Responsible Care

MGC Responsible Care Status

Environmental Report
2005 Edition
English version

MITSUBISHI GAS CHEMICAL COMPANY, INC.

Contents

Editorial policy

This our Environmental Report 2005 is issued to report MGC's Responsible Care (RC) Activities (Occupational health and safety, Process safety and disaster prevention, Environmental preservation, Product stewardship, Distribution safety, Dialogue with the community, spectrum of RC) widely, and to promote our own RC activities.
This report was prepared with reference to the Environmental Reporting Guidelines (fiscal 2003 edition) of the Japanese Ministry of the Environment.

Scope of this report

This report mainly describes the environmental and safety activities and the environmental performance data of MGC.
Sites covered: All MGC's domestic workplaces
The environmental performance data are based on those of plants where the production is carried out.
Period covered: From January 1, 2005 to December 31, 2005
The period of the environmental performance data are those from April 1, 2004 to March 31, 2005 (fiscal 2004).
Publication: March, 2006
The next publication scheduled: March, 2007.

PROFILE OF MGC

Profile of MGC (As of March 31, 2005)

Name	MITSUBISHI GAS CHEMICAL COMPANY, INC.
Address	Mitsubishi Building, 5-2 Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8324, Japan
Established on	April 21, 1951
Capital	¥ 41.97 billion
Annual Turnover	¥ 388.5 billion (Consolidated) ¥ 281.6 billion (Unconsolidated)
Number of Employees	4,426 (Consolidated) 2,277 (Unconsolidated)
Number of consolidated subsidiaries	28 companies
Number of related companies on the equity method	11 companies
URL	http://www.mgc.co.jp

Main Products

Natural Gas Chemicals Company

- Methanol
- Formalin
- Ammonia
- Metylamines
- Methyl methacrylate
- Methacrylates
- Polyols
- Dimethylether
- Ubidecarenone (Co-enzyme Q_{10})
- ASC Super (Catalase)
- Hydrogen generation device from methanol
- Catalysts

Specialty Chemicals Company

- Hydrogen peroxide
- Sodium percarbonate
- Persulfates
- Hydrosulfite
- Chemicals for elrctronic industries
- Monomer for plastic lens
- Polycarbonate resin (Iupilon®)
- Polyacetal resin (Iupital®)
- Modified polyphenylene ether (Iupiace®)
- Polyamide MXD6 (Reny®)
- Polyamideimide (AI polymer®)

Aromatic Chemicals Company

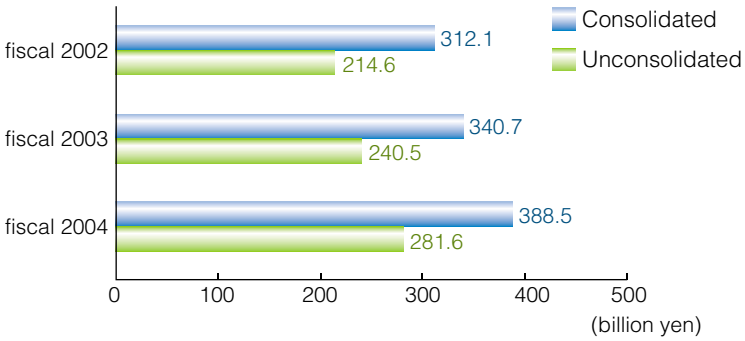
- Xylenes
- Methaxylylene diamine
- 1,3-BAC
- MX nylon resin
- Toluic acid
- Aromatic aldehydes
- Trimellitic anhydride
- Pyromellitic anhydride
- Phthalic anhydride

Information and Advanced Materials Company

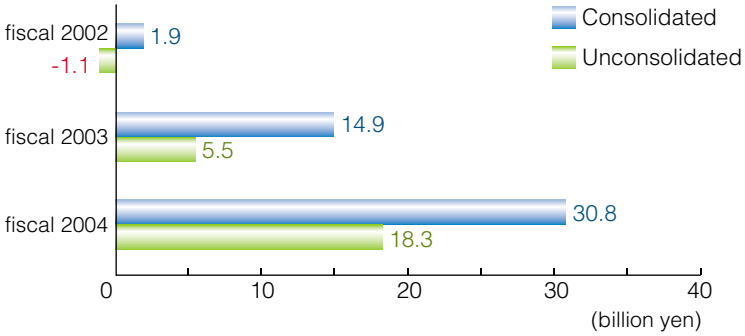
- Epoxy・BT resin copper clad laminates
- Materials for multi-layer printed circuit board
- BT resin®
- LE sheet®
- AGELESS® (oxygen absorber)
- Anaero pack®
- RP system®
- AGELESS・OMAC®
- Pharmakeep®

Financial highlight

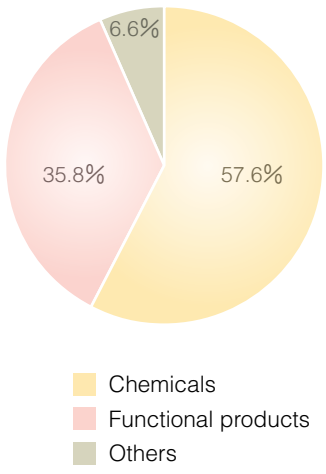
Annual Turnover



Operating Profit



Sales Ratio (Consolidated)



Message from the President

On behalf of Mitsubishi Gas Chemical (MGC), I am pleased to introduce you our publication of the Responsible Care status report 2005 (environmental report 2005).
During the decade since the launch of MGC Responsible Care (RC) program to ensure environment and safety, we have matured with expanded company-wide activities and our understanding of the need for RC through the continuously steady implementation of this program.
After MGC issued the 2001 edition of the report to include all our environmental and safety activities, the content of the report has been enhanced with every issue and we have now issued this fifth status report (it is the third edition in an English version).
By developing forthright and proactive RC activities that continue into the future, I am sure you will also see an achievement in driving major improvements in environmental and safety performance across the entire spectrum of these activities in our next status report.

The MGC Responsible Care voluntary program is based on the following implementation items which have been embraced by the Japan Responsible Care Council (JRCC) and are to be designed to fit our company culture:

- **Environmental preservation**
- **Process safety and disaster prevention**
- **Occupational safety and health**
- **Chemicals and products safety (Product stewardship)**
- **Distribution safety**
- **Dialogue with the community**

Following is brief outline of our activities which were developed positively by all members of our management and all of our employees.

Approach to Compliance

It goes without saying that the fundamental elements of a company activity are to be strictly bounded by compliance concerns.
At MGC, each of us has understood the MGC Corporate Activity Guide enacted in 1997 and we have made an effort so that we might achieve the level of social responsibility outline therein our company activities. In addition to this, we have recognized the importance of compliance through established compliance institutions to reinforce the guide in 2004 and are instituting a whole compliance structure not only for merely MGC but for MGC affiliates.
We should continue to make an effort for sound development by ensuring corporate compliance with RC at its heart.

Topics of Environmental and Safety Activities in Calendar Year (CY) 2005

We have emplaced Zero Accident, Zero Occupational Injury and Environmental Preservation among our Fundamental Policies on Environment and Safety as fundamental elements of environmental and safety activities, and have provided nine Fundamental Policy items in order to put into practice the Policies referred to above. All of our workplaces have been actively developing our RC activities according to the policy.
I will now introduce you to the main activities in CY2005.
Aiming for achievement of Zero accident and Zero occupational injury, which is our earnest desire, we have made an effort to eliminate unsafe locations through point and action by heightening our sensibility to danger while promoting HIYARI-HATTO activity and adaptation of the occupational safety risk assessment at all of our plants and laboratories. In addition, we have fully revised the Prior Safety Evaluation Procedures for New or Additional Plants to improve self-maintenance technologies and skills, and the revised procedures have certainly been inspected and the countermeasures of environment and safety implemented together with progress in planning.
As part of our environmental preservation efforts, we have actively promoted energy saving initiatives, reducing of emission volumes corresponding to Pollutant Release and Transfer Register (PRTR) substances and the initiatives to achieve zero emission of waste.
As part of chemicals and products safety, we have taken all possible measures to ensure that all of our stakeholders

(especially customers) have made use of each of our product with a sensibility of security through each MSDS prepared, improved and supplied by us.
As part of our distribution safety, we have ensured the carrying of a Yellow-Card made and distributed by us on vehicle used in transportation of our production, and each card will contribute to effective disaster-prevention and remediation activities in case of an accident.

Efforts to address Global Warming

Our countermeasures against global warming: in addition to the required global effort, we have recognized the importance of the global warming issue and have set up the Greenhouse Gas (GHG) task force within our company-wide organization in 2005.
The GHG task force has the role of considering energy saving initiatives and countermeasures against GHG and to promote at them fundamental level, company-wide.
MGC is currently striving to reduce energy consumption rate less than or equal to 0.9 and a GHG emission rate less than or equal to 0.8 of those of fiscal 1990 by fiscal 2010, as our short-term goal.
On top of this, we should take measures to prevent global warming in activities at undertaken and conducted outside of Japan.

Developing Environment-friendly Products

We have focused on the development of many environment-friendly products.
We are currently making efforts to develop the following environment-friendly products: usage of methanol which is our core product in fuel cells, usage of hydrogen peroxide for environmental cleanup, usage of recyclable MX Nylon Resin with its merits of high gas barrier capability, technology for oxygen removal preservation of valuable artifacts and other precious items, and development of the next generation of clean fuel such as Dimethyl ether (DME) which has gathered worldwide attention.
Developing of environment-friendly products is ranked as one of our most significant themes we believe we should make an effort to market such environment-friendly to encourage their regular use.

This report covers MGC's concrete approach to environmental and safety issues, and I sincerely hope that you will read this report and will deepen your understanding about our activities and the sincerity and determination we devote to them. I welcome any suggestions and assistance you may offer on how we can continue to be a very trusted company for you and stakeholders, just as we must continue to persevere in our effort to earn and maintain our social trust.

March, 2006

Representative Director, President
Hideki Odaka

Fundamental Policies on Environment and Safety

We, Mitsubishi Gas Chemical Company, Inc. (MGC), are understanding activities to promote sustainable development and creation of a recycling-based-society as important business objectives.

Corporate Philosophy

MGC is fully committed to making contributions towards development in harmony with society through the creation of a diverse range of value on chemistry

Management Philosophy

- ◇ The management of MGC is dedicated to providing an enjoyable workplace, paying due respect to the will and ability of our employees, and is determined to create energetic workgroups.
- ◇ With a view towards worldwide needs, our marketing efforts will focus on identifying and enlarging the world's markets.
- ◇ With full knowledge of the market's needs, we will implement creative research and development to nurture the seeds of our efforts to realize the best results in product development manufacture and distribution.
- ◇ By making efforts to upgrade technology, preserve the environment and promote safety, we will engage in the manufacture of better quality products.
- ◇ We are a transparent company, where everyone shares the same goal and gives his or her best.

As part of our implement action of our Corporate Philosophy and Management Philosophy, we have been carrying out the Integrated Safety Management System. This system is a set of activities aimed at preserving the environment and ensuring safety at all stages of chemical substance life cycles from development and manufacturing to distribution, use, final consumption, and disposal. In order to ensure the implementation of integrated safety management system, we have set the Environmental and Safety Targets and Fundamental Policies as the common environmental and safety policies for all of us. All of our workplaces have laid down concrete activity plans according to environmental and safety policies and have been steadily carrying them out.

Fundamental Policies on Environment and Safety

MGC, as an important member of the community, makes an effort to earn social trust by recognizing our responsibility to contribute to the community and to secure the environment and a safe workplace and products, and by thinking of how to put our corporate activities in harmony with the protection of the global environment under the principle of sustainable development.

Environmental and Safety Targets:

Zero Accident, Zero Occupational Injury and Environmental Preservation

Fundamental Policies:

- ● Ensuring of health and safety in our operations
- ● Securing security management of facilities and increasing self-maintenance technologies and skills
- ● Reducing environmental loads in business activities
- ● Ensuring safety in use, handling and disposal of products
- ● Developing of environment-friendly and safety-conscious products and technologies
- ● Ensuring environmental preservation and safety in the logistics of obtaining raw materials and storing and delivering our products
- ● Enhancing of society's confidence to us
- ● To provide support to our subsidiaries and affiliates in implementing their own RC activities
- ● Continuously improving our RC management system

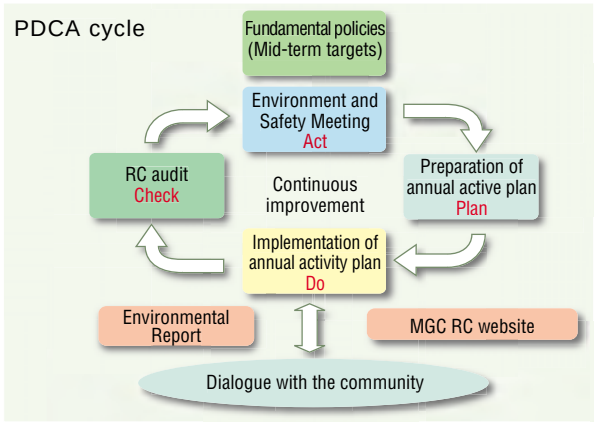
We shall comply fully with applicable domestic laws and foreign rules and shall also cooperate with related international organizations, international and national administrative organs, and nongovernmental organizations whenever needed.

