

Environmental Management

We implement ISO 14001-based management across the entire Group, and steadily endeavor to resolve environmental issues.

Environmental policy

Aiming to achieve both economic and environmental management by means of a consistent management system

The Konica Minolta Group strives to promote all its corporate activities in harmony with mankind and the environment by integrating environmental, economic and social perspectives into our corporate strategy as our Environmental Policy of the Konica Minolta Group. In order to accomplish this, we endeavor to resolve environmental issues on the basis of reliable observation data, and as such, have adopted a consistent ISO 14001-based environment management system in order to ensure

economically efficient yet effective management of the environment via various implementation efforts.

The Konica Minolta Group has set up three intensive measures, namely "Measures to Prevent Global Warming," "Minimization of Chemical Risks" and "Initiatives Toward a Sound Material-cycle Society," as the core pillars for our mid-term environmental plan (fiscal 2005–2008), and these environmental measures are actively being implemented.

Environmental Policy of the Konica Minolta Group

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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 this 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 recognize 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 minimize 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 minimize environmental risk, we work steadily to minimize 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 programs to translate this Environmental Policy into reality, and work for continuous improvement.

Environmental activity promotion structure

The entire group is lead by the RC Committee, chaired by the President and CEO.

The environmental activity promotion structure is established under the supervision of the RC Committee chaired by the President and CEO of Konica Minolta Holdings. Under the Group environmental management representative (Environmental executive officer of Konica Minolta Holdings), environment management officers are assigned to both business and common function companies, as well as their affiliates, to ensure individual entities have the power to take appropriate action throughout the entire Group.

The RC Committee is the ultimate decision-making body with regard to the environment, safety and health—and as such sets the Konica Minolta Group's environmental goals—with each company specifying and implementing their own structural targets accordingly. We have also established lateral specialist committees to discuss major environmental issues in line with the ISO 14001 system, all the better to resolve outstanding issues.



Unified EMS

Multi-site certification is being extended throughout Japan to reinforce our Group environmental management.

We are promoting an ISO 14001-based environmental management system as one measure promoting Group environmental activities under a single unified criterion, and define acquisition of ISO 14001 certification by all manufacturing affiliate companies throughout the world as a fundamental Group policy.

For environmental issues, including prevention of global warming and zero waste disposal, it is important to implement measures for the entire lifecycle of the product. The Konica Minolta Group considers that an integrated management system needs to be adopted for all operations to ensure Group companies and business sites can cooperate with each other.

Under this concept, multi-site acquisition of ISO 14001 certification has been promoted in Japan at all

business sites, including product development, sales and distribution, as well as at manufacturing sites. As of fiscal 2004, the scope for multi-site certification has been expanded to 61 business sites pertaining to 31 companies in Japan, including Konica Minolta Holdings, business companies, common function companies and affiliates, employing a total workforce of some 16,600 people. In fiscal 2005, we plan to expand the scope for multi-site certification to remaining affiliates in Japan.

In the future, we aim to make our global environmental management more consistent. We plan to integrate environmental objectives and auditing systems under the ISO 14001 management system, for which existing certification has been acquired on an individual company basis overseas.

Results of multi-site certification acquisition

Effective development implemented under standardized practices

The acquisition of multi-site certification in Japan enables activities to be conducted for the entire lifecycle of our products. Not only minimizing the environmental load generated by our Group companies, such as energy usage during production, waste generation and paper consumption, but also offering energy-saving products has enabled us to implement indirect impact-reducing activities within society. This is further exemplified by reduced power consumption, when

using our products under this single unified system. Additionally, the adoption of standardized practices for reporting environmental issues and a standardized concept for environmental accounting that evaluates and checks investment effects on the environment in numerical terms has enabled the effective development of measures because uniform information is quickly and evenly spread throughout the Group.

Environmental education for employees

Promotion of self-development for improved awareness via environmental education

We provide environmental education and self-development activities to improve environmental awareness of all employees worldwide.

In Japan, we set up environmental courses as part of training courses starting from a training course for new hires and the curriculum at Konica Minolta College, and we provide all necessary education to all employees. At Konica Minolta Business Solutions Japan Co., Ltd., a sales company, we have adopted e-learning to improve environmental education efficiency for sales staff throughout Japan, for whom integrated education would otherwise be difficult.

Furthermore, we hold Environmental Lectures annually in Japan, as means of encouraging each employee's self-development. In fiscal 2004, we invited Dr. Itaru Yasui, Vice-Rector of the United Nations University, to present a lecture under the theme of "Companies and a Sustainable Society."

