

The essentials of imaging

**Konica Minolta**  

---

**Environmental Report 2008**



**KONICA MINOLTA**

## Environmental Management

* Policy and Systems	P.2
* Medium-Term Environmental Plan	P.5
* FY 2007 Results and FY 2008 Targets	P.8

## Environmentally Sound Products

* Energy-Saving Products	P.11
* Implementing the "3Rs"	P.15
* Elimination of Hazardous Substances in Products	P.19

## Environmental Efforts at Konica Minolta Group Sites

* Site-Specific Efforts to Prevent Global Warming	P.22
* Zero Waste Sites	P.28
* Chemical Management at Group Sites	P.33

## Environmental Communication

* Information Disclosure	P.36
* Dialogue and Cooperation	P.39

## Environmental Accounting

P.45

## Environmental Performance Data

* Energy, Greenhouse Gas, Water	P.48
* Waste	P.50
* Public Water Bodies, Air (in Japan)	P.52
* PRTR (in Japan)	P.53
* Production sites	P.55

## Environmental Management

At Konica Minolta group companies worldwide, employees are united in their efforts to reduce environmental impact.

## Policy and Systems

### Environmental Policy

**The goal of our integrated environmental management system is to ensure that all of our corporate activities are good for both people and the environment.**

The Konica Minolta Group conducts all of its corporate activities in harmony with people and the environment by integrating environmental, economic and social perspectives into our corporate strategy, as the Environmental Policy of the Konica Minolta Group. To this end, the Group has established a group wide ISO 14001-based management system that ensures economically efficient and effective environmental management.

Under this system, all Konica Minolta Group employees are committed to continuous environmental improvement activities, in keeping with the Environmental Policy.

### Environmental Policy

#### Environmental Policy of the Konica Minolta Group

The Konica Minolta Group aims for both sustainable development and profitable growth. We integrate environmental, economic and social perspectives into our business strategies so that all of our activities are conducted in harmony with people and the environment.

Our basic approach is to work steadily to solve environmental issues, based on reliable data and quantitative measurements of performance and impacts.

#### "Management Based on Facts"

##### 1. A global citizen working toward a sustainable society

To promote a sustainable society, we conduct business with the aim of continuously improving our performance in environmental preservation, economic growth and responsibility to society. To end, all employees make an effort to enhance their knowledge and awareness about the global environment, economy and society, and to act responsibly in the pursuit of a sustainable society.

##### 2. Compliance with laws and other requirements

We comply with legal requirements in countries and regions where we do business, as well as with our own Group standards. We act fairly in responding to the expectations of our stakeholders and recognise the consensus of the international community.

##### 3. Consideration of the environment through the entire lifecycle of products and services

We are committed to reducing environmental impacts at all stages of the lifecycle of products and services, aware that responsibility for a product rests with its manufacturer.

##### 4. Initiatives to counter global warming

We work to steadily reduce greenhouse gas emissions from the business activities of the entire Group, throughout the lifecycle of products and services, aware that global warming is an important issue for all humanity.

##### 5. Initiatives toward a sound material-cycle society

We constantly review what we can do as a corporate citizen to create a sound material-cycle society, while striving to minimise our consumption of natural resources, and promoting activities aiming for zero waste disposal. We promote initiatives for the recovery and recycling of packaging materials and end-of-life products.

##### 6. Prevention of chemical pollution, reduction of environmental risk

Aware that chemical substances can have serious health, safety and environmental impacts, we take measures to prevent chemical pollution. In order to minimise environmental risk, we work steadily to minimise the amounts of chemicals we use, and to reduce the amounts of chemicals released.

##### 7. Information disclosure

We will be accountable to our stakeholders and strive for harmony with society by actively disclosing environmental information and conducting risk communication. Our Environmental Policy shall be made public.

##### 8. Environmental objectives and targets

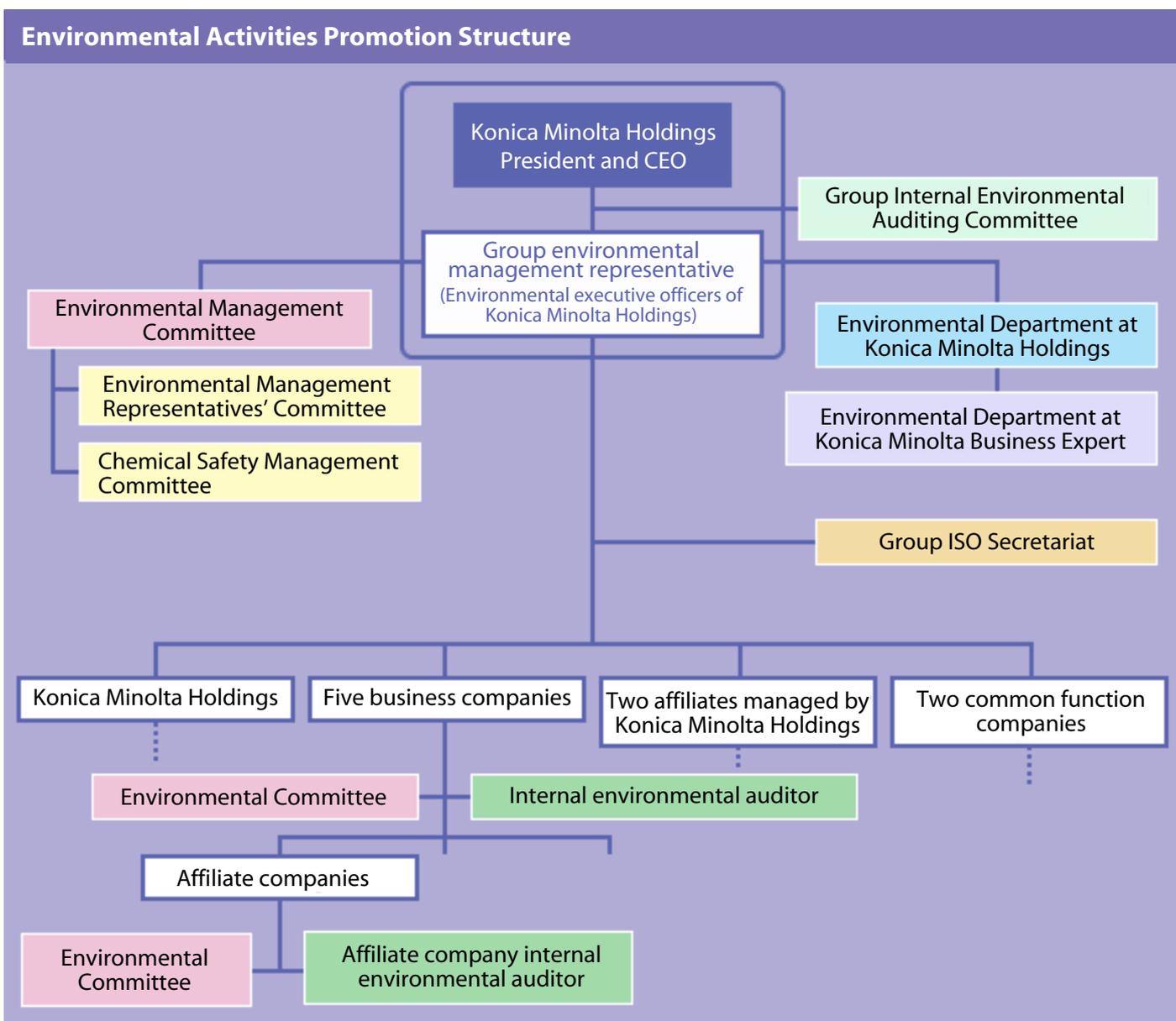
We establish and administer environmental objectives, targets, and management programmes to translate this Environmental Policy into reality, and work for continuous improvement.

## Environmental Activities Promotion Structure

### Environmental Measures Comprehensively Supervised by Group Environmental Management Representative Appointed by President and CEO.

Central to our environmental activity promotion structure is the Group environmental management representative (environmental executive officer of Konica Minolta Holdings, Inc.), who is appointed by the President and CEO of Konica Minolta Holdings, Inc.. The Environmental Management Committee is the highest organization that deliberates on environmental management for the group. Led by its Chairman, the Committee comprises environment management officers of business and common function companies, and is empowered to take the initiative in appropriate action throughout the entire Group.

The Group Internal Environmental Auditing Committee is chaired by the head of the Corporate Audit Division at Konica Minolta Holdings, Inc., and directs the internal environmental auditing for the entire group.



## Environmental Management System

### **Our environmental management system is operated in accordance with ISO 14001.**

---

The Konica Minolta Group operates an ISO 14001-based environmental management system as part of our efforts regarding group-wide environmental activities, which are based on unified criteria, stipulating ISO 14001 acquisitions by all manufacturing affiliate companies worldwide as a fundamental Group policy.

To address environmental issues, including the prevention of global warming and working toward a recycling-based society, we should implement measures in consideration of the entire product lifecycle. To accomplish this, the Konica Minolta Group believes that it must operate not only its manufacturing sites, but also its product development, sales and distribution sites, under an integrated management system and in mutual cooperation.

Based on this concept, in Japan, the Konica Minolta Group has acquired multi-site ISO 14001 certification, so that the entire Group can be managed under a single ISO certification. This has enabled prompt and efficient environmental activities throughout all product lifecycle stages. Under this integrated management system, we are working to reduce environmental impact. For instance, we are promoting the sales of energy-saving products that help reduce CO<sub>2</sub> emissions when our products are in use, and are encouraging the collection of used products. This system is also effective in carrying out our activities toward minimizing the environmental load generated directly by our Group companies, such as energy consumption during production, waste generation, and paper consumption.

For these activities, we have set up numerical targets. The entire Group periodically evaluates how well these targets are being achieved, and evaluation results are fed back to relevant entities to ensure continuous improvement.

Additionally, at least once a year we conduct internal environmental audits based on unified criteria, to ensure that the Group's environmental policy, objectives and targets are properly known to all organizations, and that the management system is functioning efficiently, by identifying any problems and making necessary improvements. In these internal audits, in addition to management system checking, compliance audits are performed using environmental checklists, to ensure that all Group organizations are fully compliant with laws and regulations.

By making the maximum use of this integrated management system, the Konica Minolta Group works to ensure compliance, fulfilling its social responsibility by helping resolve urgent environmental issues relating to global warming and zero waste, and by reducing environmental risks.

## Environmental Risk Management

### **Risk Management Performed under a Strict Audit System in Full Compliance with Laws and Regulations.**

---

The Konica Minolta Group strictly adheres to laws and regulations, in terms of both the environmental preservation measures implemented by its business sites and the provision of environmentally sound products and services. To ensure adherence, we collect, analyze and share the latest information on legal stipulations pertaining to business activities throughout the world.

Each business site (primarily manufacturing sites) operates under self-management standards more stringent than legally required. For example, they comply with air/water quality, noise and waste disposal management in line with ISO 14001 system standards, achieving a very high standard of risk management. In terms of product regulations, we also incorporate forward-looking information into our activities—for example, in order to reduce potentially harmful chemicals in advance of any requirement to do so. Specialized internal auditors periodically review our legal compliance in Japan, an activity that will be expanded to our overseas operations as well.

## Environmental Management

At Konica Minolta group companies worldwide, employees are united in their efforts to reduce environmental impact.

### Medium-Term Environmental Plan

#### Medium-Term Environmental Plan (FY 2010 Targets)

**The Konica Minolta Group is united by a worldwide environmental plan.**

With an emphasis on the key concepts of "global," "group-wide," and "entire product lifecycle," Konica Minolta has set targets for reducing environmental impact, including a reduction in the absolute volume of waste generated, and is working to achieve them. We are focusing these efforts in three areas: Measures to Prevent Global Warming, Initiatives to Help Establish Recycling-based Society, and Minimize Chemical Risks.

#### Medium-Term Environmental Plan (FY 2010 Targets)

<b>Measures to Prevent Global Warming</b> Reduce CO <sub>2</sub> emissions by 20% by FY 2010 (compared to FY 2000)	FY 2010	Reduce CO <sub>2</sub> emissions at all group production and R&D sites in Japan by 7% (compared to FY 1990)
	FY 2010	Reduce CO <sub>2</sub> emissions at production sites in the US, Europe, and Asia (excluding Japan) by 7% (compared to FY 2000)
	FY 2010	Reduce CO <sub>2</sub> emissions during distribution by 30% per unit of sales (compared to FY 2000)
	FY 2010	Reduce CO <sub>2</sub> emissions during product usage by 30% (compared to FY 2000)
<b>Initiatives to Help Establish Recycling-based Society</b> Reduce waste at all production sites worldwide by 20% by 2010 (compared to FY 2000)	FY 2007	Attain Level 2* zero waste at all group production sites in Japan
	FY 2008	Attain Level 1* zero waste at all production sites in the US, Europe, and Asia (excluding Japan)
	FY 2009	Attain Level 2* zero waste at all production sites in the US, Europe, and Asia (excluding Japan)
<b>Minimize Chemical Risks</b>	FY2010	Reduce total atmospheric VOC emissions by 90% (calculated based on risk conversion, compared to FY 2000)
	FY2007	Achieve complete elimination of specific heavy metals (lead, hexavalent chromium, cadmium, and mercury) from all products
	FY2010	Establish new mechanisms for chemical substance management that cover the supply chain

\* Level 1 zero waste criteria:  
 Recycling rate must be 90% or higher.  
 Final disposal rate should be 5% or lower (including secondary residue).

Cost reduction is achieved when the cost saving effects are at least 90% of the total recycling cost paid to outside parties (compared to the benchmark fiscal year), or when the sales of recycled materials and benefits from zero waste activities are greater than the total recycling cost paid to outside parties.

\* Level 2 zero waste criteria :

Achievement of Level 1 zero waste.

Volume of waste discharged externally per unit of sales must be reduced by 30% (compared to FY 2001).

## Measures to Prevent Global Warming

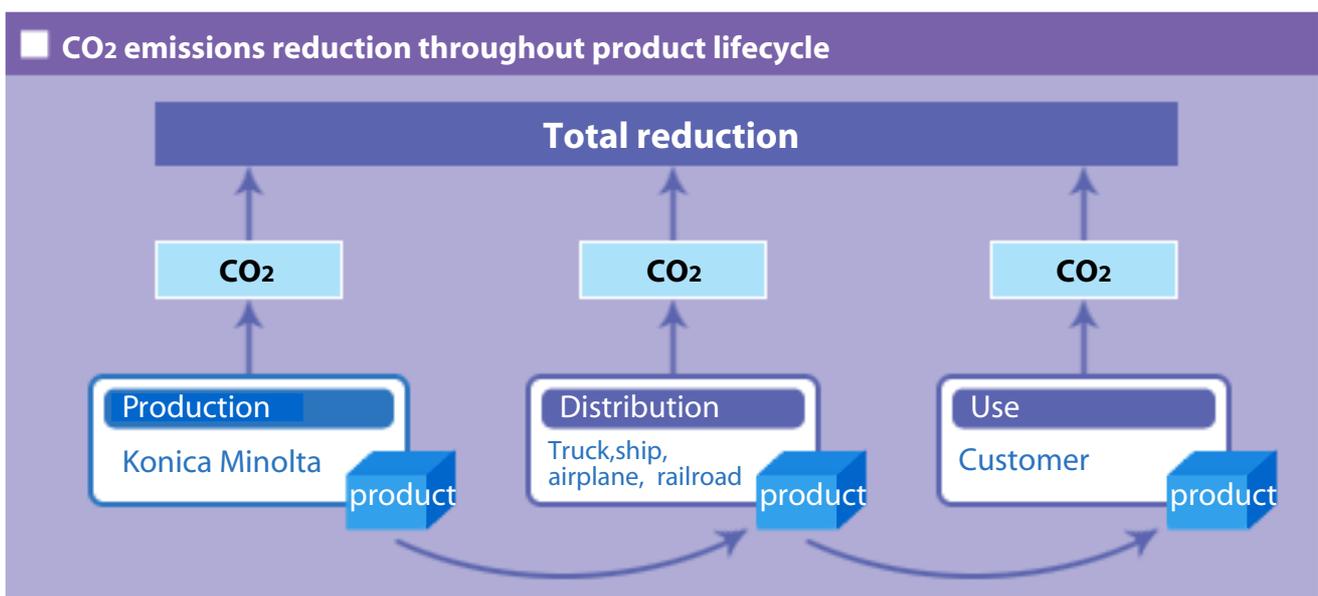
**We are working to achieve a 20% cut in CO<sub>2</sub> emissions throughout the product lifecycle compared to FY 2000.**

At Konica Minolta, we have established a challenging target: a 20% reduction in CO<sub>2</sub> emissions throughout the product lifecycle, from production and distribution to use, by fiscal 2010, compared to fiscal 2000 levels. To ensure that we achieve this goal, itemized reduction targets have been set for the following four parameters: CO<sub>2</sub> emissions from sites in Japan; from production sites in the U.S., Europe, and Asia (excluding Japan); during distribution; and during product use. Regarding CO<sub>2</sub> emissions from our sites, we have set a challenging target: "a 7% reduction of CO<sub>2</sub> emissions from all group sites in Japan by fiscal 2010, compared to fiscal 1990 levels," which is even more stringent than the 6% reduction target Japan must meet under the Kyoto Protocol. We have also set another target, "a 7% reduction of CO<sub>2</sub> emissions from all production sites in the U.S., Europe, and Asia by fiscal 2010, compared to fiscal 2000 levels." We are working hard to achieve these targets.

### Konica Minolta's Unique Approach

Helping to prevent global warming is one of the most important social responsibilities of the manufacturer today. The Konica Minolta Group is committed to helping prevent global warming from an overall product lifecycle perspective.

Our measures for reducing CO<sub>2</sub> emissions cover not only emissions from our business sites during product manufacture, but also during product distribution and use at the customer's site. We implement CO<sub>2</sub> reduction initiatives for every one of these stages.



In the area of CO<sub>2</sub> emissions from production sites, each business company has set out its own targets per unit of production or other operational measure, and each is working to improve its productivity in terms of operating and yield rates, thereby achieving production with improved energy efficiency. Moreover, we globally implement an Energy-Conservation Support Program, under which experts comprehensively assess energy use at each site and identify energy-saving measures appropriate to each one. Konica Minolta is also committed to reducing CO<sub>2</sub> emissions during distribution, by reducing air transport as much as possible, since it emits a larger amount of CO<sub>2</sub> compared to other methods, and by improving distribution efficiency through proactive reorganization of its worldwide distribution network. In the area of reduction of CO<sub>2</sub> emissions during product usage, we are contributing to CO<sub>2</sub> emissions reduction by offering energy-saving features in our products, especially MFPs, thus helping customers to reduce the amount of electricity they use.