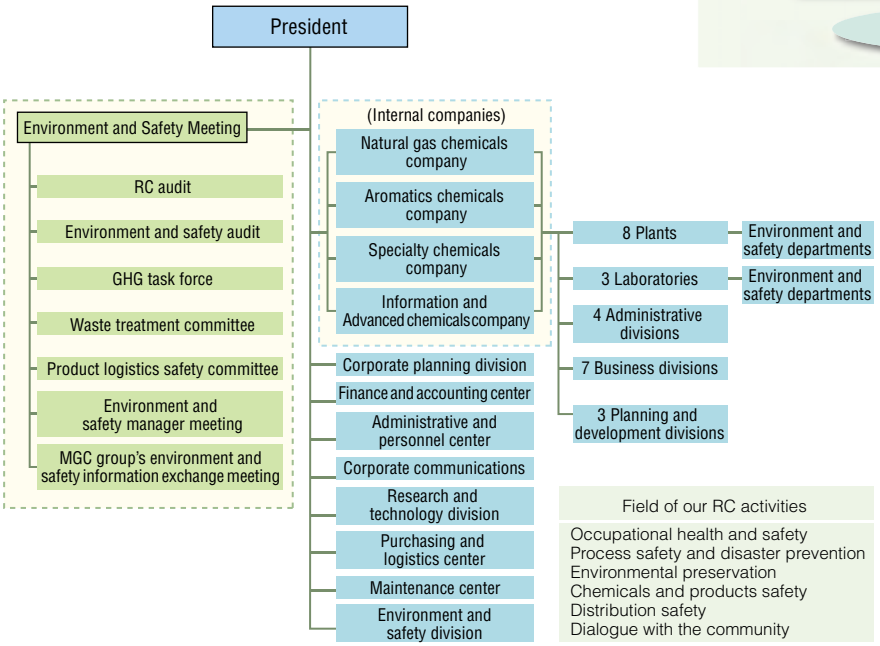
Responsible Care Promotion System

In order to ensure the implementation of our integrated management system, we have been promoting company-wide RC activities.

Environmental and Safety Management System (RC Promotion System)

We regularly hold the Environment and Safety Meeting, which is chaired by the president, in every December. This meeting is consisted of executive officers, administrative general manager of each internal company, general manager of each corporate group, chief of each workplace and designated representative by the president.
Each workplace, which has their own RC promotion system, has been promoting the activities in keeping with an annual activity plan for the daily RC activities.





Field of our RC activities
Occupational health and safety
Process safety and disaster prevention
Environmental preservation
Chemicals and products safety
Distribution safety
Dialogue with the community

Subjects at the Environment and Safety Meeting

(1) Discussion subjects
- Matters relating to environmental and safety targets and fundamental policies
- Matters relating to RC mid-term targets and annual plans
- Matters relating to rulemaking, revision or repeal of rules
- Matters relating to safety awards and award for effort to environment
- Other important RC matters

(2) Reporting items
- RC activity status, results of audits, safety results including the situation of the occurrence of occupational injury or accidents, troubles and etc.

Message from Director in charge of Environment and Safety

Director, Managing Executive Officer Dr. Takao Kawaki

We reconsidered and revised the rule of the Integrated Safety Management System at the Environment and Safety Meeting in fiscal 2004 to improve above system as well as compliance with laws. This revision of our management system not only has made our RC activities further activated and has made all employees understand that environment and safety is the important issue in our business activities but also has clearly defined the RC activities at each work place.
I think on the basis of the facts mentioned above that MGC will furthermore get the social trust by continuously improving our RC activities in accordance with the sure practice of Plan-Do-Check-Act (PDCA) cycle.

Rules related environment and safety

Integrated safety management rules	
RC management system	Audit and inspection detailed rule Environment and safety managers meeting detailed rule RC education and training curriculum
Occupational health and safety Process safety and disaster prevention	Reporting on accident, trouble and occupational injuries detailed rule Central occupational health and safety meeting detailed rule Prior safety evaluation procedures for new or additional plants MGC process safety system guideline Occupational health and safety assessment guideline
Environmental preservation	Waste management guideline Green purchase (office and stationery supplies) guideline Guideline on the emission-monitoring and management of chemical substances
Chemicals and products safety	Chemicals safety information management guideline Preparing of MSDS guideline
Distribution safety	Distribution safety management detailed rule Guideline on wide-area support system for transportation accidents Preparing of Yellow-Card guideline Preparing of container Yellow-Card guideline Products distribution safety assessment detailed rule
Regulation on certified high pressure gas process safety management	
Regulation on award of environmental and occupational health and safety	

Targets and Results of Responsible Care Activities

	Fundamental policies	RC Mid-term Targets (2001-2005)	Activity targets in 2005
Occupational health and safety	Ensuring of health and safety in our operations	To achieve the Zero accident and Zero occupational injury for the full year	To implement the risk assessment of occupational safety To manage our working environment in handling of chemical substances
Process safety and Disaster prevention	Securing security management of facilities and increasing self-maintenance technologies and skills	To improve the self-maintenance technologies and skills	To enhance the self-security management To review the prior safety evaluation procedure for new or additional plants
Environmental preservation	Reducing environmental loads in business activities	To reduce 10% of energy consumption rate compared with 1999	To reduce 1% of energy consumption rate
		To shift to the clean energy	To promote the using of clean energy
		To reduce 20% emission of chemicals listed in PRTR compared with 1999	To reduce the emission of chemicals listed in PRTR
		To promote proper management of substances which have environmental loads	To control properly the Ozone layer depleting substance, Dioxins and PCBs
		To reduce 75% of final disposal of waste compared with 1995	To make efforts for the achievement of targets for zero emission of wastes
		To promote the zero emission of waste	
Chemicals and products safety	Ensuring safety in use, handling and disposal of products Developing of environment-friendly and safety-conscious products and technologies	To offer the latest MSDS To implement the safety assessment of products To evaluate the environmental aspect of our products To develop the environment preservation products and technologies	To enhance the information for chemicals and products and to promote their offer To test our new substances for safety To establish our management system for harmful substances in our products and to promote the practical use of this system To develop environment-friendly products and technologies
Distribution safety	Ensuring environmental preservation and safety in the logistics of obtaining raw materials and storing and delivering our products	To set our targets for reduction of environmental loads in logistics	To ensure the carrying Yellow-Card
			To comprehend the emission of greenhouse gas (CO_2) in logistics
Dialogue with the community	Enhancing of society's confidence to us	To disclose the information by Environmental Report, etc. To promote the dialogue with community	To issue our environmental accounting performance of 2004 To publish the environmental report of 2004 To participate in JRCC dialogue meeting and industry segment activities To participate in the activities and events in local communities
Spectrum of RC	To provide support to our subsidiaries and affiliates in implementing their own RC activities	To regularize MGC group's meeting for exchanging of environmental and safety information	To promote the acquisition of ISO 14001 certification To audit our subsidiaries and affiliates inside and outside of Japan
	Continuously improving our RC management system		To review our documents at Head Office and workplace according to the revision of Integrated Safety Management Rule. To fit in with ISO14001-2004 edition To implement education and training for environment and safety

Estimation Remarks Achievement of targets:  Necessity of more efforts:  No activity:

Results and status of activities	Esti-mation	Relevant Page
• Our target of Zero accident and Zero occupational injury for the full year was not able to be achieved. • We have promoted HIYARI-HATTO activities with a goal of all employees' participation. • We have made efforts to improve the sensibility to hazard by introducing the occupational safety risk assessment. • Measurement of our working environment condition was enhanced by checking their practice.		10 11
• In all our plants located in the industrial complexes, we have acquired the certification of continual operation concerned with high-pressure gas and boiler and the first class pressure vessel. • In certified plant concerned with high-pressure gas, the self-maintenance management system was enhanced by improvement of auditing for maintenance management and inspection management organization. • We have made efforts to improve our assessment system by reviewing the prior safety evaluation procedure for new or additional plants.		12 13
• In fiscal 2004, energy consumption rate decreased by 10% compared with fiscal 1999, and decreased by 5% compared with previous year.		19 22 23 24 25 26 27
• The ratio of the natural gas is possibly improved from 33% to about 40% by fuel conversion from coal to natural gas in Yokkaichi plant in 2005.		
• We had executed 20% reduction in fiscal 2002 and that 67% reduction in fiscal 2004.		
• Ozone layer depleting substances: Fluorocarbons were substituted by the substances with smaller ozone depletion potential. • PCB: PCB has been stored pursuant to related laws and we have begun the preparation of its treatment started in 2005.		
• We had achieved 75% reduction in fiscal 2002 and that 81% reduction in fiscal 2004. • The volume zero of final disposal was achieved at the two plants.		
• In 2003, all MSDS had revised in conformity with JIS, and they had been distributed to our customers and transporters. • MSDS has properly been revised according to the revision of related laws or procurement of latest hazard data and has been distributed. • We have participated in the ICCA HPV initiatives and have carried out the safety assessment. • We, as a lead company, had assessed three substances and we have participated in the assessment of 25 substances as cosponsor companies. • Our all new products are assessed by the safety assessment procedure. • For ensuring our response to our customer's green procurement, domestic laws and RoHS directive, we had surveyed the substances contained in our raw materials and the status of efforts for the environment in our suppliers. • As a result of including activities to energy saving and environmental load reduction as R&D policy, useful themes on environmental preservation have increased.		14 15 16 17
• To carry our Yellow-Cards in transportation has been ensured by their distribution to transporters and their education. • We have made an Eco-drive sticker since 2004 and promoted its labeling.		15
• Our quantified target was not able to be set, but we have carried out reduction of transportation frequency, optimization of distribution, and promotion of modal shift.		23
• We have introduced our environmental accounting system since 2003 and made efforts to improve its contents. • Our environmental report has been published every year since 2001. • MGC, as a member of JRCC, has communicated with public, local administrative and neighboring companies by participating every year in RC community dialogue meeting at each district where our plants are located. • We carried out the volunteer activities for cleaning and beautification around the workplace, the reception of plant visits and the opening of our welfare provisions. • We actively participated in the volunteer activities for cleaning and beautification, the firefighting training and the festivals in local communities.		20 21 28 29
• MGC group's fundamental policies on environment and safety was established. • MGC group's meeting for exchanging of environmental and safety information has been held twice a year since 2003. • The majority of our subsidiaries and affiliates has obtained ISO 14001 certification. • We carry out the RC audit to our domestic and overseas subsidiaries and affiliates every year.		30 31
• We have made efforts to promote our fundamental policies on the environment and safety by making posters on our environment and safety. • We revised the Integrated Safety Management Rule in December 2004. • We revised documents at Head Office and workplace according to the revision of Integrated Safety Management Rule. • Four plants have finished proceeding to ISO 14001-2004 edition certification, and the other two plants will be examined in April 2006. • Each workplace makes the education and training program on environment and safety every year and carries it out.		04 05

Responsible Care Audits

RC audit in CY 2005

The RC pre-audit using the check list has been introduced this year in order to enhance our RC audit system. In this newly introduced pre-audit, auditors confirm the RC activities status at the workplaces on the basis of documents and records.

By incorporating any of RC pre-audit results into the main RC audit, auditors evaluate the progress in entire spectrum of RC activities and they also carry out the total evaluation whether or not PDCA cycle (see p.5) on the security management of production facilities is surely implemented at the plants which have high pressure gas production facilities and/or boilers and 1st class pressure vessels or which are certified to make the self inspection and/or permitted to run the production facilities continuously

Time schedule of audit: From June to October in 2005

Auditee: 7 plants, 3 laboratories, and Head Office
(4 internal companies and 1 corporate)

Auditing items:

(1) Progress in RC activities
1. Confirming the progress in RC activities plan
2. Confirming the environmental and safety performance data
3. Results of internal auditing at the workplace
4. Follow-up of pointed out subjects in previous year's audit
5. Confirming the job sites and fields from the view point of environmental preservation and safety
6. Confirming the other objects related to environmental preservation and safety

(2) Evaluation of the security management system of facilities (only certified plants)
1. Confirming the progress in the activity plan of security management of facilities
2. Results of internal auditing
3. Confirming the job sites and fields for the security management

Auditing results:

Good points (total 21cases)

Pointed out subjects
Comment with advice (total 35 cases)
Matters to be improved (total 12 cases)
Nonconformity (0 case)

RC pre-audit

RC audit
(Main RC audit)

RC Audit Program

RC pre-audit		
Field	RC activity	Process safety management (High pressure gas, boiler and the first class pressure vessel)
Auditee	Plants Research laboratories	Certified plants
Auditor	Audit team of expert in each field	
Contents	Confirmation of documents and records by auditor	

RC audit		
Field	RC activity	Process safety management (High pressure gas, boiler and the first class pressure vessel)
Auditee	7 Plants 3 Research laboratories Head Office internal companies Purchasing and logistics center	Certified plants
Auditor	Audit team (leader: Director in charge of environment and safety)	
Contents	Confirmation of status and system by auditor	

Report of audit result → Auditee

Environment and Safety Meeting

Apply for RC audit program in next year

Matters to be improved in common with all workplaces

We confirmed the matters to be improved in common with all workplaces by spreading out the auditing results of each workplace at the Environment and Safety Meeting

Matters to be improved in common with all workplaces in 2005 RC audits	
Case 1 for Head Office, Plants and Laboratories	Last year we took up the approach to energy saving and reduction of CO_2 as the subjects for discussion and as a part of efforts for said approach, we have set up the new greenhouse gas (GHG) task force as the company-wide organization. To make efforts for achieving our goal of energy saving and reduction of CO_2 by clarifying the issues which all the workplaces correspondently must tackle.
Case 2 for Plants	To manage HIYARI-HATTO activity so as to point out problems as much as possible, to aim at 100% attendee to said activity and to promote safety activities by linking exposed hazards to occupational safety and health assessments via an inventive approach to all-hands HIYARI-HATTO activity
Case 3 for Plants	To implement training for emergency notification and communication in the case of transport accident of products which workplace ships
Case 4 for Head Office	RC activity comes to stay at each department but the effort for PDCA cycle management is insufficient. To establish the application method especially of smooth Check and Act in PDCA cycle.
Case 5 for Certified Plants	To make the process safety management system of high pressure gas production facilities and boilers/ 1st class pressure vessels complete furthermore

Responsible Care Mid-term Targets from 2006 to 2010

We have begun to make efforts to achieve the purposes of our new five years Responsible Care mid-term targets extending over 5 years from 2006, which targets have been developed in the Environment and Safety Meeting in December, 2005.
We are sure you will see a progress of activities plan in 2006 according to this new mid-term targets in our next RC status report.

