THE NEW VALUE FRONTIER

KYOCERA

Kyocera Group Sustainability Report 2003

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Editorial Policy

- Until last year, Kyocera published the environmental reports to follow the policy of introducing its environmental activities. This report is published to follow the policy of announcing environmental and social activities of the Kyocera Group widely. The title is changed from "environmental report" to "sustainability report" from this time.
- This report is made referring to the guideline published by Ministry of the Environment of Japan and GRI Guideline.
- This report covers Kyocera and its 142 consolidated subsidiaries unless otherwise indicated.
- The reporting period is basically FY2003 (April 1, 2002 through March 31, 2003).
- The environmental performance data for KYOCERA Corporation is for the past 5 years and its subsidiaries date is for FY2003.

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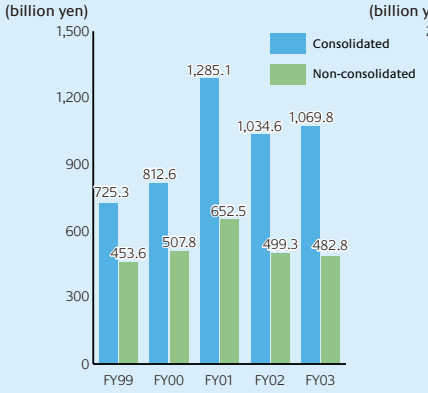
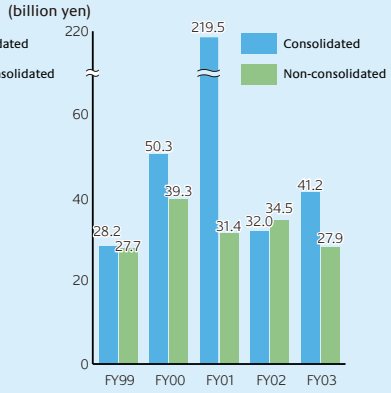
Corporate Summary (as of March 31, 2003) * Any amounts less than 0.1 billion yen are rounded.

Name : KYOCERA Corporation
Established : April 1, 1959
President and CEO : Yasuo Nishiguchi
Capital : 115.7 billion yen
Net sales : Consolidated...1,069.8 billion yen
Non-consolidated...482.8 billion yen
Employees : Consolidated...49,420
(KYOCERA Corporation, 142 consolidated subsidiaries and 3 Subsidiaries accounted for by equity method: Total 146 companies)
Non-consolidated...13,937
Main business lines : 1. Fine ceramics
(Non-consolidated) ① Fine ceramic components
② Semiconductor components
③ Applied fine ceramics products
2. Electronic devices
3. Equipment
① Telecommunication equipment
② Optical equipment

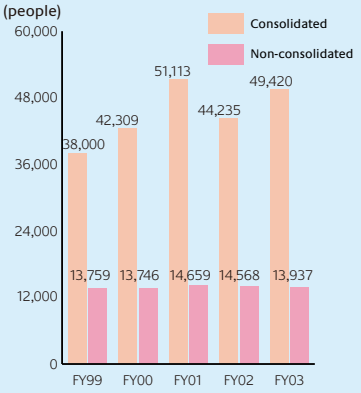
Sales



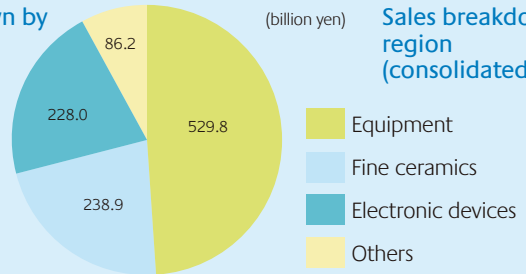
Net income



Employees

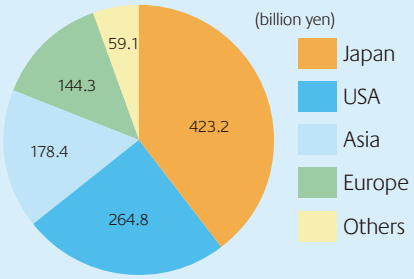


FY2003 Sales breakdown by segment (consolidated)



Total 1,082.9 billion yen
(Before 13.1 billion yen adjustment and elimination)

FY2003 Sales breakdown by region (consolidated)



Total 1,069.8 billion yen

Major subsidiaries

- KYOCERA Communication System Co., Ltd.
- KYOCERA Solar Corp.
- KYOCERA Optics Co., Ltd.
- KYOCERA ELCO Corp.
- KYOCERA Kosan Co., Ltd.
- KYOCERA Leasing Co., Ltd.
- KYOCERA Mita Corporation
- KYOCERA Chemical Corporation
- SHANGHAI KYOCERA ELECTRONITS CO., LTD.
- DONGGUAN SHILONG KYOCERA OPTICS CO., LTD.
- KYOCERA ZHENHUA COMMUNICATION CO., LTD.
- KYOCERA International, Inc.
- KYOCERA America, Inc.
- KYOCERA Industrial Ceramics, Corp.
- KYOCERA Solar, Inc.
- KYOCERA Wireless Corp.
- AVX Corp.
- KYOCERA Fineceramics GmbH

Founder and Chairman Emeritus

Kazuo Inamori

The pace of change in our world has accelerated drastically since the dawn of the 21st century. In politics, economics and society, people are seeking new frameworks and viewpoints, concluding that traditional methods and systems are no longer ideal. In our rapidly changing and increasingly borderless society, globalization is creating the need for a new age of international understanding and cooperation.

At the same time, environmental problems such as global warming and acid rain are becoming even move severe, making prompt action necessary to preserve our irreplaceable Earth for future generations.

These circumstances are bringing fundamental changes to the business world. Today's corporations are expected to build harmony with society and their local communities instead of aiming only for economic growth.

In other words, in addition to enhancing business performance, business enterprises must contribute to society in new ways as responsible corporate citizens. They must support globalization and meet the needs of individual nations by working aggressively to solve environmental problems through technical development and contribute to human life and culture.

The legacies of the 20th century include a contradictory sense of value, which tended to emphasize function, economy and rationality above all else. People are now realizing that we need a philosophy of allowing all livings on Earth to survive together to overcome this situation and build a future society based on "Harmonious Coexistence." A co-existence and co-prosperity-based philosophy that allows mutual development is necessary not only for individuals, but for companies and nations.

The Kyocera group seeks to embody how a corporation should operate based on the basic principle of "Living Together" to coexist with society, world and nature as we enter this new era. Coexistence means that all living things should prosper together while making up for each other's deficiencies. Creating this concept of coexistence will require partnerships between parties of different backgrounds and cultures so the benefits may be more widely shared.

In recognition of the unique needs of our time, the Kyocera group is striving to become a truly global enterprise that embodies the concept of harmonious coexistence by working together with people around the world. We will be an environment-friendly company that operates in harmony with nature and society both through our community and cultural activities and our business operations, by supplying products that contribute to the happiness and quality of life for all people.

Chairman of the Board and
Representative Director

Kensuke Itoh

President and CEO

Yasuo Nishiguchi

Economic growth and technology have brought material wealth and a remarkably improved standard of living to people. At the same time, however, they have also brought increased pollution and environmental disruption. Massive consumption of resources have resulted in a massive discharge of wastes. In developing countries, explosive increases in population and rising poverty have exacerbated these ills though deforestation and other forms of environmental degradation.

Simultaneously, the socioeconomic activities of advanced and developing nations have not only become intertwined, but have exceeded our planet's restorative capacity. We are now, unfortunately, well on the way to destroying the Earth's natural resource cycle. This fact is overturning a major premise of our modern world - the assumption that our ecosystem is unlimited - and revealed that it is indeed a closed system. The shattering of this false assumption now urges us to review human consumption anew from both a qualitative and a quantitative perspective, and to fundamentally change our systems of production.

From now on, we are expected to have a new policy of promoting economic development while preserving our global environment, by respecting the balance between nature and society. At the same time, we must embrace the idea of coexisting with each other in peace and prosperity - as equal inhabitants of mother Earth - without rivalry between advanced and developing nations, businesses and governments, or individuals and communities.

Based upon our corporate motto, "Respect the Divine and Love People", Kyocera has made its management rationale "To provide opportunities for the material and intellectual growth of all our employees, and through our joint effort, contribute to the advancement of society and humankind". Since the company's founding, Kyocera employees have worked together cooperatively to promote the harmonious coexistence of all life on Earth. The Kyocera Group has been promoting Earth-conscious management based upon this philosophy for many years. Today, it is clear that all corporations must address environmental problems in like manner while promoting human dignity and sustainable development.

In 1990, to raise our environmental commitment further, we established the "Kyocera Green Committee", formally convening groups of internal experts to continually review the company's operations and promote environmental "best practices". The Kyocera Environmental Charter was established in 1991, delineating our mission to preserve the global environment.

Based upon this mission, we launched full-scale environmental preservation activities in 1992, using three-year plans to implement such tools as the Kyocera environmental management criteria; a Kyocera "eco-label" to certify Earth-friendly products; our own ozone-protection guidelines; and ambitious internal targets for waste reduction, energy and resource conservation, and recycling. The forth phase, which commenced in 2002, is now being implemented.

The evolution of human society has, until now, including three stages of rapid progress: the agricultural, industrial, and information revolutions. The current effort to solve the Earth's environmental problems will go down in history as the "environmental revolution", our fourth historic stage. Recognizing that we have a significant role to play and serious expectations to fulfill as a high-tech industrial manufacturer, we intend to focus the resources of the worldwide Kyocera Group on these issues.

We renewed the report this time considering our social responsibility in addition to introducing our global environmental protection activities; and we hope it will help you understand our commitments and activities.

Corporate Motto

敬天愛人

"Respect the Divine and Love People."

Preserve the spirit to work fairly and honorably, respecting people,
our work, our company and our global community.

Management Rationale

To provide opportunities for the material and intellectual growth of all our employees,
and through our joint effort, contribute to the advancement of society and humankind.

Management Philosophy

To coexist harmoniously with nature and society.
Harmonious Coexistence is the underlying foundation of all our business activities as we
work to create a world of abundance and peace.

With the basic management policy of "Value-added diversification", the Kyocera Group is promoting its business deployment aiming at establishing a "creative company that continues to grow in the 21st century" through dedicating corporate resources and improving profitability on individual businesses. To fulfill the objectives, the Kyocera Group aims at corporate growth through extension of efforts of three types of creations, "New technological creation, New products creation and New market creation" in industrial markets of "Information and Communications", "Environmental preservation" and "Quality of life".

For the health of our planet and the future of humankind

Environmental Preservation

We believe that economic and environmental activities go hand-in-hand. The Kyocera Group's research and development efforts have led to fine ceramics that are attracting global attention as ecologically promising materials. These materials allow us to produce components and equipment for environmental applications, such as solar power generation and automotive emission-control systems.

Enriching hearts, minds and lifestyles

Quality of Life

The Kyocera Group enriches lives in countless ways. Our businesses include household goods created through fine ceramic technologies; jewelry that adds beauty and elegance to everyday life; and even electronic games and amusement services.

Laying a foundation for the "Ubiquitous Network Age"

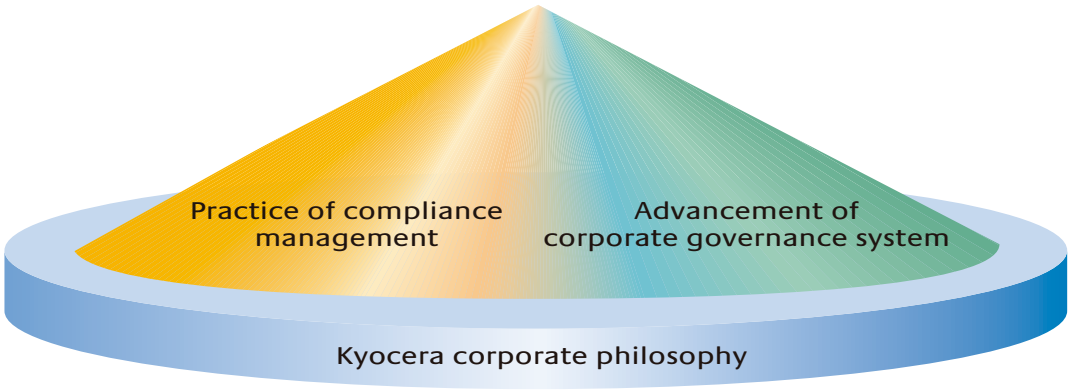
Information and Communications

The emerging Ubiquitous Network Age is fueling the advancement and enrichment of communications technology. The Kyocera Group is contributing to this ever-expanding global trend by providing a comprehensive range of diverse products, from components and devices to service networks.

Establishment of a corporate governance system is being promoted with the following 4 points defined to secure management transparency and accountability.

Basic concepts

1. Practicing management based on Kyocera corporate philosophy
2. Protecting the interests of all stakeholders
3. Establishing corporate governance system to maximize long-term and sustained shareholder values
4. "Promoting practice of compliance management" and "Advancement of corporate governance system" as 2 key basis



Thorough penetration of Kyocera corporation

The Kyocera Group has been taking fair corporate activities based on the universally accepted rationale "Kyocera corporate philosophy" as the decision criteria since its foundation in 1959.
Kyocera corporate philosophy guides the importance of extension of fair, honest and best efforts in all activities with the decision criteria. "Which is to do the right things as a human being?"
Sensible behavior and attitudes based on more universally accepted rationale, and very open rules are really required for company and its employees today. The Kyocera Group intends to extend further devotion to social responsibilities as a global company based on Kyocera corporate philosophy.

In April1994, the pocketbook titled "Kyocera Corporate Philosophy", was published to make Kyocera corporation philosophy be thoroughly understood and practiced by all employees.
"Kyocera management research institute" was established in March 2002, so that this rationale is commonly possessed and more thoroughly practiced by the entire group.
The group continues to encourage practical learning of Kyocera corporate philosophy, self-development and reinforce its corporate ethics with the institute as leader.
In November 2002, the group started the training for management personnel of Kyocera corporation group to develop the talent who is expected to be a future executive.
The group plans to extend the same type training to all employees in the future.

<Extract>

Management Based on the Bonds of Human Minds

Kyocera started as a small suburban workshop - with no money, credentials or history.
Meager technology and 28 trusty colleagues were all that we could rely on.
Kyocera's management is based on all employees exerting their full effort and managers dedicating their lives to earning their trust; all believing in each other, and none working for selfish motives. All united to make Kyocera a company for which they could be proud to work.
Human minds are said to be easily changeable. Yet, there is nothing stronger than the human mind. Kyocera developed into what it is today because it is based on the bond of human minds.

Follow Truths and Principles

Since Kyocera's founding, all its corporate decisions have been based on basic truths and principles. Corporate management would neither succeed, nor would it last, if it were unreasonable and morally unacceptable to society.
We at Kyocera do not rely on so-called "business common-sense". We don't make decisions by merely following the standard practices of "most other companies".
Whether decisions relate to the organization, finance or the distribution of earnings, basing them on the essence of the matter helps us avoid making mistakes - even in a foreign culture or a new economic reality that we have never experienced before.

Practice of Compliance Management

For serious considerations of the compliance management and its thorough practice, "Kyocera Employee's Behavior Guideline" was enacted in June 2000, as the basis of execution of works, and for making the management executives and employees have the spirit of law-abidingness.
Risk Management Division was established in September 2000 for promoting the enhancement of compliance management of the total Kyocera Group, and its actions are being taken as planned, organizationally and continually.
"Risk management training" for management executives and "Anti-Monopoly Act lecture" for each division were started in FY2003 to enhance the compliance education.
Further, "Kyocera Group Compliance Project" was started for the purposes of self-inspection throughout the group.
In April 2003, the "Employee Consultation Room" was established to accept consultations on breaches or possible breaches of "Kyocera Employee's Behavior Guideline".
Communications relating to compliance with internal and external stakeholders is being promoted through these measures.
In October 2000,"Kyocera Accountancy" pocketbook was published so that all employees may commonly understand the "essence of accounting with the pursuit of right thing".