## Initiatives to Help Establish Recycling-based Society

### **We are pursuing a 20% reduction in waste at all production sites worldwide.**

---

As part of efforts to help create a recycling-based society, Konica Minolta has set a 20% reduction target (compared to FY 2000) to be achieved by fiscal 2010, for total waste generated by production sites worldwide. This target includes itemized zero waste objectives at sites in Japan as well as in the US, Europe, and the rest of Asia (Level 2 zero waste achievement requires a 30% reduction in waste sent outside the company per unit of sales). Initiatives like these are helping us to reduce the company's environmental impact around the world.

## Minimize Chemical Risks

### **Our goal is to cut total atmospheric VOC emissions by 90%.**

---

In the area of reducing chemical risks, we have set a target to cut our total atmospheric emissions of volatile organic compounds (VOC) by 90% (calculated based on risk conversion, compared to fiscal 2000). Individual reduction targets have also been set for priority substances such as dichloromethane, and Konica Minolta is continuing to minimize environmental risks posed by chemicals.

## Environmental Management

At Konica Minolta group companies worldwide, employees are united in their efforts to reduce environmental impact.

### FY 2007 Results and FY 2008 Targets

#### FY 2007 Results

All fiscal 2007 targets for Measures to Prevent Global Warming were achieved.

	FY 2007 Targets		FY 2007 Results
<b>Measures to Prevent Global Warming</b>	<b>Reduce CO<sub>2</sub> emissions throughout the product lifecycle to 705,000 tons</b>		<b>Reduced to 582,000 tons</b>
	Reduce CO <sub>2</sub> emissions at all production and R&D sites in Japan to 320,000 tons		Reduced to 264,000 tons
	Reduce CO <sub>2</sub> emissions at production sites in the US, Europe and Asia (excluding Japan) to 95,000 tons		Reduced to 81,000 tons
	Reduce CO <sub>2</sub> emissions during distribution to 40,000 tons		Reduced to 31,000 tons
	To reduce CO <sub>2</sub> emissions during product use to 250,000 tons		Reduced to 205,000 tons
<b>Initiatives to Help Establish Recycling-based Society</b>	<b>Reduce waste at all production sites worldwide to 20,500 tons</b>	×	<b>23,900 tons</b>
	Achieve Level 2* zero waste at all group production sites in Japan		Achieved Level 2* zero waste at all production sites in Japan
	Draft a plan for achieving zero emissions at production sites in the US, Europe, and Asia (excluding Japan)		Completed plan and achieved Level 1* zero waste at one site
<b>Minimize Chemical Risks</b>	Reduce total atmospheric VOC emissions by 90% (calculated based on risk conversion as compared to FY 2000)	×	Reduced by 89% compared to FY 2000
	Achieve complete elimination of specific heavy metals (lead, hexavalent chromium, cadmium, and mercury) from all products	×	Remaining in some products with outdated parts
	Complete preparations for preliminary registration under the REACH regulations for chemical products to be sold in Europe		Completed preparations for preliminary registration

- \* Level 1 zero waste criteria :  
 Recycling rate must be 90% or higher.  
 Final disposal rate should be 5% or lower (including secondary residue).  
 Cost reduction is achieved when the cost saving effects are at least 90% of the total recycling cost paid to outside parties (compared to the benchmark fiscal year), or when the sales of recycled materials and benefits from zero waste activities are greater than the total recycling cost paid to outside parties.

- \* Level 2 zero waste criteria :  
Achievement of Level 1 zero waste.  
Volume of waste discharged externally per unit of sales must be reduced by 30% (compared to FY 2001).

## **Measures to Prevent Global Warming: Reduced CO<sub>2</sub> emissions to 582,000 tons**

---

In the Measures to Prevent Global Warming, we succeeded in reducing CO<sub>2</sub> emissions throughout the product life cycle by 21.7% (FY 2000 basis) to 582,000 tons in fiscal 2007, surpassing the target of a 20% reduction (FY 2000 basis) by fiscal 2010. Moreover, the itemized CO<sub>2</sub> reduction targets for fiscal 2007 were also all achieved, namely, the reduction targets for sites in Japan, sites in the US, Europe, and Asia (excluding Japan), during distribution, and during product usage.

## **Initiatives to Help Establish Recycling-based Society: Waste reduced by 23,900 tons**

---

As part of Initiatives to Help Establish Recycling-based Society, we succeeded in reducing total waste from all production sites worldwide by 23% (FY 2000 basis) to 23,900 tons, surpassing the target of 20% reduction (FY 2000 basis). However, we failed to meet the target of 20,500 tons for fiscal 2007. In the US and Asia (excluding Japan), production was higher than expected, leading to larger volumes of waste, and we did not meet the target. However, waste reduction activities proceeded on schedule, and Konica Minolta succeeded in reducing waste output by 5.3% compared to the previous year, despite the increased production. Measures to meet the itemized targets of our zero waste activities were carried out according to plan. Level 2 zero waste was achieved for all production sites in Japan, and Level 1 was achieved for an additional site in the US, Europe and Asia (excluding Japan), bringing the total to three sites outside Japan.

## **Minimize Chemical Risks: Atmospheric VOC emissions cut by 89%**

---

In the area of Minimize Chemical Risks, we succeeded in reducing total atmospheric volatile organic compound (VOC) emissions (calculated based on risk conversion, as compared to FY 2000) for all production sites worldwide by 89%. However, we failed to achieve the target of 90% reduction (FY 2000 basis) for fiscal 2007. This was due to the higher than expected production levels.

Konica Minolta promoted efforts for the complete elimination of specific heavy metals from all products. However, there were still some parts with outdated specifications, for which replacements were hard to find, and the target was not achieved due to models that require these parts. These products will be steadily replaced with compliant models in the future.

## FY 2008 Targets

<b>Measures to Prevent Global Warming</b>	Reduce CO <sub>2</sub> emissions throughout the product lifecycle to 707,000 tons
	Reduce CO <sub>2</sub> emissions at all production and R&D sites in Japan to 314,000 tons
	Reduce CO <sub>2</sub> emissions at production sites in the US, Europe and Asia (excluding Japan) to 96,000 tons
	Reduce CO <sub>2</sub> emissions during distribution to 34,000 tons
	Reduce CO <sub>2</sub> emissions during product use to 263,000 tons
<b>Initiatives to Help Establish Recycling-based Society</b>	Reduce waste at all production sites worldwide to 25,900 tons
	Maintain Level 2* zero waste at all group production sites in Japan
	Achieve Level 1* zero waste at all production sites in the US, Europe, and Asia (excluding Japan)
<b>Minimize Chemical Risks</b>	Reduce total atmospheric VOC emissions (calculated based on risk conversion as compared to FY 2000) by 90%
	Complete preliminary registration under the REACH regulations for chemical products to be sold in Europe

- \* Level 1 zero waste criteria:  
 Recycling rate must be 90% or higher.  
 Final disposal rate should be 5% or lower (including secondary residue).  
 Cost reduction is achieved when the cost saving effects are at least 90% of the total recycling cost paid to outside parties (compared to the benchmark fiscal year), or when the sales of recycled materials and benefits from zero waste activities are greater than the total recycling cost paid to outside parties.
  
- \* Level 2 zero waste criteria:  
 Achievement of Level 1 zero waste.  
 Volume of waste discharged externally per unit of sales must be reduced by 30% (compared to FY 2001).

## Environmentally Sound Products

Reducing Environmental Impact throughout Product Lifecycle, from Manufacture and Use to Disposal

## Energy-Saving Products

### Prevention of Global Warming

#### Devising Appropriate Measures for Curbing CO<sub>2</sub> Emissions in Accordance with Product Characteristics

We have introduced the Lifecycle Assessment (LCA) method, and collect and check data on CO<sub>2</sub> emissions throughout the lifecycle of a wide range of products. To effectively reduce CO<sub>2</sub> emissions, on the basis of our assessment results, we take measures tailored to each product's characteristics, e.g., products with higher emission rates during the production stage, or with higher rates when in use. Taking multifunctional peripherals (MFPs) as an example, CO<sub>2</sub> emissions derived from power consumption when MFPs are used by customers account for the largest percentage of the total CO<sub>2</sub> emissions throughout the lifecycle of MFPs. Also, more than 60% of power consumed during the use of MFPs is consumed by the fuser that heats the toner and fixes it to the paper. We have therefore worked to reduce energy consumption during the fusing process as an effective means of making MFPs more energy efficient. Each time we redesign MFPs we strive to realize even greater power conservation.

### Energy-Saving Performance of Color MFPs

#### We have cut electrical use by about one third, while improving copy speed.

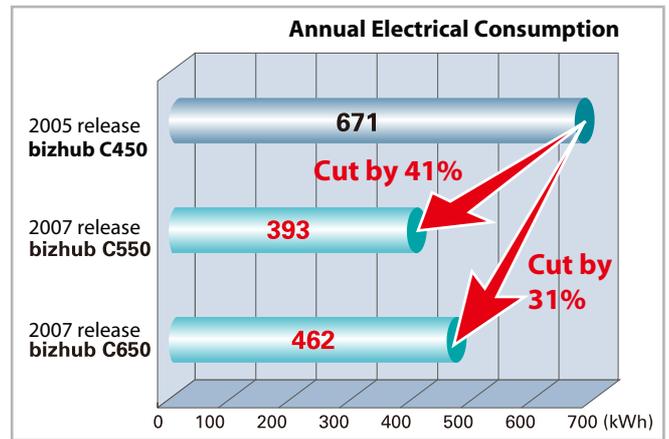
Launched in July 2007, the color MFP "bizhub C650" has achieved a startup time of less than 30 seconds when turned on with the sub-power switch,\* or less than 85 seconds when turned on from the main power switch.\* A shorter warm-up time is evidence of better warm-up performance. By speeding up the warm-up, we improved user convenience, and realized an energy-saving design that also reduces electrical consumption.

\* Sub-power switch: The power source for most machine operations, and is used as the daily power switch.

Main power switch: Controls the power to all of the machine's functions, and is usually left on at night so that, for example, the machine is able to receive faxes.



By introducing original energy-saving technology to the bizhub C650, Konica Minolta was able to achieve the typical electricity consumption (TEC\*) level of 28.87 kWh, for good environmental performance. This was done by introducing the Simitri Toner HD, which has a lower fusing temperature, by incorporating IH Fusing technology, which uses the principle of induction heating to warm just the surface of the fixing roller, and by operating to control electrical consumption at the optimal level for each mode. Compared to the bizhub C450 from two years ago, power consumption in the new C650 has been cut by about one third despite achieving copying speeds that are 40% faster.

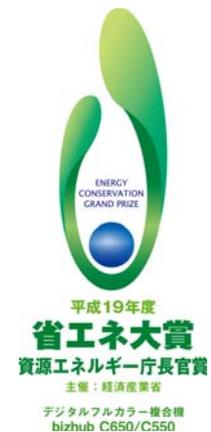


\* Based on the energy efficiency guidelines of the new International Energy Star Program, as of April 2007

	Black & white printing speed	Color printing speed	Annual electrical consumption*
<b>bizhub C450</b>	45 sheets / min.	35 sheets / min.	671 kWh
<b>bizhub C550</b>	55 sheets / min.	45 sheets / min.	393 kWh
<b>bizhub C650</b>	65 sheets / min.	50 sheets / min.	462 kWh

\* Annual power consumption: Obtained by multiplying the Typical Electricity Consumption (TEC) value, a standardized measurement established by the International Energy Star Program, by 52 (number of weeks per year).

The bizhub C650, as well as C550, won the Agency for Natural Resources and Energy Director-General's Award, in the 2007 Energy Conservation Grand Prizes hosted by Japan's Ministry of Economy, Trade and Industry.

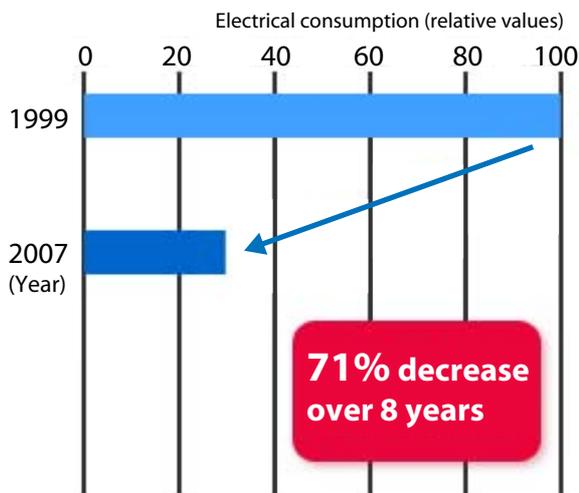


# Energy-Saving Performance of Digital X-Ray Imaging Devices for Medical Treatment

**We reduced device electrical consumption by about 70% over eight years.**

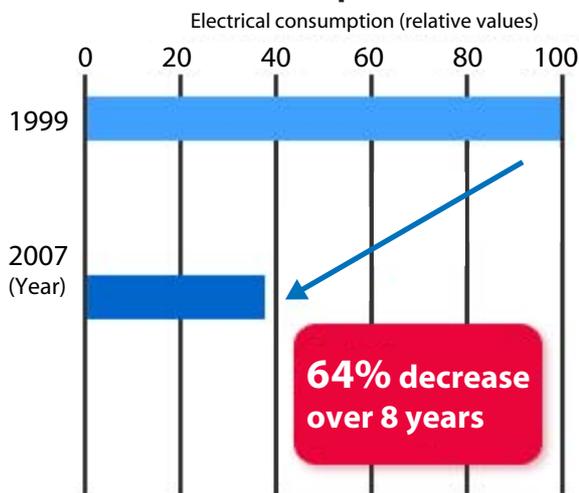
Energy conserving performance has been improved for our digital X-ray imaging devices, which are used in medical settings to process images generated by X-rays, CT scans, MRIs, and endoscopes. The "REGIUS MODEL110", a digital X-ray image reader, and the "DRYPRO MODEL832", a dry laser imager, both launched in 2007, feature 71% and 64% lower energy consumption, respectively, in comparison with previous models.

## REGIUS Electrical Consumption



"REGIUS MODEL110"  
digital X-ray image reader

## DRYPRO Electrical Consumption



"DRYPRO MODEL832"  
dry laser imager

## Reduction of CO<sub>2</sub> Emissions during Product Distribution

### We are minimizing the use of air transport.

The Konica Minolta Group has promoted a modal shift away from long-distance trucking to transport by rail and sea. We have also been working to improve our logistical efficiency through distribution center integration, joint transportation between distribution centers, and use of the return journey from product delivery to collect used copiers and photographic developer equipment. In fiscal year 2006, we established a goal to reduce CO<sub>2</sub> emissions during product distribution by 30% per unit of sales as compared to fiscal 2000 levels. To achieve this goal, we have accelerated our reduction efforts.

Konica Minolta Business Technologies Inc. (hereinafter referred to as "Business Technologies"), which produces and sells information equipment, is working to minimize air transport, which involve significant CO<sub>2</sub> emissions. Although the company usually uses ships for international transport, occasionally it has no choice but to use aircraft. Business Technologies has striven to decrease the frequency of air transport. In addition, the company is committed to reducing CO<sub>2</sub> emissions during distribution, by improving distribution efficiency through active reorganization of its worldwide distribution network.

## Reduction of CO<sub>2</sub> Emissions during Sales Stage

### We are using electric cars as service vehicles.

Konica Minolta Business Solutions Japan has been promoting the introduction of electric-powered vehicles. Service engineers use these vehicles when visiting customers to conduct maintenance of multifunctional peripherals (MFPs) and other equipment. Electric vehicles have less environmental impact than fossil fuel-driven vehicles, and their compact bodies afford better mobility in urban areas.



Electric-powered vehicles

## Environmentally Sound Products

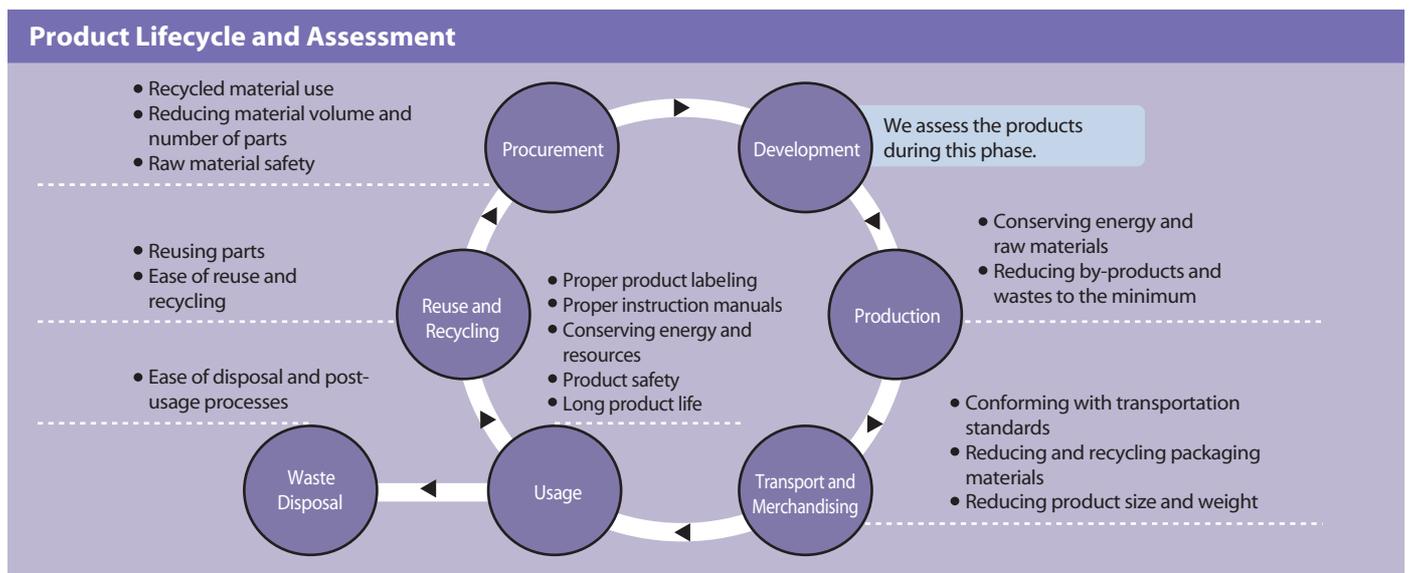
Reducing Environmental Impact throughout Product Lifecycle, from Manufacture and Use to Disposal

## Implementing the "3Rs"

### Environmental Soundness Check

#### Promoting Environmentally Sound Designs from a Comprehensive Viewpoint

Konica Minolta manufactures products under its Design for Environment approach, taking into account the various environmental aspects of our products, including global warming prevention, product recycling and hazardous emissions elimination. We assess the environmental impact at each stage in a product's lifecycle, from raw material/part procurement to manufacture, transportation/sale, use, reuse/recycling and disposal. We have established assessment criteria that enables us to take appropriate measures from a comprehensive viewpoint. During the new product planning phase, numerical targets are set for environmental goals regarding items of standard product assessment. During the prototype phase, we check whether the targets are being met. Then we do a final assessment before production, to ensure that only products meeting the targets reach the market.