RC activity code	RC mid-term targets from 2006 to 2010
Occupational health and safety	• To achieve Zero occupational injury
Process safety and disaster prevention	• To achieve Zero accident
Environmental preservation	• To reduce energy consumption rate less than or equal to 0.9 of the one of fiscal 1990 • To reduce a GHG emission rate less than or equal to 0.8 of the one of fiscal 1990 • To reduce an amount of PRTR chemicals emissions equal to 90% of the one of fiscal 2004 • To reduce an amount of VOC emission equal to 90% of the one of fiscal 2004 • To achieve zero emission of wastes (Definition: To promote 3Rs and to reduce amount of final disposal less than or equal to 0.3% of generated wastes)
Chemicals and products safety	• To promote the developing environment-friendly products and energy saving technologies • To implement safety assessment of products Participation in Japan challenge program Harmonize with REACH regulation Pertinent assessment of new substances • To provide the latest MSDS (Including the harmonize with GHS)
Distribution safety	• To reduce the environmental loads in our logistics • To ensure the safety in our logistics • To introduce the globally-harmonized system (GHS)
Dialogue with the community	• To promote the enhancement of society's confidence to us through the implementation of annual plans
Spectrum of RC	• To introduce the RC activity to our subsidiaries and affiliates • To inspect our foreign and domestic subsidiaries and affiliates • To promote the continuously improvement of RC management system through the implementation implementing of annual plans

Main RC Activities Plan in 2006

Occupational health and safety

- To assess the facilities and works by using the occupational safety and health risk assessments
- To support our cooperating companies in their safety activities

Process safety and disaster prevention

- To implement the new prior safety evaluation procedure for new or additional plants at the stage from their planning to just before their trial operation
- To devise the effective disaster prevention schemes among the abutting affiliate companies
- To improve the process safety management system of facilities at the certified plants

Environmental preservation

- To reduce energy consumption rate more than or equal to 1% of the one of previous year
- To reduce a GHG emission rate more than or equal to 1% of the one of previous year
- To reduce an amount of PRTR chemicals emission
- To reduce an amount of VOC emissions
- To approach the zero emission of waste
- To promote our green procurement (especially office and stationery supplies)

Chemicals and products safety

- To harmonize with related legal amendment quickly
- To understand and to evaluate our R & D from a view point of environment, safety and energy saving
- To utilize the latest MSDS
- To harmonize with REACH regulation and to collect safety data for related substances
- To review the chemical evaluation (assessment) system

Distribution safety

- To implement auditing of our delivery management companies
- To reduce an amount of CO_2 emission in distribution

Dialogue with the community

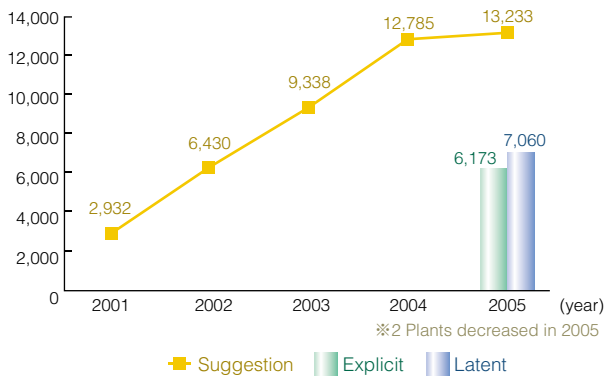
- To issue an environment and safety site report
- To participate in JRCC and industry segment activities (communication among members)
- To participate in community activities around in our each workplace

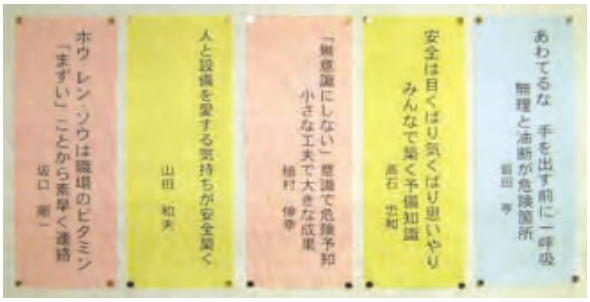
Approach to Occupational Health and Safety

Occupational Health and Safety Activities

MGC has actively worked for our RC activities under the goal of Zero accident, Zero occupational injury and Environmental preservation as our environmental and safety targets.
We have promoted our safety activities through the education and training, safety awards, asking for safety slogan, and daily safety activities such as HIYARI-HATTO activities, 5S-activities and foreseeing of danger activities.
In the safety week across the country, the safety message from the president is disseminated to all employees on the intranet-website and video, and the employees confirm the importance to ensure the safety through the lecture of the top management at each workplace addressing safety meeting.

Transition of HIYARI-HATTO suggestion





Catch-phrases (Naniwa plant)

In our HIYARI-HATTO activities, numbers of suggestion on HIYARI-HATTO have been positioned as the indicator for both improvement of sensibility and activation level of RC activities, and we have promoted the suggestion on HIYARI-HATTO.
The numbers of suggestion on latent HIYARI-HATTO which takes near accident in advance becomes majority of them.
MGC is hereafter going to enhance furthermore the safety activities' quality and to eliminate human errors through this enhancement.

Working Environmental Management

In order to secure our appropriate working environment, we have been making efforts to improve the working environment and to maintain good one by measuring the conditions in working environment.
We surveyed the status of implementation of measuring the conditions in working environment this year and confirmed its appropriate implementation and estimation of working environment at all workplaces.

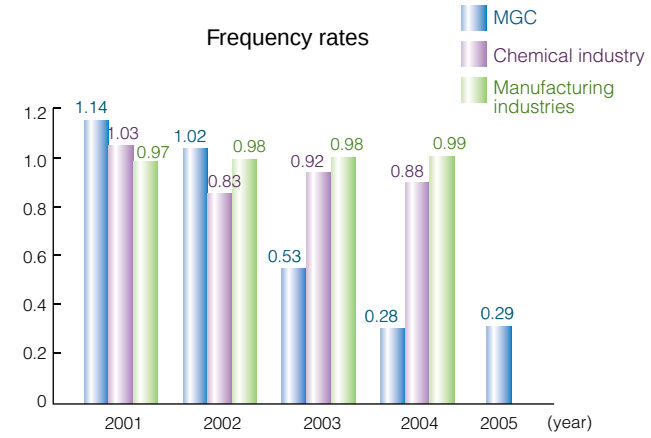
Comment from Representative at plant

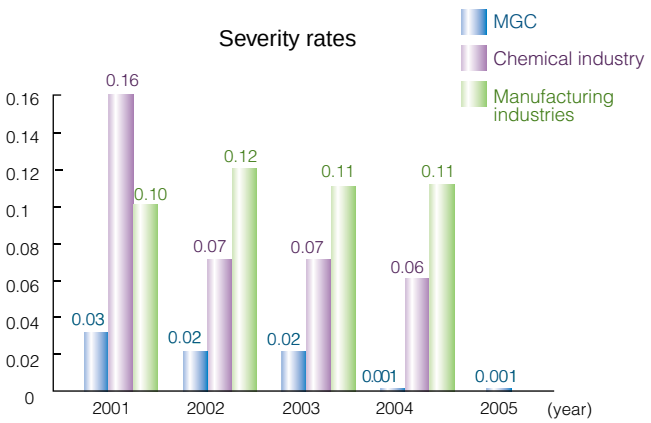
We have been promoting the RC activity for cooperate social responsibility such as Zero accident Zero occupational injury, Environmental preservation, Product stewardship and Distribution safety. We have been addressing the collection of the risk factor of equipment in our plant through accident disaster prevention activity since last year.
Our intention is not only to make efforts to improve our level on environment and safety under the condition that all employees in the plant are united but also to harmonize with community.

Environment and safety department Manager (Yokkaichi Plant)
Hidetoshi Sasazaki

Results of Safety Activities

We have not achieved our Zero occupational injury yet, though the record of the number of lost time injuries has kept decreasing for recent five years.
We revised the reporting form of occupational injury for ensuring the implementation of safety provision and confirming its effectiveness this year. In previous year, our occupational injury based on human error had increased, and so we have made effort to eliminate it by spreading activities of one plant to the others in the Environment and Safety manager's Temporary Meeting whose theme was limited only to human error. However, one occupational injury occurred in this year following last year.
Our frequency rate on occupational injury, which is the number of employees with lost time injuries per one million working hours, was 0.29 and our severity rate, which is lost days per one thousand working hours, was 0.001.
For achieving of our Zero occupational injury, we continue to promote the improvement of works and facilities by the further improvement of sensibility to danger and the collection of the factor of danger.





Occupational Safety Risk Assessment

Aiming for raising our level of occupational safety and health, our occupational safety risk assessment was introduced in last year. In order to learn and understand the procedure of our occupational safety risk assessment, the educational workshop was convened at the each plant in this year. This risk assessment is the method to evaluate the risk in advance and to lead works and facilities to be improved, and it is designed so as to increase our sensibility for safety through its process.

Risk assessment (Kashima plant)

Our Asbestos Issue

1. Status of use
   Products which include asbestos as the raw material have never been produced since 1975.
2. Status of occurrence of health hazards
   It has not been reported that employee's and retired employee's died of malignant mesothelioma or lung cancer due to asbestos.
3. Further responses
   We must continue to deal appropriately with our asbestos issue according to the related laws and our guideline.

This issue was news-released to outside the company in 16th August, 2005.

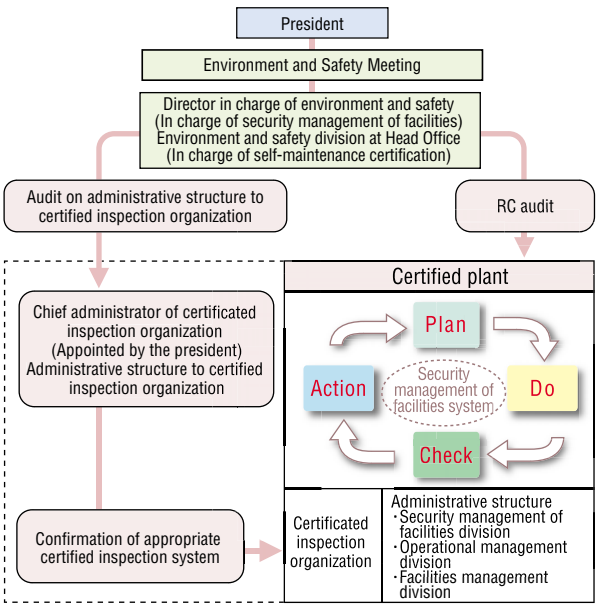
Process Safety and Disaster Prevention Activity

MGC makes the securing of safety a top priority issue and we proactively address the securing of safety, which is aiming for Zero accident and Zero occupational injury, through the promotion of self-maintenance based on RC activities.
Furthermore, our disaster prevention system has been constructed in case of an accident.

Inspection of Process Safety

As part of RC audit in each workplace every year, we implement the inspection of process safety.
The certified plant, which has acquired approved qualification on high pressure gas production facility and continuous operation of boilers and 1st class pressure vessel, has enforced their internal audit by establishing their related rules and guidelines.
Additionally, their executive organization for certified inspection organization has been audited to strengthen its objectivity.
The continuous improvement of our process safety management system has been intended by these annual audits.

High Pressure Gas Process Safety Management System



Audit on administrative structure to certified inspection organization (Mizushima plant)

Promote to Self-security Management

We have addressed to increase our self-maintenance technologies and skills mainly on the basis of high pressure gas production facility and boilers and 1st class pressure vessel.
In this year, Niigata plant's qualification of the Certified Completion and Process Safety Inspector based on the High Pressure Safety Act was renewed following the renewal of Mizushima plant's qualification in last year.
In this qualification system, only plant, which has been authorized as highly level technologies, skills and management by the Ministry of Economy, Trade and Industry, is permitted to implement safety inspection by self-security management.

Comment from Representative at plant

The qualification based on the High Pressure Gas Safety Act was renewed uneventfully.
As a result of the revised requirements of qualification, we had prepared for renewing our qualification by collection of our required items and hazard sources according to the notice for certification through a trial and error process.
I was pleased with our staff growth, though any of them had a hard time for more than a year from kick-off to renewal of qualification.