"Advancing Corporate Governance System"

As a company listed on the New York Stock Exchange, Kyocera established the "Kyocera Disclosure Committee" in accordance with the Sarbanes-Oxley Act enacted in July 2002, originated from the act of improper accounting at a leading American enterprise. As a result, fair information is being disclosed for management transparency and accountability.
In addition, Kyocera established the corporate governance system commensurate with a global company and a system to enable prompt decision-making in response to changes in business environment. Further, the executive officer system was adopted in June 2003, to cultivate management executives for the next generation.

<Extract>

"Social Responsibilities"

Kyocera has been fulfilling social responsibilities required for company, not only by ensuring stable lives of its employees but returning profits to society through tax payment and by paying dividends to shareholders in pursuit of reasonable profits through its corporate activities. At the same time, Kyocera has been widely contributing to society through its promotion of environmental protection activities and support to cultural activities in society. "You should be conscious of being a member of Kyocera, the company having fulfilled social responsibilities, and work hard to enable more positive contributions to society through development of the company and expansion of profits."

"Observance of Laws"

Kyocera has been taking corporate activities with definite view of ethics based on Kyocera corporate philosophy while observing laws and regulations. The judgment criteria "Which is to do the right thing as a human being" lies in the sound view of ethics based on the norms of society such as laws. Whatever the reason may be, or for execution of business or not, employees must not act illegally or participate in any illegal act. At the same time, employees are requested to obtain legal knowledge relating life and laws in connection with business continuously, and act with sound social common sense and sense of justice so as not to violate laws carelessly or without knowing.

<Extract>

"Which is to do the right things as a human being?"

The most important for correct judgment is to think based on "Which is to do the right things as a human being?" We are apt to take actions with the reason that all others are so doing. Further, we may take selfish actions without considering people around us. Our judgment criteria are more ambiguous than considered. It is often that we do not have definite criteria.
On the other hand, "The right things as a human being" can be said as the universal value standard expressed by words of justice, impartiality fairness, philanthropy, courage, diligence, faithfulness and modesty which a man must have.
Pursuance of "Which is to do the right things as a human being?" would reveal the judgment criteria for individual when he consider his own actions.
This applies to accounting issues as well. Even if a problem is the accounting related, judgment based on "Which is to do the right things as human being?" with the consideration of nature of problem is the origin of Kyocera accountancy.

Kyocera established the Kyocera Environmental Charter on October 1, 1991, and announced plans to implement comprehensive and continual activities to promote global environmental preservation.
The Kyocera Group has committed himself to environmental preservation, taking the Kyocera Environmental Charter as their action guide.

Kyocera Environmental Charter

I Preface

Technological progress and economic development in the industrialized countries have given rise to affluent societies of high standards of living. At the same time, they have led to the mass consumption of natural resources and the mass discharge of chemical substances which, in turn, have caused a serious environmental contamination and destruction of the earth's ecosystem. In addition, explosive population growth and widespread poverty in developing countries have aggravated environmental problems, including large-scale deforestation. The social and economic activities of both advanced and developing countries are intertwined, and with all parties laying claim to greater material consumption, nature's recuperative powers have been surpassed. As a result, the earth's natural capacity for recycling has been damaged on a global scale.
One of our major premises up to this time – that the earth's ecosystem is infinitely large – is now being rejected in favor of the idea that the earth is a closed ecosystem, Such a change in view is very related to the very foundation of mankind's existence and lead to the revaluation of the quality and quantity of the products used by mankind. This, in turn, will lead to the fundamental change in the industrial/technological system within which such products are manufactured.
In the course of history, mankind has witnessed three eras of rapid development: the Agricultural Revolution, the industrial Revolution and the Information Revolution. It is generally felt that the current environmental movement will someday be considered as mankind's forth era of rapid development: the Environmental Revolution.
In the future, new policy goals will need to be established. These should state that the development and economic growth may only be pursued when proper consideration is given to the balance between the nature and human society. In view of the fact that small acts by each of the six billion people on this planet could result in disastrous environmental destruction, it is essential to establish a basic philosophy of coexistence and co-prosperity between the developed and developing countries, between business and government, and between individuals and societies. All must be viewed as participants in the stewardship of "Mother Planet Earth", not as opposing forces with conflicting interests.
The greatest responsibility for promoting the Environmental Revolution lies with the advanced countries. In particular, business in such countries play a vital role, as they control production technologies and are directly engaged in industrial activities.

II Basic management philosophy

In accordance with our corporate motto – "Respect the Divine and Love People" – Kyocera has long complied with its management philosophy: "Kyocera will contribute to the progress and development of mankind and society." We try to conduct business in a way that is harmonious with the "Mind of the Universe" – the life – giving force of our universe.
Kyocera had early insight into the way of thinking that is demanded of every business enterprise involved in today's global environmental problems. This way of thinking implies that business activities should uphold the dignity of man and contribute to the sustainable development of human society.
Based on the management philosophy stated above, Kyocera and its domestic and overseas affiliates will adopt comprehensive measures including environmental preservation, resource/energy conservation, development of environmentally friendly products, and improvement which contribute to global environmental protection in a sustainable manner.

III Environmental management policies

In the course of business activities, Kyocera will take a serious view of global environmental protection in compliance with the Company's basic management philosophy, stated above, and will emphasize the following points:
1. Compliance with the internal environmental standards of which global environmental protection is placed as the first priority
2. More efficient utilization of resources and energy, development of processing technologies
3. Development of earth-friendly products of two types, one is Environmental Improvement Products that will make a positive contribution to the improvement of global environment, the other is Environmentally Gentle Products that will achieve much less burden on global environment.
4. Cooperation with government environmental policies, and participation in or support to social contribution activities

Ⅳ Environmental management objectives

1. In order to minimize destruction of the natural environment and any harmful efforts on the ecosystem, Kyocera will establish and comply with internal standards which are equal to or more stringent than standards specified by applicable international agreement, or the regulations of regions where the Company's facilities are located.
2. At all levels, Kyocera will scientifically study and evaluate the efforts of business activities on the environment, and then take the necessary protective measures.
3. Kyocera will develop processing technologies and production facilities that will have maximum resource and energy efficiency in all manufacturing processes. At the same time, the Company will aim to reduce raw material utilization in all processes.
4. Kyocera will promote in-house energy conservation activities, such as more efficient use of electricity and fossil fuels, the introduction of high efficiency equipment, and the reutilization of thermal energy.
5. Kyocera intends to purchase recyclable materials which contribute to resource conservation. At the same time, the Company will maximize resource utilization by establishing recycling system for waste water and waste materials. The Company will take aggressive steps to recycle, decontaminate and reduce the volume of all industrial wastes.
6. Kyocera will research and develop "Environmental Improvement Products" that make a positive contribution to the improvement of global environment.
7. Kyocera will research and develop "Environmentally Gentle Products" that are gentle to Planet Earth and place a lighter burden on the environment at every stage of production., sales, distribution, consumption and disposal.
8. Kyocera will promote the "greening" (forestation) of its facilities in an organized effort to create grounds which are lush and inviting.

Ⅴ Internal organization

1. Establishment of a Green Committee

(1) In order to comply with Kyocera management philosophy which makes global environmental protection a priority and to review internal environmental policy measures, Kyocera will establish a "Green committee" which is to be comprised of the president and corporate division managers.

(2) Kyocera will establish the following subcommittee of the Green Committee: an "Environmental Preservation Section", which will aggressively promote global environmental preservation; a "Resource/Energy Conservation Section", which will promote energy saving and effective utilization of resources; and a "Global Environmental Products Section", which will promote the development of environmentally friendly products.

2. Environmental compliance organization

(1) Kyocera will appoint Environmental Director(s) from the board members and establish an environmental organization at Kyocera Corporation to take charge of all environmental matters for the entire Kyocera Group. In addition, facility and simultaneously establish an internal system for assigning environmental responsibilities to a designate person.

(2) For the purpose of environmental management, an "Environmental Compliance Committee" consisting of staff from production departments and environmental specialists will be established at each facility. Also, a "Freon Reduction Committee" will be established in every corporate division for the purpose of ozone layer protection. Regarding other environmental protection matter, committees will be established at each facility or the every corporate division as the need arises.

3. Preparation of environmental rules

Kyocera will prepare environmental control manual and rules to encourage complete implementation of environmental protection measures.

4. Environmental audit

(1) To ensure compliance with legal/governmental environmental regulations and internal environmental standards, as internal audit team and various sections reporting to the Green Committee will conduct audits on both regular and "as needed" basis.

(2) The Environmental Director, corporate division manager, facility manager and environmental specialists will implement as independent auditing system regarding environmental protection at both the headquarters and each facility.

Ⅵ Application

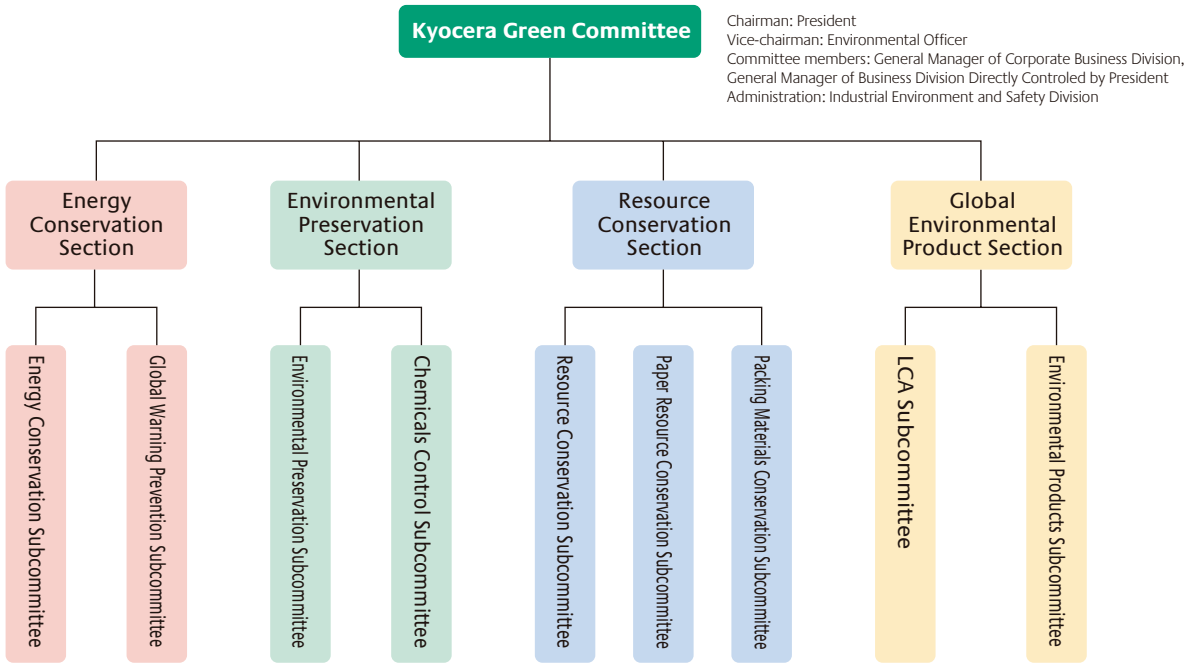
The Kyocera Environmental Charter will be applied first to Kyocera Corporation's facilities and then to its domestic and overseas affiliates.

Promotion System

Kyocera established the "Kyocera Green Committee" which is chaired by the president, and its subordinated sections and subcommittees in December 1990, for examinations of environmental preservation measures.
The "Kyocera Group Green Committee" was established in December 1991, so that the Kyocera Group may promote environmental protection activities based on the "Kyocera Environmental Charter."

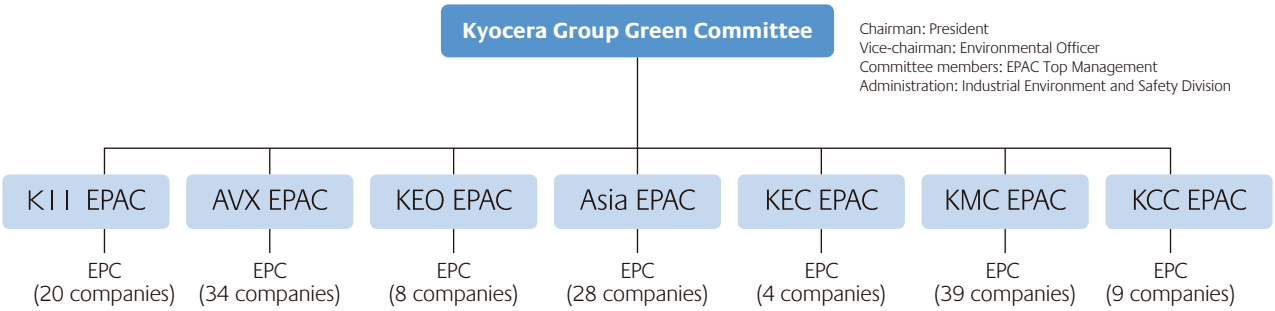
Kyocera Green Committee: KCGC

Each subcommittee prepares detailed goals and measures. Then each section makes further integrative studies. And finally, the Green Committee deliberates and approves the measures. Plant, offices and sales offices then implement the specific actions based on the decision.



Kyocera Group Green Committee: KGGC

The Kyocera Group Green Committee is held periodically to offer places for Kyocera and each group Environmental Protection Assurance Committee (EPAC) to report the status, review problems and exchange of opinions. KGGC extends instructions and guidance so that individual subsidiaries may develop its self-activities suitable for respective regions.



*Environmental Protection Assurance Committee (EPAC): There are seven groups : KII Group and AVX Group in USA, KEO Group in Europe, Asia Group in Asia, KEC Group for KYOCERA ELCO,Corp. KMC for Group for KYOCERA Mita Corporation and KCC Group for KYOCERA Chemical Corporation.

Total 142 companies
(including non-manufacturing sites)

EPAC: Environmental Protection Assurance Committee

EPAC extends instructions and guidance so that the Environmental Protection Committees (EPC) of each group may promote environmental protection activities based on the "Kyocera Environmental Charter."
EPAC is promoting environmental preservation activities of the group by conducting audit with EPC.

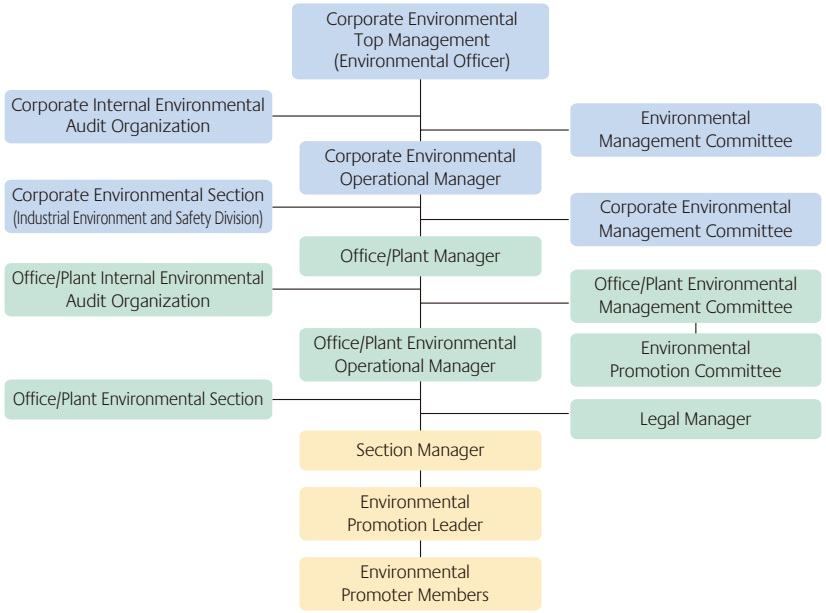
EPC: Environmental Protection Committee

All subsidiaries have respective the Environmental Protection Committees (EPC). EPC plans and implements self-activity, evaluates the result and makes the report to EPAC periodically.

ISO 14001 Certification

Kyocera constructed its environmental management system before enactment of the international standards.
In October 1996, Mie Plant became our first ISO 14001 certified plant and all domestic manufacturing sites located at 10 places were ISO 14001 certified by September 1997.
6 sites including the head office, general affairs and sales offices, and R&D were ISO 14001 multi-sites certified in March 1999. In August 1999, all 42 sites of Kyocera including sites having acquired the certification earlier were multi-sites certified with the "Corporate-wide integrated environmental management system".
In November 2000, this system was expanded to the Kyocera Group as the "Kyocera group integrated environmental management system" with larger scope of resistration. The multi-sites certification has been obtained by 57 sites in Japan as of March 2003. In overseas subsidiaries, 19 sites, that are mainly manufacturing sites, have acquired the certification and further increase is expected.
Also, "KGEMS" (Self certification system) will be introduced in mainly non-manufacturing sites of the subsidiaries.