## Resource Conservation through Design

#### Resource Conservation by Minimizing Product Size and Weight or Reducing Material Thickness

Designing products so as to use fewer raw materials greatly helps reduce raw material and energy consumption during production, as well as environmental impact upon product disposal. In keeping with our efforts to design environmentally sound products, Konica Minolta is committed to achieving ever more resource-saving designs.

## Digital X-Ray Imaging Devices for Medical Treatment

Digital X-ray imaging devices are used in medical settings to process images generated by X-rays, CT scans, MRIs, and endoscopes. Through resource-conservation efforts in product design, we have reduced the weight of our digital X-ray imaging devices by over two-thirds in the last eight years. The weight of the "REGIUS MODEL110", a digital X-ray image reader, and the "DRYPRO MODEL832", a dry laser imager, both launched in 2007, was reduced by 71% and 79%, respectively, in comparison with previous models.



"REGIUS MODEL110"  
digital X-ray image reader

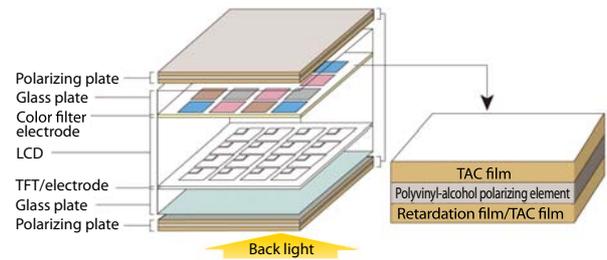


"DRYPRO MODEL832"  
dry laser imager

## Reducing Thickness of TAC Film for Liquid Crystal Displays

In an effort to help promote further resource-saving, Konica Minolta has reduced the thickness of triacetyl cellulose (TAC) film—used to protect liquid crystal display polarizing plates—by half, as compared with conventional film.

Structure of liquid crystal panel



## Saving Resources in Lenses and Lens Units

In seeking to reduce the resources used in our products, Konica Minolta has reduced the size and weight of the lens and lens barrel components. These lenses and lens units are used in digital cameras, camcorders and mobile devices, which are becoming increasingly lighter and compact.



## Reuse and Recycling of Information Technology Equipment

We promote measures to facilitate the recycling and reuse of digital multifunctional peripherals (MFPs), which combine copier, printer and other functions. In terms of recycling, we have established a Practical Design Manual for Recycling, to enable easy removal of recyclable parts and resources from used products.

### Promoting Recycling through Uniformity of Outer Casing Plastics

All outer casing parts for every MFP are made from the same two types of plastic, so as to foster a closed material-recycling loop for recycling plastics from end-of-life MFPs and incorporating them into the manufacture of newer models.

We focus particularly on recycling into outer casing parts, which require high levels of appearance, strength and flame resistance. We have installed a crusher for this sole in our recycling facilities, and reinforced the foreign matter removal mechanism for recycling. In so doing, we have enabled the recycling of high purity plastics. Each year, approximately 100 tons of plastics are recycled.



Outer Casing Plastic Part of MFPs

### Collecting and Recycling Printer Cartridges

Konica Minolta has established a system for free-of-charge collecting and recycling of used toner cartridges in 18 European countries, as well as in the U.S. Puerto Rico and Japan. In North America and Europe, this system is called the Clean Planet Program.



## Collecting and Recycling Used MFPs, Printers, and Other Products

### Promoting Action for all Products, including Non-RoHS Designated Products

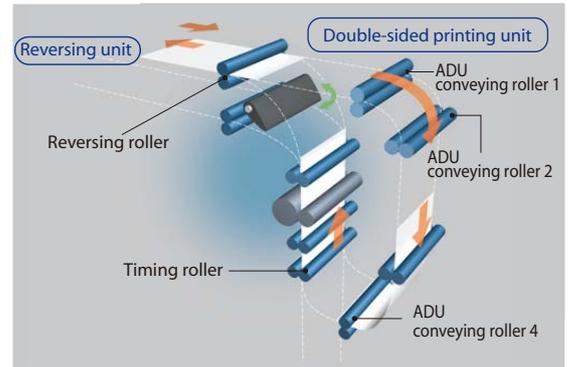
In Japan, under a special scheme to certify industrial waste disposal manufacturers for wide-area recycling, the Ministry of the Environment authorized Konica Minolta to collect used copiers, MFPs, and printers as the manufacturer who sold these products. This has enabled Konica Minolta to implement its Program to Collect Used Laser Printers and Copiers, under which such products used by corporate customers are collected and recycled on a chargeable basis.

**Note:** According to relevant laws and regulations, the Program does not cover equipment and devices used by individual customers, since such equipment and devices are categorized as non-industrial waste. Also, in overseas countries, we have carried out activities tailored to the circumstances of each market. In Europe, measures are under way in compliance with the EU directive on Waste Electrical and Electronic Equipment (WEEE).

## Color MFP That Realizes 100% Duplex Productivity

In forest resource conservation, reduction in paper use in offices is important; double-sided printing is an effective means of achieving such reduction. The color digital MFP bizhub C650 realizes high-speed printing (50 pages per minute\*) when outputting double-sided color pages, thanks to a reversing roller and paper feed control system that feeds three sheets alternately. By securing productivity equal to one-sided printing, the bizhub C650 thus makes it easier to use double-sided printing, and supports our customers' efforts to reduce paper use in their offices.

\* When A4 size paper is fed in widthwise.



## 3Rs in Product Distribution and Marketing

**We are promoting the recycling of used packaging materials through a greenhub recycling center in the UK.**

Konica Minolta Business Solutions (UK) Ltd., an office equipment sales company, has succeeded in reducing its used packaging landfill waste to zero. At a recycling station known as "greenhub" in its central warehouse, pallets, paper, plastic, and other product packaging delivered to the company are separated according to material type, before being handed over to a recycler. The new addition of mechanical compactors has made the recycling operations at greenhub even more efficient.



### New machinery



This machine compresses polystyrene into briquettes. Previously dumped into landfills, an average of 1.5 metric tons of polystyrene waste per month is now sent out for recycling.



This machine compacts cardboard. Every year about 46.8 metric tons of cardboard is sent out for recycling. The machine can handle plastic in the same way.



This cardboard shredder is specially designed for turning cardboard boxes into cushioning material for packaging, enabling recycling to occur in-house.

## Procurement of Copy Paper

### Procuring Copy Paper in Consideration of Forest Resource Conservation

Konica Minolta Business Solutions Co., Ltd., a sales company of information technology equipment in Japan, has established the PPC Paper Purchase Standards, which have been implemented since 2007. The Standards stipulate that copy paper to be supplied to customers should be procured taking into account the impact of forest destruction and degradation on living environments of animals, plants, and people.

## Environmentally Sound Products

Reducing Environmental Impact throughout Product Lifecycle, from Manufacture and Use to Disposal

## Elimination of Hazardous Substances in Products

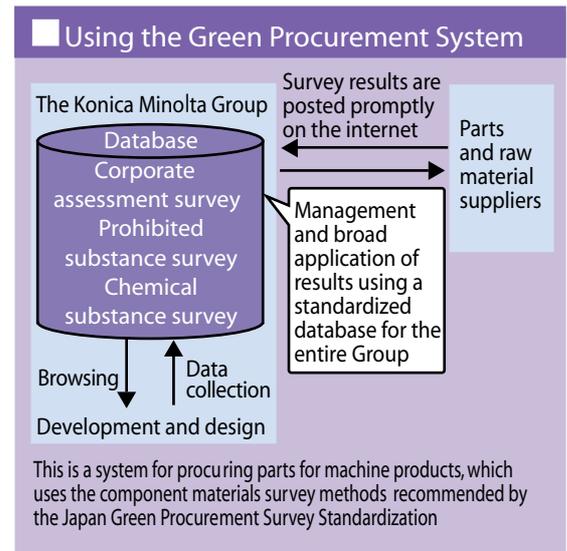
### Green Procurement

#### Global Promotion of Green Procurement

To ensure that products are environmentally sound, it is necessary to check the environmental impact of the raw materials and parts that go into those products. This is why the Konica Minolta Group promotes its Green Procurement Policy globally. To our raw materials and parts procurement assessment criteria (quality, cost and delivery), we have added environmental factors to ensure emphasis on materials and parts with less environmental impact.

We have also augmented our Green Procurement criteria with substance assessment, whereby we evaluate substances contained in raw materials and parts to be procured. We also use corporate assessment surveys to evaluate our suppliers in terms of their environmental management systems. This survey data is saved in an information database and shared throughout the Group.

To promote management of hazardous chemical substances in our parts supply chain for office equipment, strong partnerships have been established with suppliers by conducting on-site diagnoses and providing them with training support, so as to reduce environmental risks. Konica Minolta visits the manufacturing sites of all its suppliers in Japan and China, helping suppliers to strengthen their hazardous substance management systems. As a result, the percentage of suppliers achieving the highest environmental management level rose from 60% at the beginning of fiscal 2007, to over 80% by the end of that fiscal year.



## Meeting European Environmental Regulations

**We are complying with the RoHS Directive, for products sold both in Europe and around the world.**

### RoHS Directive Compliance

In July 2006, the RoHS Directive came into effect in the EU, prohibiting the sale of electrical and electronic devices containing lead, cadmium, mercury, hexavalent chromium or two types of polybromic fire retardants. With the help of its suppliers, the Konica Minolta Group has already discontinued the use of these specified substances in all RoHS-designated products. We have also achieved the complete elimination of these substances not just from the RoHS-designated products, but from all of our machinery products, in advance of any future directive expansion. Only some industrial devices with a long product life are exempted from the substance elimination. Finally, as new models are developed, the substances will be completely eliminated from those products that still contain them.

### Preparing for REACH Compliance

In December 2006, a new EU regulatory framework called REACH was put in place, combining all past regulations on chemical substances. REACH requires even tighter management of hazardous substances in products, and calls for information conveyance in addition to sales restrictions.

The Konica Minolta Group is currently building a new system for checking whether parts and materials used in machinery products contain hazardous substances.

## Action to Control Chemical Substance Emissions from Products

**We are meeting Germany's Blue Angel standards, and providing safer products.**

We pay particular attention to maintaining a comfortable office environment when we design and develop information technology equipment for office use, such as multifunctional peripherals (MFPs) and printers. To minimize the impact of our products on the office environment, we have been striving to develop products that satisfy the strict criteria of Blue Angel, a standard that rigorously restricts operational noise and emission of volatile organic compounds (VOCs), in addition to environmental impact in the broader sense.

The Federal Institute for Material Research and Testing, Germany, certified two of our laboratories in Japan as institutions qualified for measuring chemical substance emission levels, the measurement of which is required for filing applications for Blue Angel certification. This helps reduce the time necessary for acquiring certification. Moreover, our product developers can now obtain rapid feedback on the measurement results, which enables the creation of safer and more reliable products.

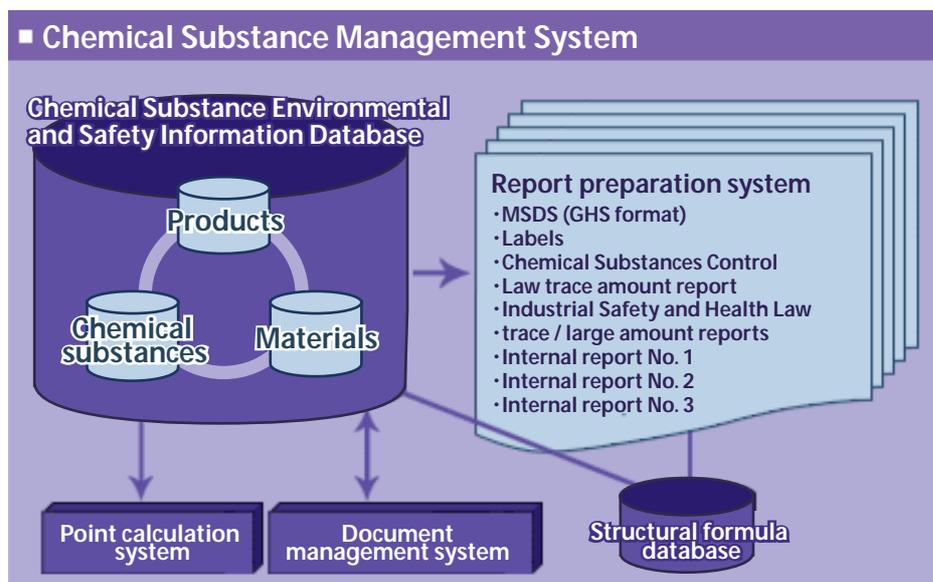


Blue Angel mark  
(Germany)

## Chemical Substance Environmental and Safety Information Database

We are compiling information on chemical substances, for use in safe designs and risk management.

Konica Minolta has built and is utilizing its own "Chemical Substance Environmental and Safety Information Database", as a tool for comprehensive management of chemicals throughout product lifecycle. This system provides a database for unified management of information such as worldwide national regulations on chemical substances, information on physical and chemical properties, as well as the results of Konica Minolta's safety evaluations, including the hazardous and harmful properties of chemical substances.



The database allows internal users to link to and access literature and test results forming the basis of evaluations, and first-order information such as Material Safety Data Sheets (MSDS) obtained from material manufacturers. Since this database can be accessed via the intranet, the development and production departments and others are able to take advantage of the information. The data is useful for risk management of chemical substances relating to safe product design, operational safety, and environmental conservation.

Since the relationships between products, materials and chemical substances are recorded in the system, Konica Minolta is able to respond with confidence to the frequent changes in the chemical regulations maintained by countries around the world. Moreover, using the unified information in this system, all kinds of forms and reports can be prepared. This means that we can provide customers with highly reliable information, including MSDS that conform with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

## Environmental Efforts at Konica Minolta Group Sites

At Konica Minolta group companies worldwide, employees are united in their efforts to reduce environmental impact.

### Site-Specific Efforts to Prevent Global Warming

#### Targets for Reduction of CO<sub>2</sub> Emissions at Group Sites

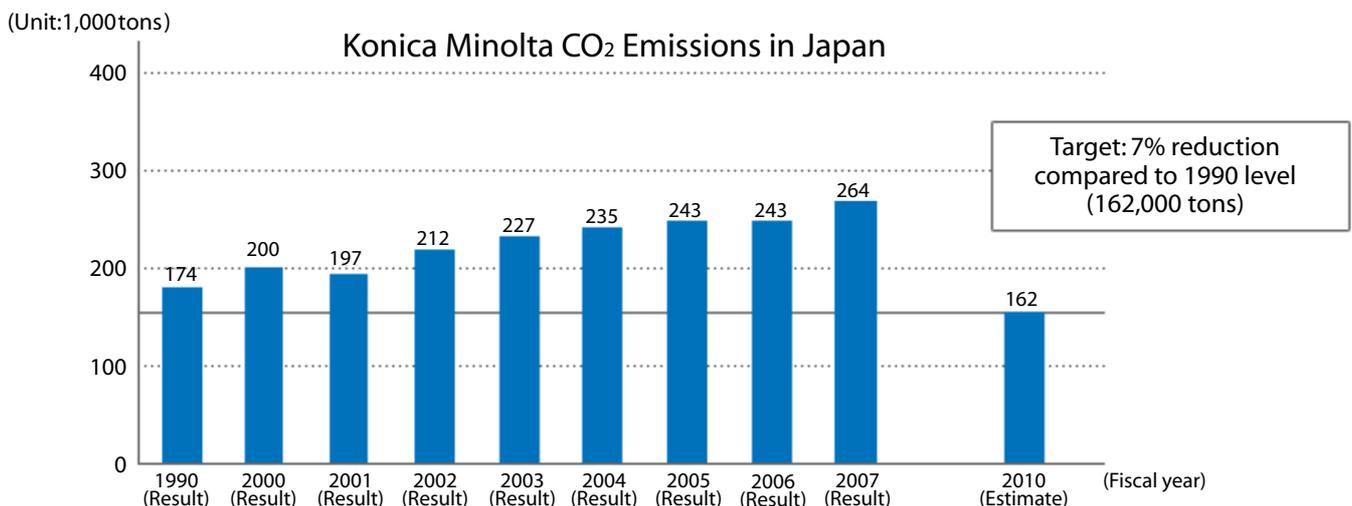
**We are aiming for a 7% reduction in CO<sub>2</sub> emissions from our factories and offices by 2010.**

With the start of the first commitment period of the Kyoto Protocol in 2008, corporate responsibility for reducing CO<sub>2</sub> emissions from group sites has increased even further. Konica Minolta has established a challenging target: "a 7% reduction of CO<sub>2</sub> emissions from group sites in Japan by fiscal 2010, compared to fiscal 1990 levels." This goal is even more stringent than the 6% reduction target Japan committed to meet under the Kyoto Protocol. We have also set another target, "a 7% reduction of CO<sub>2</sub> emissions from group manufacturing sites in the U.S., Europe, and Asia by fiscal 2010, compared to fiscal 2000 levels," in order to redouble our energy-saving efforts throughout the world. To achieve these targets, each business company has set out its own targets per unit of production or other operational measure, thus promoting initiatives directly aligned with business activities.