Environment and safety department Manager (Niigata plant)
Hirofumi Higuchi

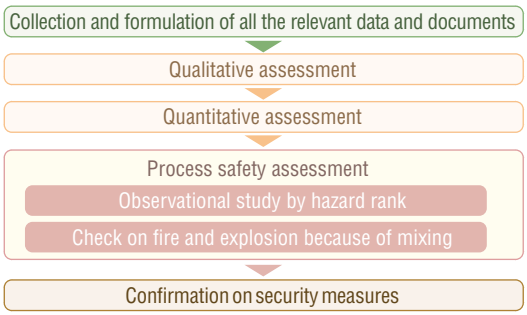
The Security of Safety Activities for Facilities

In order to prevent an accident and an occupational injury, it is important to ensure process safety and facility's good condition and to continue stable operation. Therefore, we have been promoting our security of safety activities for facilities and implementing our preventive maintenance through extraction of actual or latent risk factor at the plant, implementation of security measures and review of engineering works management.

Main security of safety activities for facilities in each plant	
Niigata plant	Risk assessment for high pressure gas production facility
Mizushima plant	Activity of suggestion for improvement of facility by TPM method Enhancement of inspection to dead-end piping and external corrosion
Yokkaichi plant	Extraction of risk factor at production facilities Diagnostics of failure in facility and process
Kashima plant	Review our rules for periodical repair
Yamakita plant	Promotion of maintenance for prevention from accident

In the case of constructing our new facility, rebuilding present facility and converting process, we should implement prior safety evaluation to ensure the safety.
We revised the Prior Safety Evaluation Procedures for the Plan of New or Additional Plants in this year according to the guideline by Ministry of Health, Labor and Welfare.
The Prior Safety Evaluation Procedures for Facility were enhanced by adding the check items on combined fire and explosion to the process safety evaluation.
It must be obliged HAZOP (Hazard and operability study) and others as observational study of hazardous operability that the high hazard ranked facility by the quantitative evaluation.

Flowchart of Safety Pre-assessment



Education and Support Activities

For the stable operation in our plant, we have been promoting our education and training for employees such as learning of skills for maintenance, instrumentation and operation.
We have also carried out the education of our forgetful trouble history, fire, explosion and work-study of leakage. We have improved our sensibility and understanding for safety through the simulation and a renewed recognition of troubles happening in our past.


HAZOP workshop (Niigata plant)


Work-study of leakage (Yokkaichi plant)


Trouble history (Mizushima plant)


Work-study of fire and explosion (Niigata plant)

Emergency Management

We have constructed the self-disaster prevention system at each workplace in case of an accident.
Each workplace has set up their disaster prevention activity rule which has defined emergency system and activity. Furthermore, Niigata, Mizushima, Yokkaichi and Kashima plant, to which the Petroleum Complex Accident Prevention Act has been applied, have entered into the regional joint accident prevention agreement with neighboring companies and constructed a mutual support system with them in case of an emergency. Each workplace develops their annual disaster prevention plan and implements the periodical training for disaster prevention. The firefighting teams at Yamakita and Naniwa plant took part in each local skills competition for firefighting and deserved to get a good mark.
Each plant has equipped with materials and equipment for emergency in case of an accident in transportation of our products. We have constructed our wide-area support system for emergency measure by getting in touch with each other plant, whenever an accident happens.


Training for general disaster prevention (Kashima plant)


Monitoring camera at the disaster prevention base (Mizushima plant)

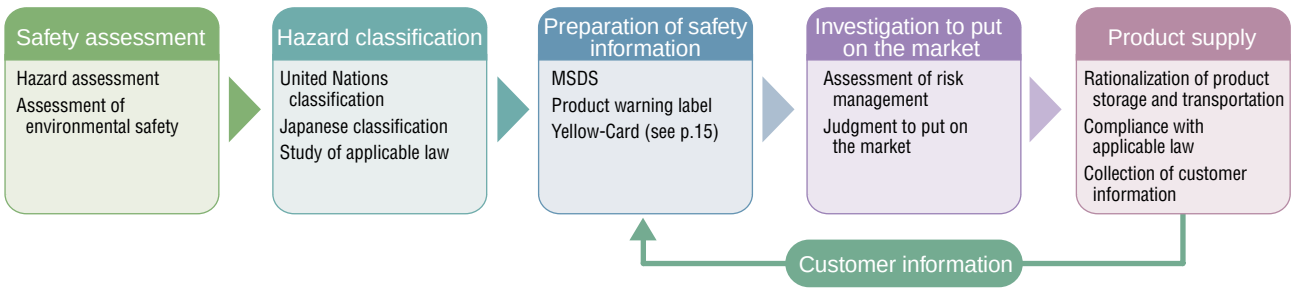

Firefighting training (Hiratsuka research laboratory)

Firefighting skills competition (Yamakita plant)

Safety Management of Product Activities

We have managed our system to secure our product safety under our products safety assessment standard enacted in accordance with the enforcement of Product Liability Law in 1995.
In the development of our product, we assess and estimate the risks in each development stage from the study of hazardous properties of raw materials to the disposal of products.

Flowchart of chemical substances and products safety assessment



Safety Assessment of Chemical Substances

We have conducted several safety tests for new chemical substances, especially biodegradability and mutagenic (Ames) tests specified by laws and regulations at our GLP certified test facilities in Niigata Research Laboratory.
In 2005, the test facility for biodegradability was audited for GLP conformity confirmation by the Ministry of Economy, Trade and Industry, and the certification was renewed on December 9 (The number of renewal is six times in the aggregate). In addition, Niigata Research Laboratory owns the test facilities for acute oral toxicity, primary skin irritation and pathogenicity. We conducted 52 chemical substances of these safety tests in 2005.

GLP facility certificates

Measures to Green Procurement and RoHS Directive (EU)

We made efforts to collect the information on certain substances contained information at all stages from purchasing raw materials to shipping our products for ensuring our measures against related domestic and overseas laws.
At first, we classified environmental concerned substances according to the related domestic and overseas laws and customers' requirement, and then we conducted research on the inclusion of environmental concerned substances in raw materials and on the status of approach to environment by raw material suppliers.
As a result of above mentioned research we have harmonized with RoHS directive, which will be enforced on July 2006, for green procurement of customers.

GLP: Good Laboratory Practice
GLP is a quality system concerned with the organizational process and the conditions under which non-clinical health and environmental safety studies are planned, performed, monitored, recorded, archived and reported. (Reference: OECD definition)

RoHS Directive: The directive is to prohibit using six specific substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers) in electrical and electronic equipment in Europe.

Safety Information Service

We established our safety information management guideline for chemicals, and we have managed our chemicals and products safety information according to this guideline and offered the information for their proper handling to persons concerned.
In addition, we have been participating in chemical safety assessment initiatives inside and outside of Japan for offering chemicals safety information to the world.

Chemicals Safety Information Service by MSDS and Yellow-Card

MGC has prepared MSDS with the form standardized by JIS on all of our approximate 1000 substances and offered those MSDS in the latest version to our customers, sales agents and transporters.
Furthermore, we distribute Yellow-Card to transporters in case of a transportation accident, which describes emergency measures and emergency contact address, before shipping our products.
Our product safety information is serviced by our product catalogs, product warning labels and product promotions on our website.
Just as an example, various kinds of safety information on oxygen absorbers (AGELESS®) used to keep quality and freshness of foods has been accessible on our website, and also we have uploaded questions and our answers on frequently asked questions (FAQ) on website of AGELESS® (only in Japanese).

Participation in Chemical Safety Assessment Initiatives Inside and Outside of Japan

In 2005 government and chemical industry have launched a joint program, so called Japan challenge program, to collect and to address safety information on 166 chemicals which are produced or imported at the weight of 1000 tons/year or more in Japan.
The fifty five companies and three associations made an application to seventy one substances of the program to sponsor at the end of 2005, and MGC also announced the participation in it.

Our announced substances on participation in Japan Challenge Program

- 1,3-cyclohexanedimethanamine
- 3,4-dimethylbenzaldehyde

  As for the following chemicals we participate in consortium.
- Cyclohexyl methacrylate
- Benzene-1,2:4,5-tetracarboxylic dianhydride (affiliate company)

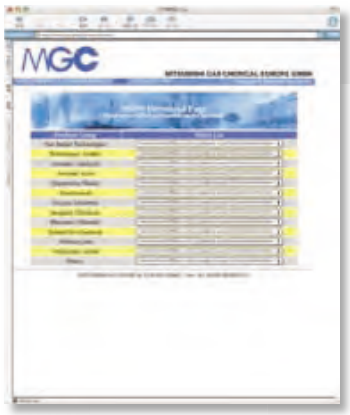
In addition, we have participated in OECD initiative for initial assessment of HPV chemical hazard and we have already completed any of assessment of our sponsored three substances.
We will include a data by these program and initiative to our MSDS and the data will be offered to social by the government and/or OECD.

Harmonization of REACH and GHS

European Unions will put a new chemicals control regulation named REACH into effect in ca.2007.
Japanese government will legislate globally-harmonized system (GHS), which is classification and labeling system for chemicals.
We have developed our internal structure so as to be able to catch the legislation movement as early as possible, to collect information on safety and to surely reflect them on our products at the same time with the enforcement of laws and regulations.


MSDS


Yellow-Card (only in Japanese)



MSDS on MGC-Europe web-site
http://www.mgc-europe.de/msds_list.html

Environment-friendly Products and Research and Development

We regard the global environmental preservation as common issue to the world, and we have been focusing on development of our environment-friendly products.
We do not have many products supplied directly to consumers but we are making actively efforts to develop products and technologies by considering energy and resource saving, low load to environment, reduction of waste, etc.

Our environment-friendly products and/or technologies

	Products or technologies	Contribution to environmental preservation	Targets*		
			A	B	C
Plastics	MX nylon resin	Non chlorinated resin with high gas barrier capability	●	●	
	Iupilon® (Polycarbonate resin)	Resin with excellent transparency, durability and weather ability, used for various purposes, contributing to resources saving	●	●	
	Reny® (Polyamide MXD6)	Mineral-filled resin mainly used for side mirror stay of vehicle, contributing to the energy saving by light weight property	●		
	Iupital® (Polyacetal resin)	Resin with excellent mechanical properties and used as the substitute for metals in various purposes	●	●	
	Iupiace® (Modified polyphenylene ether)	Resin mainly used for office automation equipment, contributing to the energy saving for its light weight property	●		
	AI polymer® (Polyamideimide)	Resin for thin outer housing of smaller and lighter office automation equipment on the basis of excellent heat resistance		●	
Treatment of waste water	Diafresh® series				
	OR-SON AT®	Agent making persistent organic materials decomposable and drastically reducing the generation of sludge	●	●	●
	F-SON®	Agent for separation and treatment of fluorine compounds, which can easily reduce the fluorine content to 8 ppm or less		●	
	NEOSOL®	Agent to prevent the oil-base paint mist from adhering and to make easy the recovery of dispersed paint in the recycled water in a painting booth	●		
	NEOPOCK®	Chemical agent for effective aggregation and separation of water-based paint, water soluble polymer, etc.	●		
	Deslime®, Contlime®	Water treatment agent for recycled cooling water in piping aiming both the cleaning and long-life of said water, and high thermal efficiency	●	●	
	DEOPOWER®	Deodorant agent to solve the issue of bad odor at sewage-treatment plant, etc.		●	
Keep quality and freshness	AGELESS®	Agent keeping quality and freshness in food sector and, as a result, reducing waste of foods and promoting efficiency of production and distribution	●		●
	AGELESS・OMAC®	New packaging film as the substitute for canned food, contributing to weight saving and waste reduction	●		●
	RP preservation system	Oxidation and corrosion resistant system for metals and electronic parts, contributing to reduction of waste	●	●	●
	Alfish®	Transportation technology enabling a high density transportation of fresh fish	●		
	Pharmakeep®	Agent keeping quality and performance in medicines and medical device, and improving their shelf life	●	●	●
	AIR-G®	Eco-friendly system for insect proof and preservation of cultural property, used as the substitute for methyl bromide referred to as ozone layer depleting substance		●	
Chemicals	Methanol, Ammonia, Methylamines, etc	Clean natural gas based basic raw materials and fine chemicals	●	●	
	Methacrylates	Raw materials for vehicle coating based on acrylates, contributing to the reduction of fuel cost	●		
	High-purity Terephthalic acid	Raw material for PET, contributing to the reduction of wastes by its recycling			●
	Hydrogen peroxide	Substitute for bleaching agents containing chlorine, used in a pulp and paper production process		●	●
	GASKAMINE 240®	Reduction of solvent by applying it to non-solvent epoxy resin (two liquid type) because of its lower viscosity		●	
Technologies, etc	Dimethylether (DME)	Research and development of its application to automobile's clean fuel produced with natural gas	●	●	
	Fuel cell	Research and development of methanol fuel cell with which electricity is directly generated without hydrogen reforming		●	
	Materials for Environment-Friendly Printed Circuit Board	Heat resistant materials for printed circuit board, suitable for lead-free solder		●	
	Persulfates	Purgation of polluted underground water and soil		●	
	Method for manufacturing of Aromatic aldehydes	Reduction of harmful waste by the completely closed process of super acid catalyst		●	●
	MGC-MH process	Process for the production of high purity hydrogen gas from methanol and water		●	
	Development of natural gas field, Development of geothermal steam	Development of clean energy and its application to raw material Application of geothermal steam to electric power generation	●	●	
	Method for manufacturing of Trimethylolpropane	Production technology that recovers and recycles by-product (sodium formate) as raw material	●		●
	Method for manufacturing of Methyl methacrylate	Production technology based on new ACH method using natural gas without generating by-product ammonium sulfate	●	●	●
	AR	Capacitor mainly consisted of AR (carbon) and aluminum is the electricity storage system with benefit of long life and less harmful materials	●	●	

*) Targets of MGC products and/or technologies contributive to environmental preservation
mark A: Energy saving and/or resource saving: Contributive to resource saving such as energy saving, reduction of water consumption, reduction of raw materials, etc. and the reduction of emission of carbon dioxide
mark B: Low environmental load: Contributive to the removal of harmful materials through the reduction of consumption of chemical materials, their reduction of emission and generation, water treatment and emission gas treatment.
mark C : Reduction of wastes: Contributive to the reduction of waste materials through the prevention of generation of wastes, their recovery and their recycle.