We also present the annual Konica Minolta Environmental Award—eligibility for which is open to all Group employees throughout the world—to commend outstanding achievements aimed at global environmental protection. In fiscal 2004, 10 awards were presented, which further motivated environmental activities within the Group.



Using e-learning for environmental education in Japan



Konica Minolta Environmental Award: Winners at Konica Minolta Business Solutions (UK) Ltd., a U.K. sales affiliate company

Environmental Management

Risk management

Risk management is performed under a strict auditing system in full compliance with the law.

The Konica Minolta Group strictly adheres to the law both in terms of its environmental preservation measures as implemented by its business sites and in the provision of environmentally sound products and services. In order to ensure this, we collate and analyze the latest information on legal stipulations pertaining to business activities throughout the world, and then share this information.

Each business site (primarily manufacturing sites) operates under rigorous self-management standards than those legally required; for example, they comply with air/water quality, noise and waste disposal management in line with ISO 14001 system standards, complemented by a very high standard of risk management. In terms of product regulations, we also incorporate forward-looking information into our activities,

such as to achieve reduction of potentially harmful chemicals in advance of any requirements to do so.

Specialist internal auditors periodically review our legal compliance in Japan, and this activity will be expanded to our overseas operations as well.

During fiscal 2004, no part of the Konica Minolta Group was subject to any fines or penalties arising from any legal violation.



Examination of cooling water at Konica Minolta Supplies Manufacturing France S.A.S., a production affiliate company in France

Countermeasures against contamination of soil and groundwater

Implementation of remediation measures and prevention of contamination dispersal through regular inspections

We conducted surveys of those business sites in Japan with a history of use of chemical substances that may have caused soil or groundwater contamination. If any contamination of soil or groundwater is found, it is reported both to local government agencies and local residents, and a specialist team is established to facilitate swift remediation measures while seeking to prevent any further spread of the identified contamination. In order to prevent contaminated groundwater from spreading to outside areas, we take great care to implement expansion prevention and purification

measures while monitoring groundwater observation wells. We also regularly monitor and report the results of such measures to local government agencies.



Groundwater purification system, Tokyo Hachioji Site

■ Status of Business Sites at Which Soil/Groundwater Contamination Has Been Identified

Business sites	Substances	Progress in fiscal 2004
Tokyo Hino Site	Mercury, selenium, lead, fluorine	Damage to the drainage basin was found, and the soil beneath the basin was surveyed. As a result, soil contamination was identified in two locations. Areas of mercury, selenium and lead contamination were confirmed, and excavation and removal of the toxic substances has begun with remediation planned for completion within the first half of fiscal 2005. Remediation measures of fluorine are being considered.
Tokyo Hachioji Site	Hexavalent chromium	The contaminated soil was excavated and replaced. A lifting pump has also been installed, and groundwater in the contaminated area is being purified. Numeric data values at observation wells around the site perimeter are maintained within environmental standards.
Itami Site	Lead, arsenic, boron, cadmium	This site continues to be monitored.
Sakai Site	TCE*1, PCE*2, c-DCE*3	Pump and treat process is being carried out, and the status is being monitored at wells within the site. The facility has been reinforced to accelerate purification by increasing the amount of water being pumped for purification.
Sayama Site, Osaka	TCE*1, PCE*2, c-DCE*3	Pump and treat process is being carried out, and the status is being monitored at wells within the site. A geological survey is being implemented to determine the most appropriate purification method.
Nankai Optical Co., Ltd.	TCE*1, PCE*2, c-DCE*3	Pump and treat process has been promoted, and a new purification method (bioremediation) has been initiated. Purification is scheduled for completion within three years.
Toyohashi Precision Products Co., Ltd.	TCE*1, c-DCE*3 Hexavalent chromium	Groundwater has been purified by means of pumping, expansion of the contaminated area is being prevented; and the purification status is being monitored at an observation well. Contamination by hexavalent chromium was detected at one of the observation wells, and the affected area was confirmed through detailed examination; accordingly, decontamination has begun through a soil replacement program. This purification project is scheduled for completion within the first half of fiscal 2005.
Konica Minolta Opto Products Co., Ltd.	TCE*1, PCE*2, c-DCE*3	Expansion of the contamination beyond the existing area is being prevented by the installation of a penetration response barrier and bio-reactive wells. We have begun to consider new technology to accelerate purification.
Konica Minolta Supplies Manufacturing Co., Ltd.	TCE*1, PCE*2, c-DCE*3	Pump and treat process has been promoted, and a new purification method (bioremediation) has also been initiated. The status is being monitored.

*1: TCE = Trichloroethylene *2: PCE = Tetrachloroethylene

*3: c-DCE = cis-1,2-Dichloroethylene (solvent and chemical intermediate for manufacturing chlorinated compounds)

Green Procurement

We promote Green Procurement across the board.

