibaraki ZEON Kasei Co.,Ltd.) Yamagughi Plant, Osaka Office.
Main business	Plastic compounds, Packing materials, Housing materials, Films, Thermal conductive materials,Deodoraizer, and Logisitic materials(STEC®).

*Ibaraki ZEON Kasei Co.,Ltd. is wholly owned subsidiary of ZEON Kasei Co., Ltd. and is a production operating for ZEON Kasei Co., Ltd.

Environment and Safety Activities and Related Topics

New thermal conductive sheet improves recycling process

Our product 'TIMF Sheet'(Thermal conductive sheet) is used for solution of heat problem of electric devices. Last year, we succeeded in developing new product that is useful for improving recycling process of electric devices.

Customer put a high value on our new product.

TIMF Sheet'
(Thermal conductive sheet)

STEC® Aluminum frame type (Light Container)

We have developed a new type of STEC® that used aluminum frame and is significantly lighter than the previous steel frame, for retaining similar strength.

The new product helps customers to reduce workloads and to improve work efficiency because it is 10kg lighter than our existing light type, STEC® NL.

STEC® Aluminum frame type

Activities with the Local Community

Ibaraki Plant disaster training

The Ibaraki plant held a disaster training on October 27, 2009. in cooperation with the Bando Fire Station. Fire drill had been done by good team work.

Ibaraki Plant disaster training

Let's transform the achievement of quality and our workplace strength

We have adopted as the code of action, "Let's transform the achievement of quality and our workplace strength" And, we have adopted as the quality objective, "Prevent using, producing or dispatching defective parts".

Tatsuo Iwamoto
Plant manager,
Yamaguch Plant

Promote industrial safty and health act with faith

We will promote industrial safty and health act with faith through all stages of the improvement of equipment or the change of production process, for achieving "Zero Accident" reflecting on the works' accident occurred in 2008.

Kazutoshi Douke
Manager, Environment and Safety Unit
Ibaraki ZEON Kasei Co., Ltd.

ZEON Polymix Co., Ltd.

ZEON Polymix Co., Ltd. was first established as Kinki Rubber Processing, Co., Ltd. in 1967 in order to expand into the carbon master batch (CM) field as a part of ZEON's rubber business development. In 1989, it merged with Higashi Rubber Processing Co., Ltd. and changed its name to ZEON Polymix Co., Ltd.
The CM produced at ZEON Polymix is used widely, primarily in automotive parts but also in industrial equipment, office equipment parts, and lifestyle and leisure products.

Otsu Plant

Makoto Yamamoto
President

Kawagoe Plant

ZEON Polymix has established a "quality and environment strategy" that covers the requirements for environmental and quality management systems. This involves specific activities aimed at achieving targets based on each year's President's strategy. The slogan for the President's strategy in 2009 is "let's make ZEON Polymix a high-quality company".
To turn this slogan into reality, we have undertaken back-to-basics activities and have set ourselves specific targets in the form of short-term business objectives and medium-term business objectives respectively that have been taken up by the entire company.
The following sections describe our short-term business objective of "strengthening our 3S and 3Tei activities", and "living together with the local community" which is one of the underlying principles of how we conduct our business.

Company Profile

Name	ZEON Polymix Co., Ltd.
Established	April 7, 1967
Capital	240 million yen
No. of Employees	95
Head office	941-1 Kamiigusa, Kawajima-machi, Hikigun, Saitama Prefecture 350-0152 Tel: 049-297-0715 Fax: 049-297-8451
Locations	Kawagoe Plant, Otsu Plant
Main business	Synthetic rubber CM (semi-finished rubbers supplied to manufacturers of auto parts and other molded and processed rubber products), polymer heating

Kawagoe Plant: "Strengthening our 3S and 3Tei Activities"

Kawagoe Plant undertakes 3S and 3Tei activities aimed at reducing process problems and customer claims, reducing the time required for stocktaking, and improving performance on inventory levels.
Based on the 2009 President's strategy of "strengthening our 3S and 3Tei activities", Kawagoe Plant is working on eliminating quality claims and process problems through 3S and 3Tei activities and by making problems visible.
Contamination is one cause of claims and process problems. We started by reviewing how we manage materials storage in the belief that preventing contaminants from entering into the production line is important. We established mechanisms for seeing at a glance the location and quantity of required raw materials and ensured that we kept our storage areas clean and tidy so that we could rely on materials being available at any time of the day.

We are convinced that we can reduce claims and process problems by making 3S and 3Tei part of our standard practice. This approach also has the benefit of reducing the time required to perform stocktaking at the end of each period.
We intend to continue reducing claims and process problems through rigorous process management.

Yoshiaki Tajima
Manager,
Production Section, Kawagoe Plant

Otsu Plant: Living Together with the Local Community

Because Otsu Plant is located near Lake Biwa, the largest lake in Japan, it operates in accordance with the environmental protection ordinances set by Shiga Prefecture and Otsu City. This section introduces some of the activities that Otsu Plant undertakes to help it coexist with the local community.
In order for a company to achieve ongoing development, it must be trusted by the local community. This year, Otsu Plant is actively expanding its activities with “active contribution to society outside the location” a top priority issue.
In a new initiative for Otsu Plant, three students from the local technical high school were invited to take up an internship in 2008 so that they could gain on-site experience of the plant.

Weeding

We received much gratitude from local residents for our involvement in volunteer activities such as cleanup programs for Lake Biwa and the area around the plant and the local cemetery.
I am proud to work at a place that continues to engage in activities involving the local community and that gives me the feeling of being part of a company that is recognized as being rooted in the local community.

Akihiko Kitamura
CF
Production Section, Otsu Plant

Optes Inc.

Optes Inc. was established as a strategic processor of a cycloolefin polymer that had been developed by ZEON. The company's ZEONOR film® and ZEONOR® diffusion panels are derived from advanced technology and are highly regarded in the optics industry. The company was taken over by ZEON Corporation in January 2009 with the aim of establishing an integrated product development organization that can handle everything from resin development through to processing and forming. In addition to continuing its current operations, the company will take up a role as a contract manufacturer for ZEON.

Toyama Plant

Sano Plant

Shinichi Hirakawa
President

Company motto

"Applying our sincerity, ingenuity and enthusiasm to make Optes an international company in which every employee can take pride"

Management creed

"To make an extensive contribution to the world by producing distinctive products that are friendly to the environment using distinctive technology that is not copied from elsewhere and that our rivals cannot imitate"

Company Profile

Name	Optes Incorporated
Established	January 1, 2009
Capital	10 million yen
No. of Employees	438
Head office	1-6-2 Marunouchi, Chiyoda-ku, Tokyo 100-8246 (Shin Marunouchi Center Building) Tel: 03-3216-2370 Fax: 03-3216-1777
Locations	Sano Plant, Toyama Plant (Takaoka and Himi)
Main business	ZEONOR film®, ZEONOR® diffusion panels for LCD backlights, large aspheric mirrors, parts for medical diagnostic systems such as blood tester cells, prisms, microlenses, and other optical components

Environment and Safety Activities

Toyama Plant uses the 4R-KY methodology for carrying out hazard identification exercises to identify, understand, and resolve the hazards that are latent in our workplace and work activities. The plant achieved a commendable second place at the "First All-ZEON KY Conference" held on October 31 2008.
The plant intends to work toward achieving zero accidents, zero injuries, and 100% yield, with an emphasis on safety, environment and quality.