Plastic products

MX nylon®
Soda bottle

Iupilon®
(Headlight, Taillight)

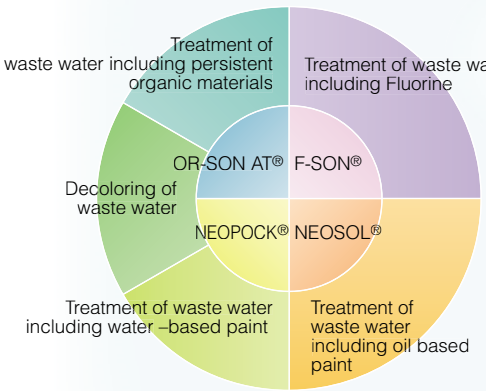
Reny®
(Side mirror stay)

Iupiace®
(DVD mechanical chassis)

Iupital®
(Planetary gear)

Environmental chemicals

Diafresh® series



Water treatment agent is injected cooling tower

For keep quality and freshness

AGELESS®

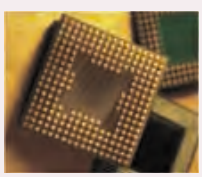
RP preservation system®

AGELESS OMAC®

Technologies and others

DME fuel autotruck and DME fuel station

Methanol fuel cell
Illuminated tree by fuel cell
(INCHEM TOKYO 2005 exhibit)



Materials for Eco-Friendly Printed Circuit Board
(Usage photo)

Development of geothermal steam

Approach to Reduce Environmental Load

MGC makes an efforts to promote the below, in accordance with reducing environmental loads in business activities as our fundamental policy

- Energy saving activity
- Reduction of emission volume of green house gas
- Reduction of emission volume of chemicals listed by PRTR law
- Reduction of air pollutant substances
- Zero emission of wastes

Conversion of fuel from coal to natural gas

Activated sludge treatment plant

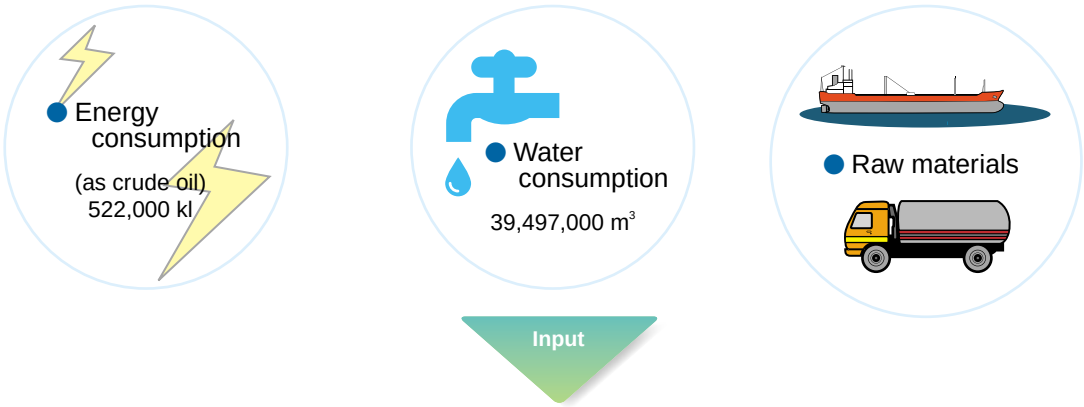
Classified waste-yard

Off-gas eliminator for harmful substances

Analyzing a substance by spectrophotometer

Environmental Load in Our Business Activities

The summary of our environmental loads status in FY2004 is below. We address to ensure the efficient use of inputted resources and materials as well as the reduction of emission and waste.



Terms of our inputted resources

Energy consumption:
Total amount of fuels (heavy oils, etc), purchased steam and purchased electric power consumed in our business activities

Water consumption:
Total amount of drinking water and industrial water used for business activities

Terms of our emission and waste

CO_2 emission	Total emission volumes of carbon dioxide(CO_2) in our business activities
SOx emission	Total emission volumes of SOx contained in exhaust gas from our utility facilities
NOx emission	Total emission volumes of NOx contained in exhaust gas from our utility facilities
Soot and dust emissions	Total emission volumes of soot and others contained in exhaust gas from our utility facilities
Emissions of PRTR listed chemicals to atmosphere	Emission volumes of the listed 45 chemicals to the air
Drainage volume	Volumes released to the public water area after re-treatment of drainage from our business activities
COD emission	Multiplying our drainage volumes by COD concentration in our drainage gives the volume
Total nitrogen emission	Multiplying volumes of our drainage by nitrogen concentration in our drainage gives the volume
Total phosphorus emission	Multiplying volumes of our drainage by phosphorus concentration in our drainage gives the volume
Drainage of PRTR listed chemicals to water area	Drainage volumes of the listed 45 chemicals to the public water area
Transfer to off-site	Volumes transferred for external treatment of our waste to off-site
Final landfill waste	Final disposal amount after off-site treatment

Environmental Accounting

MGC has been introducing and has been using the environmental accounting along the guideline of the Ministry of the Environment since fiscal 2002. It is intended to be of help to the MGC's efficient environmental preservation activities and to keep clearness of our approaches for the public by disclosing them.

Environmental Preservation Cost

【Amount of investment】

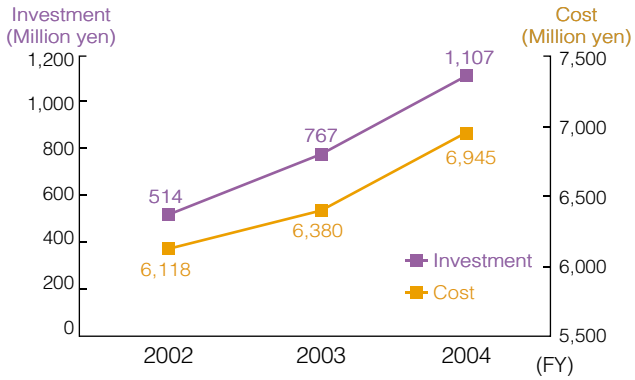
In fiscal 2004, production capacity has been reinforced at some production facilities.

The pollution prevention cost increased for the capital investment to control an increase of environmental load to the atmosphere and water based on said reinforcement.

To prevent the depletion of natural resources and the global warming, MGC promotes the approach to energy saving and efficiency improvement of its use. The steam turbine equipment was set up at the Niigata plant because of the energy recovery in fiscal 2003. In addition, capital investment was done so that it may improve the efficiencies of the operation of existing equipments and the energy consumption at the Mizushima plant in fiscal 2004.

As a result of these investment, the amount of MGC's environmental preservation investment increased by 340 million yen compared with fiscal 2003, and it resulted in the amount of 1,107 million yen.

Transition of investment and cost



【Amount of cost】

Effective energy consumption can control the generation of CO_2 that causes global warming. The cogeneration and the home generation of electricity, etc. are effective facilities to it. MGC has introduced and has used actively these equipments. Therefore, 'Global environmental preservation cost' including the cost of operation and maintenance of them has increased. In addition, 'Pollution prevention cost', the most of which was the one for prevention of water pollution, increased with the increase of production output. As a result, the amount of the environmental preservation cost increased by 565 million yen compared with fiscal 2003, and it resulted in the amount of 6,945 million yen.

Classification in accordance with activities

Unit (Million yen)		Investment			Cost		
		Fiscal2003	Fiscal2004	Change	Fiscal2003	Fiscal2004	Change
Onsite cost	Pollution prevention cost	202	646	444	1,898	2,097	199
	Global environmental preservation cost	303	155	-148	1,148	1,455	307
	Resource recycling cost	115	115	0	1,086	1,026	-60
Upstream or downstream cost		0	26	26	147	14	-133
Management activities cost		10	0	-10	414	531	117
Reseach and deveropment cost		137	154	17	1,532	1,608	76
Social contribution cost		0	12	12	9	27	18
Environmental damages cost		0	0	0	147	188	41
Total		767	1,107	340	6,380	6,945	565

Classification in accordance with environmental preservation category

Unit (Million yen)	Cost		
	Fiscal2003	Fiscal2004	Change
Global warming cost	1,148	1,455	307
Air conservation cost	656	617	-39
Water, soil, and ground preservation cost	1,226	1,475	249
Reduce and recycle of waste cost	1,086	1,026	-60

Environmental Preservation Effect

The amount of the SOx emission has been reduced greatly by converting the energy source to the one with less air pollution and by strengthening the desulphurization equipment.
Moreover, the reduction of the use amount of harmful substances and the introduction of removal equipment of them have decreased the amount of the PRTR emission. The amount of other items to be considered somewhat increased mainly with the increase of production output.

Economic Benefit According to the Environmental Preservation Measures

The table in the right hand side shows the substantially calculated economic benefit. The sale profit of 69 million yen was obtained because of the sales of fertilizer made from waste and of the fuel made from wasted oil.
Moreover, the cost for treatment and disposal of waste was reduced because of the reduction in the amount, and the benefit of 163 million yen was obtained.

		Unit	Fiscal2003	Fiscal2004	Change	Relevant Page
Atomosphere-related amount	SOx emission	tons	417	280	-137	26
	NOx emission	tons	767	792	25	
	Soot and dust emission	tons	56	59	3	
Water-related amount	Water input	Million m^3	38	39	1	
	COD emission	tons	210	238	28	
	Total Nitrogen emission	tons	464	471	7	
	Total Phosphorus emission	tons	53	65	12	
	PRTR emission	tons	299	285	-14	24 25
Global environment-related amount	Energy input (as crude oil)	k liters	510,000	522,000	12,000	22 23
	CO_2 emission	k tons-CO_2	1,471	1,451	-20	
Resource recycling-related amount	Waste generation	k tons	110	142	32	27
	Final landfill	k tons	0.53	0.52	0	

		Unit	Fiscal2003	Fiscal2004
Gain on sale of valuable resource	Fertilizer made from waste, Refuse-derived fuel (RDF), Fuel from waste, etc.	Million yen	109	69
Reduction of disposal cost	Reduction of waste disposal cost compared with previous year	Million yen	55	163

Implemented in relation to the Environmental Accounting Guidelines 2005
Targeted period: From April 1, 2004 to March 31, 2005
Scope: unconsolidated basis
Counting methods
Investment: The amounts, associated with environmental preservation, are prorated from its ratio in capital spending during the fiscal year.
Cost: The amounts are associated specifically with environmental preservation, and the depreciation of machinery and equipment are included.
Economic benefit: The amounts are as measured in actual monetary value, and estimated economic benefit is indicated by physical unit.

Integrated environmental load and Environmental efficiency

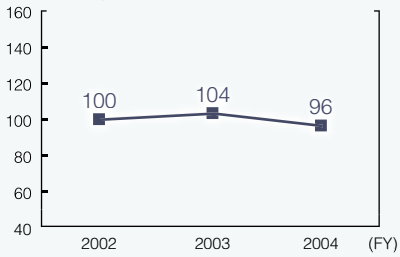
To understand various environmental damages caused by the MGC's production in all, amount of the integrated environmental load and environmental efficiency were calculated.
Referring 'Life cycle impact assessment method based on endpoint modeling (LIME)' (*note) that is offered by Japan Environmental Management Association for Industry, the amount of integrated environmental load was calculated by multiplying integration coefficients by the main environmental loads of MGC.
The graphs in the right hand side show the integrated environmental load index and the environmental efficiency index based on fiscal 2002. Each index have been improved respectively by 8 points and 28 points compared with last year.