Konica Minolta has been promoting Green Procurement through participation in the Green Procurement Network (GPN) ever since its establishment in Japan. We seek out materials that exert the minimum envi-

ronmental impact across the entire lifecycle of the product with regard to various resources, including stationery, OA equipment, company transport, and the paper and ink used for our own publications.

Environmental accounting

We seek better understanding of risk reduction by converting risk reduction into monetary values, and we also strive to reflect invisible benefits.

Environmental accounting refers to the converted monetary value of benefits derived from the various environmental measures we implement, and their investment effectiveness is compared and studied quantitatively. This enables rational decision-making to ensure the most effective environmental measures and comprehensive environmental action that directly links environmental measures with management strategy. The Konica Minolta Group positively implements environmental accounting to promote more effective environmental measures, and conducts consolidated global accounting for the entire Group by assigning environmental accounting personnel to each office. We continuously aim to achieve thorough implementation of environmental measures through the practical adoption of environmental accounting and further promotion of its use internally.

The Konica Minolta Group has established both the standards and assessment methods for risk calculation as well as for the economic and environmental protec-

tion benefits, and in doing so, has gained better understanding of the risk reduction benefits. The effectiveness of risk reduction benefits is "assumed benefits," which expresses the extent to which the environmental impact was reduced in monetary terms compared to the estimated environmental impact had those measures not been implemented.

■ Fiscal 2004: Risk Reduction Benefits

Stage	Measures to Prevent Global Warming	Minimization of Chemical Risks
Measures and activities undertaken in fiscal 2004	Worldwide reduction of carbon dioxide (CO ₂) emissions based on the Life Cycle Assessment (LCA) for all products	Reduction of atmospheric emissions of dichloromethane, benzene, and methanol
Environmental impact reduction benefits	CO ₂ emissions: Reduction of 23,000 tons	Atmospheric emissions: Reduction of 27 tons
Risk reduction benefits in monetary units	¥228 million	¥112 million

*In accordance with internal calculation criteria based on the Guidebook for Environmental Accounting II (Ministry of the Environment)

■ Environmental Accounting: Results for Fiscal 2004 and Budget for Fiscal 2005

Types of environmental measures		Fiscal 2004 Results						Fiscal 2005 Budget	
		Investment costs	Expenses	Economic benefits		Risk reduction benefits		Investment costs	Expenses
				Fiscal 2004	Fiscal 2005-2008	Fiscal 2004	Fiscal 2005-2008		
Cost within business domain	Pollution prevention	204	1,285	170	5	231	394	1,031	1,589
	Global warming prevention	213	2,032	348	63	182	118	170	1,802
	Resource recycling	202	1,939	6,470	7,324	5	59	1,682	2,627
	Subtotal	619	5,256	6,988	7,393	419	570	2,883	6,018
	Up-/downstream costs	59	3,063	2,250	0	25	0	248	1,447
	Management costs	114	1,261	1	4	0	0	16	3,644
	R&D costs	0	3,935	539	2,682	532	1,692	0	36
	Social contribution costs	0	14	0	0	0	0	0	86
	Environmental damage costs	5	46	0	0	3	0	3	0
	Other costs	0	0	0	0	1	4	0	0
	Total	798	13,574	9,778	10,079	980	2,266	3,150	11,231

*Fiscal 2005 budget does not cover overseas affiliates.

■ Fiscal 2004 Results: Environmental Protection Benefits

Stage	Type of benefit	Fiscal 2004*
Manufacturing	Reduction in water usage (tons)	148,751
	Reduction in electricity usage (MWh)	16,041
	Reduction in natural gas usage (1,000 m ³)	2,497
	Reduction in heavy oil usage (kl)	2,092
	Reduction in harmful chemical substances (tons)	89 (861)
	Reduction in materials usage (tons)	1,803
Sales	External recycling and reuse of waste (tons)	20,270
	Reduction in packaging materials (tons)	443
Use	Reuse and recycling of used products (tons)	6,242
	Reduction in CO ₂ emission (tons)	2,393 (11,715)

*Figures within the parentheses express total benefits between fiscal 2005 and fiscal 2008.

■ Fiscal 2004 Results: Customer Benefits

Stage	Type of benefit	Fiscal 2004	Fiscal 2005-2008
Use	Reduction in electricity usage (MWh)	5,744	22,376
	Reduction in electricity costs (millions of yen)	103	403

• Companies included in results
 8 Konica Minolta companies
 27 Japanese affiliates
 18 overseas affiliates

A comprehensive list of companies included is available on our website.

<http://konicaminolta.com/pr/ecodata>