Environmental Management System Organizational



Development of KGEMS

"KGEMS" standing for Kyocera Group Environmental Management System is a self-certification system to follow ISO 14001.
This is applicable to non-manufacturing sites that have not ISO 14001 certification and self certified environmental management system.
Introduction of this system enables the Kyocera Group to have the system to follow ISO 14001 on its all sites.

Features

- "KGEMS" is a self-certification system to follow ISO 14001. It's environmental management manual is verified by the third party.
- System can be established in shorter period as compared with ISO 14001 certification

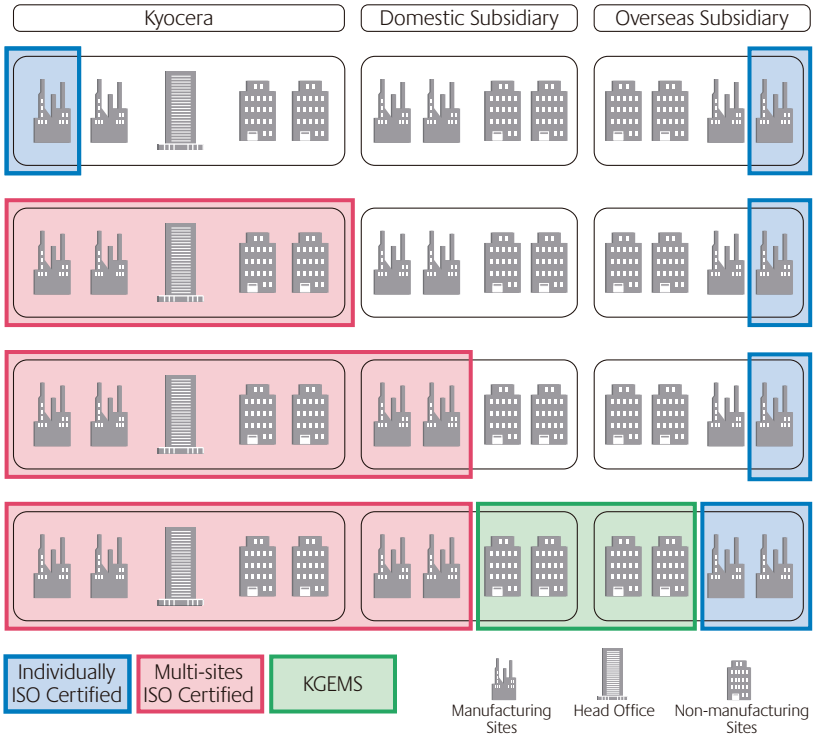
Development of Environmental Management System

1st step (September 1997)
Start of environmental management system introduction
Operation of system at 10 domestic production sites

2nd step (August 1999)
Corporate integrated environmental management system
Operation of common system at domestic 16 previousty certified sites and 26 non-manufacturing sites

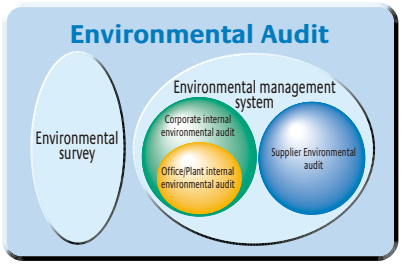
3rd step (November 2000)
Kyocera group integrated environmental management system
Operation of common system at the sites including domestic subsidiaries who have manufacturing sites

4th step (September 2003 -)
Development of KGEMS
Operation of common system at the sites who have no ISO 14001 certification and self-certification system



Environmental Audit

Kyocera implements "environmental audit" to evaluate the environmental management status of each office/plant. Besides, "Office/Plant internal environmental audit" is implemented at each site and "Corporate internal environmental audit" is implemented to verify its effectiveness, "Supplier environmental audit" is implemented to evaluate environmental status of the suppliers based on the environmental management system.



* Supplier Environmental audit is described on Page 35.

Environmental Survey

Environmental survey has been implemented in every June during the Kyocera group environmental month to evaluate the condition of environmental management of office/plant and improve the management level since FY2003. The auditors are corporate top management, staff members of environmental devision and internal environmental auditors. The survey is conducted for evaluating the status of environmental protection activities.

Environmental survey

Environmental survey (on-site check)

Corporate Internal Environmental Audit

Internal audit is implemented according to the instruction from corporate environmental top management. This is conducted between 2 sites each other by audit team selected its members from other site.
In the corporate internal environmental audit, the result of office/plant manager's activities is also audited as well as verifying effectiveness of internal environmental audit done by each office/plant.
Audit results in FY2002 are shown right. All 19 observations have been corrected with continuous improvement.

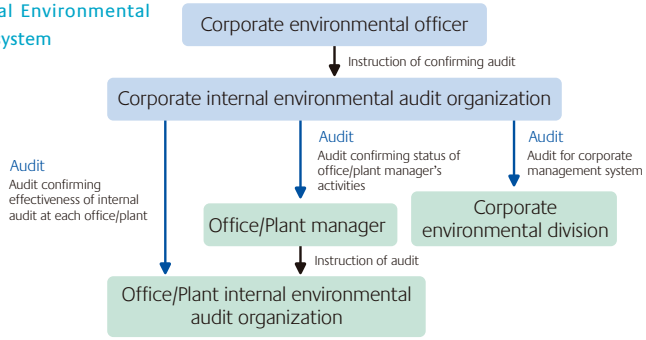
Corporate Internal Environmental Audit Results (Jan. 27, 2003 to Feb. 20, 2003)

Grouping	Results	Items
Environmental management system	Observation	1
	Minor nonconformance	0
	Major nonconformance	0
Environmental protection promotion plan	Observation	0
	Minor nonconformance	0
	Major nonconformance	0
Office/Plant manager	Observation	2
	Minor nonconformance	0
	Major nonconformance	0
Office/Plant internal audit	Observation	16
	Minor nonconformance	0
	Major nonconformance	0
Total	Observation	19
	Minor nonconformance	0
	Major nonconformance	0

Office/Plant Internal Environmental Audit

Office/Plant internal environmental audit is impremented periodically to verify operating status of environmental protection activities. In this audit, operation status of the system, progress of environmental protection promotion plan and activities at each sections are checked. Audit results are reported to the office/plant manager and refferred when the environmental management system is reviewed.

Internal Environmental Audit system



Examinations by Certification Agency

Kyocera receives examinations by certification agency every year to verify effectiveness of its ISO 14001 management system. In October, FY2003, first renewal audit was examined with "Kyocera group integrated environmental management system".
Though there were 4 obserbations, the evaluation result was mentioned as "On the whole, the system has been improved." We confirmed the effectiveness of our system.

Examination

The "Kyocera Global Environmental Contribution Award" was established in FY1997 for encouraging environmental protection activities.
The contribution award is to commend the activities having made a great contribution to the global environment with original and epoch-making ideas during our environmental protection promotion activities every year.

7th: FY2004 Results

Grand Award

"Development of environment-preserving products" category

Development of P48 WLL base station

Base station of wireless local loop system (WLL) was developed for wireless connection from base station to subscribers' homes in accordance with increasing of fixed phone in overseas countories. 202 units of base stations were installed in Thailand this time.

Effects

1. Protection of forest by reduction of telegraph poles
2. Protection of resources such as copper because cables are not required

WLL system base station

Grand Award

"Chemical Substance Reduction" category

Total elimination of hydrochloric acid through process improvement

Hydrochloric acid treatment and its washing had been conducted in the solar power element production process, but the treatment was eliminated as a result of the process improvement.

Effects

1. No use of hydrochloric acid in process
2. No use of water after stopping hydrochloric acid treatment washing process
3. No waste water, waste liquid produced by hydrochlonic acid treatment

Solar energy division manager receiving the trophy

Excellence Award

"Energy Saving" category

Fuel saving by shortening firing time of gas furnace.

Heat condition of gas furnace firing alumina raw material was revised.
It took 10 days for one cycle - preheating, binder removing, temperature increasing, keeping and decreasing, but it could be shortened by 2 days.

Effects

1. LPG usage reduction: 470,000 kg/year
2. CO_2 emission reduction: 1,419 tons/year

Excellence Award

"Energy Saving" Category

Electricity reduction by improving magnetic coil and lagging of magnetic furnace

Electric energy consumption could be reduced by changing the magnetic coil shape and increasing the number of coil turns of magnetic furnace.

Effects

1. Electric energy consumption saving: 2.09 million kW-h/year
2. Economic benefits: Approx. 18 million yen/year

Past Grand Prizes

1st: FY1998

"Development of environment-preserving products" category

Amorphous silicon drum and ECOSYS printer FS-1700 using the drum

Waste reduction and electricity saving were achieved by adopting highly durable amorphous silicon drum

Amorphous silicon drum

ECOSYS printer FS-1700

3rd : FY2000

"Development of environment-preserving products" category

600dpi LED array

Harmful chemical substances were drastically reduced through change of board material used in the products.

600dpi LED array

4th: FY2001

"Development of environment-preserving products" category

G3 base station

It was achieved to save resources with compact and lightweight design of products, and energy by reducting power consumption.

G3 base station

Corporate Environmental Accounting

The Kyocera Group had been implementing optimum environmental measures from both aspects of environment and economy by identifying cost-effect ratios relating to individual environmental measures. The Kyocera Group established its environmental accounting system in FY2003 to enable timely collection of such information and analysis of the cost-effect ratios more in detail. Our environmental accounting was made and reported referring to the "2002 Environmental Accounting guidelines" issued by Japanese Ministry of Environment and Kyocera group systems. We are thinking to identify the monthly environmental accounting of all group companies including overseas in future.

Principle of Environmental Accounting

1. Relations between environmental accounting and environmental management system

Environmental accounting was established as a part of environmental management system. It is evaluating the activities for achieving Kyocera environmental protection promotion plan (See page 20 and 21), that was made based on Kyocera Environmental Charter, and Kyocera environmental management standards (See page26). The right chart shows the relations.

2. Scope of data collection for environmental accounting

The data for environmental accounting was collected in FY2003 from mainly our domestic sites who are multi-sites certified with the Kyocera Group integrated environmental management system. We would like to expand the scope step by stey and to cover all Kyocera group companies including overseas in future.

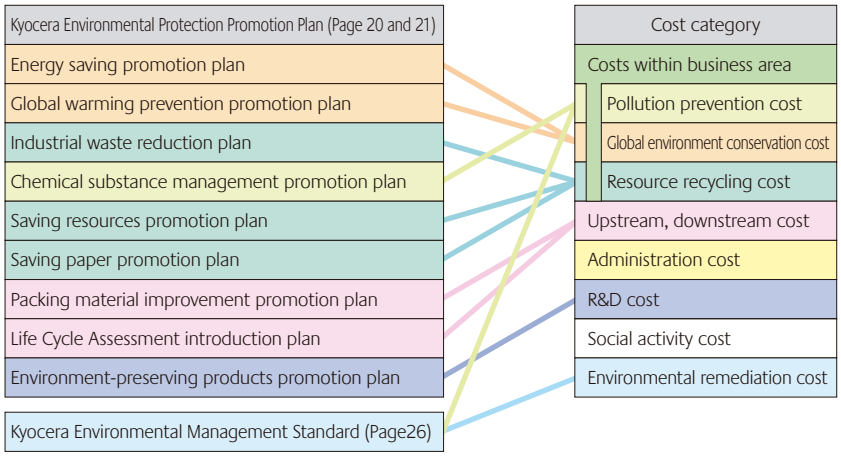
3. Principle of environmental conservation cost

The investment amount and running cost of environmental conservation equipment, and expenses spent for environmental conservation activities are collected.
The past investments is collected for only the equipment that is 100% used for environmental conservation purpose.

4. Principle of environmental conservation benefits and economical benefits

Environmental conservation benefits and economical benefits are collected only when the improvement effects can be confirmed with numerical data.
All of the benefits happened during the environmental accounting period are collected without considering when the actions were taken.

Relations between environmental accounting and environmental management system

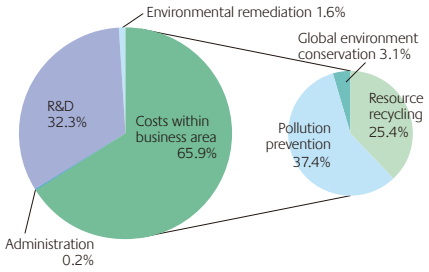


FY2003 Environmental Accounting Result

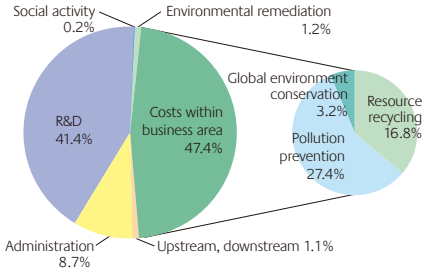
1. Details of environmental conservation cost

The environmental conservation cost (investment) was 572 million yen.
Main investigations were 377 million yen for the costs within business area (Pollution prevention: 214 million yen, Global environment conservation: 18 million yen and Resource recycling: 145 million yen) and 185 million yen for R&D cost. The environmental conservation cost (expense) was 7,324 million yen. Main expenses were 3,471 million yen for the costs within business area (Pollution prevention: 2,005 million yen, Global environment conservation: 236 million yen and Resource recycling: 1,230 million yen), 636 million yen for administration cost and 3,034 million yen for R&D cost. For details of main areas , Please see the reference pages listed in the Environmental Conservation Cost Table on page 17.

Environmental conservation cost (Investment)



Environmental conservation cost (Expense)



2. Details of environmental conservation benefits and economic benefits

Main environmental conservation benefits were 33.803MW-h reductions of electricity consumption, 297kℓ (crude oil basis) reduction of fuel consumption, 2,712 tons-CO_2 reduction of PFC and other greenhouse gases, 31,670 thousand m^3 reduction of water consumption, 2,344 tons reduction of chemical substances and 12,294 tons reduction of waste. In addition, other measures such as measure for noise were taken for environmental impact reduction. It is equivalent to 13,544 tons-CO_2 reduction when we convert the reduction of electricity consumption, fuel consumption and greenhouse gases including PFC to CO_2 discharge. This is conversed to the amount of 86 million yen.
Economic benefits were 1,212 million yen income and 2,126 million yen reduction of expense.

FY2003 Environmental Accounting Status.

■ Scope of data collection for environmental accounting

Scope of data collection : Multi-sites certified sites with "Kyocera Group Integrated Environmental Management System" (See P54), KYOCERA Chemical Corporation and KYOCERA Chemical Reinforced Plastics Co., Ltd.

Accounting period : April 2002 to March 2003
(Data for KYOCERA Chemical Corporation and KYOCERA Chemical Reinforced Plastics Co., Ltd. were collected from August 2002.)

Environment Conservation Cost (unit: million yen)

Cost category	Investments	Expenses	Major areas addressed	Reference page
Costs within business area	377	3,471		
Pollution prevention cost	214	2,005	Installation and maintenance of pollution preventive facilities / Environmental impact measurement and analysis	P26,36
Global environment conservation cost	18	236	Introduction of energy saving type equipment / Greenhouse gas discharge reduction activities	P22,23
Resource recycling cost	145	1,230	Resource saving activities / Installation and maintenance of waste recycling facilities	P24,25,28～30
Upstream, downstream cost	—	84	Green procurement / Collecting and recycling of end-of-life products	P35
Administration cost	1	636	Development and implementation of environmental management system / PRTR activities	P12～14,27,43
R&D cost	185	3,034	Development of products and processes contributing to environmental preservation	P15,31～34
Social activity cost	—	11	Donation to environment affiliate organization / Support for environmental education at primary schools	P46,48
Environmental remediation cost	9	88	Soil replacement / Purification and monitoring of grand water	P36
Total	572	7,324		

(Notes) 1. Division of multiple cost is calculated by appropriate differences proportionally or divided proportionally.
2. Depreciation of facilities was calculated based on depreciation periods originally set by Kyocera.
3. Personnel expenses were calculated with average personnel expenses unit price multiplied by the time of participation in activities.
4. R&D costs were those for the purpose of environmental conservation in fundamental R&D.