#### Results in Japan

**CO<sub>2</sub> emissions for fiscal 2007 were 264,000 tons.**

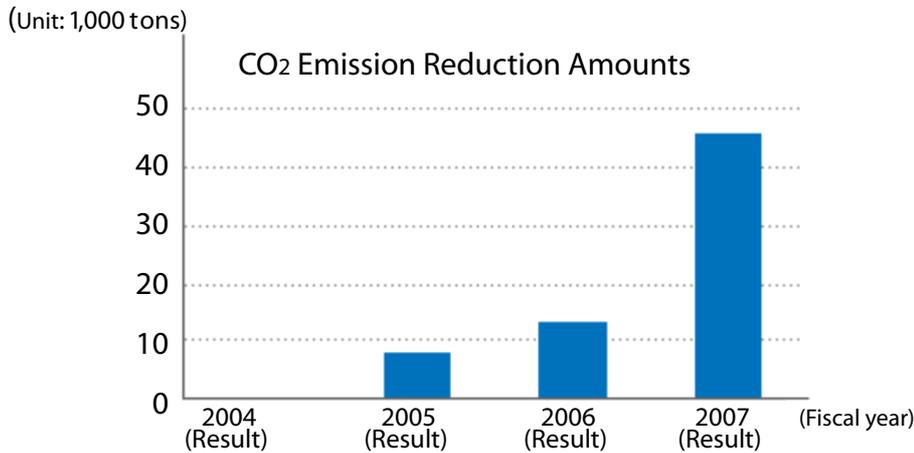
In fiscal 2007, CO<sub>2</sub> emissions from all sites in Japan rose 8.6% over the previous year to 264,000 tons (a 43.8% increase compared to the fiscal 1990 level). The group's companies in Japan are striving to conserve energy through the incorporation of the latest energy-saving technologies at new factories and by improving production efficiency in all business areas.



Note: Based on usage results of all sites, and includes estimates for part of the fiscal 1990 data. For the emissions coefficient for electricity and natural gas, results for all the suppliers were used, and results for the previous fiscal year were used for figures not yet released. Regarding other fossil fuels, coefficients were used based on Japan's Law Concerning the Promotion of Measures to Cope with Global Warming.

In fiscal 2007, the material flow cost accounting (MFCA) method was introduced on a trial basis in order to help "visualize" process energy loss. Through this trial implementation, measures to reduce energy use by 15% were identified. Studies are currently underway with a view to full-scale implementation of these measures.

Konica Minolta is also undertaking initiatives for visualizing CO<sub>2</sub> amounts reduced through the execution of energy conservation measures. A reduction of 450,000 tons was confirmed, which was obtained in the form of the difference between the fiscal 2007 results and the estimate CO<sub>2</sub> emissions if the fiscal 2007 production had been carried out using the production units from fiscal 2004, which were the benchmarks in the medium-term environmental plan.

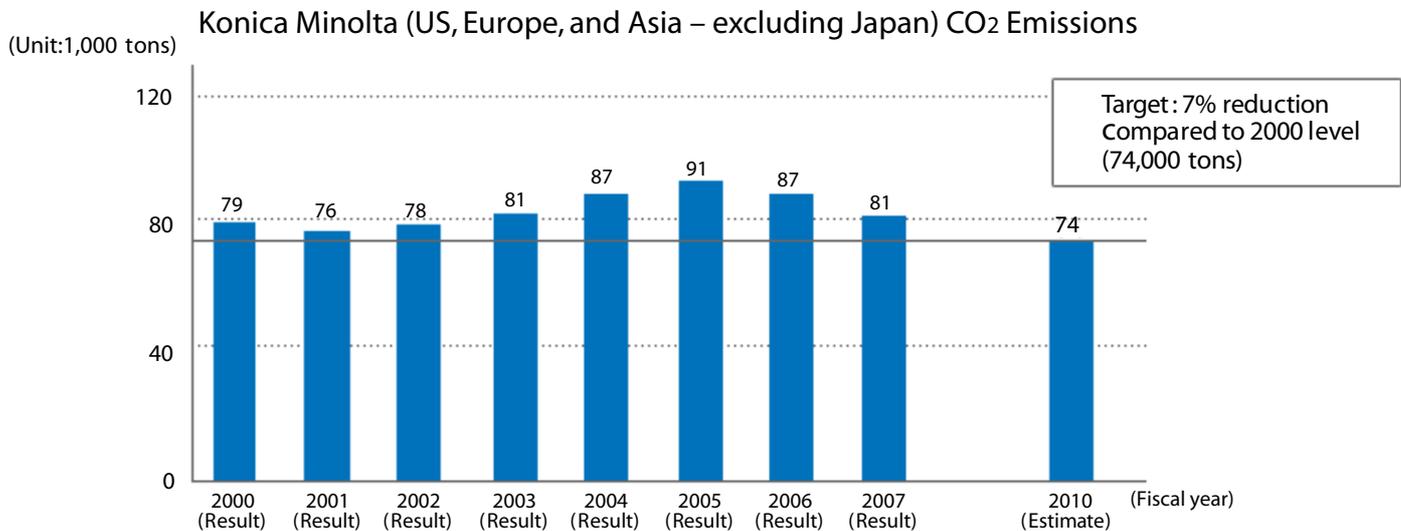


Thanks to the execution of these energy saving measures, greater CO<sub>2</sub> reduction amounts were achieved. However, a new factory was built to produce LCD-protecting TAC film at the Kobe Site, which was completed in November 2007. As a result of this construction, CO<sub>2</sub> emissions from Konica Minolta sites in Japan increased during this year. Since future factory strengthening and production expansion may lead to greater CO<sub>2</sub> emissions, Konica Minolta is preparing to obtain emission rights as a measure to supplement its thorough energy conservation efforts.

## Results Outside Japan

### CO<sub>2</sub> emissions were 81,000 tons in fiscal 2007.

In fiscal 2007, CO<sub>2</sub> emissions from all sites in the US, Europe, and Asia (excluding Japan) fell 6.5% over the previous year to 81,000 tons (a 2.4% increase compared to the fiscal 2000 level).



**Note:** Based on usage results of all sites, and includes estimates for part of the fiscal 1990 data. For the emissions coefficient for electricity and natural gas, results for all the suppliers were used, and results for the previous fiscal year were used for figures not yet released. Regarding other fossil fuels, coefficients were used based on Japan's Law Concerning the Promotion of Measures to Cope with Global Warming.

There was a temporary decrease in CO<sub>2</sub> emissions due to the effects of Konica Minolta's withdrawal from the camera and photo business. However, further reduction efforts are needed as an increase in CO<sub>2</sub> emissions is expected from fiscal 2008 onward. This is due to expanded production at various factories, and to the new construction and reinforcement of a glass substrate factory for hard disks completed in March 2008 in Malacca, Malaysia.

## Energy-Conservation Support Program

### We are sending energy management experts to our factories to identify energy-saving measures.

Konica Minolta has implemented an Energy-Conservation Support Program, dispatching energy management professionals to various factories to check the status of energy and equipment use, and identify energy conservation measures.

In fiscal 2007, we sent energy management experts to two factories in China, and started the Energy-Conservation Support Program there. As a result, measures have been identified to reduce energy use by about 10% at each factory.



Energy-Conservation Support Program being carried out at Konica Minolta Business Technologies (Dongguan) Co., Ltd.



Energy-Conservation Support Program being carried out at Konica Minolta Optical Products (Shanghai) Co., Ltd.

For fiscal 2008, along with the implementation of the identified measures, we are planning to expand the program to other factories in China, as well as those in Europe and the US.

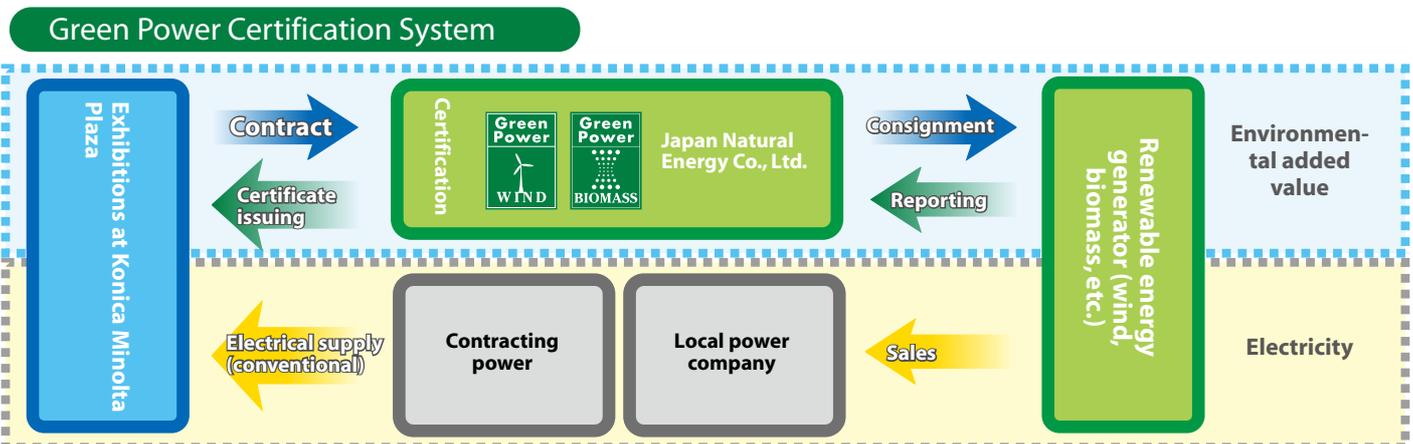
## Using Green Electricity

### We purchase green electricity for our exhibitions at Konica Minolta Plaza.

Located in Tokyo, the Konica Minolta Plaza is the group's venue for providing the public with various types of information, including social, cultural, and artistic exhibits. As of March 2008, Konica Minolta Plaza uses only low-environmental-impact electricity procured through the green power certification system to cover electrical needs for all its exhibitions.

Green power is electricity made from renewable energy sources such as wind and biomass. In addition to the electricity itself, it benefits us in terms of "environmental added value," which represents the advantages of green power including a reduction in CO<sub>2</sub> emissions, and energy conservation (reduced use of fossil fuels). The green power certification system allows Konica Minolta to receive certificates for the environmental added value of electricity that it purchases.

Having a green power certificate means that the group purchased the environmental added value of electricity, in addition to the regular electricity supplied by the power company. In other words, it certifies that green power was used. During the year, the Konica Minolta Plaza used 72,000 kWh of electricity for its exhibits. In fiscal 2008, about 90% of this amount was biomass electricity from power stations in Iwate, and in Tokyo. The remaining 10% essentially came from the wind turbine power facility in Chiba.



## Rooftop Greening

**We factory on rooftops in order to create more green space and also to reduce the energy required for heating and cooling.**

By carrying out rooftop greening, Konica Minolta is helping to fight global warming, while also reducing the heat island effect around these sites.

The Konica Minolta Itami Site began its rooftop greening project in fiscal 2006. In April 2008, planting was also carried out on the roof of a new building completed at the Osakasayama Site. The building also has a courtyard on the top floor, where more natural light comes into the building interior, which reduce the need for lighting and provides additional energy savings.



Itami Site (rooftop greening)



Osakasayama Site (rooftop greening)



Osakasayama Site (natural light from the courtyard helps illuminate the interior)

## Team Minus 6%

"Team Minus 6%" is the nickname of a national campaign waged in Japan to fight global warming by achieving the 6% reduction commitment stipulated in the Kyoto Protocol. In support of the campaign's objective, Konica Minolta has enrolled as a member of "Team Minus 6%" and is taking the following measures.



みんなで止めよう温暖化

チーム・マイナス6%

### 1) In-house measures

1. Recommended air conditioning settings of 28 degree C in summer, and 20 degree C in winter  
Putting up posters to advertise Company participation in "Team Minus 6%" to all employees and calling for their all-out efforts.  
Promoting "Cool Biz" and "Warm Biz" campaigns to encourage employees to dress down in summer and dress warmly in winter, so as to adapt to appropriate room temperature settings.
2. Efficient operation of elevators  
"Two-up and Three-down" campaign (use stairs, rather than elevators, when going up two floors and down three floors).
3. Energy-saving on office lighting and OA equipment  
Turning off power when lights are not needed.  
Using energy-saving mode and turning off power when OA equipment is not in use.

#### 4. Promotion of idling stops

- \* Stopping engine idling in Company-owned vehicles when not in motion.
- \* Requesting vehicles entering Company premises to stop idling engines when not in motion

#### 2) Activities at home

Encouraging employees to act on the "Team Minus 6%" campaign even at home.

#### 3) Activities outside the Company

Encouraging active participation in related campaigns and other events organized outside the Company (mainly via the Corporate Communication & Brand Management Departments).

## Environmental Efforts at Konica Minolta Group Sites

At Konica Minolta group companies worldwide, employees are united in their efforts to reduce environmental impact.

### Zero Waste Sites

#### Basic Approach

##### Zero Waste Activities with Due Regard to Economics

The Konica Minolta Group is lightening its environmental impact and cutting down on the amount of waste that it produces by setting a goal of reducing its total waste disposal at all sites by 20% in fiscal 2010 compared to the fiscal 2000 level. To achieve this goal, the group is promoting zero waste activities at production bases to minimize landfill waste through recycling. The criteria, which Konica Minolta categorizes as either Level 1 or Level 2, are implemented at each site. Level 1 calls for the reduction of landfill waste by recycling. After reaching Level 1, the site aims to meet Level 2 standards for reducing the volume of waste per unit of sales.

In our Level 1 zero waste criteria, we include targets for recycling and final disposal (landfill) rates, as well as for cost-cutting. We have also established stricter Level 2 zero waste criteria. To reach Level 2, we have to meet the reduction rate targets for externally discarded waste volumes, while also striving for greater reductions in cost and risk. Characteristically, Konica Minolta's zero waste activities are integrated into management, from the perspective of both risk management and economy.

To fulfill our zero waste goals, first we try to avoid unnecessary acquisitions, and to fundamentally reduce waste in both resources and costs. Second we use all acquired resources efficiently, minimize waste generation and try to reduce the volume of externally discarded waste by implementing internal recycling. In terms of waste remaining even after such processes, we promote external recycling so as to reduce landfill volume to the minimum possible.

#### Konica Minolta Group's zero waste criteria

##### Level 1 criteria

Recycling rate must be 90% or higher.

Final disposal rate should be 5% or lower (including secondary residue).

Cost reduction is achieved when the cost saving effects are at least 90% of the total recycling cost paid to outside parties (compared to the benchmark fiscal year), or when the sales of recycled materials and benefits from zero waste activities are greater than the total recycling cost paid to outside parties.

##### Level 2 criteria

Achievement of Level 1 zero waste.

Volume of waste discharged externally per unit of sales must be reduced by 30% (compared to FY 2001).



Result of zero waste activities:  
¥ 3.9billion annual savings FY2007

## Thorough Risk Management

### Integrated Management of Information on Appropriate Handling of Waste Disposal

---

We implement risk management to ensure that discarded waste is reliably and properly handled. For Group companies in Japan, we have established criteria for selecting waste disposal contractors. Through careful investigation, including preliminary and field surveys, we select reliable contractors who are then registered and managed in a database.

The database also includes a wide range of related information, such as illegal waste disposal, laws and regulations, environmental technologies and other knowledge accumulated within the Group. Such information is managed in an integrated manner, to ensure the most appropriate waste disposal and improve the level of zero waste activities throughout the entire Group.

Konica Minolta has started applying the same criteria for selecting waste disposal contractors at group companies in other parts of the world as it does in Japan.

## Resource Recovery and Waste Volume

### **By promoting resource recovery, we achieved reductions in both waste handled outside the company and final landfill disposal.**

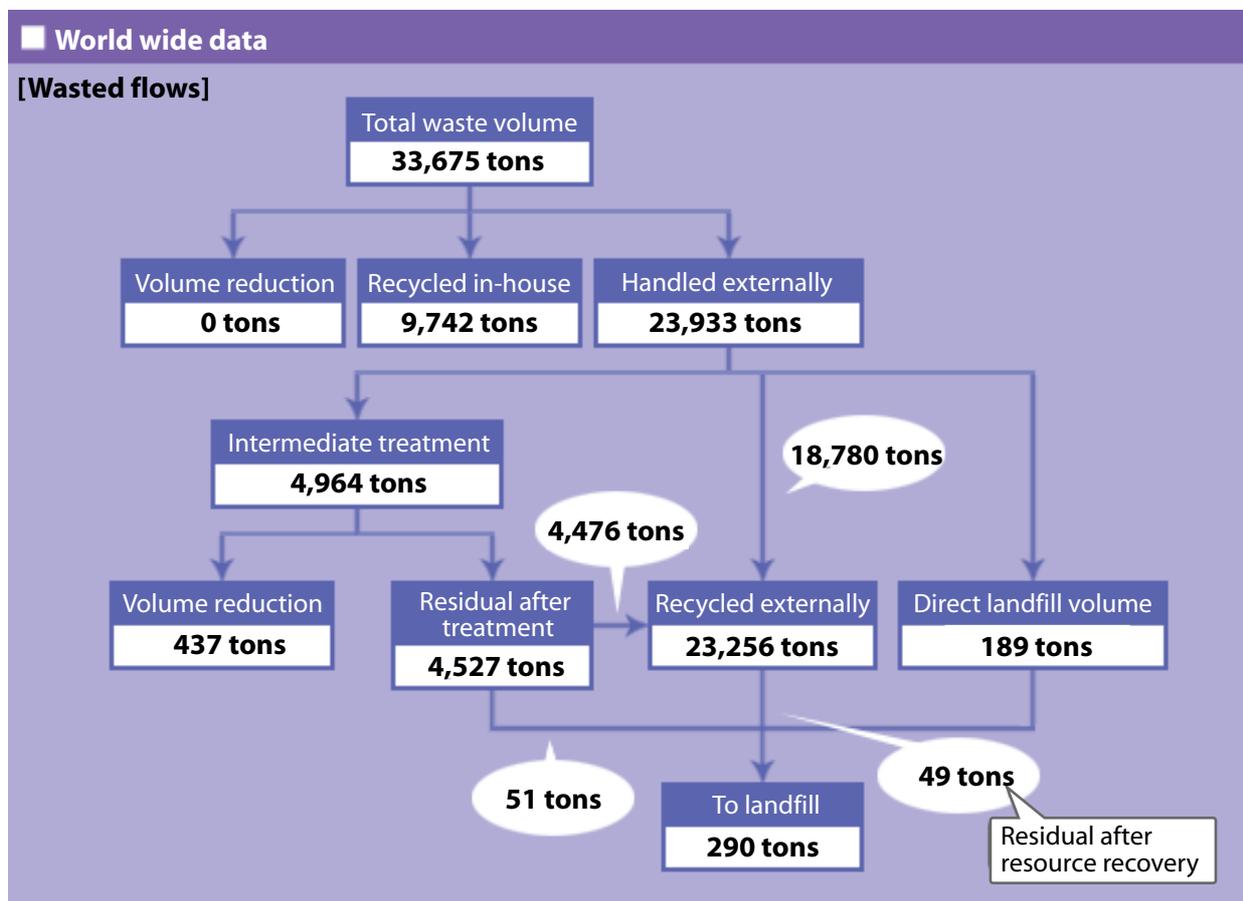
---

In pursuing resource recovery, top priority is given to the in-house recycling of leftover materials produced in the manufacturing process. In cases where in-house recycling is not possible, the leftovers are sent outside for advanced recycling. To facilitate this effort, we research and develop new recycling and production technologies.