Living Together with the Local Community

Participation in volunteer cleanup program for the local Himi waterfront (June)

110 employees participated in a volunteer cleanup program for the local Himi waterfront.
Encouraged by words of thanks from the Himi City Mayor, we intend to continue building good relationships with the local community.

Volunteer cleanup program

Plant visits

We organize plant visits with the aim of being an open plant. We received visits from a wide range of groups during 2008, ranging from high school and university students through to people from the city and Chamber of Commerce.

Consideration for the Environment

The plant at the Himi Production Division established in 2007 was constructed based on consideration for global warming and environmental protection from the design phase. Wind power is used to supply some of the plant's electricity. The wind turbine was installed to remind all employees of the importance of energy.

Himi Production Division at Toyama Plant

The ZEONOR film® produced by my section helps reduce power consumption in thin-panel televisions. The production process also helps make thin-panel televisions use less electric power. We also strive to reduce resource and energy use in the production process to make ourselves an environmentally friendly plant.

Tetsuya Sakaguchi
Manager, No.2 Film Group
Film Production Section, Toyama Plant

ZEON Chemicals Yonezawa Co., Ltd.

ZEON Chemicals Yonezawa Co., Ltd. was established in 1996 to produce fine chemical products and commenced production of synthetic aromatic chemicals using leaf alcohol as the main raw material in 1997. Since 1988 the company has also been producing liquid compounds for reaction injection molding that use dicyclopentadiene as their main raw material. ZEON opened a new chemical research building in April 2006 and the company also undertakes contract research work.

Ichiro Igarashi
President

Environment and Safety Activities

Award for excellent plant occupational health

The company received an award for excellent plant occupational health from the Okitama Labor Standards Association.

Mental Health Training

Instructors from the Okitama public health center were invited to run the company's first comprehensive mental health training.

Various Safety Training

Safety awareness was strengthened by holding events such as forklift driving competitions and point and name competitions.

Company Profile

- **Name** ZEON Chemicals Yonezawa Co., Ltd.
- **Established** April 26, 1996
- **Capital** 90 million yen
- **No. of Employees** 26
- **Head office** 3-446-13 Hachimanpara, Yonezawa City, Yamagata Prefecture 992-1128 Tel: 0238-29-0055 Fax: 0238-29-0053
- **Main business** Green note aroma chemicals produced from leaf alcohol, intermediate organic chemicals for pharmaceuticals and agrichemicals, and liquid compounds for reaction injection molding

Judging of forklift driving competition

Mental health training carried our by external instructors

Award for excellent plant occupational health

Living Together with the Local Community

Sponsorship of the Yonezawa Sun Lantern Festival

Company employees and their families have been participating in Yonezawa'a traditional winter Yuki Doro (snow lantern) festival since 1999 and each year build two snow lanterns.

Participation in local cleanup campaign

We participated in a cleanup of the industrial district organized by the Hachimanbara Business Association and helped pick up litter.

Building a snow lantern

Picking up litter

Contributing to society through manifest checks

ZEON Chemicals Yonezawa processes industrial waste from other companies. Operating a manifest clarifies which company is responsible for the waste and helps prevent illegal disposal. Accordingly, it is very important to check that the waste is processed appropriately within the allotted time. We intend to continue operating this system.

Hitomi Shikano
Administration Group

RIMTEC Corporation

RIMTEC Corporation was formed from the merger of the RIM Division of ZEON with Teijin Metton Co., Ltd. The company supplies the PENTAM® and METTON® compounded fluids for reaction injection molding using dicyclopentadiene as the main raw material.

RIMTEC Corporation plant

世界に翔けるRIMTEC
RIMTEC soars over the world

Tatsuhiko Iwamoto
President

Providing environmentally friendly molding liquid compounds and molded products

Resin with dicyclopentadiene as its main component combines a strength equivalent to general-purpose engineering plastic with the high productivity of the reaction injection molding (RIM) method of production.

Components formed from dicyclopentadiene using RIM consist entirely of hydrogen and carbon. This means they can be used as a clean source of heat energy because the volume of dioxins produced when they are incinerated is very low.

Also, RIM using dicyclopentadiene helps reduce energy consumption because it eliminates the processes from drying to re-melting.

Company Profile

- **Name** RIMTEC Corporation
- **Established** August 1, 2003
- **Capital** 490 million yen
- **No. of Employees** 22
- **Head office** 1-6-2 Marunouchi, Chiyoda-ku, Tokyo 100-0005 (Shin-Marunouchi Center Building) Tel: 03-5220-8581 Fax: 03-5220-8584
- **Locations** Mizushima Plant
- **Main business** Liquid compounds for reaction injection molding (RIM) using dicyclopentadiene as the main raw material, and components formed from these compounds using RIM

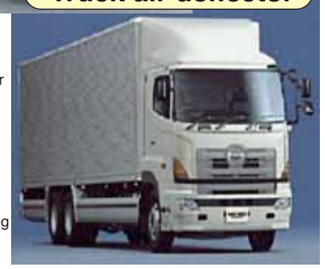
Environmental Topics

By utilizing the characteristics of its resins, the company is actively expanding into the environmental business.

Electric vehicle

Truck air deflector

The entire body is made from PENTAM® (lighter weight means better environmental performance)



VOC using IMC (simultaneous forming and painting)/Lower power consumption

Main applications for reaction injection molded products

Use in household fittings

Living Together with the Local Community

- Hanami (flower viewing) event with employees from affiliated companies and their families (April)
- Clean-up of roads around Takashima harbor (June)
- Participation in the summer festival run by ZEON Mizushima Plant (August)

Cleaning up around harbor-side roads

Other CSR Activities

- Passed regular ISO9001 audit (August)
- Passed regular ISO14001 audit (August)

We are expanding our business into the environmental sector.

Yasushi Tanaka
Laboratory Manager

ZEON Environmental Materials Co., Ltd.

ZEON Environmental Materials commenced operation in September 2004 and since then has operated as a sales company dealing with purification johkaso and sales and installation of related products.
In 2008, the company worked on encouraging wider use of household johkaso that can eliminate phosphorus as part of "eutrophication improvement" for enclosed environments such as lakes and other waterways.