Environment Conservation Benefits

Benefits	Annual benefits amount	
Electricity saving	33,803	MW·h
Fuel saving	297	Converted to crude oil (kℓ)
PFC and other greenhouse gases reduction	2,712	ton-CO_2
Water consumption reduction	31,670	thousand m^3
Packing material reduction	633	ton
Chemical substance reduction	2,344	ton
Waste reduction	12,294	ton

CO_2 conversion

	Reduced amount	Monetary terms
CO_2 discharge reduction	13,544 tons-CO_2	86 million yen

(Notes) 1. Environment conservation benefits were collected with only the items of which improvement effects could be confirmed obviously.
2. All of the benefits happened during the environmental accounting period were collected without considering when the actions were taken.
3. 6,370 yen/ton- CO_2 is assumed as expense required for CO_2. reduction
(Source: Japanese Ministry of Environment "2002 Report for the Suggestion Project of the Mie-style CO_2 Emission Trading System")

Economic Benefits by Environmental Conservation Actions (unit: million yen)

	Amount	Major areas addressed
Income	1,212	Sales of products with value
Expense saving	2,126	Reduction of electricity charges, waste treatment expense and raw material cost
Total	3,338	

(Notes) 1. Economic benefits with environmental conservation actions were collected when the improvement effects could confirmed obviously.
2. All of the benefits happened during the environmental accounting period were collcted without considering when the actions were taken.

Product Environmental Accounting

The Kyocera Group is supplying various products to the world for the sake of future of global environment and the humankind. The products have many effects such as prevention of pollutions, prevention of global warming and promotion of recycling oriented society. We would like to introduce the example of effects of products on environment quantitatively with the solar power generating systems this time.

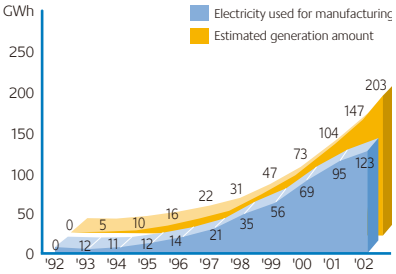
1. Principle of environmental accounting on solar power system

Kyocera has been producing and selling solar power generating systems since 1979. Once installed, the solar power generating systems continuously generate clean electric power. In this meaning, all of generated electricity can be considered as energy creation. This time, the "benefit of energy creation" on environmental accounting was calculated based on the total electricity amount that was generated by solar power generating system Kyocera supplied in the last 10 years. We took the electricity amount that was used for manufacturing those systems from the above amount and then, converted it to monetary terms.

2. Electricity amount generated by solar power generating systems.

Yellow portion on the chart indicates the estimated electricity amount*1 based on the MW values of systems we shipped from 1992 to 2001 (cumulated) and assumption that the system started power generation from the next years after our shipment. The estimated generation amount increased from 5GW-h in 1993 to 203GW-h in 2002, 10 years thereafter. The cumulative generation amount during that period was 658GW-h.

Estimated electricity amount generated and used for manufacturing



3. Electricity amount used for manufacturing solar power generating system

Blue portion shows the estimated electricity amount*2 required for manufacturing (from raw materials to finished products) of solar power generating systems we supplyed from 1992 to 2001. The amount was counted on the year when the systems started power generation. (Example: Electricity used for manufacturing on 1992 is counted on the value of 1993.)
The estimated electricity used for manufacturing increased from 12GW-h in 1993 to 123GW-h in 2002 because of the production increasing. The cumulative electricity used for manufacturing during that period was 446GW-h.

Generated electricity amount	Monetary terms (Electric charge terms)
212GW-h	1.8 million yen

CO_2 equivalent

CO_2 reduction	Monetary terms	Tree planting area	the Koshien Stadium
155 thousand -CO_2	1 billion yen	39km^2	equivalent to 991 stadiums

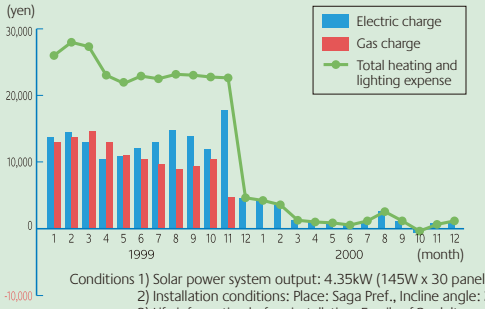
4. Benefit of energy creation of solar power generating system

The electricity generated by solar power generating system is considered as net creating energy benefits after talking the amount used for manufacturing of the systems from it. There was no benefit until 1995 since cumulative amount used for manufacturing was larger than cumulative genelation amount. The effect turned plus in 1996 onward. The cumulative benefit was 212GW-h in 2002.
212GW-h cleating energy benefit can be considered as 1.8 billion yen economic benefit when it is converted to monetary terms by using electric charge rate. It is also considered as 155 thousand CO_2 reduction when it is converted to CO_2 emission. This is equivalent to absorption of CO_2 with trees planted over 39km^2 of area*5 in these 10 years. This is 991 times as big as the Koshien stadium. In addition, it becomes 1 billion yen when CO_2 reduction volume is converted to monetary terms.
Sighificant level benefits could be achieved in only these 10 years, but it is expected that the systems will continue power generation for another 20 years during the life time. The cumulative creative energy benefit is expected to reach 3,611GW-h and it is equivalent to 30.7 billion yen in monetary terms. (converted using electric charge rate)
More benefit can be expected, since production volume of solar power generating systems will be drastically increased considering the future of global environment.
For continuous protection of global environment, the Kyocera Group will continue the effert to improve the power generation efficiency of solar power generating system and reduce electricity consumption for its manufacturing.

<Conditions for calculation>
*1: Calculated from estimated average value of generated power that is simulated by KYOCERA Corporation at 16 places in Japan.
*2: Calculated estimated electricity consumption for manufacturing based on 2.2 years energy payback time (System size: 30MW/year, Roof installation type), Product life: 20 years (Source: "Solar power generation evaluation report" 1996 NEDO Contract Report (Photovoltaic Power Generation Technology Research Association) March 1997)
*3: Calculated based on hige voltage power supply rate: B 8.5 yen/KW-h of Kansai Electric Power Co., Inc. assuming large user.
*4: 733g-CO_2 per l KW-h
*5: 0.002445km^2/ton-C (Source: "Global Warming Guidebook" (McMillan Research Institute)
*6: Area of the Koshien Studium: 39,600m^2
*7: 6,370 yen/ton- C is assumed as the cost required for reduction of CO_2 per ton. (Source: Japanese Ministry of Environment "2002 Report for the Suggestion Project of the Mie-style CO_2 Emission Trading System")

Economic Benefits of Solar Power Generation System for Housing.

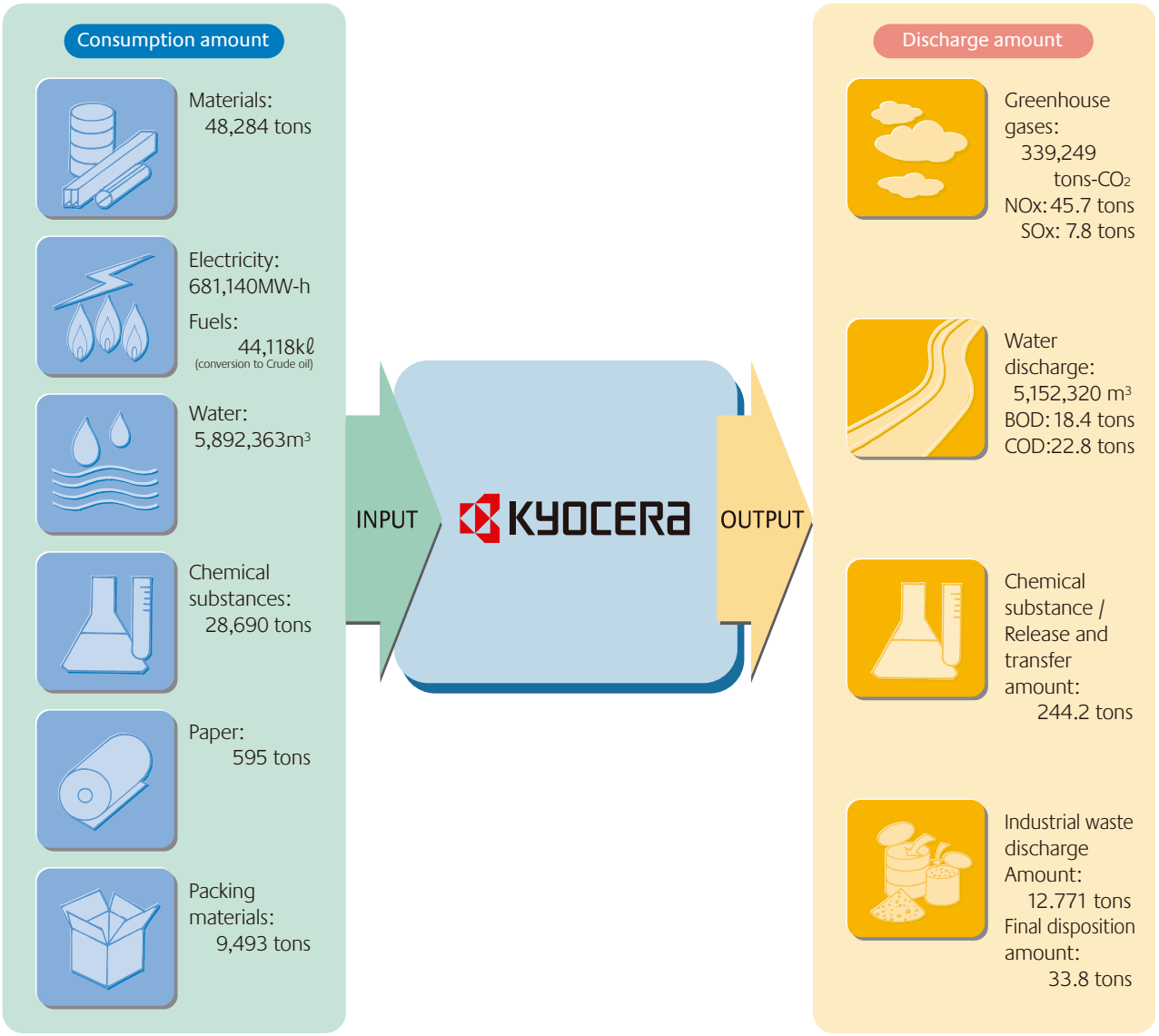
A person living in Saga Prefecture installed Kyocera solar power generating system and introduced all electrification system in his house in December 1999. As a result, heating and lighting expense, 22,520 yen in November 1999 before adoption, was drastically reduced to 470 yen in November 2000.



Conditions 1) Solar power system output: 4.35kW (145W x 30 panels)
2) Installation conditions: Place: Saga Pref., Incline angle: 28 degree, Direction: Due south
3) Life information before installation: Family of 2 adults and 2 children, 60 amperes, Use of propanegas burning hot-water supply boiler
4) Living information after installation: Use of solar power generating system, electromagnetic cooker and heat pump type hot-water supply system started in December 1999.

Whole picture of Environmental Impact

Here is the whole picture showing environmental impact of the Kyocera Group that clarifies the relations between business activities and the environmental impact.



Data collection

Scope: Multi-sites certified sites with "Kyocera Group Integrated Environmental Management System" (See P54)

Input items

Materials :Consumption amount of main raw materials and sub materials
Electricity :Electric energy purchased from electric power companies
Fuels :Amount of fuels such as LPG, gas oil and crude oil used as energy
Water :Consumption amount of city water and groundwater
Chemical substances : Consumption amount of legal regulated chemical substances used in manufacturing process (Substances specified by 12 ordinances such as Poisonous and Deleterious Substances Control Law, Fire Services Act (Dangerous Substance), Industrial Safety and Health Law, PRTR Law, and Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances)
Paper :Amount of copying paper, and forms used in manufacturing process
Packing materials : Consumption amount of packing materials

Output items

Greenhouse gases: Discharged amount of 5 kinds of gases such as CO_2 and PFCs generated when electricity, gases and fuels are used
NOx :Load amount of nitrogen oxides happens when gases and fuels are burned
SOx :Load amount of sulfur oxides happens when fuels are burned
Water discharge : Amount of discharge water into river and so on (except water discharged to sewerage system)
BOD :Load amount of biochemical oxygen demand
COD :Load amount of chemical oxygen demand
Chemical substances : Release and transter amount of chemical substance specified by PRTR Law (Specified Class 1 and Class 1 chemical substances)
Industrial waste : Amount of discharged waste generated by business activities
Final disposition : Amount of industrial waste directly filled in land

Environmental Protection Promotion Program Summary

Kyocera is promoting positive environmental protection activities in accordance with the following plans to clarify the environmental policy, and define the action plans and middle-term goals.

Item		4th environmental protection promotion plan
Energy saving promotion plan Page 22		1. Reduce electricity consumption per net sales by FY2005 from FY2002 level.
		2. Reduce fuel consumption per net sales by FY2005 from FY2002 level.
Global warming prevention promotion plan Page 23		1. Reduce total emission amount of CO_2 by FY2005 from FY1991 level.
		2. Reduce PFC and other gases (Methane, Nitrous oxide, HFC, PFC, SF6) by the end of FY2005.
		3. Reduce total emission amount of greenhouse gases by FY2005 from FY1991 level.
Industrial waste reduction plan Page 24-25		1. Plant Reduce amount of industrial waste discharged per net sales by FY2005 from FY2002 level.
		2. Office Reduce amount of industrial waste discharged per net sales by FY2005 from FY2002 level.
		3. Achieve zero emission (100% recycling) by March 2003.
		4. Reduce amount of waste (industrial waste and valuables) generated per net sales by FY2005 from the first half of FY2003 level at manufacturing sites.
Chemical substance management promotion plan Page 27		1. Reduce amount of specified chemical substances used for wastewater treatment per waste water amount by FY2005 from FY2002 level.
		2. Reduce release and transfer amounts of specified class 1 designated chemical substances specified by PRTR Law per net sales by FY2005 from the first half of FY2003 level.
Saving resources promotion plan Page 28-29	Vehicle fuel	1. Reduce fuel for automotive per net sales by FY2005 from FY2002 level.
	Water consumption	2. Plant Reduce water consumption per net sales by FY2005 from FY2002 level.
		3. Office Reduce water consumption per net sales by FY2005 from FY2002 level.
	Travel expenses	4. Reduce traveling expenses per net sales by FY2005 from FY2002 level.
	Gas expenses	5. Reduce gas (N2, H2 and argon) expenses per net sales by FY2005 from FY2002 level.
Saving paper promotion plan Page 29		1. Reduce weight of office papers purchased per net sales by FY2005 from FY2002 level.
		2. Reduce weight of papers used in manufacturing process per net sales by FY2005 from FY2002 level.
		3. Continue 100% recycling of papers and reduce amount of recycled papers per net sales by FY2005 from FY2002 level.
Packing material improvement promotion plan Page 30		1. Reduce packing material purchasing cost per net sales by FY2005 from FY2002 level.
		2. Completely stop using PVC packing materials (outer packing materials, bags and cushioning materials) by FY2004
Life Cycle Assessment introduction plan Page 31		1. Introduce the system for equipment business and preparation of its implementation for components business.
Environment-preserving product promotion plan Page 32-34		1. Develop environment-preserving products at each division by FY2005.