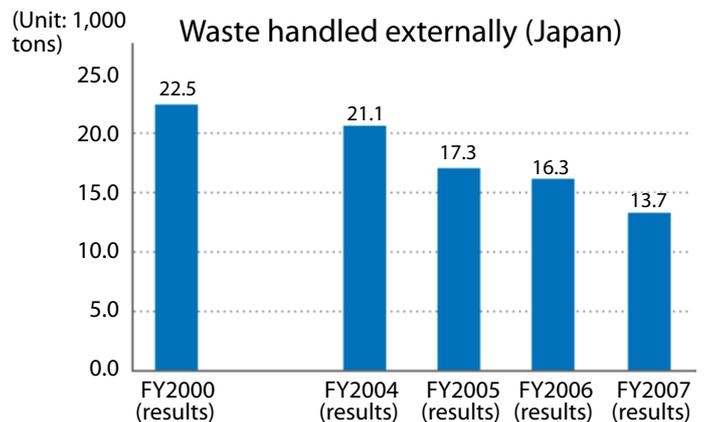
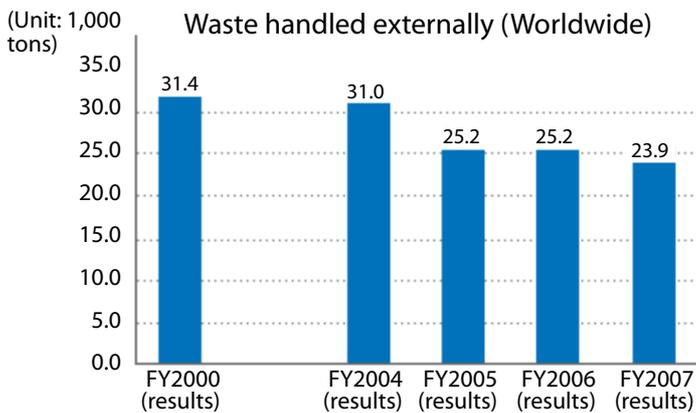
Regarding landfill disposal, we feel that the handling of secondary residuals, those that remain after energy recovery and other recycling processes, is also the responsibility of waste producers. Accordingly, we are acutely aware of disposal volume. To reduce landfill volume we thoroughly implement waste separation and select an appropriate recycling route after checking the secondary residual volume.

World wide data

[Wasted flows]



As a result, in fiscal year 2007, the total waste volume from group manufacturing sites worldwide was 33,675 tons, the volume of recovered resources (the volume recycled in-house and externally) was 32,998 tons and the landfill volume was 290 tons. Thus, the resource recovery rate was 98.0% and the final disposal rate (landfill rate) was 0.9%. Total waste handled externally was 23,933 tons, a 33% reduction from the 2000 level.



The total waste volume from group manufacturing sites in Japan was 23,406 tons, the volume of recovered resources (the volume recycled in-house and externally) was 23,149 tons and the landfill volume was 39 tons. Thus, the resource recovery rate was 98.9% and the final disposal rate (landfill rate) was 0.2%. The amount of site waste handled externally was 13,670 tons, which was a reduction of 39% compared to fiscal 2000.

Thanks to the waste reduction activities for the Level 2 zero waste criteria, such as the efficient use of resources and loss reduction, there was a drop in waste handled externally. In the future, Level 2 zero waste achievement will be promoted at sites outside Japan.

## Achieving Zero Waste Targets

### We are stepping up our zero waste efforts worldwide.

In fiscal 2007, we achieved Level 1 zero waste status at one site in China. Many newspapers and websites in that country reported on our zero waste initiative. As a result, there are now three Konica Minolta sites in China that have achieved Level 1 status. In Japan, with the last six sites having now achieved Level 2 zero waste status, all production sites have achieved Level 2 status.

In fiscal 2008, we will further promote zero waste activities on a worldwide scale.

### Sites that achieved zero waste goals in fiscal 2007

#### Level 1

##### **Konica Minolta Optical Products (Shanghai) Co., Ltd.**

This company produces mainly lens units for digital cameras, and micro-lens units for mobile phones. Waste from this site includes leftover plastic and used cleaning fluid. The company has focused on training to raise the environmental awareness of employees in order to advance the zero waste activities. As part of this effort, there has been thorough sorting of waste, and substantial increase in recycling based on measures to increase the types of items that can be recovered as resources. The site carries out evaluation including local audits using the same Konica Minolta Group evaluation standards as used in Japan. When evaluation standards for things such as disposal method and risk are not met, the recycling route is reselected. In this way, the optimal recycling routes were chosen.



#### Level 2

##### **Konica Minolta Supplies, Co., Ltd.**

This company produces polymerized toner and organic photo conductor drums, and its main wastes are effluent and used solvent. Waste volume was primarily reduced by putting toner production on a special line, and by minimizing changeover loss. There was also an initiative to internally recycle applied solvent used in the production of photo conductor drums, which resulted in a large reduction in waste solvent.



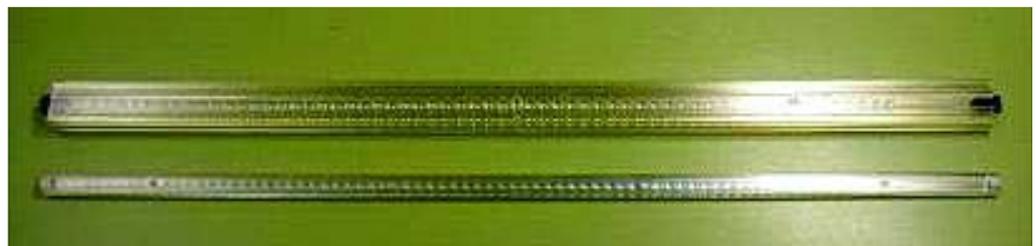
Tatsuno Factory: Began operation in January 2007

##### **Konica Minolta Opto Inc., OC Division (Hachioji)**

This company produces mostly aspheric plastic lenses, and leftover plastic is the main waste created by the production process. The waste plastic generated during the manufacturing of aspheric plastic lenses is effectively reused as packaging material for product shipment.



Aspheric plastic lenses



Shipment packaging material

### **Konica Minolta Chemical Co., Ltd.**

This company carries out high-precision resin molding, and electronic substrate manufacturing for MFPs. The main wastes are leftover plastic and byproducts from the production process, as well as shipment packaging material from suppliers.

The leftover plastic generated at the time of MFP part molding is reused as raw material. Moreover, through the recycling and reuse of unwanted solder emitted from the electronic substrate manufacturing process, and the reuse of shipment trays for parts received, the company has greatly reduced its waste. It has also reduced waste handled externally, through effective utilization of internal equipment.

### **Konica Minolta Electronics Co., Ltd.**

This company carries out high-precision resin molding, and electronic substrate manufacturing for MFPs. The main wastes are leftover plastic and byproducts from the production process, as well as shipment packaging material from suppliers.

The leftover plastic generated at the time of MFP part molding is reused as raw material. Moreover, through the recycling and reuse of unwanted solder emitted from the electronic substrate manufacturing process, and the reuse of shipment trays for parts received, the company has greatly reduced its waste. It has also reduced waste handled externally, through effective utilization of internal equipment.



Electronic substrate

### **Konica Minolta Technoproducts Co., Ltd.**

This company assembles products such as printers and medical devices. The main waste is shipment packaging from parts and units delivered by suppliers.

As part of initiatives for developing clean and functional production processes, the company thoroughly restricts the bringing in of shipment packaging that is unnecessary for product assembly. Konica Minolta Technoproducts has succeeded in greatly reducing waste by reusing packing material and in introducing returnable containers and special cases for supplied parts.



Returnable container that protects contents from static electricity



Special case for suction cups

### **Konica Minolta Components Co., Ltd.**

This company produces mainly micro-lens units for mobile phones, and the primary waste is leftover plastic. It reduced waste by reusing plastic left over from micro-lens manufacturing for the production of vapor-deposition trays. Moreover, Konica Minolta Components has strengthened cooperation with group companies outside Japan, promoting returnable containers for part shipment. This has helped reduce waste throughout the group.

## Environmental Efforts at Konica Minolta Group Sites

At Konica Minolta group companies worldwide, employees are united in their efforts to reduce environmental impact.

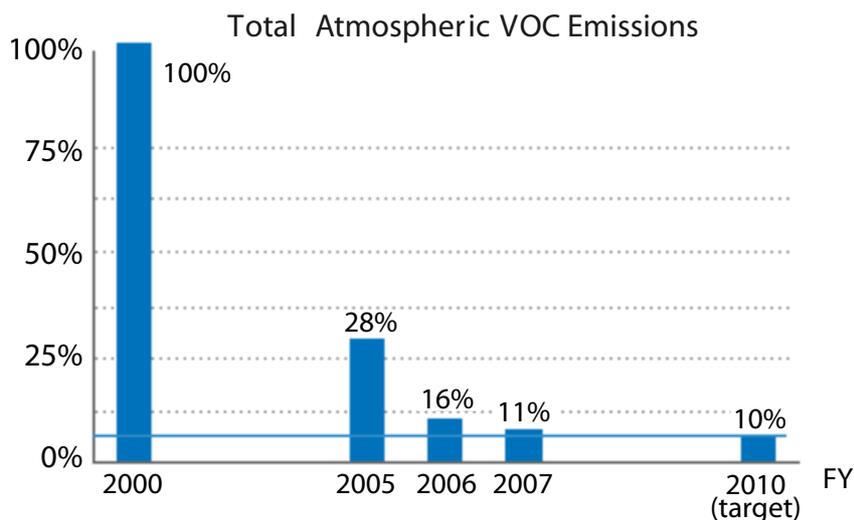
### Chemical Management at Group Sites

#### Reduction Measures for Priority Chemicals

**Konica Minolta follows its Master Plan for Chemical Safety Management to reduce the risk of hazardous chemicals.**

Of the many chemical substances we use at our factories, since 1997, the Konica Minolta Group has voluntarily set reduction targets, prioritizing several types of volatile organic compounds (VOCs)\* that are deemed particularly risky in terms of toxicity and usage volume. We are promoting chemical reduction activities using the same standards worldwide, with group-wide targets that also cover production sites outside Japan.

We have established Konica Minolta's original risk indicator, as defining the risk posed by the adverse effects of VOC atmospheric emissions which is the sum of the human health risk and the air pollution risk. We have set a target on the basis of this indicator. The target is to cut emissions in fiscal 2010 to 1/10th the level of fiscal 2000.



We were not able to achieve our fiscal-2007 target to cut emissions by 90% of the fiscal 2000 level, but we did manage to achieve 89% reduction, putting us very close to the goal. In fiscal 2008 and beyond, Konica Minolta will continue to reduce atmospheric emissions.

\* VOCs are widely used in detergents, solvents, and fuel. In recent years they have been regarded as hazardous substances that cause pollution like photochemical smog and health problems like sick-house syndrome

#### Safety Management for Chemicals

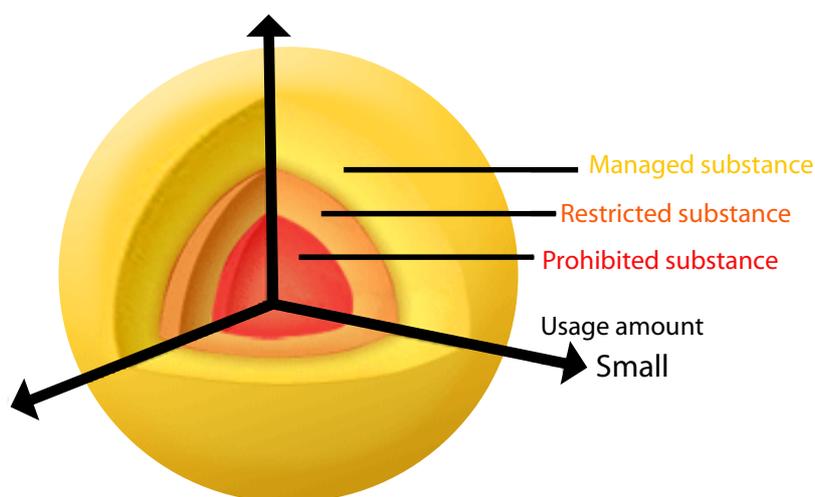
**We evaluate the risk of chemicals in advance, and strive to prevent accidents and any harmful impact on the environment.**

Konica Minolta strives to prevent chemical-related accidents and adverse environmental impact. This is done by carrying out pre-manufacturing evaluation and risk management (based on our safety verification system), and the advance investigation of risk management necessary for any new chemicals to be adopted.

In fiscal 2007, the evaluation scheme for the safety verification system was revised. Previously we assigned points based on hazardousness posed by individual chemicals and the amounts used. By incorporating the exposure format into the evaluation, it is now possible to carry out the initial risk assessment more efficiently.

Using this system, risk evaluation is carried out from various standpoints including product safety, environmental protection, and labor safety. Konica Minolta determines the content of its chemical management by focusing on chemicals to be avoided, and those that require strict management, according to the usage conditions.

### Risk Assessment Factors and Determination



Note: The closer to the center of the sphere, the higher the level of risk.

Chemicals that require care in handling are listed as Konica Minolta's managed chemicals. When they are brought into a manufacturing process for the first time, whether in Japan or elsewhere, safety measures are confirmed in advance by internal and external experts, as well as by an industrial physician.

## Countermeasures against Contamination of Soil and Groundwater

### Reliable Management of Contaminated Sites through Regular Inspections and Further Purification to Prevent Contamination Spread

We survey our sites in Japan that have a history of using chemical substances, which may have caused soil or groundwater contamination. If any contamination of soil or groundwater is found at our sites, we implement regular inspections for more reliable management, so as to prevent identified pollutants from impacting the neighborhood.

To facilitate purification of contamination and prevent any further spread, a specialist team has been organized. Under the team's supervision, we carry out detailed examinations to work out decontamination measures, and study purification technologies. Based on the results of these examinations and studies, we are further strengthening our purification activities.

The outcome of these activities and inspection results are regularly reported to the local government agencies concerned.

## Status of Sites where Soil / Groundwater Contamination Has Been Found

Site	Substances	Progress in fiscal 2007
Tokyo Site Hino	Fluorine	The fluorine soil contamination discovered in fiscal 2005 was largely cleaned up through soil replacement in August 2006. The groundwater continues to be monitored, in order to confirm that there has been no effect on the surrounding areas.
Tokyo Site Hachioji	Hexavalent chromium	A pumping well has been set up on the site, and groundwater remediation and monitoring continues to be carried out. It has been confirmed that there was no effect on the surrounding areas. As a new measure, electrophoresis technology was introduced in November 2007 in order to remove hexavalent chromium from the groundwater.
Itami Site	Lead, arsenic, boron, cadmium, and fluorine	In a detailed soil and groundwater survey carried out in 2005, five substances including lead that were used as materials for optical glass making were discovered here in levels higher than allowed by environmental standards. The contamination has been limited within the site and no contamination has been reported outside the site. After discussing the situation with government and local residents, cleanup efforts began in January 2007, involving the removal of contaminated soil and replacing it with clean soil. The work is scheduled for completion by the end of fiscal 2008.
Sakai Site	TCE, PCE, and c-DCE	Ongoing groundwater pumping and remediation is being carried out. A detailed contaminant survey was carried out for TCE, PCE, and c-DCE, and cleanup measures for the pollution source are under investigation.
	Lead, arsenic, and cadmium	Through monitoring, it has been confirmed that the contamination is limited and has not affected the groundwater. Monitoring will continue to be carried out.
Osakasayama Site	TCE, PCE, and c-DCE	Groundwater pumping and remediation is continuing. Remediation is being carried out using a method that involves specification of the aquifer layer that contains the groundwater, gas absorption and pumping, together with bio-remediation. The effectiveness of this method has been confirmed, and additional measures are currently under investigation.
Site of the former Nankai Optical Co., Ltd. (Kainan City, Wakayama Prefecture)	TCE, PCE, and c-DCE	Bio-remediation was begun in fiscal 2004, and has been proceeding according to plan. The levels measured at the monitoring wells on the site are now within the standards. Continued observation is now being carried out.
Toyohashi Precision Products Co., Ltd. (Toyohashi City, Aichi Prefecture)	TCE, PCE, and c-DCE	Levels of TCE, PCE, and c-DCE are now within the standards at most monitoring wells. After boring in fiscal 2005, pumping and remediation continues to be carried out to eliminate hexavalent chromium contamination. It has been confirmed through groundwater monitoring that the contamination has not spread from the site. Continued monitoring, pumping, and remediation will be performed.
	Hexavalent chromium	
Konica Minolta Opto Products Co., Ltd. (Fuefuki City, Yamanashi Prefecture)	TCE, PCE, and c-DCE	Measures are under way to prevent the contamination from spreading beyond the existing area by installing a penetration response barrier, and through bioremediation. Detailed examinations were conducted to identify the pollution source at the site. To decontaminate the detected area of contamination, in 2005 we launched a remediation program combining gas absorption and the pump-and-treat process. This program is currently in progress.
Konica Minolta Supplies Manufacturing Co., Ltd. (Kofu City, Yamanashi Prefecture)	TCE, PCE, and c-DCE	The pump-and-treat process was suspended; purification via bioremediation was commenced in 2004. Status monitoring continues.

Note: The use of lead, arsenic, cadmium, hexavalent chromium, TCE, and PCE has already been completely abolished.