Muneki Sawa
President

Environmental Activities

- To help care for the world's limited water resources, we are contributing to protecting and improving regional waterways by marketing and installing our PENTAM® purification johkaso to households.
- At ZEON Environmental Materials, reading through and discussing ZEON's 7 Articles is a compulsory item on the agenda at the start of each "Zenjo (general) meeting" and at the sales meetings held at each office.
  We are also proactive in checking that we are following compliance rules.
- KPS activities (we use the term "KPS activities" instead of NPS (new product system). The topics are as follows:

1) Application for johkaso subsidies ... We are working on speeding up this process and eliminating rework. (No. 1 Sales Department)
2) We are in the process of reducing inventory to improve cashflow (Administration Department)
3) We are applying 5S/3Tei with the motto "without 5S, we cannot be sure of safety!". (Entire company)

Company Profile

Name	ZEON Environmental Materials Co., Ltd.
Established	September 1, 2004
Capital	142.5 million yen (as of March 2007)
No. of Employees	25
Head office	2767-22 Aza Niihama, Shionasu, Kojima, Kurashiki City, Okayama Prefecture 711-0934 (Inside ZEON's No. 2 Mizushima Plant) Tel: 086-470-3711 Fax: 086-470-3722
office	Fukushima, Yonezawa, Osaka, Wakayama, Kurashiki, Okayama, Shikoku, Yamaguchi, Fukuoka, Kagoshima
Main business	Purification johkaso

5S Activities for Safety and the Environment

- We formulate and follow annual activity plans.
- Sales staff have road safety as their top priority. We would be very concerned if one of our staff caused or was the victim of an accident.
  We have a comprehensive manpower allocation plan and carry out our sales activities in a systematic way without being rushed.
- 5S is carried out on sales staff vehicles three times a year with employees following a check-sheet to inspect each other's vehicles.
- Emphasis on safety, quality and good manners.
  We conduct internal audits when we carry out repairs to faulty johkaso.
  Although installation of johkaso is handled by contractors, we conduct these audits to improve staff behavior and compliance with the johkaso laws and safety.
- Although the johkaso assembly plant has been shut down, we collated a manifest of the industrial waste left behind after the shut down in accordance with the law and had it removed. Where possible, the waste was reused or recycled.

Performing 5S checks on each other's vehicles

Living Together with the Local Community

- We joined forces with ZEON's Mizushima Plant to participate in a neighborhood cleanup campaign.
- Three employees participated in the Kojima Lake Catchment Cleanup Project held each September.
- Sponsored the organizing committee for Green Day 2008 held on April 19 2008 and demonstrated a cut-away model of a johkaso and blowers with low CO_2 emissions at the "day for considering the natural environment of the Takahashi River catchment area" run jointly by the Ministry of Land, Infrastructure, Transport and Tourism, Okayama Prefecture, the Prefectural Residents Office, and various towns.

Neighborhood cleanup campaign

We help preserve natural water systems!

I am proud to be helping preserve water resources through our johkaso business. We intend to continue supplying our customers with products that contribute to society and are kind to the environment.

Takateru Matsumura
Administration Department

Tokyo Zairyo Co., Ltd.

Tokyo Zairyo Co., Ltd. is a ZEON Group company with a corporate philosophy of "contributing to society as a specialist trading business founded on chemicals by supplying unique functions and services".

Shuichi Kakinuma
President

Sales of Environmentally Friendly Products

Tokyo Zairyo received ISO14001 certification on December 1 2006 and the company has set its key environmental goal as being the sale of environmentally friendly products.
One example of these environmentally friendly products is the reuse of plastic recycled from used automotive battery cases in the production of new battery cases. Tokyo Zairyo helps promote automotive recycling by acting as an intermediary between battery manufacturers and plastics recyclers and handles the sale of several hundred tons of recycled plastic each year.

Automotive batteries produced using recycled plastic

Encouraging Compliance with Regulations

As a trading company that deals in chemicals, Tokyo Zairyo has a responsibility to comply with the laws both domestic and external that deal with these products and has strengthened its compliance systems primarily through the activities of the Environment and Technical Section. Particular priority was placed on the following activities during 2008.

[1] The EU's REACH Regulation on chemical substances that came into force in June 2006 requires registration of all chemical substances and compounds exported to the EU. Tokyo Zairyo conducted a survey to determine which of the products it handles require registration to ensure that it had completed pre-registration for all of these by the deadline of November 30 2008. This involved coordinating with customers and suppliers and consulting on the appropriate actions to take.

[2] Tokyo Zairyo conducts ongoing employee training. In 2008, staged courses were organized and run on MSDS and Export Trade Control Order. Training on the transportation and other handling of hazardous goods was also supplied to individual departments at the request of their managers.

Company Profile

Name	Tokyo Zairyo Co., Ltd.
Established	December 1947
Capital	227.6 million yen
No. of Employees	140
Head office	1-6-2 Marunouchi, Chiyoda-ku, Tokyo 100-0005 (Shin Marunouchi Center Building) Tel: 03-5219-2171 Fax: 03-5219-2201
Branches and offices	Nagoya Branch, Osaka Branch, Okayama Office Representative Office Vietnam Representative Office
Subsidiaries	Tokyo Zairyo (U.S.A.) Inc. Tokyo Zairyo (Shanghai) Co., Ltd. and 3 other offices in China Tokyo Zairyo (Thailand) Co., Ltd. and 4 other offices in South East Asia
Main business	Various chemical products

Relationship with Employees

In addition to promoting employee development through internal education and external training, the company also encourages employees to undertake study at their own initiative with a self-study support policy that provides assistance for 50 to 70% of study costs. The company also puts a lot of effort into employee welfare and in 2008 held a bowling tournament for the head office region which was organized by the employees themselves.

Scene from the bowling tournament held on November 19 2008

Although I am normally very busy ...

As well as being coordinator of the bowling tournament, I also took part myself and enjoyed a night out eating, drinking, and bowling. I ended up winning the women's section and even received a wonderful prize. It was a very refreshing experience!

Reiko Fujisawa
Rubber Sales Department 3

ZEON Yamaguchi Co., Ltd.

ZEON Yamaguchi was established in October 1992 as a regional enterprise with two divisions that handled construction and analytical work respectively. The company contributes to society as part of the ZEON Group by operating three divisions, having merged our logistics department with ZEON's logistics and shipping business based at the Tokuyama Plant site in March 2008.

Renovated head office building

Kiyoshi Hashimoto
President

Environmental Activities

Wide range of environmental support activities for customers

ZEON Yamaguchi's analytic business supports the environmental activities of ZEON's Tokuyama Plant by analyzing boiler waste gas and plant waste water, and by performing soil analysis for on-site building work.

Externally, the company supports the environmental activities of government and local businesses and helps them reduce environmental impacts. This includes being commissioned by national or local government to undertake environmental monitoring of building work, including noise and vibration testing and testing the water quality of lakes, wetlands and the ocean. The company also performs analysis and measurement of air, odors, water, soil, noise, vibration and other environmental factors for the business activities of local companies.

Sea water environmental survey

Activities aimed at recycling

ZEON Yamaguchi's building division sorts reusable materials such as asphalt, timber and aluminum so that they can be recovered by designated operators. Similarly, the analytic division returns empty reagent bottles that were previously treated as waste to their manufacturers for recycling.

Noise and CO_2 reduction activities

To help prevent noise pollution affecting nearby residents, the logistics division is working on improving the sound of its warning alarms and ensuring compliance with driving rules that cover things like the sudden movement, acceleration, or stopping of its trucks and lifter cars. It is also investigating changing the lifter cars used on the site to battery power as a way of reducing CO_2 emissions.

Company Profile

Name	ZEON Yamaguchi Co., Ltd.
Established	April 1, 1992
Capital	50 million yen
No. of Employees	80
Head office	2-1 Nachi, Shunan City, Yamaguchi Prefecture 745-0023 (Inside the ZEON Tokuyama Plant site) Tel: 0834-21-8482 Fax: 0834-21-8663
Locations	Hagi City, Yamaguchi City
Main business	Construction, analysis, logistics

Living Together with the Local Community

Testing the healthiness of the indoor environment

Activities to support the local environment

Together with the ZEON Tokuyama Plant, employees volunteered to be part of the clean-up campaign for the Higashi-gawa river that runs near the plant.