	FY2003 Target	FY2003 result	FY2004 target	FY2005 target
	6% reduction of electricity consumption per net sales	6.8% increase	13% reduction	26% reduction
	6% reduction of fuel consumption per net sales	7.8% increase	13% reduction	26% reduction
	Preparations for 6% reduction of total amount of CO_2 discharged	18.1% increase	Preparations for 6% reduction	Preparations for 6% reduction
	Minimization of PFCs and other gases discharge	73.2% reduction	Minimization of PFCs and other gases discharge	Minimization of PFCs and other gases dischrge
	Preparations for 6% reduction of total amount of greenhouse gases	2.2% reduction	Preparations for 6% reduction	Preparations for 6% reduction
	35% reduction of industrial waste discharge per net sales	7.5% reduction	54% reduction	70% reduction
	25% reduction of industrial waste discharge per net sales	34.8% increase	38% reduction	50% reduction
	Achieve zero emission by March 2003	99.6% achieved	Continue zero emission	Continue zero emission
	FY2003 second half: 3% reduction of waste generation per net sales	2.4% reduction	10% reduction	20% reduction
	2% reduction of discharged water per waste water amount	19.3% reduction	5% reduction	10% reduction
	FY2003 second half: 1% reduction of discharged water per net sales	Release : 15.3% reduction Transfer : 13.4% increase	3% reduction	5% reduction
	10% reduction of fuel for automotive per net sales	9.6% increase	20% reduction	30% reduction
	10% reduction of water consumption per net sales	6.9% increase	20% reduction	30% reduction
	5% reduction of water consumption per net sales	7.8% increase	10% reduction	15% reduction
	5% reduction of travel expenses per net sales	8.4% increase	8% reduction	10% reduction
	5% reduction of gas expenses per net sales	3.9% increase	10% reduction	15% reduction
	5% reduction of purchased office papers weight per net sales	4.5% increase	10% reduction	15% reduction
	5% reduction of purchased papers weight per net sales	16.9% reduction	10% reduction	15% reduction
	5% reduction of discharged papers weight per net sales	11.2% increase	10% reduction	15% reduction
	5% reduction of packing material purchasing cost per net sales	8.0% reduction	10% reduction	15% reduction
4.	Preparations for completely stop using PVC (outer packing materials, bags and cushioning materials)	Switched to other materials	Completely stop using PVC (outer packing materials, bags and cushioning materials)	Completely stop using PVC (outer packing materials, bags and cushioning materials)
	LCA model development	In development	Implementation of LCA of at least 1 major item in each business area	Expansion LCA to more products
	Development of at least 5 new products at each division	19 items recognized	Development of at least 5 new products at each division	Development at least 5 new products at each division

* · Scope: KYOCERA Corporation only
· The values per net sales are basically used.

Energy Saving

Increasing of energy consumption has influence on the environment issues such as global warming. It is common subject for people in the world to utilize the limited energy effectively for industrial activities. Kyocera started company-wide promotion activities with the target (per net sales) in FY1993.

Promotion of energy saving

Kyocera made the first project team for energy saving activities at Kagoshima Kokubu plant in FY2000 and has been expanded its activities to other large plants. In FY2003, project activities were extended to medium and small plants such as Hokkaido Kitami plant, Nagano Okaya plant, Mie Ise plant and Kagoshima Hayato plant.
Energy saving activities were promoted with specific targets such as high efficiency utilization of energy and thermal recycling.

Major achievement of the projects were as follows.
1. Use of outside air energy for air conditioner
2. Change thermal source for air conditioner
3. Control numbers of compressors
4. Combining and high efficiency of light load transformer
5. Introduction of inverters for pump fan

Main examination and implementation in FY2003 by the project activates were as follows.
1. Improvement of refrigerator system
2. Thermal recycling for furnace facilities
3. Standby power reduction of hydraulic equipment for manufacturing
4. Roof heat insulation through change of painting materials
5. Best mixing of energy utilization

Reduction of energy consumption

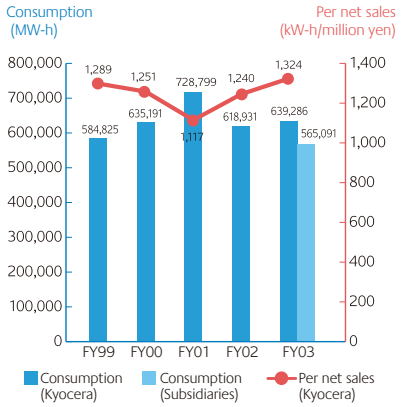
Energy consumption was slightly increased in FY2003 from the level of FY2002 (base year) resulting from the increase of manufacturing volume. Fuel consumption was also increased because of big impact resulting from energy changeover from electricity. As a result, electricity consumption per net sales increased by 6.8% against the target of 6% reduction. Fuel consumption per net sales also increased by 7.8% against the target of 6% reduction.
In FY2004, we will implement the plans made by energy saving project immediately, certainly continue the measures for energy saving such as heat insulation of manufacturing process and air conditioning temperature control, and promote the activities for achieving the targets.

Main Activities

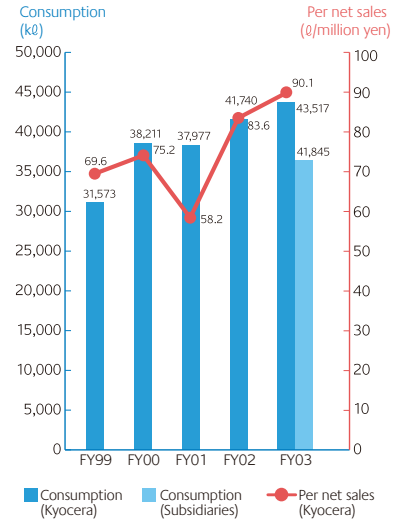
(Plant)
- Implementation of energy saving project
- Horizontally spreading of the effective improvement
- Energy saving measures in manufacturing process

(Office, Sales office)
- Monthly trend monitoring of energy consumption
- Saving electricity of unnecessary lighting and OA equipment that is not used
- Appropriate temperature control of interior air conditioner
- Water spraying onto external unit of air conditioning
- Introduction of energy saving type lighting

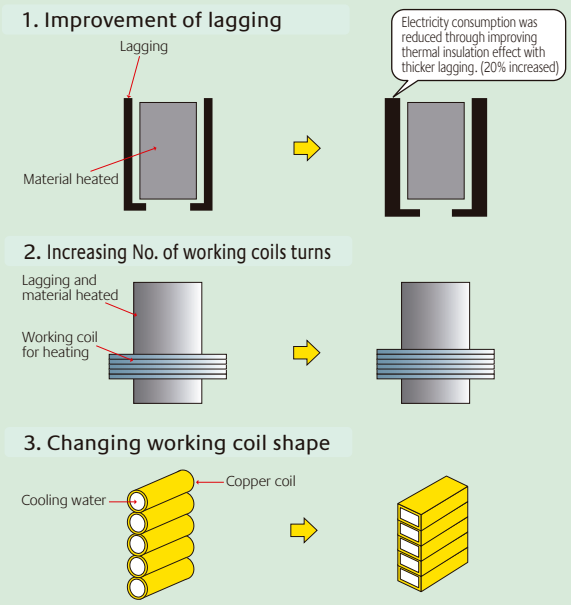
Electricity consumption



Fuel consumption



Example of activity: "Saving electricity through improving magnetic coil and lagging of magnetic furnace."



1. Electricity consumption was reduced through improving thermal insulation effect with thicker lagging. (100% implemented)

2. Electricity consumption was reduced through improving of heating efficiency with more turns of coil of magnetic furnace.
(67% implemented, 100% implementation by October 2003)

3. Electricity consumption was reduced through improving heating efficiency with new shape of coil of magnetic furnace.
(67% implemented, 100% implementation by October 2003)

Global warming, the concentration of greenhouse gases in the atmosphere due to artificial increase of the emission and decrease in CO_2 absorption sources, is considered as the critical disruption of the global climate system. In view of anticipated and seriousness of the influences, this is one of the most significant environmental problems that affect survival of humankind. Kyocera held the 1st Global Warming Prevention Subcommittee in FY1999 and started the activities for greenhouse gases reduction in FY2000.

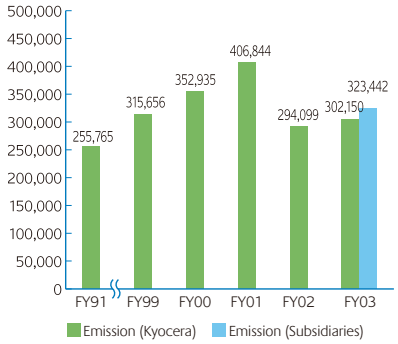
Reduction of Greenhouse Gas Emission

Energy saving project was started at Kagoshima Kokubu plant as a model plant, since energy saving greatly contributes to reduction of greenhouse gases.
It is extremely difficult, however, to reduce total amount of emission with only the measures for energy saving, since additional energy is required for facilities and equipment newly installed.
Accordingly, we have set the goal for reducing PFCs and other gases that have bigger impact to global warming, and been working aggressively to achieve it at all plants.
As a result, CO_2 emission increased by 18.1% in FY2003 compared with the FY1991 level but emission amount of gases such as PFCs could be reduced by 73.2%. Total emission of greenhouse gases thus reduced by 2.2%.

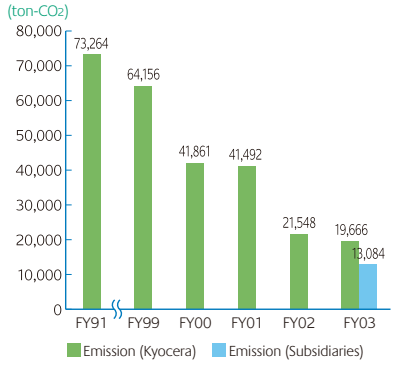
Main Activities

- Reduction of emission of PFCs and others
  1. Review of cleaning operation
  2. Using substitutes
  3. Sharing the latest information
- Reduction of greenhouse gases by using another fuels
- Promotion of solar power generating system
- Promotion of cogeneration system
- Project activities for global warming prevention
- Horizontally spreading of effective measures for global warming prevention to other plants

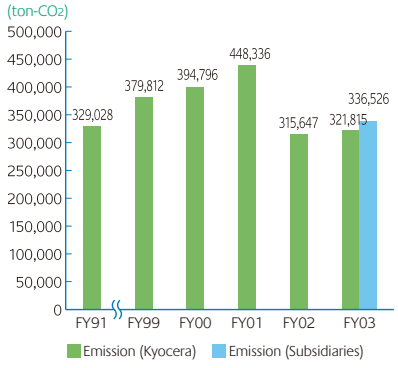
CO_2 emission



PFCs and others emission



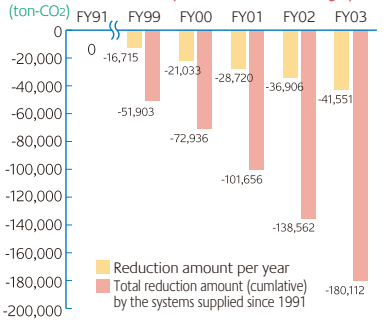
Total emission of greenhouse gases



CO_2 Reduction Effect with Solar Power Generating System

Solar power generating system does not generate CO_2 being the cause of global warming, since sunlight is changed to electric power directly. Kyocera has been selling solar power generating systems since 1979. According to the number of systems supplied after 1991, 180,000 ton-CO_2 of greenhouse gases reduction could be achieved as of FY2003.

Estimated CO_2 Reduction by Solar Power Generating System



*CO_2 reduction is calculated based on estimated solar power generation amount (kW-h) and emission coefficient of thermal power plant (Source: "Solar power generation evaluation report" 1996 NEDO contract report and "Solar power generation technology research association" March 1997.)

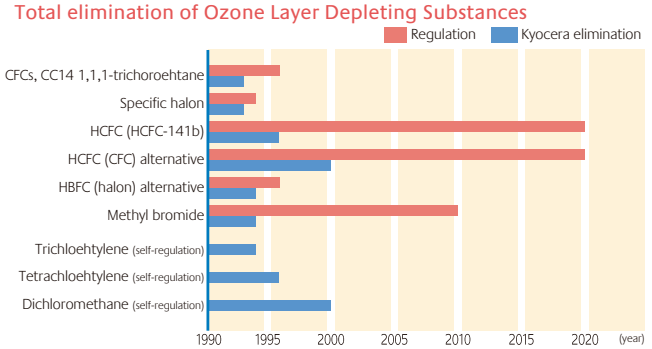
Fuel Conversion Plan

Fuel conversion from LPG to LNG started at Kagoshima Kokubu plant in FY2003. It will be finished within FY2004. The conversion to LNG will be started at Shiga Gamo plant and Yohkaichi plant in FY2004, too. In addition, it is also planned at Kagoshima Sendai plant in FY2004. About 10,000 tons CO_2 reduction can be expected once the conversion to LNG is finished at those 4 plants.

Ozone Layer

In addition to the materials regulated the Montreal Protocol, Kyocera eliminated other chlorine solvents. As a result, "CFCs" and other flons, "carbon tetrachloride," "1,1,1-trichoroehtane" and "halons" were totally eliminated in 1992. CFC alternative was totally eliminated in 1999, 20 years ahead. As to other chlorine solvents, all solvents such as trichloroethylene, tetrachloroethylene and dichloromethane were totally eliminated by 2000.

Total elimination of Ozone Layer Depleting Substances



Waste Reduction

Concerning final disposition sites in Japan, direct landfilling of industrial waste is getting more difficult because of limited space for landfilling. Kyocera made the policy for industrial waste reduction in FY1992 and has been taking activities in accordance with the policy.

Reduction of Industrial Waste discharge

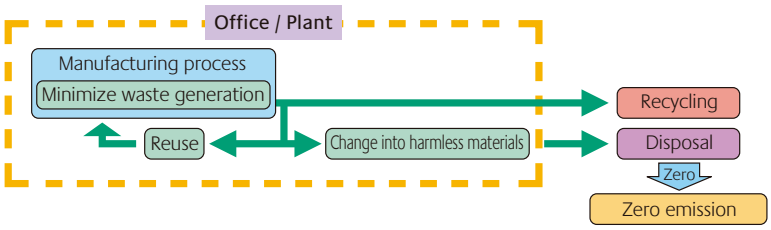
Kyocera has been setting target for waste reduction every 3 years since FY1993 in accordance with the basic policy for industrial waste reduction.
Kyocera has been promoting the waste reduction base on its reduction plans defined key actions, that is made according to actual status of industrial waste and the basic policy.
The waste discharge from the plants in FY2003 could be reduced compared with FY2002 level. Actually, however, the result was only 7.5% reduction against the target of 35% of reduction per net sales. The discharge from offices increased by 5 tons but it was too small and had no significant impact to the total result.

Basic Policy for Industrial Waste Reduction

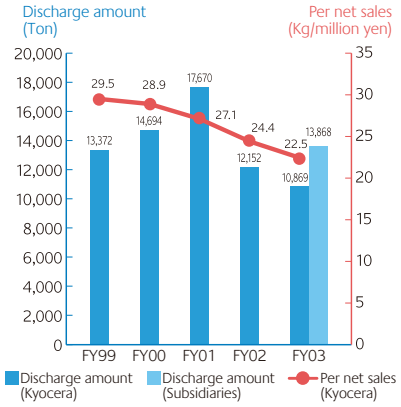
1. Minimize of waste generation in process
2. Recycle waste once it is genelated
3. Change non-recycable waste into harmless materials

Main Activities

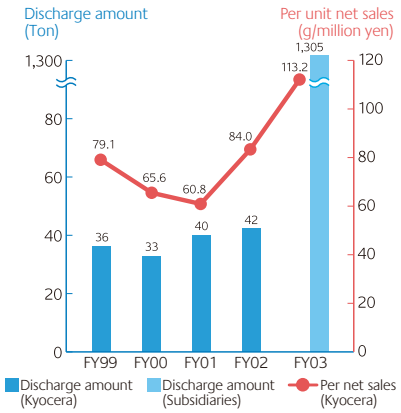
- Introduction industrial waste disposal facility
  1. Drying equipment for sludge and waste water
  2. Treating facility for cleaning liquid waste
  3. Hydrofluoric acid effluents treating facility
  4. Crushing facility
  5. Alkali waste drying facility
- Industrial waste reduction project actioity



Industrial Waste Discharge (Pants)



Industrial Waste Discharge (Offices)



Minimization of Waste Generation

In order to enhance our activities along the basic policy further more, we established another goal for our activities to minimize waste generation itself from our 4th environmental protection promotion plan.
It is important to minimize waste generation itself during manufacturing of products for more effective reduction of waste discharge. Accordingly, we will continue this activity in the future as well.
In FY2003, the result was not sufficient yet because we just started the activities from the second half. As a result, it was 2.4% reduction against the target of 3% reduction per net sales.