Note: TCE: Trichloroethylene, PCE: Tetrachloroethylene c-DCE: cis-Dichloroethylene (discomposed substance of TCE and PCE)

## Environmental Communication

Establishing Interactive Communication Based on "Transparency" and "Continuity"

### Information Disclosure

#### Our Views on Information Disclosure

##### Establishing a Relationship of Trust, Based on Information Disclosure and Communication

Konica Minolta promotes information disclosure and communication with stakeholders, based on the concepts of transparency and continuity. We disclose information about the environmental activities of the entire Group, through the issuance of reports such as this online version of the Environmental Report, other media, such as an environmental website, and various other measures.

#### Environmental Information Disclosure

##### Promoting Information Disclosure via Reports and Website Updates

We publish annual reports introducing the activities of the Group as a whole, as well as of individual sites. In fiscal year 2006, we began to post an online version of our Environmental Report, to explain the measures being adopted across the entire Group towards reducing environmental impact, and to convey our respect for the environment. We also publish Site Reports that detail environmental information about our business sites in Japan.



## Information Disclosure about Our Products

### Actively Disclosing Relevant Information Using Environmental Labels

Konica Minolta has been active in acquiring Type I environmental labels as proof that our products are having less environmental impact. Concerning Germany's Blue Angel certification, the world's first Type I environmental label, each time its criteria are revised to become more stringent, Konica Minolta has acquired certification ahead of any other manufacturer in the category of digital multifunctional peripherals (MFPs), one of our primary product categories. In the category of office printing devices (office output devices), newly established in January 2007, the bizhub 420 was awarded Blue Angel certification, a global first. By the end of March 2008, we obtained certification for a total of 26 models.

In regard to the Eco-Mark, Japan's leading Type I environmental label, we are striving to obtain certification in principle for our office information technology equipment.

Under the EcoLeaf system, a Type III environmental label stipulated in Japan, we quantitatively identify and disclose the environmental impact of designated products throughout their lifecycle, ranging from procurement of raw materials to assembly, sales, use, disposal and recycling. Konica Minolta has also acquired "system certification," affirming that we have a mechanism for appropriately and efficiently identifying such environmental impact data for our copying and printing businesses.

We have also registered the following categories of products with the Green Purchasing Network of Japan: copiers/MFPs printers/fax machines, copy paper, and digital printing presses. Environmental information on these products is published regularly.

### Examples of Environmental Labels



#### Eco-Mark

Certification is provided for products recognized by the Japan Environmental Association as having low environmental impact.



#### Blue Angel

The world's first environmental label, introduced in Germany in 1978. Products and services certified as having low environmental impact are permitted to bear this label.



#### International ENERGY STAR Program®

This Program, implemented since 1995 under a Japanese-US agreement, uses the ENERGY STAR mark to label energy-saving OA equipment that meets its guidelines.



#### EcoLeaf

The EcoLeaf is intended to quantitatively identify and disclose the environmental impact of labeled products throughout their lifecycle.

## Information Disclosure at Exhibitions

### Participation in Eco Products 2007 Trade Fair and Osaka Green Eco Plaza

In December 2007, Konica Minolta exhibited at Eco Products 2007, Japan's largest environmental trade show, which was held at Tokyo Big Sight. Visitors to the Konica Minolta booth included people of every generation, from kindergarten students to senior citizens. This year we exhibited color MFPs based on the theme of reducing CO<sub>2</sub> emissions in the office. Visitors were able to experience the environmental features of our products, while learning about ways to cut CO<sub>2</sub> emissions through activities in their own homes and offices. We also introduced haiku works (short poems) submitted by applicants for the Konica Minolta Eco Haiku Award, which annually invites public participation, and showed the environmental awareness-raising program One Planet, The Earth using Konica Minolta's digital planetarium, MEDIAGLOBE.



In the Kansai region, Konica Minolta has set up a permanent booth at Osaka ATC Green Eco Plaza in Osaka Nanko to introduce, in an easy-to-understand manner, our environmental activities in copier. The exhibition was updated on April 1, 2008 to provide new information to visitors.



## Environmental Communication

Establishing Interactive Communication Based on “Transparency” and “Continuity”

### Dialogue and Cooperation

#### Dialogue with Local Communities

**We continue to hold Community Environmental Briefings across Japan.**

As one way to communicate environmental risks in the context of the Japanese PRTR (Pollutant Release and Transfer Register) system, each year since fiscal year 2002, we have held Community Environmental Briefings. In fiscal 2007, we also organized a new briefing at our Osakasayama Site, in addition to the regular briefings at our Tokyo Site, Itami Site, and Mizuho Site (the Mizuho briefing covered three sites in the Tokai region). Konica Minolta places importance on holding informal gatherings after the briefings to answer questions from participants. The residents offered their opinions and asked questions about community concerns on a variety of subjects including initiatives to cut CO<sub>2</sub> emissions to combat global warming and other environmental issues such as waste reduction, as well as initiatives for traffic safety. It was a great opportunity for us to understand the deep concerns about the community and high expectations local residents have for Konica Minolta.

In the future, we will continue to promote good communication with local residents in order to foster trust and confidence in our communities. We also provide site tours to local residents and visitors from schools, governments, and other companies, both in and outside Japan.

#### Fiscal 2007 Community Environmental Briefings Tokyo Site (Hino and Hachioji)

The Tokyo Site held Konica Minolta's first Community Environmental Briefing in 2002, and the fiscal 2007 event marked the sixth one. After an opening message from the representative of the Tokyo Site, the briefing covered current site conditions including environmental initiatives as well as safety and disaster prevention and community involvement efforts, based on the Konica Minolta Tokyo Site Environment and Safety Report 2007. Afterwards, local residents were taken on a tour of the site, which provided them with an opportunity to get an up-close look at the environmental equipment that is not normally seen by the public. At the informal gathering that followed, local residents expressed opinions such as these: "I am convinced that Konica Minolta is taking the proper steps to help fight global warming; I think I'll tell others about this," and "I'd like to take this opportunity to urge local residents to move forward in the fight against global warming together." The residents and the company also agreed to work together on the "Team Minus 6%" campaign promoted by the Japanese government.



Tokyo Site  
39 people attended the briefing held on  
Saturday September 22, 2007

## Joint Briefing for Three Tokai Sites (Mizuho, Toyokawa, and Mikawa)

The Mizuho Site began holding its annual briefing in fiscal 2005. There were 32 participants in attendance at the fiscal 2007 briefing, a fourfold increase compared to the first time, three years prior. Since there are three Konica Minolta sites in the Tokai region, the briefing was held jointly this time, at the Mizuho Site. The participants included representatives from the local chamber of commerce as well as city and prefectural governments. All of these representatives showed a great deal of interest in Konica Minolta's environmental and social initiatives. The briefing covered current site conditions including environmental initiatives as well as safety and disaster prevention and community involvement, based on the Konica Minolta Tokai Region Environment and Social Report 2007.

Afterwards, participants were taken on a tour of the site, where they inspected the environmental equipment, as well as the development and design workplaces. At the informal gathering that followed, residents expressed opinions such as, "I am impressed that the company is actively carrying out the sorting of waste materials."



Mizuho Site  
32 people attended the briefing held on  
Saturday September 22, 2007

## Itami Site

This was the third annual briefing since the first one in fiscal 2005. After reviewing production items and environmental posters in the display area, the participants listened to a report on the site's environmental initiatives. During the tour of the site, the visitors saw the site's environmental equipment, a survey spot for groundwater boring, and a location where soil decontamination is being carried out. The participants were also told about the site's soil decontamination project. In the question and answer session that followed, local residents and Konica Minolta representatives had a lively dialogue.



Itami Site  
15 people attended the briefing held on  
Saturday October 13, 2007

## Osakasayama Site

This year marked the first briefing for this site. After an opening message from the representative of the Osakasayama Site, the briefing covered current site conditions including environmental initiatives, safety and disaster prevention, and community involvement efforts. Afterwards, the participants were given a tour of the site, and at the new building on the premises, they were given a chance to go inside and shown the unique environmental design features. Local residents offered the following feedback: "I was able to experience the motion-sensor controlled lighting and the energy-saving design of the stairway emergency lights," and "The lighting in the sunlight well gave it a bright and spacious feeling."

During the question and answer session at the end, the participants

asked questions and gave their opinions on a variety of issues such as efforts to add greenery to the site and ensure traffic safety at the main gate. Here are some opinions that were expressed: "It is clear that Konica Minolta is actively working to promote good communication with the community; I look forward to future briefings like this one," and "I was worried that the increase in employees at the site would raise the volume of traffic, but I feel better after hearing about the company's traffic safety measures." Residents and the company agreed to keep working together for the benefit of the community.



Osakasayama Site  
27 people attended the briefing held on  
Saturday March 22, 2008

## Winning the 1st Responsible Care Award

**Konica Minolta was recognized for activities to promote community dialogue and communication about environmental risks.**

On July 4, 2007, Konica Minolta received the 1st Responsible Care Award from the Japan Responsible Care Council (JRCC) of the Japan Chemical Industry Association for its efforts to practice and promote community dialogue and environmental risk communication.

In light of global environmental issues and the new problems posed by factors such as increasing industrialization and technological advancement, today, more than ever, producers of chemical-related products need to take responsibility for environmental conservation, safety, and health. Given this situation, the Responsible Care Awards were established as a new system to recognize individuals and groups that contribute to the promotion and improvement of responsible care activities.\*



The recent award was given in recognition of Konica Minolta's responsible care efforts. We were quick to carry out communication about environmental risks with plant neighbors starting in 2002, and continued to hold communication meetings since that time. Based on these actual experiences, Konica Minolta has given case presentations on many occasions, including case reporting sessions hosted by the Tokyo Metropolitan Government, and even provides information to regional organizations, companies, the National Institute of Technology and Evaluation (NITE), and the Center for Environmental Information Science. The award also recognized Konica Minolta for these efforts to implement and promote communication about environmental risks. Moreover, since the award was created to honor people rendering distinguished service in this field, it was presented to Yoko Kita, who is in charge of environmental risk communication at Konica Minolta, and who made remarkable contributions by actively promoting responsible care activities through dialogue with schools and community groups.

- \* Responsible care activities: Each producer of chemical substances voluntarily ensures environmental conservation, safety, and health, in all processes from the development of chemical substances to their production, distribution, use, and disposal after final consumption. The producers also must announce the results of their activities, and promote dialogue and communication with society. These activities are called "responsible care."

## Cooperation in Environmental Education

**We are working to promote environmental education in society through various communication channels.**

In order to build sustainable societies, it is important to raise environmental awareness and understanding within society as a whole. This is why Konica Minolta is working to promote environmental education, not just among its employees, but also for the entire public, in order to make everyone aware of the need to protect the environment.

### **On-site Lecture on Environmental Issues at Kawasaki Municipal Masugata Junior High School**

On December 20, 2007, Masugata Junior High School in Kawasaki, Kanagawa, held an open house for Energy and Environment Education. A Konica Minolta employee gave a lecture entitled, "Reuse and Recycle: Caring for the Planet."



### Environmental Education at Masugata Junior High School:

The Energy and Environment Education program began in 2003 with support from the Energy Conservation Center Japan, by establishing Masugata Junior High School as a model for promoting education on energy conservation. After that, the school was designated as a school for energy education by the Information Center for Energy and Environment Education. Based on a consistent policy since the beginning which calls for environmental education that considers both the global environment and individual lifestyles, the school has been promoting environmental education that always includes practical applications. As a result of this program, the school has greatly reduced its electrical usage, and the students have also helped to save electricity in their own homes. In recognition of these results, the school has received numerous awards including the Environment Minister's Award for Activities to Help Prevent Global Warming in 2005.

During the open house on Thursday December 20, 2007, the student body was divided into 11 groups, with workshops in the morning and forums in the afternoon. The guest instructors from different companies played a leading role, and teachers from the host school also provided assistance.

### Lecture by Konica Minolta: "Reuse and Recycle: Caring for the Planet"

Konica Minolta has been giving classes as one of the cooperating companies for this event since 2004. For 2007, the lecture was entitled, "Reuse and Recycle: Caring for the Planet."

During the morning workshop, the students learned the difference between reusing and recycling parts through the manufacture of clay models. They also learned the importance of not wasting energy and other environmental considerations. After the workshop, students offered their impressions: "I learned that it is better to reuse than to recycle," and "Now I know how difficult it is to recycle things."

During the afternoon forum, the students gave presentations on what they could do in their own lives in order to reuse and recycle. Through the presentations, they once again recognized the importance of reusing things, with ideas such as refilling bottles for products like shampoo, and buying from flea markets.

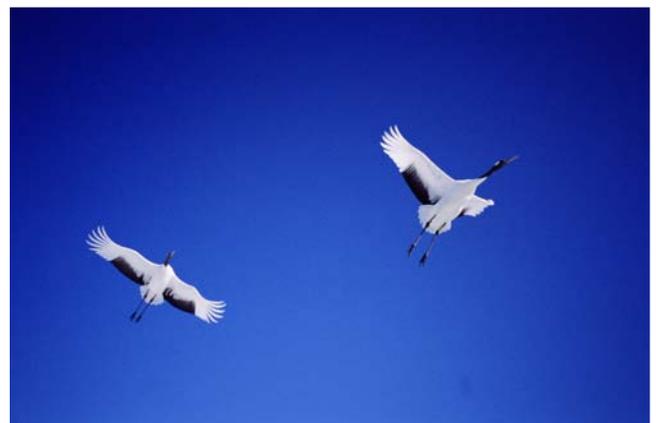
## Working Together for Environmental Conservation

### **Konica Minolta communicates with residents, NGOs, and local communities about environmental conservation.**

Through various activities, Konica Minolta is strengthening ties with its stakeholders, and working toward the creation of a society with an even brighter future. We intend to actively fulfill our responsibilities as a corporate citizen, and to remain a welcome member of the communities in which we operate.

### **Konica Minolta Red-Crowned Crane Charity Photo Contest**

Not long ago, the number of red-crowned cranes\* indigenous to Japan plummeted due to the deterioration of their native habitat. The bird was, for a time, on the verge of extinction. However, thanks to the establishment of the Tsurui Ito Red-Crowned Crane Sanctuary in 1987 by the Wild Bird Society of Japan, and to the protection activities undertaken by local residents and concerned organizations, the number of cranes has increased to more than 1,000. Konica Minolta has been a supporter of the sanctu-



ary for 20 years, ever since its establishment. We provide support for its crane protection activities, namely conservation of the crane habitat, research on their behavior, and personnel training and educational activities.

- \* The red-crowned crane is a large bird with a white body and a patch of red on the crown of its head. Its habitat extends from eastern Eurasia to Hokkaido in Japan.

### Konica Minolta Red-Crowned Crane Charity Photo Contest

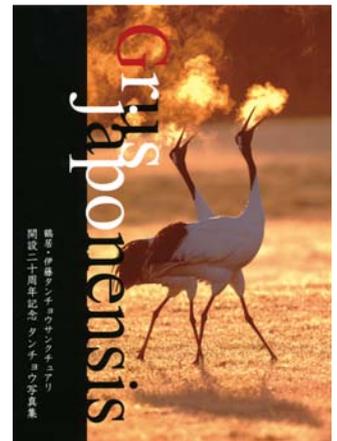
Every year, we support the Konica Minolta Red-Crowned Crane Charity Photo Contest held by the Wild Bird Society of Japan. In 2007, a set of five postcards was again produced using the prize-winning photos to commemorate the charity. In order to support conservation activities for this bird, the postcard sets were given as gifts to everyone who donated 1,000 yen to the Tsurui Ito Red-Crowned Crane Sanctuary.

### 20th Anniversary Red-Crowned Crane Photo Collection

The year 2007 marked the 20th anniversary of the establishment of the Tsurui Ito Red-Crowned Crane Sanctuary. Consequently, we created a photo collection from the prize-winning pieces received for the photo contest over the years, and used them for a commemorative charity program.

Thirty photos were chosen from all the winning contest entries to date, and a photo collection was produced using high-resolution on-demand printing\* with the bizhub PRO C series. This series of high-speed color MFPs was designed for the convenience-printing field where Konica Minolta is concentrating its efforts. The photo collections were given as gifts to everyone who donated ¥1,000 to the Tsurui Ito Red-Crowned Crane Sanctuary.

- \* On-demand printing allows users to print out just the required number of copies, whenever needed. On-demand printing using an MFP eliminates the need for printing production work, thereby offering rapid low-cost printing.



### Supporting Forest Societies

Konica Minolta participates in and supports various forest conservation activities. The Takao Forest Society manages the natural vegetation of a national forest, located in the western part of the Tokyo region. The society aims, by thinning and planting trees while clearing the undergrowth, to restore a lush forest where coniferous trees are interspersed with broad-leafed varieties. With Konica Minolta as a corporate member, and employees as individual members of this organization, we are rolling up our sleeves every month to promote forest conservation.



## Cleanup Event in Dalian, China

On November 3, 2007, some 200 employees of Konica Minolta Opto (Dalian) Co., Ltd., and their families participated in a cleanup at Paotais-han Park in the Dalian Economic and Technological Development Zone. In China, the profusion of litter, including plastic shopping bags, has become a social issue. Under the slogan "community environmental protection begins with you," the employees got together to collect rubbish in the park, and filled 30 garbage bags, each with a 90-liter capacity. Many employees participated in the activity with an awareness of the need not just for park cleanup, but also for environmental protection. Many children of employees also volunteered to participate in the event. Providing children with an opportunity to develop awareness for environmental conservation is not only good for the children, but can become a great asset for the entire community.



## Participating in the Adopt-a-Road Program in Osaka

The Konica Minolta Sakai Site has been participating in Osaka Prefecture's Adopt-a-Road Program\* since 2002. Employees carry out beautification activities along a road near the site by creating and maintaining flowerbeds. On November 14, 2007, the flowerbeds were replanted along the bus route in front of the site. The replanting, watering, and weeding of the flowerbeds is carried out by all seven Konica Minolta companies with premises on the Sakai Site, and they are helping to keep the neighborhood looking good.



### \* Adopt-a-Road Program:

As the name suggests, this program encourages companies to "adopt" a section of road, and take care of ongoing cleanup and planting along the sides of that roadway. Originating in the US in the mid-1980s, Osaka prefecture decided to take on the idea, and is promoting the program through government and community partnerships.