Another activity that supports the local environment was to subsidize the cost of testing school swimming pools, bathing pools at hot springs, and household drinking water taken from wells in eastern Yamaguchi Prefecture. The analytical division also helped prevent the symptoms of sick house syndrome by taking measurements of formaldehyde, toluene, and other toxic indoor air pollutants. During 2008, 380 of these sick house checks were performed in schools, public housing, and other buildings. This contributes to creating living spaces that are safe and comfortable.

Participation in the Third Neighborhood Social Softball Tournament

Each year, ZEON Yamaguchi participates in a social softball tournament together with nearby public agencies. The event helps deepen relationships with the local community and in 2009 it was held at the Shunan softball field on Saturday May 16 as a round-robin between two teams from the public agencies and one from ZEON.

Wholeheartedly! Contributing to society through team play!!

We are working to make a contribution to society by helping all company employees in a cheerful way with our motto that "wholeheartedly is the way to go".

Yoshie Harada, Business Development Department
Tomoe Sumi
Yukari Tsukinoki, Administration Department
Chiemi Kataoka
Sachiko Aoki

ZEON North Co., Ltd.

ZEON North was established as a subsidiary of ZEON in April 1972. In July 2003, it merged with Daisan Kosan, an affiliated company, and the ZEON Takaoka Analysis Center, a ZEON subsidiary, to extend its operations to cover product sales, engineering, machinery sales to the aluminum industry, and environmental analysis businesses. The company runs a distinctive business that utilizes the technologies and personal connections built up over time, along with the advantages of its Hokuriku (northern) location.

Machinery and can production site

Yoshio Umezawa
President

Environmental and Safety Activities

ISO9001 and ISO14001 accreditation

ZEON North obtained accreditation for both ISO9001 and ISO14001 in January 2007. Every year, each department formulates environmental and quality policies along with targets based on these policies and carries out improvement activities.

We intend to continue to maintain and strengthen our environmental and quality management systems to help protect the environment while carrying out engineering work and supplying products and services that meet our customers' needs.

Promoting safety awareness

Twice yearly, ZEON North holds an occupational health and safety conference with associated companies to improve the safety awareness of all staff who work on site. We work together with these other companies to build a safety culture so as to achieve our goal of zero accidents and injuries.

Health and safety conference with associated companies

Environmental Topics

(1)ZEON North designs, manufactures, and markets aluminum heat retention furnaces that use environmentally friendly energy-efficient burners (regeneration burners).
The system achieves a significant reduction in CO2 emissions by using a low-NOx regeneration burner that recovers nearly 90% of waste heat and maintaining a uniform furnace temperature by turning combustion on and off for short periods.

(2)As a registered environmental measurement agency under Japanese measurement law, ZEON North is involved in survey and analysis work on regional environmental problems (effect of toxic substances and other pollutants).

Aluminum heat retention furnace (front)

Aluminum heat retention furnace (rear)

Regeneration burner

Company Profile

Name	ZEON North Co., Ltd.
Established	April 12, 1972
Capital	100 million yen
No. of Employees	154
Head office	351 Ejiri, Takaoka, Toyama Prefecture 933- 0062 Tel: 0766-25-1111 Fax: 0766-25-1114
Main business	Plant and equipment, construction equipment, design of industrial and environmental machinery, industrial materials, materials (synthetic resins, etc.), sales of civil engineering materials and petroleum, environmental measurement certification, work environment measurement, and various types of measurement, analysis and survey work

Encouraging Compliance with Regulations

- We participated in a local beatification program along with ZEON's Takaoka Plant.
- We participate every year in a fire fighting drill organized by the Takaoka fire department.
- We participated as part of the ZEON Group in the "Oishi Hiki" Takaoka Castle-building Festival celebrating the 400th anniversary of the founding of Takaoka city.

Cleanup program around plant

Oishi Hiki festival

Aiming to achieve a user-friendly workplace through full adoption of 3S

We are working actively to improve our workplace environments through the promotion of the 3Ss in keeping with the priority issue identified in the President's policy of "working closely with affiliated companies on 3S and taking a rigorous approach to environmental and safety activities".

Akihiro Fujita
CSR, Safety, and Administration Department

Zeon Chemicals L.P. (USA)

Zeon Chemicals L.P. was established in 1989 from the purchase of the BF Goodrich Elastomers Division combined with the new Zeon HNBR facility in Pasadena Texas. ZCLP manufactures Nipol® NBR, HyTemp® AR(Acrylic Rubber), Zetpol®(HNBR), Hydrin®, and Zeotherm® polymers in North America. ZCLP also provides sales and market development support in North America for the Cyclo-olefin polymers, Styrene Isoprene Block Polymer, Reaction Injection Molding, and Electronic materials. ZCLP also includes Zeon Brazil, a wholly owned subsidiary serving South America. ZCLP has grown steadily since 1989 and has renewed the growth effort through the implementation of our Zeon Innovation Process (ZIP) to drive new product development and new applications for Zeon polymers.

President
Tom Gettelfinger

Environmental and Safety Activities

The Louisville district in Kentucky has adopted the STAR Program* which has some of the most stringent standards of any regime in America for preventing atmospheric pollution. Zeon's Kentucky Plant has spent the last few years striving in a systematic way to reduce emissions of pollutants into the atmosphere, and in doing so has achieved considerable reductions. In the final stages of this work, the plant has installed a new type of thermal oxidizer that is able to reuse its waste heat efficiently in the emissions control system of the powdered resin dryer. This will reduce emissions of acrylonitrile, butadiene and styrene.

* STAR Program:
Abbreviation of Strategic Toxic Air Reduction, a plan for reducing pollution

Thermal Oxidizer

Company Profile

Name	ZEON Chemicals L.P.
Established	October 12, 1989
Capital	US$ 36,000,000
Investment Ratio	100% ZEON Corporation
No. of Employees	306
Head office	4100 Bells Lane, Louisville, Kentucky 40211, U.S.A. Tel: +1-502-775-7700 Fax: +1-502-775-7714
Locations	Kentucky Plant, Texas Plant, Mississippi Plant
Main business	Synthetic rubber, petrochemical products, etc.

Kentucky Plant

Living Together with the Local Community

The Kentucky Plant participates in cleanup programs for picking up trash from surrounding streets in cooperation with other neighboring chemical plants. The plant is also actively involved with members of the local community who live nearby in running community cleanup programs for parks, adjacent streets, and other locations around the factory.

We have also been providing ongoing support for more than 50 years to local charity organizations and to schools and other educational institutions, donating a total of $100,000 this year. Also, $2,900 raised by the staff and from recycling of aluminum cans and scrap metal from the plant was donated to children's facilities, and this year an item about this work was featured on a local TV program.

An employee appearing on television with grandchildren

Focus on the customer and the environment

We are committed to providing our customers with quality products and solutions, while being a responsible member of our community. While plant productivity has increased, we have also demonstrated a consistent record of significant reductions in plant emissions each year through continual improvement efforts and the use of new technologies.

Kentucky Plant Polymerization Production Manager;
Tim Kiper

Zeon Chemicals Europe Ltd.

(United Kingdom)

2009 is the 20th anniversary of the establishment of Zeon Chemicals Europe Ltd. The synthetic rubber manufacturing plant was purchased from BP Chemicals in 1989 and is Zeon's only manufacturing site in Europe. Nitrile rubber and Zeoforte™ are produced at the plant in South Wales.