Amount of the integrated environmental load
$= \sum$(Environmental load) i x (Integration coefficients) i
i : Environmental load inventory

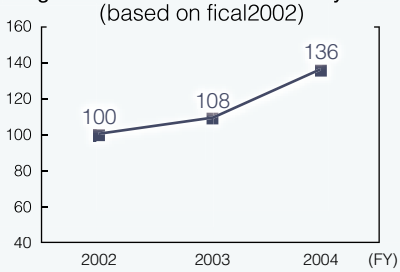
Environmental efficiency
= {(Sales) / (Amount of the integrated environmental load)} x 100

*note
Life cycle impact assessment method based on endpoint modeling (LIME):
Method of evaluating damages that emission of environmental loads gives to four objects (human health, biodiversity, primary producer, and social property) that should be protected. After said damages are quantitatively analyzed and evaluated, the integration coefficients are multiplied, a single index (amount of integrated environmental load) is led

Integrated environmental load index
(based on fiscal2002)



Integrated environmental efficiency index
(based on fical2002)



Approach to Global Warming Prevention

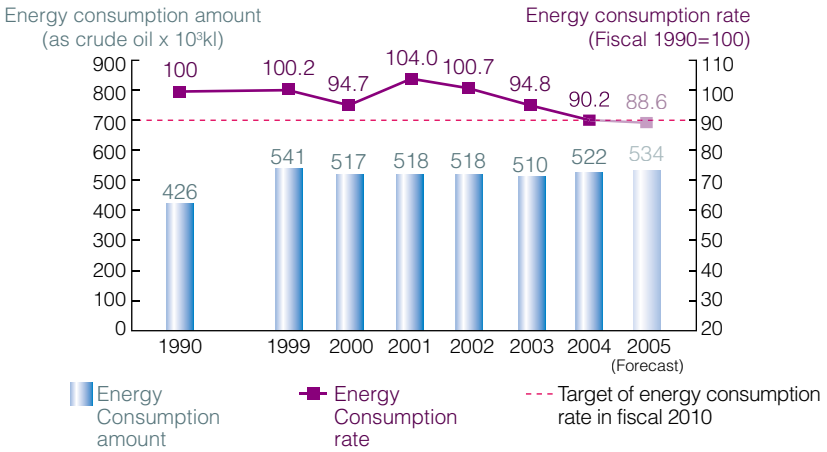
About the establishment of the GHG task force

The GHG task force has been established in fiscal 2005 as an organization to promote the emission amount reduction of greenhouse gas (GHG).

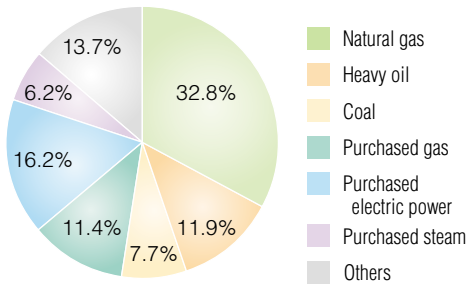
This task force opens the secretariat within the Environment and safety division, and is composed with the persons of distribution department, of research and technology department, and of four plants where the amount of the energy consumption is large (Niigata, Mizushima, Yokkaichi and Kashima).

MGC is working on energy saving and the GHG emission amount reduction furthermore with this team as the central organization.

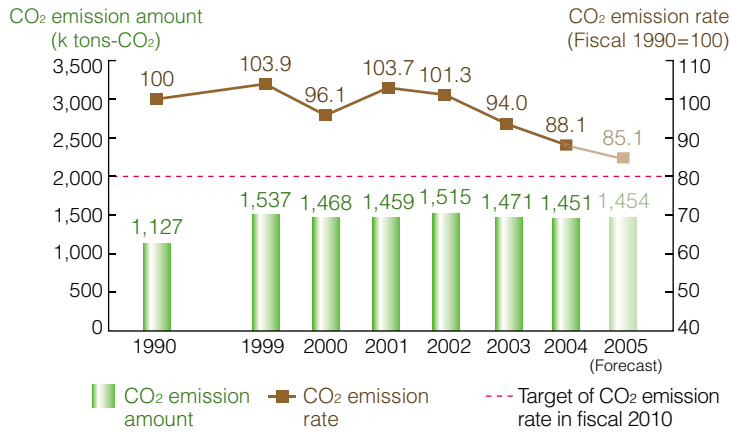
Transition of energy consumption amount and consumption rate



Component ratio of energy sources (Fiscal 2004)



Transition of CO_2 emission amount and emission rate



From this report, the base (denominator) of the emission rate calculation has been changed from the simple total of product amount to the amount converted into the standard product. Therefore, the past data have been re-calculated.

Detail GHG Emission amount (converted to k tons-CO_2)

CO_2 (energy origin)	1,192
CO_2 (non-energy origin)	259
Methane	1.3
Dinitrogen oxide	2.2
Hydrofluorocarbons	3.0
Perhydrofluorocarbons	0.0
Sulfur hexafluoride	0.0
Total	1,458

Message from the GHG task force leader

Corporate Officer Yasuo Sugihara

The Kyoto Protocol came into effect in February, 2005, and Japan came to have the obligation of 6% reduction of the GHG emission in comparison with 1990 for the first commitment period (2008-2012). At the result of this obligation a further effort is required to the industrial sector.

The GHG task force has been established newly as an organization to promote the sure GHG reduction measures from the company-wide point of view.

The mid-term numerical targets for the reduction of both the energy consumption rate index and the GHG emission rate index were respectively fixed to 0.9 or less and to 0.8 or less, compared with 1990.

To achieve these targets by the final year fiscal 2010, we continue to make efforts to the reduction.

Energy Saving Activities

MGC has worked on the reduction of the energy consumption rate by 1% every year, and by 10% compared with 1999, as the mid-term target from 2001 to 2005.
The amount of the energy consumption in fiscal 2004 on the basis of crude oil was 522,000 kL in total of all plants, and it had increased by 2.4% compared with the previous year. This depends on the increase of production output by 6%.
However, the energy consumption rate was improved by 4.8% compared with the previous year, and achieved fiscal year target of 1% reduction. Moreover, a mid-term target of 10% reduction compared with 1999 also was achieved earlier than expected.The investment for energy saving and the stabilization of plant operation, etc. shown below were executed as the Concrete countermeasures for the energy consumption rate improvement and the effect of the energy saving in total corresponds to 11,000kL of crude oil.

- Generation of electricity using surplus steam by the introduction of stream jet compressor
- Effective use of exhausted steam by change from condensing turbine to back-pressure turbine
- Fuel saving by improvement of boiler control
- Optimization of operating conditions such as distillation towers
- Improvement of the energy consumption rate by stabilization of plant operation

Countermeasures for Reduction of Greenhouse Gas Emission

Countermeasures for reduction of greenhouse gas emission amount are advanced by the conversion of fuel to the one with less CO_2 emission and by the decrease of greenhouse gas generated from manufacturing process, in addition to energy saving.
The amount of CO_2 emission in fiscal 2004 was 1,451,000 tons and this means 1.4% decrease compared with the previous year. Moreover, the CO_2 emission rate had decreased by 6.3% compared with the previous year and this means the big improvement.
The amount of five kinds of greenhouse gas emission other than CO_2 is negligibly less than that of CO_2. Therefore, in the breakdown of the amount of the emission including CO_2 and said five kinds of greenhouse gas, the amount of CO_2 originated from energy generation was 1,192,000 tons, 82% of the whole, and the one originated from production process, that is, non-energy generation was 18%.

Using of Clean Energy

Our consumption ratio of the natural gas being clean energy was large and that accounted for 33% of all our energy source in fiscal 2004.
In addition, the fuel of the cogeneration process in the Yokkaichi plant was converted from coal to the natural gas (the city gas 13A) in October, 2005. As a result, the reduction in the amount of the CO_2 emission is expected to be about 60,000 tons a year.
And the proportion of the natural gas in the energy source of all our plants is expected to reach 40%.
Moreover, MGC continues to participate in the business of the geothermal generation of electricity which hardly generates CO_2.

Piping for city gas receiving (Yokkaichi plant)

Approach to Energy Saving in Distribution

'MGC's entire distribution system' was constructed in January, 2005.
The improvement of efficiency in distribution and promotion of energy saving have been intended by the unitary management of the distribution of chemicals according to this distribution system.

- Promotion of modal shift
  Comparison of the freight charges of track with the one of railway together with indication of their CO_2 emission rate and observation of its amount in the MGC's distribution system.
- Improvement of loading rate of track and enlargement of transportation lot
  Improvement of loading rate using freight combination function of the distribution system, Transportation with proper sized vehicle, Enlargement of transportation lot by use of large-scale tanker

Large-scale exclusive tanker for methanol transportation

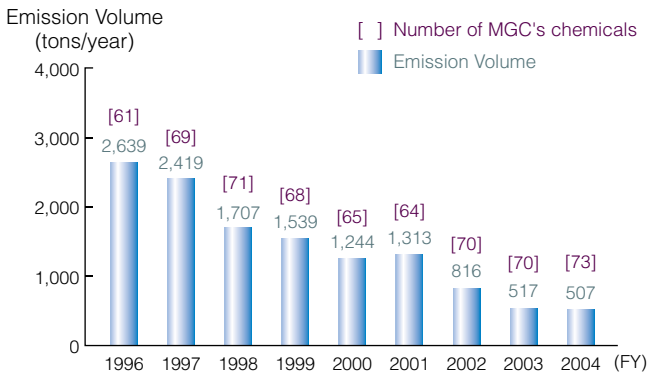
The method to totalize and to use the data based on the distribution system is under study to comprehend the energy consumption and CO_2 emission.
MGC is going to set the targets of energy saving and CO_2 emission reduction based on quantitative data in distribution, and is going to work on the reduction measures.

Approach to Chemicals Release Reduction

PRTR Chemicals in the JCIA's List

MGC has been voluntarily continuing the grasp and reduction of the amount of PRTR chemicals released and transferred from its plants.
(Those PRTR chemicals are listed by Japan Chemical Industry Association (JCIA), and the PRTR Law-listed 354 chemicals are all included in the JCIA's list.)
MGC investigated its emission and waste by detecting 481 kinds of chemicals that include 480 JCIA listed chemicals and hydrocarbons consisted of 4-8 carbon atoms (except for said 480 chemicals). And it was made clear that 73 kinds of chemicals correspond of the 481 chemicals in fiscal 2004.
The total emission amount was 507 tons, about 2% reduced, compared with the previous year. The total transferred amount was 843 tons, about 44% reduced, compared with the previous year.
The target value of reduction in the RC mid-term targets is 20%, compared with fiscal 1999 and we had already achieved 67% reduction in fiscal 2004.
(This PRTR investigation result contains the data of the combination plants in Mizushima plant.)

Total Emission Volume of the PRTR Chemicals in the JCIA's List



Volatile Organic Compounds (VOC)

Along with the revision of the Air Pollution Control Law, the users of facilities whose VOC emission is to be controlled are being obligated to register these facilities to the local government and to measure the emission density. MGC properly deals with the registry and the measurement based on the regulations.
The VOC chemicals registered by MGC are all included in the JCIA's PRTR list. And we voluntarily and continuously continue to cut down the emission amount.
The actual results of the VOC emission amount in fiscal 2004 were 445 tons.
[The one hundred typical VOC chemicals that the Japanese Ministry of the Environment showed and the chain hydrocarbons consisted of 4-8 carbons (Above-mentioned 480 chemicals were excluded) were totalized. The data of the combination plants in Mizushima plant are included.]
In the responsible care mid-term target (2006-2010), MGC has set the target to reduce 10% VOC emission, compared with fiscal 2004, and MGC is going to work on its reduction through the concrete measures in each plant.

- Main VOC emission
  Dichloromethane, Methanol, Xylenes, Methylethylketone

Volatile Organic Compounds (VOC)

The 'Volatile Organic Compounds' is a generic name of organic compounds that become gas in the atmosphere because of their volatility.
VOC is one of the causative agents of the suspended particles and the photochemical oxidants whose influence on person's health is feared.
The idea of 'Best mix' has been included in the revised the Air Pollution Control Law in 2004, as a frame of the emission control measures of VOC. 'Best mix' is the coexistence of regulations to the VOC emission facilities and voluntary approaches to those to which said regulations are not applied.

Registered Chemicals on the Basis of PRTR Law

MGC grasps the amount of PRTR chemicals that are released in the environment or transferred outside the plant as waste or drainage, and also reports said amount to the administrative body once a year.
In the results in fiscal 2004, it was made clear that 45 materials are those to be registered, since they are included in the listed 354 chemicals by PRTR Law.
The total amount of the emission was 285 tons, and was reduced about 4% compared with the previous year, and the amount of transferred was 261 tons, also reduced in about 21%.
The following table shows the registered chemicals by MGC on the basis of PRTR Law and the details of those whose total emission amount in fiscal 2004 was 0.1 tons or more.
(The data in listed table are those only by MGC.)

PRTR

PRTR is the acronym for Pollutant Release and Transfer Register.
It is based on the Law Concerning Reporting, etc. of Release of Specific Chemical Substances to the Environment and Promotion of the Improvement of their Management (so-called PRTR Law), and is a mechanism according to which the amount of released and transferred harmful chemicals are grasped, totalized, and made public.