## Environmental Accounting

Expressing the effects of our environmental measures in numerical values, so as to enable comprehensive environmental response that is linked to management strategies

### Environmental Accounting at Konica Minolta

**We have implemented group environmental accounting worldwide.**

Environmental accounting refers to the converted monetary value of benefits derived from the various environmental measures we implement; their investment effectiveness is compared and studied quantitatively. This enables rational decision-making so as to ensure implementation of the most effective environmental measures and comprehensive environmental action that directly links environmental measures with management strategy. The Konica Minolta Group actively implements environmental accounting so as to advance more effective environmental measures, and conducts consolidated global accounting for the entire Group by assigning environmental accounting personnel to each office. We use the obtained environmental accounting results group-wide to develop better environmental measures.

### Results for Fiscal 2007 and Budget for Fiscal 2008

In fiscal 2007, the investment required for Konica Minolta's environmental conservation activities rose to 3.9 billion yen, a 73% increase compared to fiscal 2006. Investment in equipment accounted for 92% of this amount. The equipment was for the purpose of reducing environmental impact including steps taken to reduce emission of harmful substances at production sites. The expense of environmental conservation activities was 16.2 billion yen, an increase of 13% compared to fiscal 2006. The expense of energy-saving measures for products and manufacturing, along with waste reuse and recycling costs, accounted for 44% of this entire cost.

#### Environmental Accounting: Results for Fiscal 2007 and Budget for Fiscal 2008

Unit: million yen

Types of Environmental Measures		Fiscal 2007 Results			Fiscal 2008 Budget	
		Investment costs	Expenses	Economic benefits	Investment costs	Expenses
Cost within business domain	Pollution prevention	2,274	2,257	55	372	2,571
	Global warming prevention	426	465	598	475	538
	Resource recycling	884	1,503	12,523	77	1,451
Subtotal		<b>3,583</b>	<b>4,225</b>	<b>13,176</b>	<b>923</b>	<b>4,560</b>
Up-/downstream costs		11	5,870	4,040	11	4,791
Management costs		24	1,428	0	157	1,468
R&D costs		30	4,162	65	1,274	4,595
Social contribution costs		0	16	0	11	22
Environmental damage costs		246	538	0	230	1,020
Other costs		1	0	0	1	0
Total		<b>3,895</b>	<b>16,239</b>	<b>17,281</b>	<b>2,607</b>	<b>16,456</b>

**Fiscal 2007 Results: Environmental Protection Benefits**

Unit: Million yen

Stage	Type of benefit	Fiscal 2007
Manufacturing	Reduction in water usage (tons) *1	457,477
	Reduction in electricity usage (MWh) *1	19,291
	Reduction in city gas usage (1,000m <sup>3</sup> ) *1	2,621
	Reduction in heavy oil usage (kl) *1	117
	Reduction in harmful chemical substances (tons) *1	20
	Reduction in materials usage (tons) *1	57,996
	External recycling and reuse of waste (tons) *2	23,324
Sales	Sales Reduction in packaging materials (tons) *1	610
	Reuse and recycling of used products (tons) *2	6,036
Use	Use Reduction in CO <sub>2</sub> emissions (tons) *3	26,102

\*1. Calculated as the environmental protection effect, namely, the difference from the environmental impact level before the start of the activity

\*2. Calculated as the environmental protection effect, namely, the amount of waste recycled and reused due to the activity

\*3. Calculated as the environmental protection effect, namely, the difference from the CO<sub>2</sub> emission level during use of previous product models

**Fiscal 2007 Results: Customer Benefits**

Unit: million yen

Stage	Type of benefit	Fiscal 2007
Use	Reduction in electricity usage (MWh)	69,053
	Reduction in electricity costs (millions of yen)	994

**Companies included in fiscal 2007 results**

10 Konica Minolta companies

22 Japanese affiliates

14 overseas affiliates

## Companies Included in Fiscal 2007 Results

---

### **The ten main Konica Minolta companies**

Konica Minolta Holdings, Inc.  
Konica Minolta Business Technologies, Inc.  
Konica Minolta Opto, Inc.  
Konica Minolta Photo Imaging, Inc.  
Konica Minolta Medical & Graphic, Inc.  
Konica Minolta Sensing, Inc.  
Konica Minolta Technology Center, Inc.  
Konica Minolta Business Expert, Inc.  
Konica Minolta IJ Technologies, Inc.  
Konica Minolta Planetarium Co., Ltd.

### **22 Japanese affiliate companies**

Konica Minolta Information System Co., Ltd.  
Konica Minolta Supplies Manufacturing Co., Ltd.  
Konica Minolta Supplies Manufacturing Kansai Co., Ltd.  
Toyohashi Precision Products Co., Ltd.  
Konica Minolta Electronics Co., Ltd.  
Konica Minolta Business Solutions Japan Co., Ltd.  
Konica Minolta Printing Solutions Japan Co., Ltd.  
Konica Minolta Software Laboratory Co., Ltd.  
Konica Minolta Opto Products Co., Ltd.  
Konica Minolta Components Co., Ltd.  
Konica Minolta Opto Device Co., Ltd.  
Konica Minolta Glass Tech. Co., Ltd.  
Konica Minolta Repro Co., Ltd.  
Konica Minolta Technoproducts Co., Ltd.  
Konica Minolta Healthcare Co., Ltd.  
Konica Minolta Graphic Imaging Japan Co., Ltd.  
Konica Minolta ID System Co., Ltd.  
Konica Minolta Technosearch Co., Ltd.  
Konica Minolta Chemical Co., Ltd.  
Konica Minolta Engineering Co., Ltd.  
Konica Minolta Logistics Co., Ltd.  
Konica Minolta Sogo Service Co., Ltd.

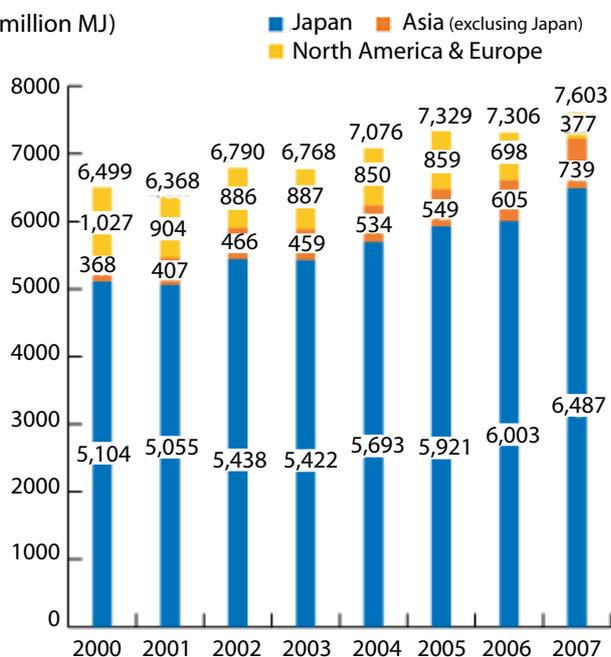
### **14 overseas affiliate companies**

Konica Minolta Business Technologies Manufacturing (HK) Ltd.  
Konica Minolta Business Technologies (WUXI) Co., Ltd.  
Konica Minolta Supplies Manufacturing U.S.A., Inc.  
Konica Minolta Business Solutions U.S.A., Inc.  
Konica Minolta Supplies Manufacturing France S.A.S.  
Konica Minolta Business Solutions Europe GmbH  
Konica Minolta Business Solutions Germany GmbH  
Develop GmbH  
Konica Minolta Opto (Dalian) Co., Ltd.  
Konica Minolta Optical Products (SHANGHAI) Co., Ltd.  
Konica Minolta Glass Tech (M) Sdn. Bhd.  
Konica Minolta Medical Imaging U.S.A, Inc.  
Konica Minolta Graphic Imaging U.S.A, Inc.  
American Litho Inc.

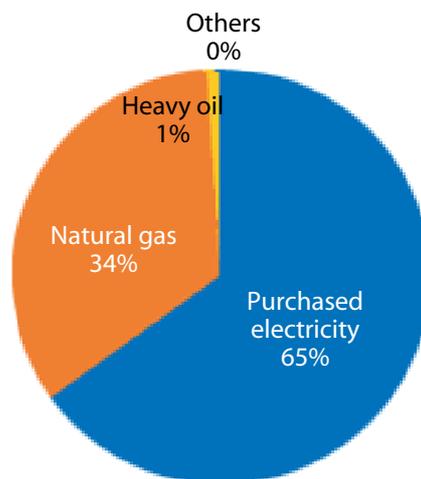
### INPUT

Total energy inputs

(Unit: million MJ)

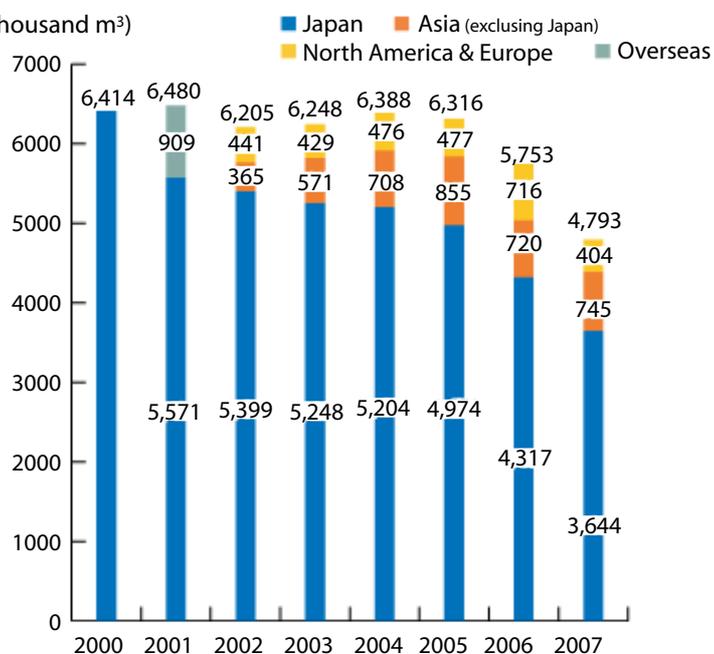


Energy use by type FY2007



Total water inputs

(Unit: thousand m<sup>3</sup>)



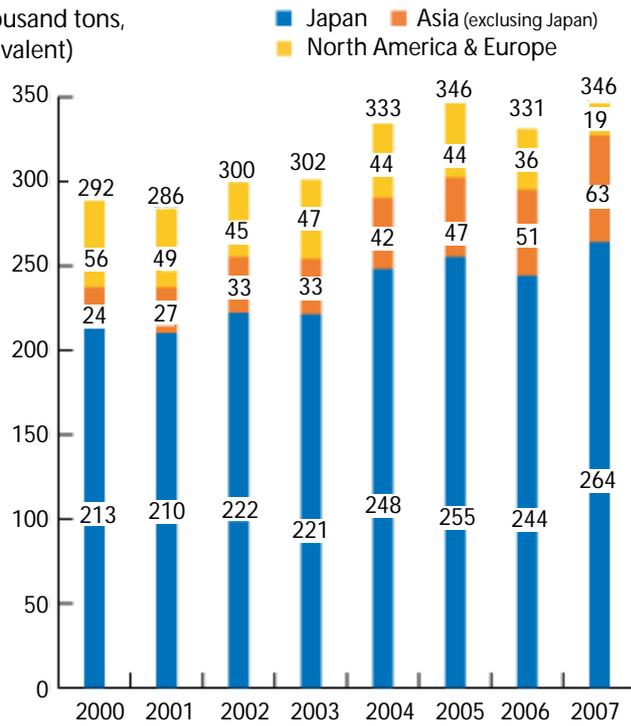
**Konica Monolta**



# OUTPUT

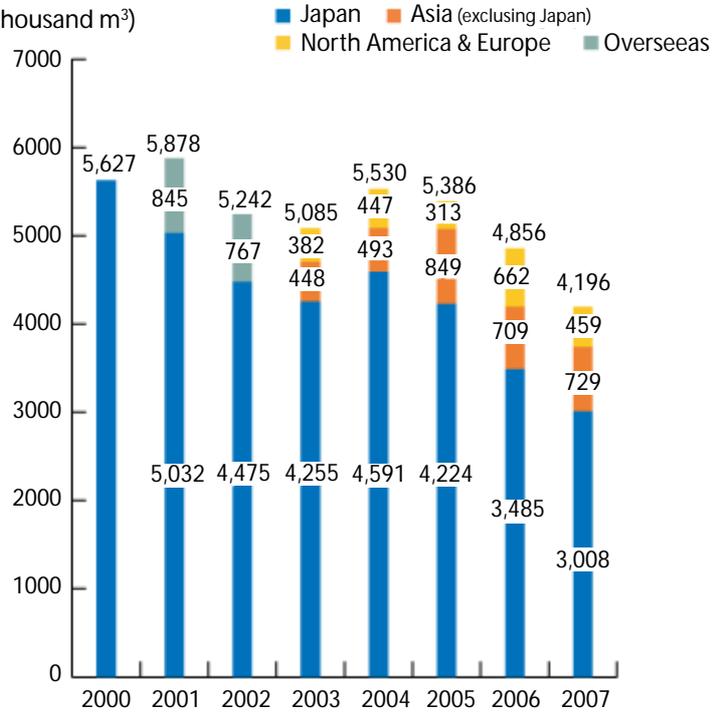
## Greenhouse gas emissions

(Unit:thousand tons, CO<sub>2</sub>-equivalent)



## Total waste water

(Unit:thousand m<sup>3</sup>)



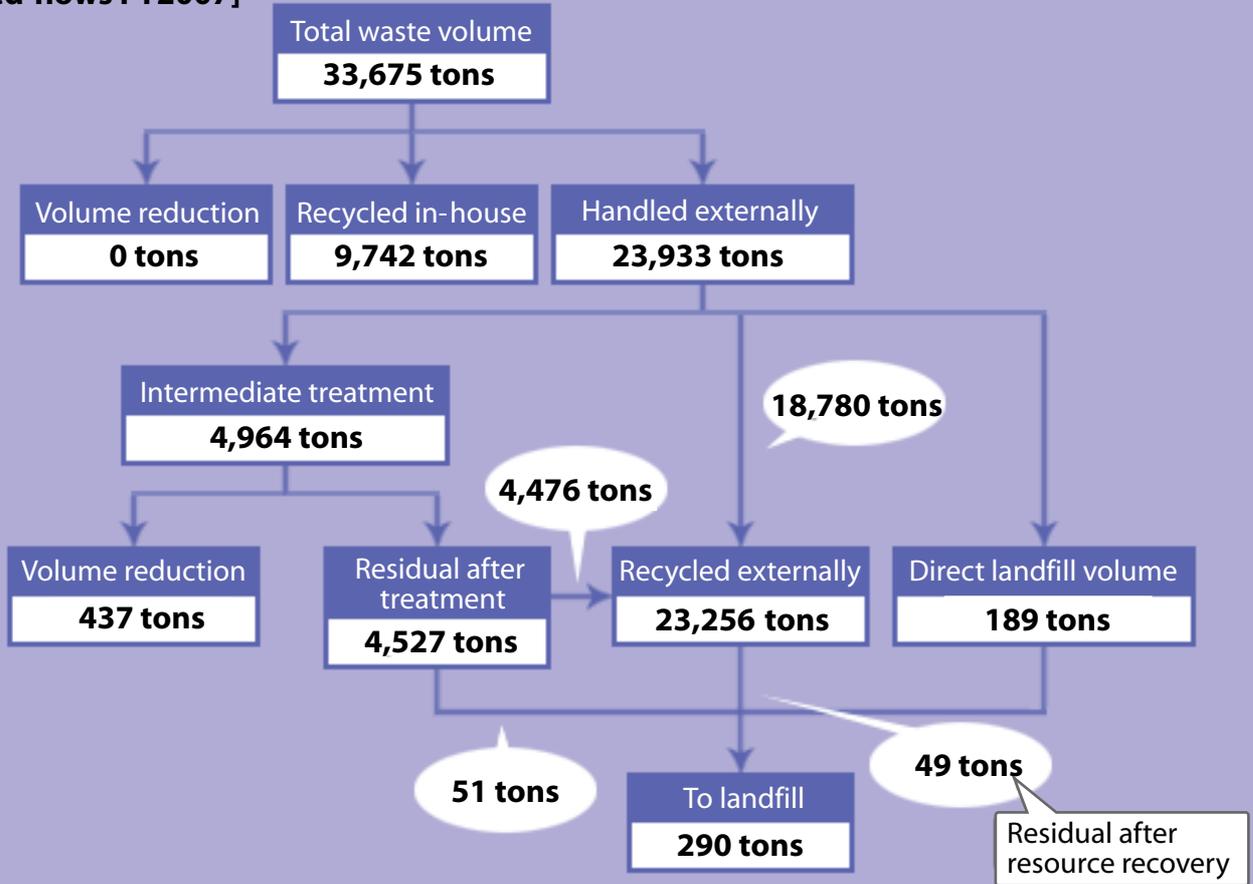
### Scope of data

Charts cover manufacturing and R&D sites in Global Konica Minolta group.