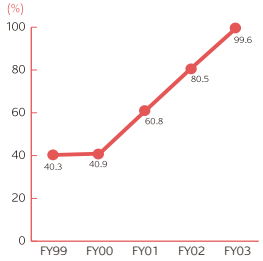
Zero emission

The definition of zero emission adopted by Kyocera is “100% recycling ratio of industrial waste”. The recycling ratio is considered as “weight ratio of materials recycled or used for thermal recycling among the industrial waste discharged”. Our goal was to achieve zero emission during FY2003.
The result was 99.6%. We could achieve the goal almost all. We will continue our activities in FY2004. In addition, we will improve the level of our activities with higher goal that is established by reviewing the definition of zero emission.

FY2003 Waste Generation

Item	FY2003 first half / Result	FY2003 second half / Result
Amount (ton)	10,151	9,906
Amount per net sales (kg/million yen)	42	41

Industrial Waste Recycling Ratio



Prevention of Illegal Dumping

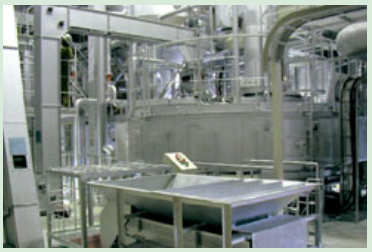
Illegal dumping resulting from shortage of final disposal site and sudden steep rise of expenses required for disposal is a large social problem.
Kyocera established the “Waste Disposal Regulation” in FY1995 for appropriate disposal and its strict management.
When we entrust disposal companies with the operation, Kyocera (discharging company) concludes individual entrustment agreements with a transportation company and a disposal company after conducting pre-survey and credit investigations, and ensure appropriate management is conducted based on manifest.
In addition, periodical on-site survey is conducted to ensure the appropriale waste disposal by all disposal and processing companies.

Examples of Activities

Introduction Green Sheet Waste Recycling Facility (Kagoshima Sendai Plant)

Green sheet waste is waste of raw materials generated from manufacturing of multi-layer ceramic packages. It is green color sheet shape waste contains chromium. Since chromium changes to hexavalent chromium during heating, it is difficult to incinerate the green sheets waste. In the past, it was required to dispose the green sheet waste at controlled landfill site with large expenses.
We wanted to find the method to change it into harmless materials and finally, introduced "Green sheet recycling facility" in FY2003 as the result of examination at the "Industrial waste reduction project". This is the sintering furnace that can heat the green sheet waste at high temperature for a certain period. As a result of sintering, green sheet waste can now be sold as materials of refractories. It allows us to reduce the waste drastically. We are planning to introduce it in Kagoshima Kokubu plant in FY2004. Drastic reduction of waste can be expected in the future.

Effect
Reduction of green sheet waste ····· 1,000 tons/year
Reduction ratio to total amount of industrial waste discharged (Kagoshima Sendai plant) ····· 21%/year


Green sheet waste recycling facility


Green sheet waste

Introduction of Complex Intermediate Waste Processing Facility (Shiga Yohkaichi Plant, Kagoshima Sendai Plant, Kagoshima Kokubu Plant)

The complex intermediate waste processing system was introduced to dry sludge after dewatering, and vaporize waste acid and waste alkali at the same facilities with the heat happens by burning combustibles, waste oil and waste solvents. This system allowed us to reduce the waste drastically.

Effect (3 plants total)
Waste reduction ····· 2,692 tons/year
Reduction ratio to total amount of industrial waste discharged (3 plants total.) ····· 23%/year


Complex intermediate waste processing facility

Introduction of Product Cleaning Liquid Waste Treating Facility (Fukushima Tanakura Plant)

Cleaning liquid waste used for the products was treated of as industrial waste in the past. Since special facility was required to treat it internally, the "Cleaning liquid waste treating facility" was introduced. We could achieve zero emission with the introduction of this internal treatment facility.

Effect
Waste liquid reduction ····· 1,200 kg/year
Reduction ratio to total amount of industrial waste discharged (Fukushima Tanakura plant) ····· 2%/year


Cleaning liquid waste treatment facility

Introduction of Measurement System (Kagoshima Kokubu Plant)

Operator who brought waste to the storage was required to measure and record the weight in the past for data collection and monitoring purpose. It took time to summarize the data. Further, entry and summarization errors might be happend. We introduced measurement system with bar-code reader and computerized automatic data collection system with various information in the main storage yards. It allows us to keep the rapid and accurate data management.


Measurement system

Segregated Storage of Waste (All Plants)

Waste generated in the manufacturing process is thoroughly segregated for its appropriate treatment and recycling, from waste acid, waste alkali and waste oil to glass and ceramics waste.

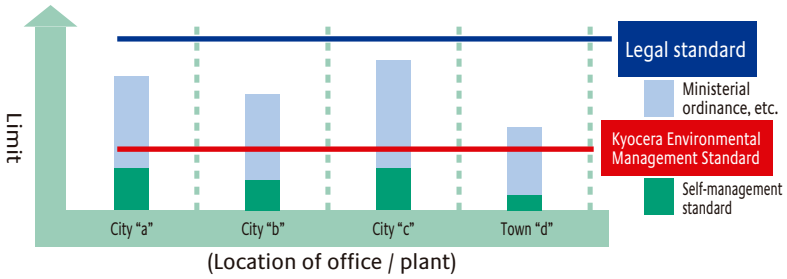

Industrial waste segregated yard

Water and Air Pollution Prevention

Kyocera has been taking activities to reduce pollutants since discharge of pollutants into water area, atmosphere and soils causes large influences on natural environment and ecosystem. Kyocera is managing the pollutants strictly with tighter limit than legal control that was established as the company-wide common "Kyocera Environmental Management Standard" in FY1993.

Kyocera Environmental Management Standard

"Kyocera Environmental Management Standard" requires us the management with tighter limit than the legal control. Individual office / plant has own "Self-management standard" that is even tighter limit for the strict management.
Treatment capability and management of pollutants were drastically improved, as a result of new introduction and improvements of environment related facilities that were required to observe the Kyocera Environmental Management Standard.



Waste Water Self-management in Plant

To reduce environmental impact into water areas, we are conducting the upstream management of waste water at the process where the waste water is generated, and operations management at the waste water treatment facility. Self-analysis as well as legal analysis is made for waste water discharged to outside of the plant. This allows the plant to confirm and control its appropriate management and helps to reduce environmental impact.

Waste water analysis

Example of Kyocera Environmental Management Standard
(Extracted from total 44 water related substances)

No.	Item	Unit	Water Pollution Control Law	Kyocera Environmental Management Standard	Self-management Standard (Ex.: Shiga Gamo Plant)
1	Hydrogen ion concentration	pH	5.8~8.6	6.2~8.2	6.7~7.6
2	Biochemical oxygen demand (BOD)	mg/ℓ	160 max.	10 max.	7.2 max.
3	Chemical oxygen demand (COD)	mg/ℓ	160 max.	10 max.	9.5 max.
4	Suspended solid amount (SS)	mg/ℓ	200 max.	5 max.	4.75 max.
5	Normalhexane extracts substance (Mineral oil)	mg/ℓ	5 max.	1 max.	0.95 max.
6	Normalhexane extracts substance (Animal and plant oils)	mg/ℓ	30 max.	1 max.	0.95 max.
7	Phenols content	mg/ℓ	5 max.	0.5 max.	0.3 max.
8	Copper content	mg/ℓ	3 max.	1 max.	0.03 max.
9	Zinc content	mg/ℓ	5 max.	1 max.	0.21 max.
10	Soluble iron content	mg/ℓ	10 max.	5 max.	0.42 max.
11	Soluble manganese content	mg/ℓ	10 max.	5 max.	0.27 max.

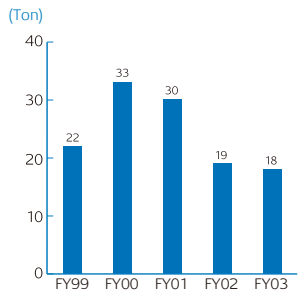
BOD Load Amount Reduction

Kyocera is taking actions to reduce environmental impact on rivers with the management of waste water discharged from plants base on the tighter limit.
Total amount of BOD (Biochemical oxygen demand) has been decreasing.

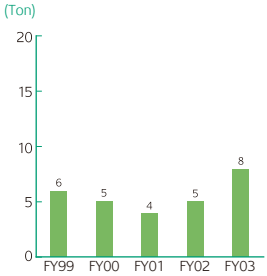
SOx and NOx Loads Amount Reduction

For prevention of air pollution and global warming, fuels used in plants have been changed over to low-sulfur fuel or town area gas.
In FY2003, total amount of SOx increased by 60% compared with FY2002, because the manufacturing of particular products was increased. But, total amount of NOx was reduced by 23.3% compared with FY2002. However, both SOx and NOx meet the legal control (discharge concentrations). In the future, further efforts will be extended for reduction of pollutant amount of these substances.

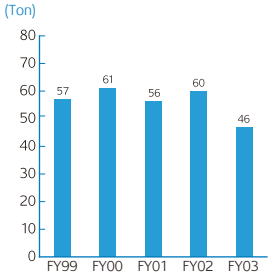
Total amount of BOD Discharged



Total Amount of SOx Emission Pollutant Load



Total Amount of NOx Emission Pollutant Load



Chemical substances may cause large influences on the environment if they are not used or treated properly.
For its strict management, we have established chemical substance control system, and make sure the amount of chemical substances release into air and water and its transfer with waste, that may cause environmental pollution.

Activities for PRTR Law

On FY2003 report, total amount of target chemical substances handled was 1,129.6 tons, of which the release amount was 153.2 tons and the transfer amount 91 tons.

Summary Chart of Kyocera Chemical Substances Designated by PRTR Law (Specified Class 1 Designated Substances and Class 1 Designated Substances)

(unit: ton)

No.	Substance name	Amount handled	Amount released			Amount transfered		Others		
			To atmosphere	To water	To soil	As waste	To sewage	Recycled	Consumed	Removed
16	2-aminoethanol	12.8	0	0	0	5.3	0	0	7.5	0
40	Ethylbenzene	14.5	3.1	0	0	0.1	0	11.3	0	0
63	Xylene	8.3	2.3	0	0	0.7	0	5.3	0	0
64	Silver and its water-soluble compounds	44.9	0	0	0	3.1	0	2.5	39.3	0
68	Chromium and chromium (III) compounds	49.1	0	0	0	1.4	0	17.3	30.4	0
100	Cobalt and its compounds	20.1	0	0.4	0	1.8	0	0.5	17.4	0
108	Inorganic cyanogen compounds (except-complex salts and cyanates)	6.0	0	0	0	0	0	0	0	6.0
179	Dioxins (Unit: mg-TEQ)	1.39	0.31	0	0	0.48	0	0.60	0	0
207	Copper salt (water-soluble, except for complex salt)	7.9	0	0	0	0.4	0	0	0	7.5
227	Toluene	550.7	144.7	0	0	18.2	0	103.8	284.0	0
230	Lead and its compounds	86.1	0	0	0	27.3	0	3.1	55.7	0
231	Nickel	74.1	0	0.4	0	4.3	0	3.2	66.2	0
232	Nickel compounds	31.0	0	0.1	0	4.8	0	3.6	22.5	0
270	Di-n-butyl phthalate	49.4	1.0	0	0	4.9	0	4.9	34.7	3.9
272	Bis (2-ethylhexyl) phthalate	38.2	0.4	0	0	4.6	0	3.9	27.9	1.4
283	Hydrogen fluoride and its water-soluble salts	36.3	0	0.2	0	0	0	0	36.1	0
304	Baron and its compounds	17.4	0	0.3	0	2.4	0	2.4	12.3	0
307	Poly (oxyethylene) alkyl ether (alkyl C = 12 - 15) Manganese and its compounds	7.2	0	0	0	7.2	0	0	0	0
311	Molybdenum and its compounds	27.2	0	0.1	0	1.2	0	2.3	23.6	0
346	Target chemical substances total	48.4	0.1	0.1	0	3.3	0	28.4	16.5	0
	Target chemical substances total	1,129.6	151.6	1.6	0	91.0	0	192.5	674.1	18.8

As to specifed Class 1 designated substances specified by the PRTR Law, we started our activity with the targets of reducing the release and transfer amount per net sales by FY2005 from the FY2003 1st half level on our 4th environmental protection promotion plan.

Reduction of Specified Chemical Substances Used for Waste Water Treatment

We selected 11 items newly as specified chemical substances from the chemical substances used for waste water treatment, and started our activity to reduce the use of them with the target in FY2003.
For achievement of the target, not only the improvement of treatment efficiency by the waste water treatment division, but strict control and minimization of waste water generation at production are positively promoted.
We are proceeding stable treatment of waste water and reduction of environmental impact through these measures.
We could reduce the use of specified chemical substances in FY2003 from the FY2002 level. As a result, it was 9.3% reduction against the target of 2% reduction per waste water amount.

FY2003 Specified Chemical Substances Used in Waste Water Treatment

Item	FY2002 result	FY2003 result
Amount of specified chemical substances used (ton)	6,899	5,497
Amount of waste water treated (m³)	4,308,615	4,255,783
Per waste water amount (g/m³)	1,601	1,292

Preventing Generation of Dioxins

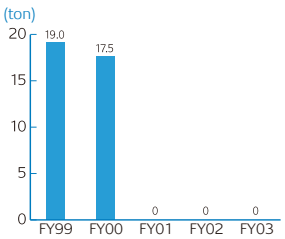
We decided the policy to abolish small incinerators in April 1999 for preventing generation of Dioxins. All small incinerators were abolished by December 2000 in combination with zero emission activities.
Currently, there are 3 units of complex intermediate waste processing facilities that have the integral functions of incineration and drying sludge and waste liquid using the heat from incinevation.
These facilitates meet the "Kyocera Environmental Management Standard", that is even tighter than the tightest discharge standard of the Law Concerning Special Measures against Dioxins (1/10 of the legal control).

Activated carbon adsorption facility

Reduction Hazardous Air Pollutants Discharge

In FY1997, "Self-management plan for hazardous air pollutants" were made by 4 electrical and electronic affiliated organization.
This self-management plan specified dichloromethane, trichloroethylene and tetrachloroehylene, and also chloroform in 2001 as priority substances for reduction of discharge considering the amount of substances used and discharged into air, and asked self-management to all members as well as other 9 substances.
Kyocera is investigating the current status of use and discharge, and promoting reduction the of discharge based on the self-management plan.

Discharge of Hazardous Air Pollutants



Saving Resources

Kyocera has been promoting its activities for saving resources since FY1997 with the specific reduction targets for the effective utilization of limited resources as much as possible and contribution to global environmental protection. Vehicle fuel, water, travel expenses, gases, paper and packing materials are defined as the target of our actions in the 4th environmental protection promotion plan.

Reduction of Vehicle Fuel Consumption

Kyocera has been promoting the use of low fuel consumption vehicles more and more to reduce the consumption by company cars.
In FY2002, the ratio of low fuel consumption vehicles was only approx. 10% of all vehicles. But, the ratio increased to approx. 30% in FY2003 as a result of positive activities in all offices and plants.
Low fuel consumption vehicles, low emission gas vehicles and clean energy vehicles will be continuously introduced positively in FY2004.
The vehicle fuel consumption increased a little in FY2003 compared with the result in FY2002 because the cars were used more oftenty for sales activities.
It was 9.6% increase against the target of 10% reduction per net sales.

Main Activities

- Establishment of selection guideline for purchasing vehicles
  Parchasing / Leasing most effective vehicles in fuel consumption for company cars
- Education for drivers
  Stop idling and prevention of abrupt start
- Restrictions on use of vehicles
  Positive utilization of TV conference and telephone conference

Reduction of Water Consumption

Reduction of water consumption greatly contributes to reduce environmental impact since it protects water resources and allows to reduce wastewater. It is also necessary to consider the influence on the surrounding area and its improvement, such as well drawdown and water deterioration. Accordingly, as to city water and well water, we are taking actions for improvement of the use efficiency and recycling of wastewater based on the investigations of actual condition of facilities using water at each manufacturing process.
In FY2003, however, the consumption increased at the plants. As a result, it was 6.9% increase against the target of 10% reduction per net sales.
It was 7.8% increase at the offices but this hardly has influence on the total because of the small consumption itself.