PRTR Law registered chemicals (results in fiscal 2004)

(unit: tons/year)

No.	Chemicals	Emission Amount			Emission	Transfer
		Air	Water	Soil	Total	Total
145	Dichloromethane	160.6	0.0	0.0	160.6	4.5
63	Xylenes	73.0	0.0	0.0	73.0	38.0
283	Hydrogen fluoride and it's water-soluble salt	0.7	18.0	0.0	18.7	0.2
42	Ethylene oxide	7.6	0.0	0.0	7.6	0.0
227	Toluene	6.3	0.0	0.0	6.3	5.9
40	Ethylbenzene	4.9	0.0	0.0	4.9	0.0
253	Hydrazine	0.4	3.1	0.0	3.5	0.0
304	Boron and it's compounds	0.1	3.2	0.0	3.3	0.2
224	1,3,5-Trimethylbenzene	2.1	0.0	0.0	2.1	11.0
310	Formaldehyde	0.6	1.0	0.0	1.6	8.6
320	Methylmethacrylate	1.2	0.0	0.0	1.2	19.0
311	Manganese and it's compounds	0.0	0.8	0.0	0.8	0.4
299	Benzene	0.6	0.0	0.0	0.6	0.1
312	Phthalic anhydride	0.5	0.0	0.0	0.5	3.4
313	Maleic anhydride	0.3	0.0	0.0	0.3	0.0
54	Epichlorohydrin	0.2	0.0	0.0	0.2	0.4
	Others (29 chemicals)	0.1	0.1	0.0	0.2	169.7
	Total (45 chemicals)	259.2	26.2	0.0	285.4	261.4

Registered Amount (Emission and transfer data in fiscal year)

	2001	2002	2003	2004
Number of Registered	46	42	44	45
Emission (tons/year)	617	507	299	285
Transfer (tons/year)	1,139	360	331	261

Approach to the Atmosphere, the Waters and the Soil

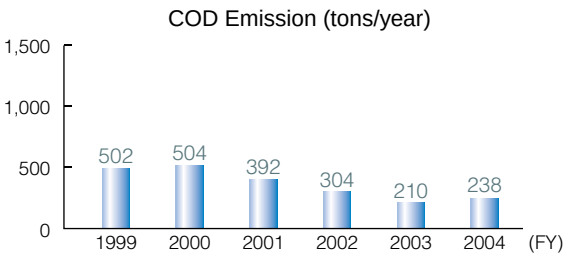
Prevention of Air Pollution

MGC has been working on the reduction of the air pollutant sulfur oxide (SOx), nitrogen oxide (NOx), soot and dust, etc. The countermeasures for the SOx reduction have been executed, for example, by setting up flue gas desulphurization equipment of the boiler exhaust gas, and replacing the fuel to low sulfur heavy oil and city gas (natural gas) etc. MGC has kept their concentration and total amount to be fully lower than those determined by laws and regulations and has managed them.

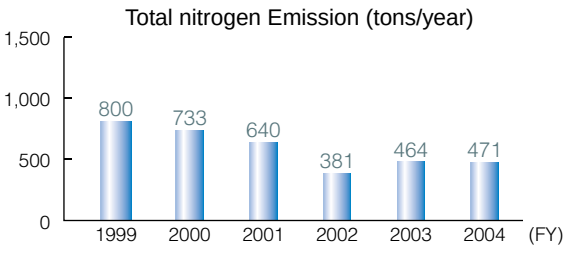
The total emission amount of NOx and the soot and dust has increased in fiscal 2004, compared with the previous year. However, SOx has desirably decreased by 33% because of decrease in heavy oil C consumption.

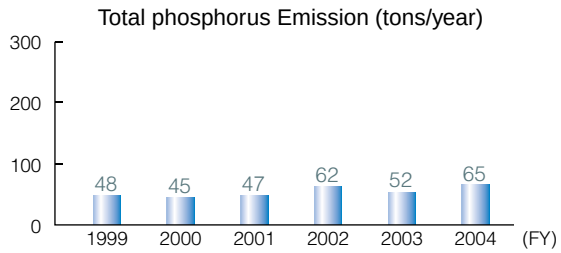
Prevention of Water Pollution

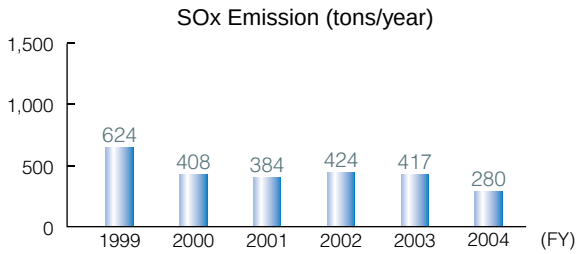
In order to prevent the pollution of river and sea, each plant manages the waste water treatment equipments of the neutralizing processing, the activated sludge processing, and the cohesion precipitation processing, etc. and watches drain water quality.

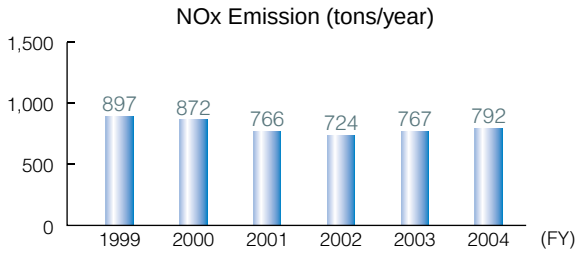


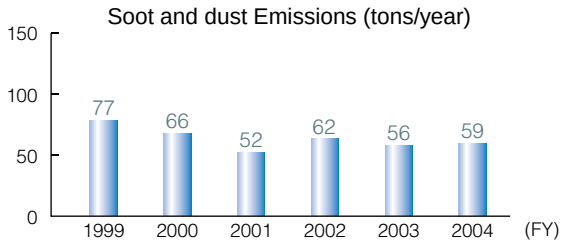
COD: Chemical Oxygen Demand. An index of water pollution, which indicates the amount of oxygen consumed to oxidize and break down organic substances in water.











The emissions standards are regulated in concentration and in total emission etc., depending on the law, the ordinance and the agreement. Each plant has released the drain satisfying the restriction value to the public waters by waste water treatment.

The total emission amount in fiscal 2004 has increased, compared with the previous year in COD, total nitrogen and total phosphorus with the increase in production.

Control of PCB (Polychlorinated biphenyl)

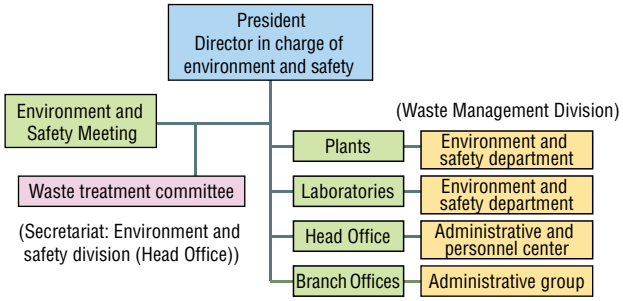
The equipments (transformer, capacitor and stabilizer, etc.) that contains PCB used in the past are in the strict custody of us. Because the wide-area PCB treatment facilities of Japan Environmental Safety Corporation (JESCO) finally started the operation one by one, MGC appropriately advances processing of PCB mentioned above.

Investigation of Soil and Groundwater Contamination

MGC investigates the used situation of harmful substances in production, and also of underground water around the plant. We continue to carry out self-management to prevent from soil and groundwater contamination and countermeasures for said prevention on the basis of the Soil Contamination Countermeasures Law and the ordinance of the municipality.

Zero Emission of Waste

MGC, under it's waste management system, has been working on the overall waste countermeasures consisting of promotion of 3Rs of waste, that is, 'Reduce, Reuse, Recycle', management of proper processing of waste (observance of the law, management of the waste management of traders who are consigned processing), and promotion of zero emission.



Definition of zero emission

Decreasing the amount of final disposal to 0.3% or less of the amount of waste generation by the promotion of 3Rs

Results of Waste Reduction

The amount of waste to off-site in fiscal 2004 was able to be suppressed to the average in the previous year, though the amount of waste generation from the production processes showed 32,000-ton increase as output increased.

The recycling rate became 32% (total recycling amount ÷ generated amount x 100), and this shows the 47% decrease, compared with the previous year.

Because the most of the wastes are waste oil (50%) and sludge (24%) which are rarely recyclable, outward transferred amount has been decreased by onsite treatment to reduce their weight and volume.

Approach to Zero Emission

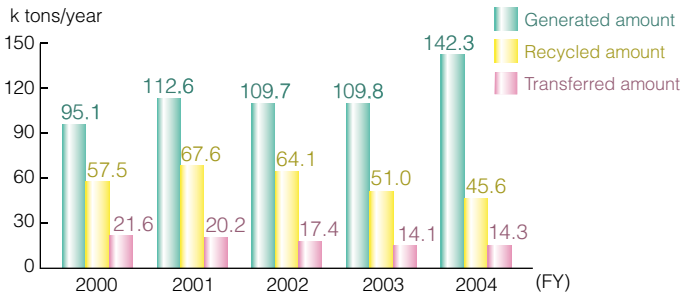
Up to now, the waste emission rate had been defined on the basis of the outward transferred amount. However, because the on-site treatment was not reflected on this definition, we redefined it with the ratio of the amount of final disposal to the amount of waste generation.

The waste emission rate in fiscal 2004 was 0.37%.

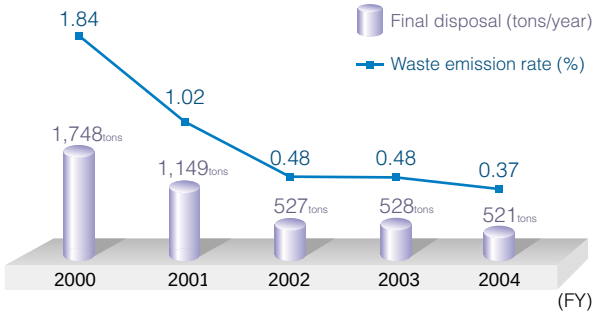
The amount of final disposal leveled off since fiscal 2002 (more 500 tons), though it had been able to be reduced greatly every year since fiscal 1990 (less 3,000 tons).

To break this state, each workplaces strengthened the segregated collection of valuable things and the development of recycling traders etc., and the amount of final disposal in fiscal 2004 was reduced by 7 tons (1%) less than the previous year.

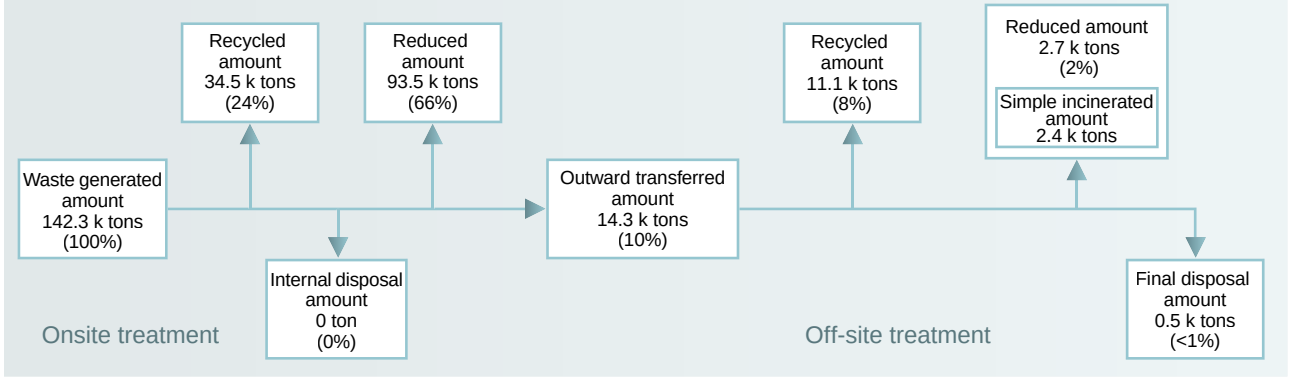
Transition of waste management amount



Transition of final disposal and waste emission rate



Results of waste treatment in fiscal 2004



Environmental Communications

MGC continues to enhance the reliability from the society through various environmental communication activities.

Publication of Environmental Report and Site Report

MGC issues both Japanese and English version of the environmental report, and is distributing it not only to the government offices and the enterprises concerned, etc. but also to the communities near the workplaces. MGC also discloses it to the public through its web site.

The Kashima plant has newly issued Environmental and Safety Report as plant version site report following the Niigata plant.

It discloses information about the environmental load data of the plant, and the activities on the environment and safety.

Environmental and Safety Report (plant version)

Participation in JRCC's Community Dialogue Meeting

MGC has been participating in the community dialogue meeting held by the Japan Responsible Care Council (JRCC).

The Mizushima plant and the Kashima plant respectively attended the Okayama area meeting and the Kashima area meeting, both held in February, 2005.

Participation in Exhibition

MGC and its affiliates exhibited the booth with products and developments as themes both the 'Eco-Manufacture Show' and the 'Advanced Materials Show' of the trade fair 'INCHEM TOKYO 2005' exhibition which held at the Tokyo Big Sight in November, 2005.

In the energy field, there were exhibited new fuel DME (dimethyl ether), high purity hydrogen generating-refining device and direct methanol type fuel cell.

In the environmental field, there were exhibited waste water treatment agents and advanced water treatment agents.

Especially, the fuel cell, under development as a portable power supply, was not only the exhibition but the lighting up MGC's booth by the lights on the Christmas tree placed in the booth.

INCHEM TOKYO 2005

Relations with Local Communities

• Cooperating in the job education

In each workplace, there are held the plant visit for the local citizens and the students.

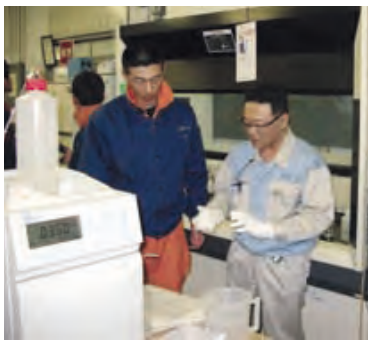
The Hiratsuka Research Laboratory accepted an offer of the visit for job education from the local high school, and held it in July.

The object of this visit and experience through this visit was to deepen more the students' outlooks on the occupation.