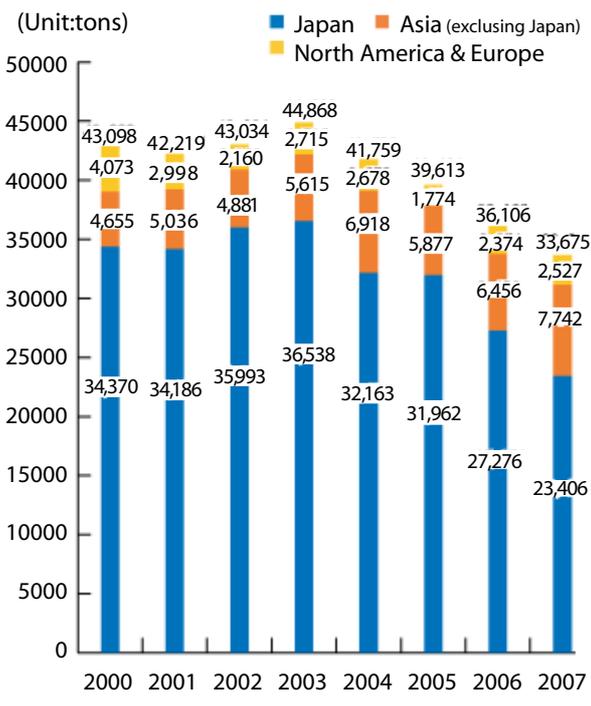
# Waste

## World wide data

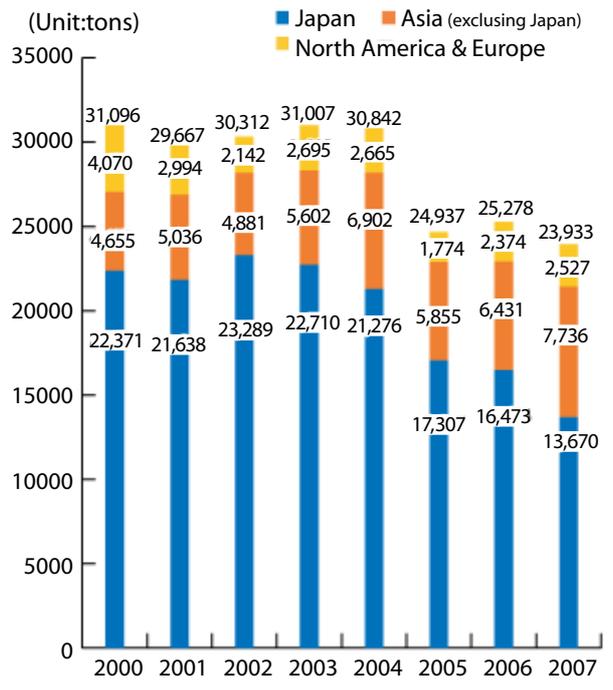
[Wasted flows FY2007]



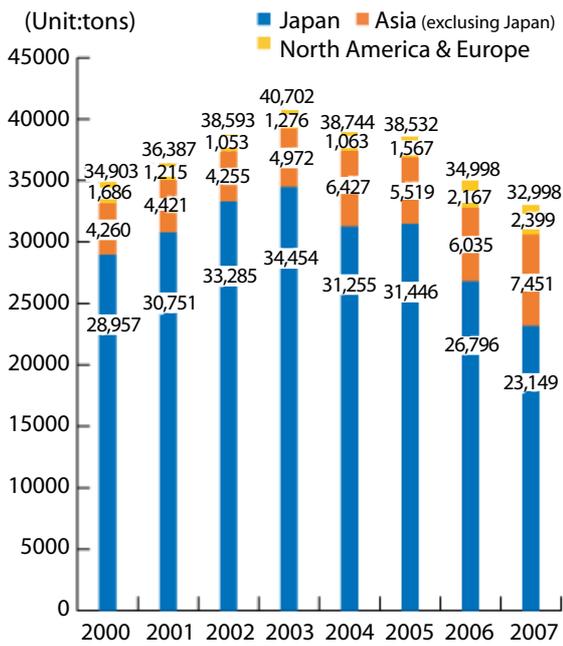
Total waste volume



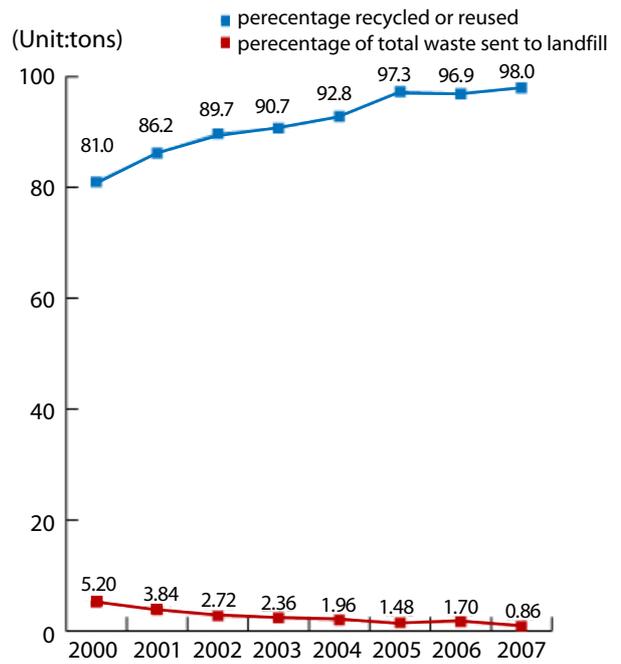
Total waste discharged outside facilities (Disposed of externally)



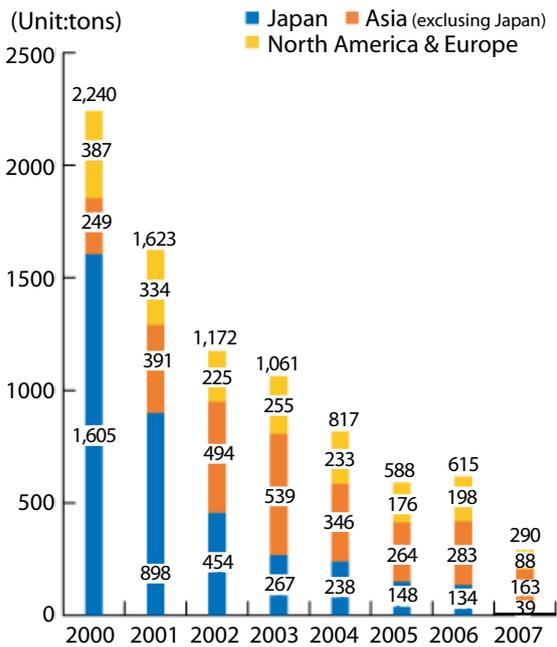
Total volume of recovered resources  
(Recycled in-house and externally)



Percentage recycled or reused.  
Percentage of total waste sent to landfill



Total waste sent to landfill



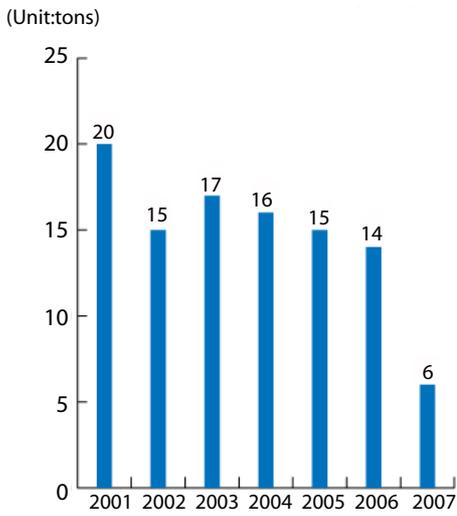
**Scope of data**

Charts cover manufacturing sites in Global Konica Minolta group.

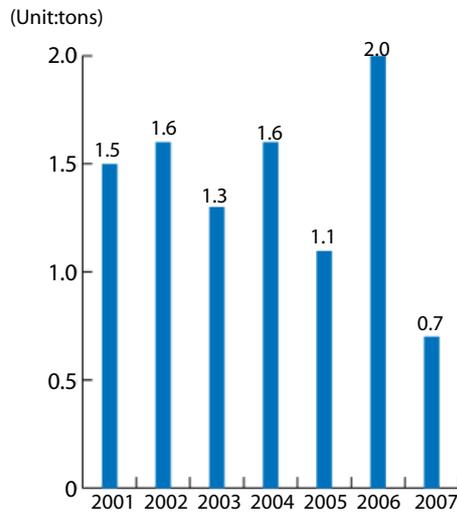
# Public Water Bodies, Air (in Japan)

## Public water bodies

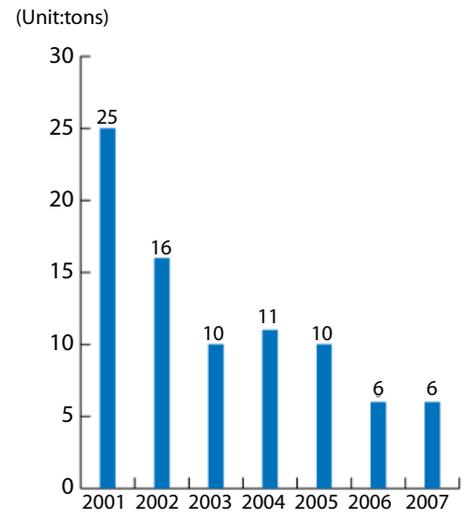
### COD discharged



### Phosphorus discharged

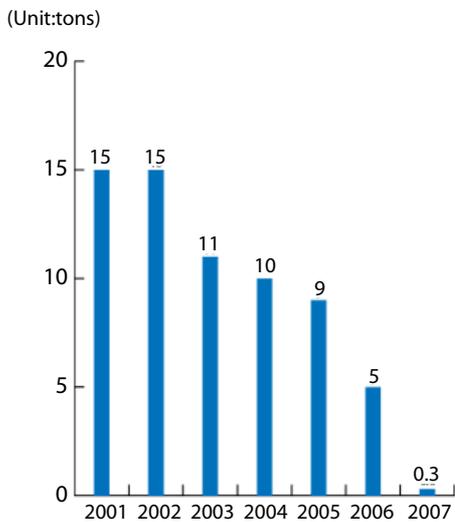


### Nitrogen discharged

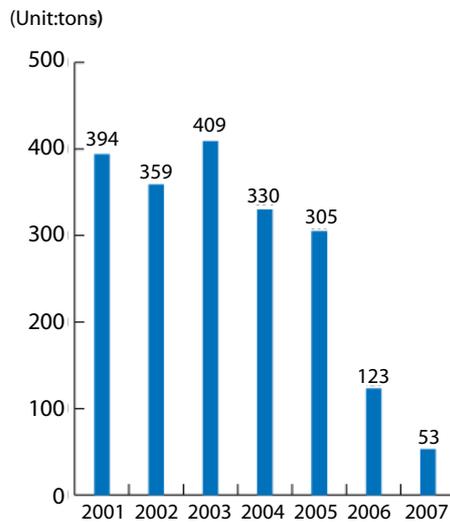


## Air

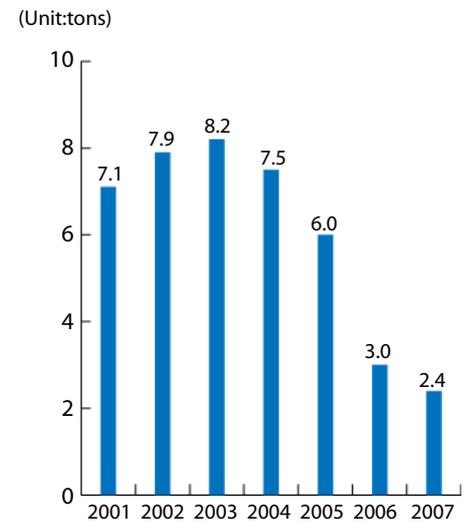
### SOx discharged



### NOx discharged



### Dust and soot discharged



## Scope of data

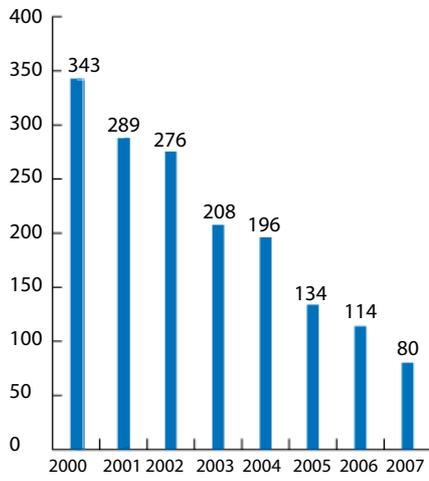
Charts cover Konica Minolta group manufacturing sites in Japan.

## PRTR (in Japan)

### Atmospheric emissions of PRTR substance

#### Decreasing Trends

(Unit:tons)



## Substances Controlled by PRTR (Pollution Release and Transfer Register) Regulations

Unit: tons

PRTR Law identification number	Name of chemical substance	Amount handled	Releases			Amounts used (in products)	Treated on-site (incinerated, decomposed)	Amount transferred externally		Recycled
			To air	To water	To soil			*waste	sewage	
4	Ethyl acrylate	3.8	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0
12	Acetonitrile	63.8	2.7	0.0	0.0	0.5	5.0	55.7	0.0	0.0
25	Antimony and its compounds	18.6	0.2	0.0	0.0	14.7	0.0	3.7	0.0	0.0
46	Ethylenediamine	2.0	0.0	0.0	0.0	2.0	.0	0.0	0.0	0.0
64	Silver compounds (Ag equivalent)	608.5	0.0	0.0	0.0	599.7	0.0	8.1	0.0	0.6
102	Vinyl acetate	1.7	0.0	0.0	0.0	1.7	0.0	0.1	0.0	0.0
116	1,2-Dichloroethane	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117	1,1-Dichloroethylene	9.5	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0
139	o-Dichlorobenzene	3.6	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
145	Dichloromethane	443.3	63.5	0.0	0.0	9.3	0.1	329.7	0.0	40.7
172	N,N-Dimethyl formamide (DMF)	67.0	0.0	0.0	0.0	0.0	0.6	66.3	0.0	0.0
177	Styrene	3,447.9	4.5	0.0	0.0	3,423.4	0.0	20.0	0.0	0.0
212	2,4,6-Trichloro-1,3,5-triazine (also known as cyanuric chloride)	17.3	0.0	0.0	0.0	17.2	0.0	0.0	0.0	0.0
227	Toluene	83.0	7.3	0.0	0.0	0.4	0.8	74.4	0.0	0.0
243	Barium and its water-soluble compounds (such as barium iodide)	6.1	0.0	0.0	0.0	4.5	1.5	0.1	0.0	0.0
254	Hydroquinone	15.3	0.0	0.0	0.0	8.0	0.0	7.2	0.0	0.0
259	Pyridine	10.9	0.0	0.0	0.0	1.0	0.1	9.8	0.0	0.0
304	Boron and its compounds (B equivalent)	7.4	0.0	0.0	0.0	4.7	0.0	2.6	0.0	0.0
311	Manganese and its compounds	122.8	0.0	0.0	0.0	121.2	0.0	1.6	0.0	0.0
313	Maleic anhydride	2.2	0.0	0.0	0.0	2.1	0.0	0.1	0.0	0.0
314	Methacrylic acid	274.8	0.4	0.0	0.0	273.0	0.0	1.4	0.0	0.0
320	Methyl methacrylate	7.8	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0

\* In accordance with PRTR Law definitions, even if materials were recycled later, they were counted here as waste if they were not sold at a price.

## Production sites (as of 2008.3.31)

Site name	Location	Items produced
<b>Konica Minolta production sites</b>		
Konica Minolta Tokyo site (Hino block)	Hino-shi, Tokyo	Color film and photosensitive materials
Konica Minolta Tokyo site (Hachioji block)	Hachioji-shi, Tokyo	Optical parts
Konica Minolta Kofu site	Nakakoma-gun, Yamanashi Prefecture	Medical imaging materials
Konica Minolta Itami site	Itami-shi, Hyogo Prefecture	Optical-related products
Konica Minolta Osakasayama site	Osakasayama-shi, Osaka	Optical-related products
Konica Minolta Kobe site	Kobe-shi, Hyogo Prefecture	Triacetyl-cellulose (TAC)film
Konica Minolta Seishin site	Kobe-shi, Hyogo Prefecture	Triacetyl-cellulose (TAC)film
<b>Japanese affiliate production sites</b>		
Konica Minolta Supplies Manufacturing Co., Ltd. Headquarters	Kofu-shi, Yamanashi Prefecture	Toner for image information equipment
Konica Minolta Supplies Manufacturing Co., Ltd. Tasuno Facility	Tasuno-shi, Nagano, Prefecture	Toner for image information equipment
Konica Minolta Supplies Manufacturing Kansai Co., Ltd. Headquarters	Miki-shi, Hyogo Prefecture	Consumables for image information equipment
Konica Minolta Supplies Manufacturing Kansai Co., Ltd. Seishin Facility	Kobe-shi, Hyogo Prefecture (within Seishin site)	Consumables for image information equipment
Toyohashi Precision Products Co., Ltd.	Toyohashi-shi, Aichi Prefecture	Equipment parts
Konica Minolta Electronics Co., Ltd.	Tsuru-shi, Yamanashi Prefecture	Electronics parts
Konica Minolta Opto Products Co., Ltd.	Higashiyatsushiro-gun & Minamitsuru-gun, Yamanashi Prefecture	Optical parts
Konica Minolta Components Co., Ltd.	Toyokawa-shi, Aichi Prefecture	Optical parts
Konica Minolta Glass Tech. Co., Ltd. Headquarters	Osakasayama-shi, Osaka (within Osakasayama site)	Optical parts
Konica Minolta Glass Tech. Co., Ltd. Iruma Facility	Iruma-shi, Saitama Prefecture	Optical parts
Konica Minolta Opto Device Co., Ltd.	Osakasayama-shi, Osaka (within Osakasayama site)	Optical parts
Konica Minolta Technoproducts Co., Ltd. Headquarters	Sayama-shi, Saitama Prefecture	Assorted machinery
Konica Minolta Technoproducts Co., Ltd. Hachioji Facility	Hachioji-shi, Tokyo (within Tokyo site)	Machining
Konica Minolta Chemical Co., Ltd.	Iwata-gun, Shizuoka Prefecture	Chemicals

<b>Overseas affiliate production sites</b>		
Konica Minolta Business Technologies (Wuxi) Co., Ltd.	China	Image information equipment
Konica Minolta Business Technologies (Dongguan) Co., Ltd.	China	Image information equipment
Konica Minolta Business Solutions(Wuhan)Co., Ltd.	China	Image information equipment
Konica Minolta Opto(Dalian)Co., Ltd.	China	Optical-related products
Konica Minolta Optical Products(Shanghai)Co., Ltd.	China	Optical-related products
Konica Minolta Glass Tech (M) Sdn. Bhd.	Malaysia	Glass substrates for hard-disk drives
Konica Supplies Manufacturing U.S.A., Inc.	United States	Image information equipment toner
American Litho, Inc.	United States	Photosensitive materials for printing
Konica Minolta Manufacturing U.S.A., Inc.	United States	Photo printing paper
Konica Minolta Supplies Manufacturing France S.A.S.	France	Image information equipment toner

\* Following sites are no longer our group manufacturing sites, but their environmental loads incurred while they are in operation in fiscal year 2007 are included in our performance data.

Sold outside the group:Konica Minolta Manufacturing U.S.A., Inc.

Ceased manufacturing operation:Konica Minolta Business Solutions (Wuhan) Co., Ltd.