Main Activities

- Reduction of blow water for cooling tower
- Recycling of cooling water
- Reuse of discharged water as toilet water
- Reuse of process wastewater
- Flow control of toilet water
- Reuse of pure water
- Use of water saving device
- Advanced treatment of wastewater
- Reuse of washing water at manufacturing process
- Adjustment of feed pressure of well water feed pump
- Reduction of use of well water through use of rainwater sprinkle

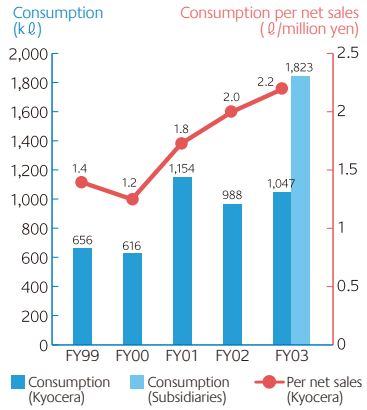
Reduction of Travel Expenses

Reduction of number of business trips directly contributes to save the expenses as well as to reduction of many resources consumption, such as fuels, tickets used by public transportation, and water, detergent and towels used by accommodations.
In Japan, offices/plants are available all over the country. Various meetings were held at the head office or other offices/plants with the participation of the staff.
Under the circumstances, TV conference system was introduced sequentially into all plants and main sales offices beginning in FY1992. Further, monthly meetings, which had also been held with many partipations, started to use TV conference system and multi-media conference system with a large screen and internal LAN line connection in FY2003.
In FY2003, various actions were taken to reduce travel expenses, but the overseas traveling expense increased due to mainly startup of overseas plant. As a result,it was 8.4% increase against the target of 5% reduction per net sales.

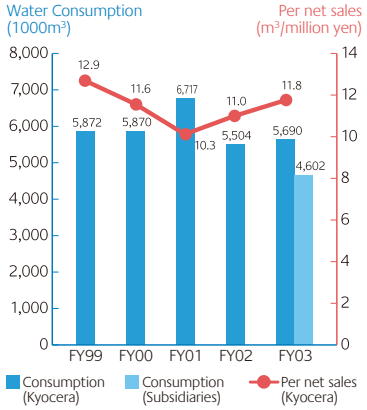
Main Activities

- Positive utilization of TV conference system
- Positive utilization of telephone conference and IT conference
- Restrictions on number of persons to be dispatched for a same purpose
- Reduction of number of business trips with consideration of number of meeting

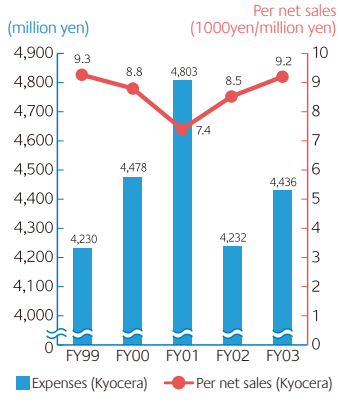
Vehicle Fuel Consumption



Water Consumption



Travel Expenses



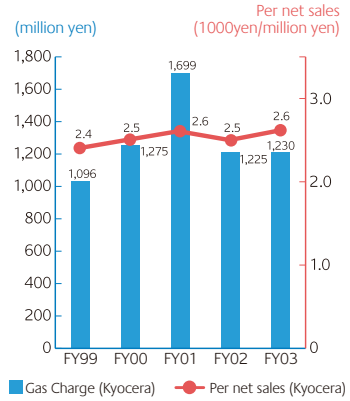
Reduction of Gas Charge

Reduction of gas consumption contributes to lower environmental impact such as reduction of chemical substances and energy required for producing gases as well as the reduction of expenses.
Kyocera has been continuing actions for its reduction since FY2000 with the specific activities.
The plants have been conducting the reduction activities for positively since many kinds of gases are used such as atmosphere gas for electric furnace, and various gases used for cleaning the products and analysis in addition to those used as fuels.
Nitrogen gas, hydrogen gas and argon gas are considered as the target for reduction.
In FY2003, the charge increased a little.
It was 3.9% increase against the target of 5% reduction per net sales.

Main Activities

- Improvement of cut-off method of furnace inlet and outlet, and reviewing the emission method
- Investigation into alternative gases
- Development of dust-removing method using air
- Implementation of dust preventive measures in clean room
- Review and change of gas purchasing condition
- Review for low-pressure supply instead of high-pressure supply
- Purchasing with lorry instead of gas cylinder
- Review of process and facility conditions

Gas Charge



Reduction of Papers Consumption

In addition to reduction of office papers by electronic means and using papers already printed on one side, we are reducing the papers used in the manufacturing process as well.
We made our reduction plan for papers discharged in our 4th environmental protection promotion plan in addition to the plan for papers purchased.
As a result, 16.9% reduction achieved against the target of 5% reduction in terms of the amount of production papers purchased per net sales.
As to the amount of office papers purchased, however, it was 4.5% increase against the target of 5% reduction per net sales. The amount of papers discharged increased by 11.2% against the target of 5% reduction per net sales.
We will review more aggressive actions and achieve the targets in FY2004.

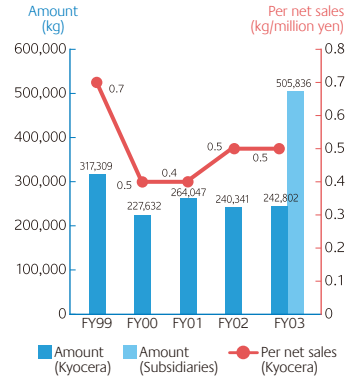
Main Activities

- Reduction of office papers
  1. Reduction of copying paper
  2. Reduction of continuous forms
  3. Reduction of sensitized paper
  4. Promotion of office automation
  5. Minimization of printing e-mail
  6. Review of distribution of meeting materials
  7. Thoroughly using papers already printed on one side
- Reduction of papers used in manufacturing process
  1. Review of grade of separate paper, high-grade paper and white paper
- Reduction of amount of papers discharged
  1. Refusing to receive unnecessary catalogs

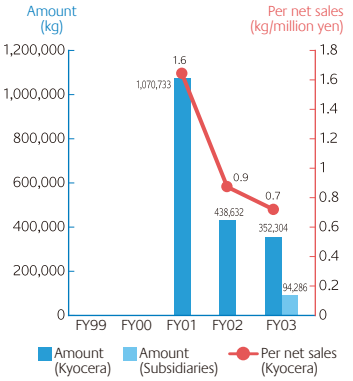
FY2003 Results of Amount of Papers Discharged

Item	FY2002 result	FY2003 result
Discharge weight (ton)	921	990
Per net sales (ton/million yen)	1.8	2.0

Amount of office papers purchased

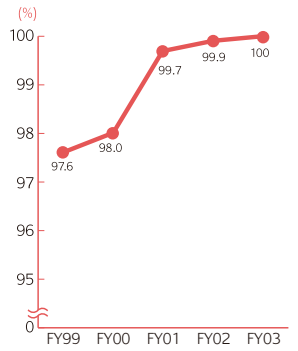


Amount of production papers purchased



* The data up to FY2000 is not available, since papers amount was monitored with purchasing cost until FY2000.

Paper Recycling ratio



Separation of papers and waste

Packing Materials Improvement

Kyocera made basic policy for packing materials improvement in FY1993 and have been working for improving the method and materials, and packing size reduction positively.
As a result of positive activities, it was 8.0% reduction against the target of 5% reduction per net sales in FY2003.

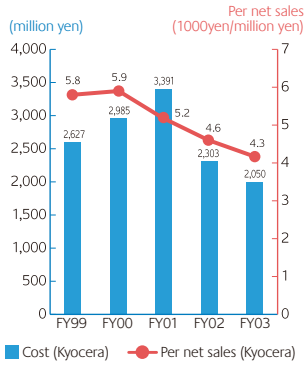
Basic Policy for Packing Materials Improvement

1. Non-use of packing materials containing hazardous substances
2. Minimum required use of packing materials
3. Reuse of packing materials or use of reusable packing container
4. Use of easy-to-recycle packing materials
5. Establishment of appropriate disposal system of waste packing materials

Main Activities

- Improvement of packing methods and materials
- Packages size reduction
- Standardization of packing materials
- Reusable packing materials
- Use of paper type materials instead of resin type
- Restriction on receiving materials based on the Green Procurement Regulations
- Use of reusable packing container

Packing Material Cost



Example of Activities

Packing Material Change for Cellular Phone

FY2001 specifications

- Packing material: Plastic tray
- Body and accessories packed separately at shipment of products

Specifications of today

- Changed to currugated carton
- Body and accessories packed together from our shipment of products

Reduction of Environmental Impact during Transportation

Promotion of Modal-Shift

Truck transportations have a large influences on the environment and cause problems such as global warming, air pollution, traffic jam and noises.
The Kyocera Group is promoting modal-shift, from truck transportations to railway transportations.
For example, transportations of cellular phones produced in Hokkaido Kitami plant were changed from trucks to railways.
Transportations of products to the group companies in China were also shifted from aircrafts to ships as much as possible in an effort for reduction of the environmental impact. At the same time, we have been trying to minimize the energy required for transportation by reducing product size and reviewing packing method.

Promotion of Joint Distribution

Individual distributions by each company cause an increase in the environmental impact.
Accordingly, the Kyocera Group organized the Joint Distribution Conference for optical equipment in participation of 5 other companies in the same business field and started joint distributions from FY1998.

Main Activities

- Review of transportation methods of finished products
- Smaller and lighter design of products
- Promotion of joint distribution

Modal-Shift

It is important to develop products with smaller environmental impact by the assessment of influences of products on the environment thought their life cycles. Kyocera made the "LCA Subcommittee" and started research of LCA techniques in FY2000. Kyocera will continue the assessment of environmental impact of many products through the life cycles and use the result for our development of environmentally friendly products.

LCA (Life Cycle Assessment)

LCA is a technique to quantitatively assess the influences of products on the environment with the total product life of "Material procurement → Production → Distribution → Use → Recycling・Disposal". Kyocera group implemented LCA for printers and digital copying machines.
As the results, the "Type Ⅲ environmental labeling ("Ecoleaf project" environmental laveling of the Japan environmental management association for industry) was obtained.
Environmental impact information of products throughout the life cycles is disclosed in accordance with the label.
Further more, we will promote the implementation of LCA in all business fields such as semiconductor components and electronic components, solar battery and jewels in addition to telecommunications, optical and information equipment.

Environmental Labeling Types

The internationally standards, ISO 14020 series specify 3 types of environmental labeling.

Type Ⅰ
Certification marking provided by a third party certification institution when the products meet the requirement from institution about its environmental features.

Type Ⅱ
Self-declaration type environmental laveling to insist on conformity of the product or service to environmental standard originally established by the company.

Type Ⅲ
The labeling for quantitatively analyzing and disclosing the environmental impact at all stages of life cycle from materials production to recycling or disposal.

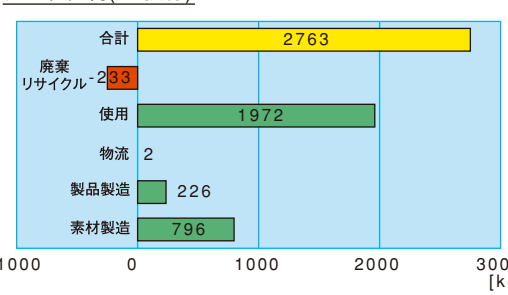
Example of Activities

Type III Assessment of Digital Copying Machine KM-6330

This label discloses the quantitatively analysis result of impact on consumption of energy resources, mineral resources and recyclable resources, and also the environmental impact on discharging into air, water and soils.
About 70% of impact for global warning as the result of energy consumption happens when the product is used. Such LCA assessment results are reported to the design division to promote the development of more environment-preserving products.

温暖化負荷(CO_2換算) [kg]	酸性化(SO_2換算) [kg]	エネルギー使用量 (MJ)
2, 763	6	63, 845

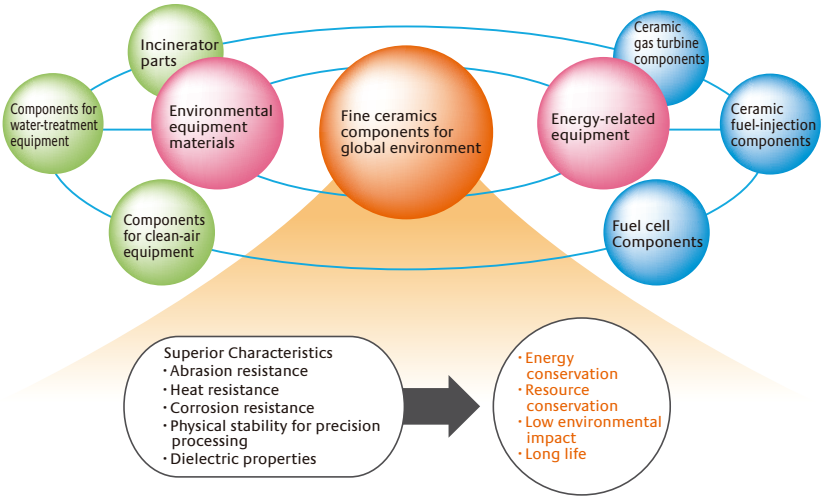
温暖化負荷(CO_2換算)



Environment-Preserving Products

Development of Next-Generation Environmental-Preserving Products with Fine Ceramics

Fine ceramics - Kyocera's core technologies - are excellent examples of ecological materials that contribute to environmental preservation. Talking advantage of ceramic superior resistance to abrasion, heat and corrosion, Kyocera has developed a variety of environmental solutions. Kyocera also practices Green Procurement based on its own standards, playing close environmental attention to procured materials used in production processes.

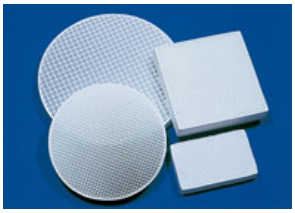


Gas Turbine Components

The thermal efficiency of gas turbine engine with fine ceramics components, that has superior heat resistance, is high. It enables the engines to reduce CO_2. Further more, fuel efficiency can be improved and it reduces the emission of NOx.

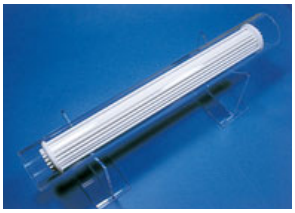
Sliding Components for Fuel Injection

High fuel injection pressure is proven way to improve fuel efficiency of engine. Fine ceramic sliding components contribute to the development with its extreme wear resistance and anti-seizure characteristics.



Honeycomb Filters

Ceramic honeycomb filters is featured with high thermal resistance and air permeability. This material is impregnated with catalysts; which provides a function as purification filter to reduce exhaust gases and ozone.



Gas Separation Membrane

Separation membrane made of porous fine ceramics is used for environmental preservation such as solvent recovery and recovery of gasoline vapour since it has high heat resistance and chemical resistance.

"ECOSYS" Printer

The "ECOSYS" printer series have high reputations in the world because of its environmental-preserving designs including non-cartridge technology to enable printing with replenishment of toner only. In addition to the German "Blue Angel" Eco Label certification, the most strict certification in the world, the "ECOSYS" printers suit the major power consumption standards such as the "International Energy Star Program" as well.

Blue Angel (Germany)

Eco Mark (Japan)

Kyocera Eco-Product Label

International Energy Star Program (USA - Japan)

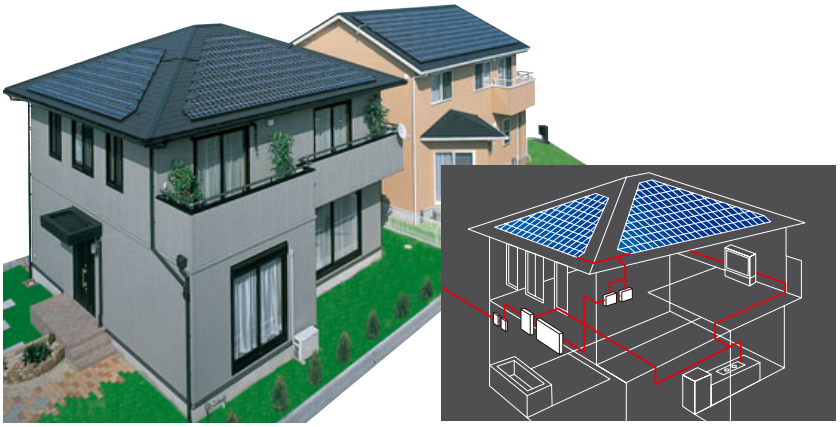
GEEA (Switzerland)

Digital Camera

Rechargeable large-capacity and small size lithium-ion battery are adopted in a small and lightweight high picture quality digital camera provided with high-precision CCD and optical zoom lens. Long life and mildness to the earth have been made compatible.