Operations Director
Martin Davies

Environmental and Safety Activities

Zeon Chemicals Europe Ltd. has held ISO 14001 since 1999 and continues to work towards reducing its emissions to the atmosphere, the land and the sea in line with the UK government's IPPC Regulations. Recent focus has been on reducing waste volume by dewatering the waste before sending it to land fill. The target is to reduce waste volume by more than 70%.

Company Profile

Name	Zeon Chemicals Europe Ltd.
Established	February 6, 1989
Capital	STG£ 23,300,000
Investment Ratio	100% ZEON Corporation
Head office	Sully, Vale of Glamorgan, CF64 5ZE, United Kingdom TEL:+44-1446-725400 FAX:+44-1446-747988 www.zeon.eu
Main business	Synthetic rubber

Safety and Training

An electronic system for authorising engineering work on the plant is being introduced. This gives a more systematic approach to removing risks and making sure work is done in a safe manner.
Many new training programmes have been successfully established over the last few years including training packages on the company Intranet to help employees use their computer more effectively. Employees are encouraged to use computer based systems to report plant issues and unsafe practices so that they can be quickly and efficiently resolved.

Training at ZCEL

Resource and Energy Saving

Since 2008 there has been a concerted effort to reduce energy and water usage on the plant. By recycling water a saving of up to 25% in unit water consumption has been realised. Steam and air leaks around the plant have been repaired during 2009. A yearly saving of over £20,000 in electricity costs has been seen by identifying and repairing air leaks. This all goes to reduce CO_2 emissions.

Living Together with the Local Community

Employees of Zeon Chemicals have been working with a local school through the Engineering Education Scheme Wales. The students ran a project for a dust extraction scheme for the plant. The project was presented to judges from local Engineering Sectors who placed the students second out of 79 teams in the 'Best appreciation of Safety' category.

5S – Making ZCEL Profitable

5S is being used to improve safety, the environment, quality and productivity in order to improve the profitability of the company and the welfare of the employees.

Production Manager
James Hooper

Zeon Chemicals Thailand Co., Ltd.
(Thailand)

Zeon Chemicals (Thailand) produces Quintone® petroleum resin for use in adhesives and is the ZEON Group's only petrochemical production site in Southeast Asia. The company's products are used not only in Thailand but are also exported around the world to Asia, the Near and Middle East, Europe, America, and elsewhere.

Managing Director
Yutaka Isozaki

Company Profile

Name	Zeon Chemicals Thailand Co., Ltd.
Established	May 9, 1996
Capital	BHT 350,000,000
Investment Ratio	73.9% ZEON Corporation
Head office	3 Tambol Huaypong, Soi G-14 Pakorn-Songkhorat Road, Amphur Muang, Rayong 21150,Thailand Tel: +66-3-868-5973 ~ 5 Fax: +66-3-868-5972
Main business	Petroleum resin

Environmental and Safety Activities

Safety and Environmental Management System

As the result of best cooperation and effort of management and employees since November 2007, we established two quality management systems, which are "The Occupational Health & Safety Management System (TIS / OHSAS 18001:2007, date of registration was July 1st)" and "The Environmental Management System (ISO 14001:2004, date of registration was September 11th)", in 3rd quarter of Y2008.
We continuously maintain and improve our safety & environmental management system, such as training, hazard identification, risk assessment in the company, environmental evaluation, creating standard working-procedures, etc.

999 Days without lost working day

On May 2009, we reached one of our important target "999 days without lost working day" that means we'd never had serious patient absence from accidental in process for about 3 years. ("9" is a lucky number in Thailand.)

Emergency drill

Safety board contest in celebration's day

Living together with the Local Community

CSR Activities

For participation and living together with local community, we joined the project with neighbor companies to donate supplies to students in many schools.
Besides that, we've been doing various CSR activities such as blood donation every 3 months, and a member of Safety & Environmental Club in the industrial estate for promoting safety and environmental program to protect any pollutant effect from industries that may occur to public or environment.

Blood donation

Growth tree project

Adopt-A-School

Safety & Environment are our Life & Home

Industrial development should grow together with safe working, environment, and community. Cause of safety and environment are our life and home.

Warisa Siripratoom
Health & Safety Manager

Zeon Advanced Polymix Co., Ltd.
(Thailand)

Zeon Advanced Polymix is part of ZEON's global rubber business and its primary business is the supply of carbon master batch for use in automotive parts from its base in Thailand.

No. 1 Plant

Managing Director
Yutaka Isozaki

Company Profile

Name	Zeon Advanced Polymix Co., Ltd.
Established	April 26, 1995
Capital	BHT 100,000,000
Investment Ratio	40% ZEON Corporation
Head office	111/2 SOI NIKOM 13, MOO 2 T.Makhamkhoo, Nikompattana Sub-District, Rayong 21180, Thailand Tel: +66-3-889-3565 Fax: +66-3-889-3569
Main business	Carbon master batch rubber

Living together with the Local Community

- With the aim of taking an active role in the community, we made donations of 47,900 baht during 2008 including donations and supply of old computers to local government, and presentation of stationery to neighboring elementary schools.

Stationery donations

- We planted ten trees at a neighboring elementary school to mark National Children's Day held on the first Saturday of January.

Tree planting

Safety

- A Safety Week was held during November.
To improve awareness of safety, we invited local government, police, and neighboring companies to a presentation on safety and the environment at which employees from each section ran booths.

No. 2 Plant constructed in 2007

Health Management

- To help keep our employees healthy, we hold aerobics training twice a week before work starts under the direction of a company instructor.

Aerobics training

We have formed a new CSD (Customer Service Department).

The new department provides users with a point of contact for product quality issues.

Naruemon (right)
Jintana (left)

Environmental Data

ZEON Corporation

Takaoka Plant		2001	2002	2003	2004	2005	2006	2007	2008
Toxic substances	Vinyl chloride monomer consumption(tons)	45,200	41,600	40,300	785	656	777	759	0
	Vinyl chloride monomer emissions(tons)	53	40	40	1	1	1	1	0
Substances covered by PRTR law	Consumption(Tons)	47,145	42,338	42,575	1,439	1,312	1,405	1,277	116
	Amount emitted(Tons)*	96	83	85	4	4	5	4	0
Industrial waste	Amount produced(Tons)	7,569	6,068	5,255	5,143	4,358	3,536	3,751	3,199
	Amount sent to landfill(Tons)	1,909	1,692	1,497	1,437	1,114	895	1,016	312
Atmospheric emissions	CO_2 emissions(tons-C*)	16,772	17,494	16,856	17,760	17,567	17,638	16,609	8,100
	SOx emissions(tons)	22	30	53	41	33	51	52	14
	NOx emissions(tons)	47	56	70	69	31	50	49	17
Waste water	Total effluent waste water discharge(thousand m³)	6,158	6,464	6,649	6,441	5,901	6,587	6,919	4,284
	COD emissions(tons)	36	35	46	29	31	33	42	12
	Total phosphorus discharge(tons)	2	4	3	1	1	1	1	1
	Total nitrogen discharge(tons)	5	7	25	15	15	16	6	23
Energy	Total amount(crude oil equivalent, kl)	24,897	26,462	26,341	27,494	28,692	31,417	28,967	15,329
	Unit consumption index(1990 = 100)	106	98	90	83	80	75	83	108