Students were listening eagerly to the explanation of a research for the application of plastics etc., while showing tense looks.

• Cooperating in the local fire fighters' chemical training.

The fire fighters of the Niigata fire station learned about chemicals in the laboratory of the Niigata plant.



• Cleaning volunteer work

Each workplace regularly carries out the cleaning volunteer work around it.

• Participation in community event, offer of facilities

We promote the communications with local community by participating in community festival, and opening the gym and the ground etc. to the people in local community.

Summer festival in resident's association

Matsuhama festival

HANAMI (Viewing party of cherry blossoms) in the yard of Niigata plant

Contributions to society

• Support to NPO

The Mizushima plant accepted the visit of the Cambodian students, etc. studying in Japan with an introduction from NPO 'Heart of Gold'* in August, 2005. The plant tour was carried out after the explanation of plant's outline.

*'Heart of Gold'

A NPO that aims to do support service etc. of the dweller's independence in stricken area and trouble spot, represented by Ms. Yuko ARIMORI, famous marathon runner.

• Support to disaster damage

MGC, wishing an early revival from the disaster without losing time, contributed the monetary donation through Japan Red Cross for the United States hurricane Catherine damage and for the damage of the northern Pakistan earthquake.

Environmental and Safety Activities in Affiliates

MGC Group Environmental and Safety Information Exchange Meeting

The environmental and safety information exchange meeting of the MGC group had started in 2003, and now is composed of 12 domestic affiliates that handle chemicals. The meeting is held twice a year in order to improve the environmental and safety activities of each group member by the spreading of each group member's activities to the others and by the dissemination of the latest trend of the regulations etc.
Moreover, the MGC Group's fundamental policies on environment and safety were enacted in this year to promote a further environmental and safety activities.

MGC group's fundamental policies on environment and safety poster

MGC Group's Fundamental Policies on Environment and Safety

Environmental and safety targets

Zero accident, Zero occupational injury and Environmental Preservation

Fundamental policies

- Ensuring of health and safety in our operations
- Securing security management of facilities and increasing self-maintenance technologies and skills
- Reducing environmental loads in business activities
- Ensuring safety in use, handling and disposal of products
- Developing environment-friendly and safety-conscious products and technologies
- Ensuring environmental preservation and safety in the logistics of obtaining raw materials and storing and delivering our products
- Enhancing of society's confidence to us

Environmental and Safety Inspection

Aiming further improvement of environmental and safety activities, MGC started the environmental and safety inspection to the group affiliates in 2004. Three or four of the member companies have been inspected every year and, therefore, it makes a round in three years.
Overseas affiliates are also inspected in similar to the domestic ones to promote the environmental and safety activities.

MGC group environmental and safety information exchange meeting

A.G. International Chemical Co., Inc
Manufacture and sale of purified isophthalic acid
Tokyo Sakurada bldg., 1-3 Nishishinbashi 1-chome, Minato-ku,Tokyo 105-0003 Japan
Phone: +81-3-3503-4811

MGC Filsheet Co., Ltd.
Manufacture of PC sheet and film
2242 Mikajima 4-chome, Tokorozawa-City, Saitama 359-1164 Japan
Phone: +81-4-2948-2151

JSP Corporation
Manufacture and sale of foamed plastics
Shinnisseki bldg., 4-2 Marunouchi 3-chome, Chiyoda-ku, Tokyo 100-0005 Japan
Phone: +81-3-6212-6300
http://www.co-jsp.co.jp/

Eiwa Chemical Industrial Co., Ltd
Manufacture and sale of blowing agents
Daido seimei co. kyoto build., 595-3 Sanjiosagaru karasuma-dori, Manjuya-cho, Nakagyo-ku, Kyoto-City, Kyoto 604-8161 Japan
Phone: +81-75-256-5131
http://www.eiwa-chem.co.jp/

Electrotechno Co., Ltd
Manufacture of copper clad laminates for printed circuit board
9-41 Aza-Sugiyama Oaza-Yone, Nishigo-mura, Nishishirakawa-gun, Fukushima 961-8031 Japan
Phone: +81-248-25-5000

Toyo Kagaku Co., Ltd
Manufacture of injection molding processed products
51-497 Aza-Dodo, Oaza-Morowa, Togo-cho, Aichi-gun, Aichi 470-0151 Japan
Phone: +81-561-39-0531
http://www.co-jsp.co.jp/

Environmental and Safety Activities in Affiliates

SOx reduction by fuel conversion
(Eiwa Chemical Ind.Co., Ltd)

Eco-life fair exhibition in Kanuma
(JSP Corporation)

Cleaning around plant yard
(Japan Circuit Industrial Co., Ltd)

Fire extinguish training
(Toyo Kagaku Co., Ltd)

Disaster prevention training
(Electrotechno Co., Ltd)

Fire extinguish training
(JAPAN FINECHEM Co., Inc)

Safety patrol
(Japan U-Pica Co., Ltd)

Safety patrol
(Fudow Co., Ltd)

Japan Circuit Industrial Co., Ltd
Manufacture and sale of printed circuit boads
2-1236 Kamiike-cho, Toyota-City, Aichi
471-0804 Japan
Phone: +81-565-88-3718
http://www.jci-jp.com/

JAPAN FINECHEM Co., Inc.
Manufacture and sale of chemical products and electronic parts
Iino bidg., 1-1 Uchisaiwai-cho 2-chome,
Chiyoda-ku, Tokyo 100-0011 Japan
Phone: +81-3-3501-5656
http://www.jfine.co.jp/

Fudow Co., Ltd
Manufacture and sale of resins and molded components
No.7th Daigo bidg., 20-5 Nishikamada 7-chome,
Ota-ku, Tokyo 144-0051 Japan
Phone: +81-3-3737-0611
http://www.fudow.co.jp/

Japan Pionics Co., Ltd
Manufacture and sale of Gas purifiers and surface heater
Tokyo Sakurada bldg.,
1-3 Nishishinbashi 1-chome, Minato-ku, Tokyo
105-0003, Japan
Phone: +81-3-3506-8801

Japan U-Pica Co., Ltd
Manufacture and sale of unsaturated polyester
Iino bidg.,1-1 Uchisaiwai-cho 2-chome,
Chiyoda-ku, Tokyo 100-0011 Japan
Phone: +81-3-3503-3981
http://www.u-pica.co.jp/

Mizushima Aroma Co., Ltd
Manufacture and sale of purified terephthalic acid
3-1 Mizushimanakadori 2-chome,
Kurashiki-City, Okayama 712-8072 Japan
Phone: +81-86-446-4570

Environmental Activities at Each Plant

Natural Gas Chemicals Company ◆ Niigata plant

Address:
3500 Matsuhama-cho, Niigata-City, Niigata 950-3121 Japan
Phone: +81-25-258-3474

Comments by plant manager

Our attitude and approach on the environment never change after start-up of plant operation.
Getting the local citizens' cooperation, we have been carefully making great efforts to sustain beautiful natural environment in which we can admire full bloom of cherry trees, there is lot of green, we can awake listening to birds' singing, we can enjoy the sunset into the Sea of Japan, and small animals such as pheasants, raccoons, etc. as ever can live their lives.

Plant manager
Masami Orisaku

Water use (km³)	10,539
CO_2 emission (k tons)	505
NOx emission (tons)	368
SOx emission (tons)	1
Drainage volume (km³)	7,518
COD emission (tons)	40
Outward transfer of waste (tons)	1,878
Final disposal (tons)	316

Main products

- Ammonia
- Formalin
- Methyl methacrylate

Substances listed by PRTR law	Emission (tons)	Transfer (tons)
Ethylene oxide	7.600	0
Methyl methacrylate	1.200	19.000
Vanadium pentoxide	0	6.900

Aromatic Chemicals Company ◆ Mizushima plant

Address:
3-10 Mizushima Kaigandori, Kurashiki-City, Okayama 712-8525 Japan
Phone: +81-86-446-3822

Comments by plant manager

The Mizushima plant has been working on the energy rationalization, and the reduction of release amount of air and water pollutant, as the special assignment since 2000, and the great result has been obtained.
Especially, the Mizushima Eco-works, which is the waste treatment company and can treat all the wastes with gasification melting furnace, started its operation in Apr., 2005 and the goal of zero emission is coming just around the corner.
We do continue to reduce the environmental loads and to operate the plant safely and reliably.

Plant manager
Yukio Sakai

Water use (km³)	12,644
CO_2 emission (k tons)	606
NOx emission (tons)	367
SOx emission (tons)	250
Drainage volume (km³)	11,253
COD emission (tons)	140
Outward transfer of waste (tons)	2,918
Final disposal (tons)	164

Main products

- Xylenes
- Aromatic aldehydes
- Phthalic anhydride

Substances listed by PRTR law	Emission (tons)	Transfer (tons)
Xylene	73.006	38.000
Hydrogen fluoride and its water soluble salt	18.650	0
Ethylbenzene	4.902	0

Specialty Chemicals Company ◆ Kashima plant

Address:
35 Higashi Wada, Kamisu-City, Ibaraki 314-0102 Japan
Phone: +81-299-96-3121

Comments by plant manager

The Kashima plant has been working on the reduction of the environmental loads through the global standard of environmental management system ISO14001, attested in 1999.
Aiming at 'Sustainable development' and 'Construction of the recycling-oriented society', we will make efforts to accomplish the plant which gives more peace of mind to local citizens as 'zero accident, zero occupational injury and environmental preservation' as being the base for plant management.

Corporate officer
Plant manager
Makoto Mizutani

Water use (km³)	1,740
CO_2 emission (k tons)	155
NOx emission (tons)	5
SOx emission (tons)	1
Drainage volume (km³)	1,620
COD emission (tons)	9
Outward transfer of waste (tons)	581
Final disposal (tons)	9

Main products

- Hydrogen peroxide
- Polycarbonate

Substances listed by PRTR law	Emission (tons)	Transfer (tons)
Dichloromethane	160.000	2.300

Specialty Chemicals Company ◆ Yokkaichi plant

Address:
4-16 Hinagahigashi 2-chome,Yokkaichi-City, Mie 510-0886 Japan
Phone: +81-593-45-8800

Comments by plant manager

The modulation of the global environment such as global warming is being actualized.
In the Yokkaichi plant, the coal fuel of the co-generation system that produces the steam and electricity has been converted into the city gas. This conversion enables us to reduce CO_2 generation in about 40%, and we think we can contribute to reduce the earth environmental load through this reduction.

Plant manager
Shinichi Kaji

Water use (km³)	6,902
CO_2 emission (tons)	162
NOx emission (tons)	39
SOx emission (tons)	25
Drainage volume (km³)	810
COD emission (tons)	38
Outward transfer of waste (tons)	7,924
Final disposal (tons)	14

Main products

- Hydrogen peroxide
- Chemicals for electronics industries
- Polyacetal

Substances listed by PRTR law	Emission (tons)	Transfer (tons)
Hydrazine	3.460	0
Formaldehyde	1.070	8.600

Specialty Chemicals Company ◆ Yamakita plant

Address:
950 Kishi, Yamakita-machi, Ashigarakami-gun, Kanagawa 258-0112 Japan
Phone: +81-465-75-1111

Comments by plant manager

The Yamakita plant is located just beside the clear stream Sakawa River. While we have been using abundant water in production.
We think that it is our greatest mission to maintain his beautiful water environment.
With the motto of "Never pollute the Sakawa River", we are ready for preventing the emergent pollution accidents by equipping with the cautious detection systems for drainage and the emergency shut-off equipments.

Plant manager
Yoshihiro Ono

Water use (km³)	7,241
CO_2 emission (k tons)	28
NOx emission (tons)	8
SOx emission (tons)	3
Drainage volume (km³)	6,969
COD emission (tons)	12
Outward transfer of waste (tons)	90
Final disposal (tons)	16

Main products

- Ultra pure hydrogen peroxide
- Persulfates
- Chemical polishing agents

Substances listed by PRTR law	Emission (tons)	Transfer (tons)
Hydrogen fluoride and its water soluble salt	0	0.220

Location of other plants and research laboratories

	Address:	*Phone:*
Natural gas Chemicals Company		
◆ Niigata research laboratory	182 Tayuhama Shinwari, Niigata-City, Niigata 950-3112	+81-25-259-8211
Aromatic Chemicals Company		
◆ Hiratsuka research laboratory	6-2 Higashiyawata 5-chome, Hiratsuka-City, Kanagawa 254-0016	+81-463-21-8600
Specialty Chemicals Company		
◆ Naniwa plant	3-27 Funamachi 1-chome, Taisho-ku, Osaka -City, Osaka 551-0022	+81-6-6551-3371
◆ Saga plant	681-45 Kamikumakawa, Fuji-cho, Saga-City, Saga 840-0512	+81-952-64-2400
◆ Tokyo research laboratory	1-1 Niijuku 6-chome Katsushika-ku, Tokyo 125-0051	+81-3-5699-9711
(Osaka plant merged to form MGC Filsheet Co., Ltd on Oct. 1, 2005.)		
Information and Advanced Materials Company		
◆ Tokyo techno center	1-1 Niijuku 6-chome Katsushika-ku, Tokyo 125-8601	+81-3-3627-9411
(Tokyo Plant was reorganized to Tokyo techno center on Oct. 1, 2005.)		

MITSUBISHI GAS CHEMICAL COMPANY, INC.

● Editing division and Contact for MGC Responsible Care further information

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