Kawasaki Plant		2001	2002	2003	2004	2005	2006	2007	2008
Toxic substances	Butadiene consumption(tons)	29,058	27,335	29,876	30,726	29,694	28,278	28,886	21,902
	Butadiene emissions(tons)	39	34	32	29	9	9	5	3
	Acrylonitrile consumption(tons)	11,257	10,937	12,336	12,953	12,345	12,446	13,030	9,576
	Acrylonitrile emissions(tons)	38	29	32	38	24	24	20	14
Substances covered by PRTR law	Consumption(Tons)	57,429	55,629	59,001	59,530	58,960	56,751	55,278	41,389
	Amount emitted(Tons)*	84	69	70	73	54	56	69	38
Industrial waste	Amount produced(Tons)	48,606	70,261	63,759	44,758	37,158	47,826	45,395	50,456
	Amount sent to landfill(Tons)	50	230	24	238	520	189	392	118
Atmospheric emissions	CO_2 emissions(tons-C*)	13,356	13,226	13,077	13,077	13,894	11,918	12,955	10,991
	SOx emissions(tons)	2	1	1	3	1	2	1	1
	NOx emissions(tons)	29	29	27	28	18	28	17	17
Waste water	Total effluent waste water discharge(thousand m³)	1,942	1,726	1,825	2,006	1,906	1,988	1,970	1,598
	COD emissions(tons)	56	49	57	53	52	55	58	37
	Total phosphorus discharge(tons)	0	1	1	1	1	1	1	1
	Total nitrogen discharge(tons)	70	68	107	107	118	125	93	60
Energy	Total amount(crude oil equivalent, kl)	21,966	20,911	20,955	20,836	20,490	20,092	19,982	15,829
	Unit consumption index(1990 = 100)	108	110	101	99	103	101	102	109

Tokuyama Plant		2001	2002	2003	2004	2005	2006	2007	2008
Toxic substances	Butadiene consumption(tons)	35	46	24	20	17	17	17	15
	Acrylonitrile consumption(tons)	4	5	1	0	1	1	1	1
Substances covered by PRTR law	Consumption(Tons)	361,690	432,694	398,557	398,387	395,821	380,312	407,934	17,519
	Amount emitted(Tons)*	577	495	126	67	23	23	20	18
Industrial waste	Amount produced(Tons)	2,676	2,709	2,916	4,042	3,650	5,151	10,211	4,512
	Amount sent to landfill(Tons)	401	295	260	216	134	81	77	15
Atmospheric emissions	CO2 emissions(tons-C*)	75,632	78,253	73,577	72,834	71,615	70,352	70,790	67,798
	SOx emissions(tons)	733	822	726	756	870	674	647	547
	NOx emissions(tons)	388	424	326	310	385	315	280	311
Waste water	Total effluent waste water discharge(thousand m³)	8,619	8,361	8,904	9,822	8,080	8,293	6,331	7,704
	COD emissions(tons)	110	157	149	138	95	91	81	79
	Total phosphorus discharge(tons)	1	0	1	1	1	1	1	1
	Total nitrogen discharge(tons)	54	62	54	53	50	47	27	32
Energy	Total amount(crude oil equivalent, kl)	94,449	106,249	100,057	99,088	96,729	95,281	96,933	93,671
	Unit consumption index(1990 = 100)	108	103	105	104	103	104	104	109

Mizushima Plant		2001	2002	2003	2004	2005	2006	2007	2008
Toxic substances	Butadiene consumption(tons)	143,583	153,919	163,521	149,435	154,510	154,899	150,281	133,483
	Butadiene emissions(tons)	2	0	0	0	0	0	0	0
Substances covered by PRTR law	Consumption(Tons)	266,725	303,967	342,931	335,458	336,308	343,930	317,673	285,584
	Amount emitted(Tons)*	7	6	2	1	1	1	1	1
Industrial waste	Amount produced(Tons)	55,821	62,575	56,398	60,975	57,425	57,773	58,983	35,488
	Amount sent to landfill(Tons)	1,859	1,091	1,185	1,032	29	9	19	19
Atmospheric emissions	CO2 emissions(tons-C*)	90,016	102,320	109,147	111,326	111,194	109,725	103,091	90,136
	SOx emissions(tons)	3	2	4	3	1	3	2	2
	NOx emissions(tons)	70	58	76	81	68	87	70	63
Waste water	Total effluent waste water discharge(thousand m³)	2,108	1,946	2,113	2,290	2,242	2,559	2,550	2,200
	COD emissions(tons)	13	13	13	14	14	15	13	11
	Total phosphorus discharge(tons)	1	0	1	1	1	1	1	1
	Total nitrogen discharge(tons)	22	23	21	22	13	20	21	15
Energy	Total amount(crude oil equivalent, kl)	128,654	145,725	154,962	159,927	160,179	175,037	164,994	142,592
	Unit consumption index(1990 = 100)	101	97	94	93	93	92	93	96

Affiliated Group Companies in Japan

* Total discharges to air, water, and soil
* * Amount of carbon equivalent

ZEON Kasei Co., Ltd. Ibaraki Plant		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	3	3	2	3	4
	Consumption(Tons)	179	114	88	100	90
	Amount emitted(Tons)*	16	13	7	6	6
Industrial waste	Amount produced(Tons)	463	583	783	611	550
	Amount sent to landfill(Tons)	189	219	190	198	205
CO_2 emissions(tons-C)**		824	963	949	1,009	1,211
Energy consumption(crude oil equivalent, kl)		1,960	2,193	2,278	1,866	1,833

ZEON Kasei Co., Ltd. Yamaguchi Plant		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	1	1	1	1	1
	Consumption(Tons)	2	1	1	1	1
	Amount emitted(Tons)*	1	1	0	1	0
Industrial waste	Amount produced(Tons)	16	6	77	76	71
	Amount sent to landfill(Tons)	12	0	0	0	0
CO_2 emissions(tons-C)**		63	72	67	73	64
Energy consumption(crude oil equivalent, kl)		95	109	102	110	97

ZEON Polymix Co., Ltd. Otsu Plant		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	6	6	6	6	5
	Consumption(Tons)	214	161	164	171	90
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	139	144	186	216	167
	Amount sent to landfill(Tons)	111	118	120	121	101
CO_2 emissions(tons-C)**		756	739	682	752	614
Energy consumption(crude oil equivalent, kl)		1,618	1,604	1,579	1,634	1,329

ZEON Polymix Co., Ltd. Kawagoe Plant		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	5	6	6	6	3
	Consumption(Tons)	74	50	53	62	81
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	102	121	129	150	90
	Amount sent to landfill(Tons)	62	70	84	93	51
CO_2 emissions(tons-C)**		242	236	247	271	233
Energy consumption(crude oil equivalent, kl)		536	534	567	571	352

The Optronics Co., Ltd. Sano Plant		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	1	1	1	0	0
	Consumption(Tons)	0	0	0	0	0
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	112	52	39	25	16
	Amount sent to landfill(Tons)	28	25	16	10	16
CO_2 emissions(tons-C)**		584	567	524	480	431
Energy consumption(crude oil equivalent, kl)		1,352	1,314	1,315	992	888

The Optronics Co., Ltd. Toyama Plant		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	0	0	0	0	0
	Consumption(Tons)	0	0	0	0	0
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	997	1,981	824	830	200
	Amount sent to landfill(Tons)	0	0	0	0	0
CO_2 emissions(tons-C)**		1,366	1,961	3,300	5,018	5,672
Energy consumption(crude oil equivalent, kl)		2,856	4,095	6,118	7,708	8,608

ZEON Chemicals Yonezawa Co., Ltd.		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	4	4	4	4	4
	Consumption(Tons)	25	24	22	18	17
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	258	259	271	194	223
	Amount sent to landfill(Tons)	8	7	5	9	10
CO_2 emissions(tons-C)**		316	349	415	395	319
Energy consumption(crude oil equivalent, kl)		479	530	674	623	509

ZEON Medical Co., Ltd.		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	1	1	1	1	1
	Consumption(Tons)	1	1	1	1	1
	Amount emitted(Tons)*	1	1	1	1	1
Industrial waste	Amount produced(Tons)	7	8	7	2	5
	Amount sent to landfill(Tons)	7	7	7	2	5
CO_2 emissions(tons-C)**		249	218	211	245	273
Energy consumption(crude oil equivalent, kl)		471	407	386	423	412

RIMTEC Corporation		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	0	0	0	0	0
	Consumption(Tons)	0	0	0	0	0
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	132	282	108	263	149
	Amount sent to landfill(Tons)	1	62	0	150	66
CO_2 emissions(tons-C)**		252	398	319	239	184
Energy consumption(crude oil equivalent, kl)		407	598	486	366	281

ZEON North Co., Ltd.		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	0	0	0	0	0
	Consumption(Tons)	0	0	0	0	0
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	67	28	40	45	43
	Amount sent to landfill(Tons)	63	27	39	45	31
CO_2 emissions(tons-C)**		41	43	45	53	53
Energy consumption(crude oil equivalent, kl)		81	85	81	80	81

ZEON Yamaguchi Co., Ltd.		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	40	40	40	40	40
	Consumption(Tons)	0	0	0	0	0
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	364	97	141	62	77
	Amount sent to landfill(Tons)	33	8	7	5	1
CO_2 emissions(tons-C)**		3	3	3	3	3
Energy consumption(crude oil equivalent, kl)		5	5	5	5	6

Overseas Affiliated Group Companies

Zeon Chemicals L.P. (USA): Kentucky		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	8	8	9	8	8
	Consumption(Tons)	18,170	19,846	20,751	30,768	18,835
	Amount emitted(Tons)*	70	67	78	62	56
Industrial waste	Amount produced(Tons)	1,159	547	423	394	721
	Amount sent to landfill(Tons)	1,110	483	366	350	679
CO_2 emissions(tons-C)**		9,408	9,872	9,517	9,599	9,817
Energy consumption(crude oil equivalent, kl)		11,505	12,213	11,601	11,389	11,870

Zeon Chemicals L.P. (USA): Texas		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	0	0	0	0	0
	Consumption(Tons)	0	0	0	0	0
	Amount emitted(Tons)*	0	0	0	0	0
Industrial waste	Amount produced(Tons)	28	29	32	33	34
	Amount sent to landfill(Tons)	2	2	2	1	1
CO_2 emissions(tons-C)**		2,184	2,113	2,312	2,356	2,214
Energy consumption(crude oil equivalent, kl)		2,398	2,367	2,480	2,526	2,332

Zeon Chemicals L.P. (USA): Mississippi		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	3	3	3	3	3
	Consumption(Tons)	6,008	3,488	4,825	4,538	3,923
	Amount emitted(Tons)*	86	43	61	56	53
Industrial waste	Amount produced(Tons)	39	36	66	100	50
	Amount sent to landfill(Tons)	39	36	66	100	50
CO_2 emissions(tons-C)**		4,854	3,436	4,690	4,500	4,118
Energy consumption(crude oil equivalent, kl)		7,451	5,173	7,293	6,987	6,323

Zeon Chemicals Europe Ltd. (UK)		2004	2005	2006	2007	2008
Substances covered by PRTR law	Number of substances	2	2	2	2	2
	Consumption(Tons)	13,081	12,493	12,790	13,546	12,554
	Amount emitted(Tons)*	3	4	3	3	3
Industrial waste	Amount produced(Tons)	1,254	1,292	1,430	1,937	1,302
	Amount sent to landfill(Tons)	1,234	1,273	1,421	1,911	1,280
CO_2 emissions(tons-C)**		3,538	3,569	3,726	3,479	3,437
Energy consumption(crude oil equivalent, kl)		6,843	6,905	7,201	6,760	6,661

Zeon Advanced Polymix Co., Ltd. (Thailand)		2004	2005	2006	2007	2008
Industrial waste	Amount produced(Tons)	1,142	1,238	966	1,147	1,088
	Amount sent to landfill(Tons)	539	518	277	262	277
CO_2 emissions(tons-C)**		–	1,257	1,312	1,530	1,650
Energy consumption(crude oil equivalent, kl)		–	2,165	2,261	2,517	2,714

Zeon Chemicals (Thailand) Co., Ltd. (Thailand)		2004	2005	2006	2007	2008
Industrial waste	Amount produced(Tons)	3,019	2,956	2,406	2,146	1,022
	Amount sent to landfill(Tons)	1,168	1,188	1,427	1,700	659
CO_2 emissions(tons-C)**		1,390	1,306	1,412	1,541	1,426
Energy consumption(crude oil equivalent, kl)		1,999	1,878	2,031	2,215	2,050

Third Party Opinion

"Reading of the ZEON Corporation CSR Report"

Hitoshi Okada (Dr. of Engineering/Professional Engineer)
Senior Researcher
Institute for Environmental Management Accounting

Graduated in 1979 from the Graduate School of Engineering at Osaka University. Graduated in September 2006 from the Graduate School of Business Administration at Kobe University specializing in business administration (a professional graduate school for mid-career education). Part-time lecturer at Osaka City University. Appointed by the Ministry of Economy, Trade and Industry in 2009 to a committee investigating how to "encourage more efficient use of resources in supply chains".
While undertaking research into corporate misconduct, CSR, compliance, business theory, restructuring management and other fields as part of his doctoral course at the Graduate School of Business Administration at Kobe University, he also supports areas such as CSR management and the introduction of material flow cost accounting.

CSR Objectives at ZEON Corporation

ZEON Corporation's corporate mission is to "be a company that makes a positive contribution to the preservation of the earth and the prosperity of the human race" and the basis of its business is a distinctive and steadfast technology organization that cannot be duplicated by its competitors, and the range of products supported by this technological base. This range of products includes many that contribute to protecting the global environment and some have been described as environmentally friendly products. As noted in the President's Message, ZEON Corporation aims to "operate our business in a way that is kind to the global environment" and the company views contributing to society through its business activities as a key part of its CSR activities.
Although contributing to society through a company's core business should be given due respect as an important part of CSR, it is also important that a differentiation is made in the company's CSR framework between the "core business in itself" and the "contribution to society made through that core business". If the significance of CSR is made clear in this "contribution to society made through the core business", then an even stronger message can be conveyed both inside and outside the company. I look forward to seeing more information in future reports about the setting of targets and the results of activities aimed at achieving those targets associated with this "contribution to society made through the core business".

Environment, Safety, and Relationship with Employees

As a company that deals with chemical substances, ZEON Corporation has excellent and effective management for its environmental and safety activities, including formulating a safety philosophy and a Responsible Care policy. ZEON Corporation's Responsible Care activities can also be rated highly with the company having signed up to participate in the Responsible Care Global Charter.
Looking at the results of the company's environmental activities during 2008 shows that, overall, their planned targets have been met. However, there are a number of items for which no numeric targets have been published and this makes it difficult to judge the level of achievement. It is to be hoped that future plans will include explicit numeric targets wherever possible.
ZEON Corporation has established a manufacturing training center as part of its efforts aimed at establishing mechanisms for human resource development to support production innovation. The center provides a venue for training operators from all parts of the company. The report also shows the company as having a human resources system that allows workers a sense of challenge and achievement. The company has a distinctive approach that avoids the pitfalls of a results-oriented regime by being process-focused and placing an emphasis on things like contribution to the team. The company also conducts a questionnaire about their employee performance appraisal system which indicates more than 80% of staff are satisfied with their appraisals. This indicates that the company has a good relationship with its employees.

Dialogue with Stakeholders

ZEON Corporation runs plant visits that are attended by a large number of analysts. These are centered primarily on the Integrated Production Center which acts as a base for "monozukuri" (manufacturing ethos) within the company. The site reports featured in this CSR report indicate that the company has an active involvement with the local communities in the areas where it operates. In terms of communication with employees, management maintains an active dialogue with plant staff with the number of site visits by the President increasing each year. This indicates a good level of dialogue with stakeholders. Improving its relationship with stakeholders is very important for ZEON Corporation. It is by conducting an active dialogue with these stakeholders that the company can identify the issues that are important to society and apply itself to resolving these issues. I look forward to seeing the company taking the initiative in establishing bi-directional communication with stakeholders in the future.

Response to Third Party Opinion

Seiichi Okada
Executive Officer and Director with Responsibility for CSR

The Responsible Care Activity Report published by ZEON Corporation was renamed the CSR Report to coincide with the decision to operate the business with an emphasis on CSR that was one of the core policies in the company's 2005 PZ-3 3-year mid-term management plan. This is the fourth year that a CSR Report has been published. Although business conditions have been very difficult since fall of last year, it is even more important in times like these to keep CSR in the forefront of our minds as we go about our business. Enhancements to the 2009 CSR Report include [1] expanding the section of the report that deals with activities that relate to society to give the document more of the feel of a CSR report, [2] expanding the employee message items that were introduced in the 2008 CSR Report, [3] including data from overseas affiliates in the environmental data section, and [4] making reference to production innovation, NPS, and similar activities.
Regarding the comments of Dr. Hitoshi Okada, Senior Researcher at the Institute for Environmental Management Accounting, he has generally understood the form that CSR takes at ZEON Group and we accept with sincerity his guidance from the perspective of achieving a higher level of CSR performance. We aim to continue contributing to the sustainable development of society by meeting the expectations and desires of all of our stakeholders, particularly local communities, customers and shareholders, by considering the following as topics for investigation in CSR activities from this year onwards and taking action accordingly:

[1]Devise ways of presenting a more tangible image of how we contribute to society through our core business.
[2]Provide numeric targets for environmental and safety activities wherever possible, pursue these targets in a systematic way, and aim to conduct even more extensive activities that relate to society.
[3]In addition to existing activities associated with dialogue with stakeholders, also conduct bi-directional stakeholder dialogues.

CSR Activity Time Line (ZEON Corporation only)

Year	Activity Details
1994	Takaoka Plant received ISO9002 certification (changed to ISO9001:2000 in 2002) Tokuyama Plant received ISO9002 certification (changed to ISO9001:2000 in 2002)
1995	Joined the Japan Responsible Care Council ZEON declared that it would perform Responsible Care activities The "ZEON Responsible Care Basic Policy" was established Kawasaki Plant received ISO9002 certification (changed to ISO9001:2000 in 2003) Mizushima Plant received ISO9002 certification (changed to ISO9001:2000 in 2003)
1996	The company-wide safety management system was reviewed and strengthened The "ZEON Safety Philosophy" was established The "Plant Technology Audit System" was established and activities started
1997	The "Company-wide Environment Improvement Project" was established The first "ZEON Safety Month" and "All-ZEON Safety Conference" were held (subsequently held every April) A code of conduct ("ZEON's 7 Articles") was established
1998	Takaoka Plant received ISO14001 certification Kawasaki Plant acquired certification for high-pressure gas safety inspection
1999	Tokuyama Plant received ISO14001 certification Mizushima Plant received ISO14001 certification Kawasaki Plant received ISO14001 certification The main business departments received ISO9001 certification The "Risk Management Rules" were established
2000	Takaoka Plant acquired certification for high-pressure gas safety inspection Publication of the "Responsible Care Activity Report" commenced (from the 1999 edition)
2001	The "ZEON Environment Philosophy" was established The "Handling Restricted Materials Rules" were established
2002	The "Affiliate Joint Environment and Safety Meeting" was established The "Project for Reducing the Emissions of Substances Subject to the PRTR Law" was established The "Project for Promoting the Development of Energy Conserving Technology" was established
2003	The "Energy Management Rules" were established Revision to the "Risk Management and Compliance Rules" Action Plan for "ZEON's 7 Articles" was established The "Rules for Observing Antitrust Laws" were established
2004	The Specialty Plastics Division received ISO9001 certification The "Internal Report System" was established "Compliance Textbook (Special)" was published
2005	The English version of the "Responsible Care Activity Report" was published Third-party verification was performed for the "Responsible Care Activity Report" "Compliance Textbook (Inspection) (QA edition)" was published
2006	The "Responsible Care Activity Report" was renamed the "CSR Report" The "Basic Policy Concerning the Establishment of an Internal Controls System" was established
2007	The basic policy for financial reporting was established A part time work system to promote child care was introduced
2008	The "Internal Controls Committee" was established Signed up to "Responsible Care Global Charter"

ISO Certification Status for ZEON Corporation and Affiliates

Certification Status for ZEON Corporation

Site	ISO9001	ISO14001
Takaoka Plant	○	○
Tokuyama Plant	○	○
Kawasaki Plant	○	○
Mizushima Plant	○	○
Core operating departments	○	
Specialist departments	○	

Certification Status for Affiliated Group Companies

Site	ISO9001	ISO14001	ISO13485
ZEON Kasei Co., Ltd.	○*1	○*2	
ZEON Polymix Co., Ltd.*	○	○	
The Optronics Co., Ltd.	○	○	
ZEON Chemicals Yonezawa Co., Ltd.*	○	○	
RIMTEC Corporation	○	○	
Tokyo Zairyo Co., Ltd.	○	○	
ZEON Medical Co., Ltd.	○		○
ZEON North Co., Ltd.	○	○	
Zeon Chemicals L.P. (ZCLP)	○		
ZEON Chemicals Europe Ltd. (ZCEL)	○	○	
Zeon Chemicals (Thailand) Co., Ltd. (ZCT)	○	○	
ZEON Advanced Polymix Co., Ltd. (ZAP)	○	○	

*1: Certification for logistical materials department is for STEC section only.
*2: Excluding logistical materials department.