Solar Power Generating System

This is residential power generating system designed to convert the solar energy to electric power in considerations of the global environment. Kyocera introduced this system in 1993 as the first residential system in Japan, as the result of our continuous R&D activities since 1975. After that, Kyocera has been promoting the solar power generating system through comprenensive system from production of silicon wafers (materials of solar cells) to inspection and maintenance after installation on houses.



Residential Solar Power Generating System

Solar cell modules installed on roof convert the solar energy to electric power, which is converted to A.C. power usable at home with a power conditioner. Two power sources, solar power generation and commercial power source, can be selectively and automatically used.

Large condominium (Germany)

Large-Scale Solar Power Generating System

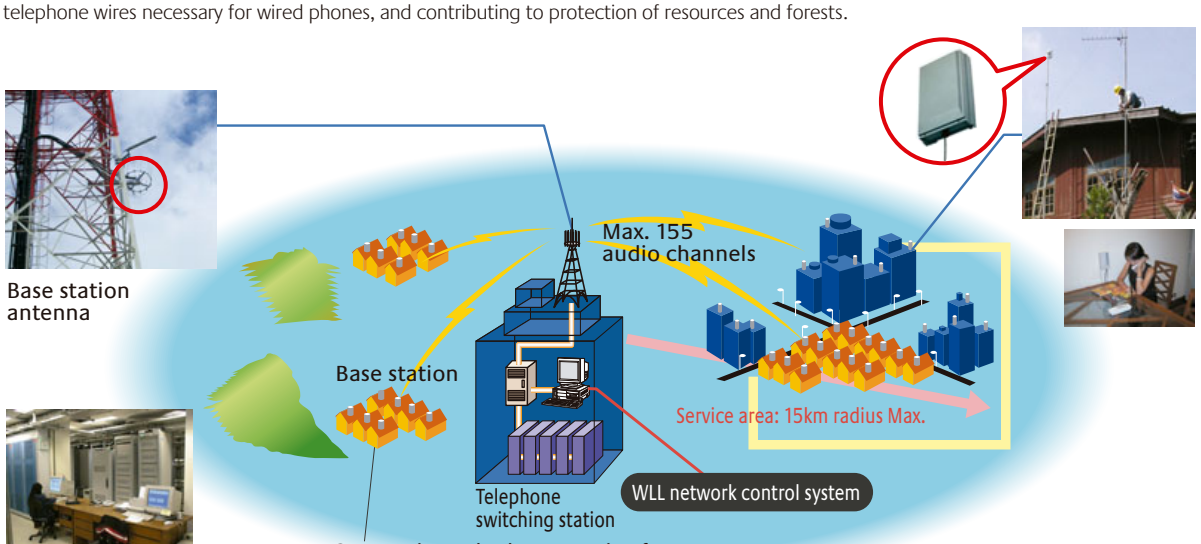
The module for large-scale solar power generating systems are developed and supplied in many countries. The systems are recently installed on public facilities and industrial facilities.

Super WLL System

Super WLL system supports max. 155 audio channels and covers 15km radius area with one base station. The system can be flexibly used for both small populated areas in countries and suburbs, and large populated cities by changing the number of units. The system does not require telegraph poles and telephone wires necessary for wired phones, and contributing to protection of resources and forests.

Base station antenna

WLL base station set in telephone switching station



Global Environment-perserving Products Certification Program with Kyocera Eco Product Lavel

The "Eco-Product Label, Global Environment-Preserving Product Certification Program" was established for the purpose of corporate-wide acknowledgment to the products that contribute to the global environmental and promoting the development of such products. The "Kyocera Eco-Product Label" is given to the products that are certified with this program.

Kyocera Global Environment-Preserving Product Certification Standard

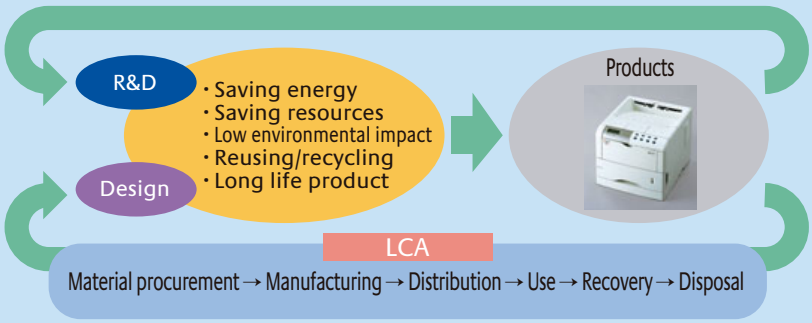
The Kyocera Group is positively promoting the development of "environment-preserving products" that contribute to improvement of the global environment, and "environmental impact reduction products" with minimized impact at all stages of production, sales, distribution, use and disposal of products, in accordance with the global environment-preserving product promotion plan and Kyocera Environmental Charter.

"Kyocera Global Environment-Preserving Products" that meet the standard, have been certified since FY2000.

R&D of Global Environment-Preserving Products

The Kyocera Group wishes all our products to be global environment-preserving products.
Thus, we regard the manufacturing of products considering environment-preserving as important from its R&D stage.
The 4th environmental protection promotion plan indicates the target of development global environment-preserving products at each division. The activities are positively promoted with this target.

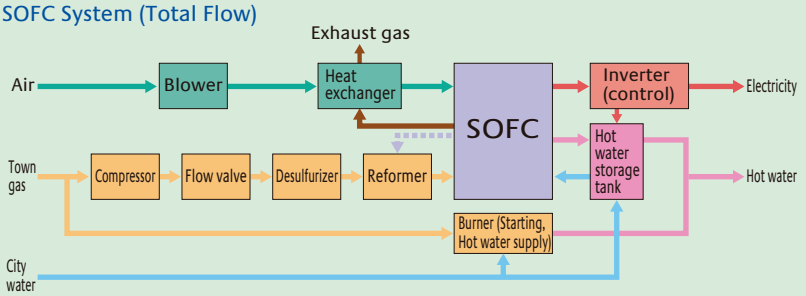
Concept of Product Research, Development and Design



Development of 1kW Class SOFC (Solid Oxide Fuel Cell) for Home Use

The energy efficiency of fuel cell is good and it leads the reduction of CO_2 emission causing global warming. Further more, fuel cell is expected as clean energy to hardly generate NOx and noises. In addition, in view of high power generation efficiency, fuel cell is expected to be used as decentralized power sources in the future.
SOFC is considered as best for cogeneration (combined heat and power generation), since the overall energy efficiency with heat generated from power generation is approx. 70 to 80%.
Kyocera is developing 1kW Class SOFC for home use. Ionic ceramic conductor, that is our own technology and advantage, is used for the electrolyte of this fuel cell.
Development is promoted using our own products for all component materials such as battery cell. We are expecting to commercialize it at the beginning of 2005.

SOFC System (Total Flow)



Development of Ceramic Components for 8,000kW Class Hybrid Gas Turbine Engine

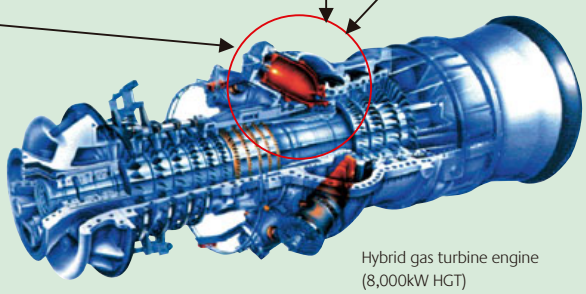
Research for high-efficiency cogeneration system is executed as the joint project of 5 companies entrusted by the New Energy and Industrial Technology Development Organization (NEDO)
Kyocera is responsible for the development and manufacturing of ceramic components for gas turbine engine of the cogeneration system.
With use of ceramic components at portions of gas turbine exposed to high temperature combustion gas, the turbine inlet temperature becomes high and heat efficiency can be improved.
Energy saving and reduction of CO_2 emission are expected as a result.
The overall heat efficiency of the total cogeneration system is approx. 83%. When annual operation time is 8,000 hours, Approx. 1.9 thousand kℓ/year (crude oil conversion) in terms of fuel, approx. 3.7 thousand-CO_2/year in terms of CO_2 reduction per one system can be expected.

Kyocera development
1. Components
   ① Combustor liner
   ② Duct
   ③ First-stage nozzle
2. Ceramic materials
   Silicon nitride with high-temperature strength and oxidation resistance


②Transition duct


③First-stage nozzle


①Support ring combustor liner


Hybrid gas turbine engine (8,000kW HGT)

To supply environment-preserving products, it is necessary to take actions including the supply chain.
The Kyocera Group established "Green Procurement Standards" in FY1999 in order for procurement of environment-preserving materials and has been asking our supplies for cooperation based on our "Green Procurement Guideline."

Green Procurement Standards

Green Procurement Standards defines the following three points for our activities.

1. Basic understanding of green procurement and items to be environmentally considered
2. Standards for environmental improvement of materials purchased
3. Supplier environmental management survey and audit

1. Basic understanding of green procurement and items to be environmentally considered

"To purchase only required amount of materials when it is required" is the principle of our purchasing.
Waste is eliminated from our procurement by developing purchasing specification, selection and purchasing of low environment impact materials, and purchasing and use as scheduled.
In procuring purchasing materials, we consider the following three points to reduce the environmental impact.

a. Reduction of environmental impact at all stages of production, distribution, use and disposal
b. Saving resources and energy
c. Long product life, reusable, recyclable, use of recycled materials and easy disposal

2. Standards for environmental improvement of materials purchased

a. Management and identification of chemical substances contained in materials purchased

Chemical substances are strictly managed according to the toxicity and others as well as confirming contained chemical substances by obtaining MSDS.
If prohibited substances or substances to be reduced are contained in purchasing parts, we stop the purchasing and consider to purchase the substitutes.

b. Considerations of environment impact of facility purchased

Kyocera determines the specifications of facility purchased considering its environmental impact when we introduce any new facility.
We make sure if facility is made per specification when it is installed, and also manage its operation strictly.

c. Specifications of packing materials for purchasing parts

Kyocera prohibits to use hazardous substances, and PVC for outer packing and cushioning for our purchasing parts, as well as promoting the reduction of packing material, and changeover to materials that can be easily reused or recycled.

d. Indication of material on purchasing parts

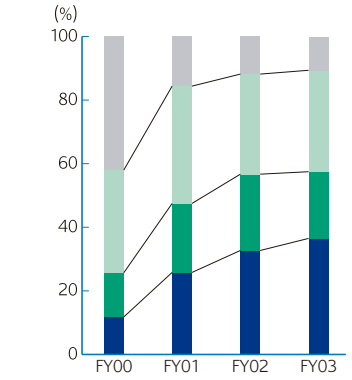
To reduce environment impact related resin type materials purchased, Kyocera is promoting the designation of specifications or indication of material through consultation with suppliers. This allows us to promote the recycling of our purchasing parts since it is effective for segregated disposal.

3. Supplier environmental management survey and audit

As to main suppliers, Kyocera is conducting periodical survey and confirming the status of ISO 14001 certification, environmental management and environmental protection activities.
In FY2003, the surveys were made into 1,773 suppliers and the result is as shown below. The number of Rank A Suppliers have increased. It is suggesting us that environmental management of our suppliers have been also improved.

As fo rank Cand D suppliers, Kyocera provide our requirements relating to the environment for their understanding about our the environmental policy. Further, the environmental audit is conducted for some of them. In FY2003, we conducted the audit at 15 companies, mainly manufacturing companies.

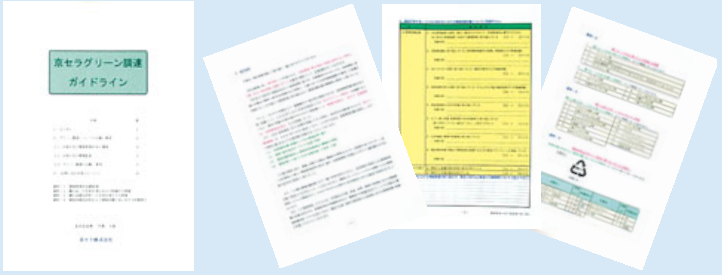
Supplier Survey Results



Rank A : Very Good environmental management
Rank B : Generally good environmental management
Rank C : Partial improvement of environmental management required
Rank D : Incomplete environmental management

Requirement of Green Procurement Guideline

1. Improvement of chemicals management
2. Improvement of packing materials used for procurement materials
3. Improvement of identification for resin type procurement materials



Kyocera Green Procurement Guideline

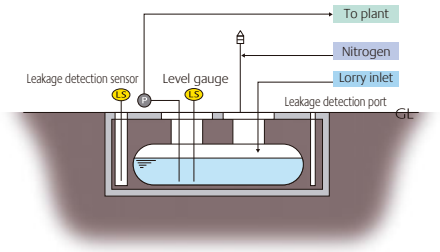
Supplier on-site audit

Environmental Risk Management

Reduction of environmental risks is expected with the solutions promoted on assumption of various environmental risks in addition to observance of laws.
The Kyocera Group is performing preventive activities for water, air and soil pollutions in conformance to the Kyocera Environmental Management Standard that is severer than legal and public regulations.

Moving Installations from Underground to Aboveground, or Using Double-layered Tanks

Soil and ground water could be contaminated in the event of a leakage of underground installations such as pipes and tanks.
Kyocera has managed them through periodical inspections. In addition, Kyocera established "Underground Installations Management Standard" in FY1997 specifying the structure of installations, in order to enable easy visual inspection for early finding of leakage and prevention of further contamination.
In accordance with the standard, Kyocera started countermeasures, moving installations from underground to aboveground, or using double-layered tanks in FY1997 and completed them in May 2001.
The same measures are applied to all underground installations newly made after that.



Underground tank storage space

Emergency Prevention

Kyocera has been taking preventive actions such as installation of spill prevention dike on assumption of accident or emergency that may affect the environment.
Kyocera is conducting emergency training for actions and notification periodically once a year, in addition to preparation of the procedures and emergency stocks.

Emergency training

Management of Equipment PCB Used

Equipment containing PCB (polychlorinated biphenyl) are strictly stored and managed at the specified storage space with inventory sheets in accordance with the Waste Treatment Law.
As of march 2003, 23 units of electric condensers and 1,312 units of light stabilizers are available under the strict storage and management.
Kyocera will dispose of them as planned by FY2017, time limit for disposal specified by the PCB Waste Treatment Law.

Storage of PCB waste

Observance of Environment-Related Laws and Regulations

In FY2003, there was no monetary penalty, fine or complaints from neighbors.
There was an administrative guidance, however, in connection with observance of legal regulations. In water quality analysis by Tokyo Metropolitan, it was found that total nitrogen in wastewater from the private sewerage treatment tank of our subsidiary exceeded the standard value. The subsidiary submitted an corrective action plan to the administration and improved the treating method. There was no other violation.

In EU, the movements asking for prohibition of hazardous chemicals are active such as the WEEE & RoHS Directives officially issued in February 2003. The Kyocera Group will follow the movement in its early stage.

Prevention of Soils and Groundwater Pollution

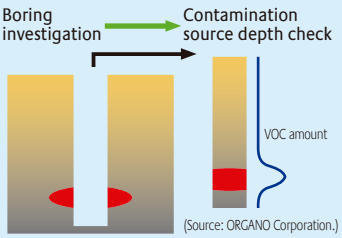
It is necessary to prevent soils and groundwater pollution with chemicals, since it affects to person's health and living environment once it happens.
The Kyocera Group established its internal environmental management standard relating to soils in FY1993 and has been conducting periodical survey once a year for strict management.
As to groundwater, monitoring and measurements had been also conducted periodically in accordance with Groundwater Environmental Standard specified by the law. The new internal environmental management standard values were established in FY2003 for our more strict environmental management.

Soil and Groundwater Pollution Survey Results

The Kyocera Group has been conducting periodical survey for soil and groundwater pollution relating to heavy metals and organochlorine solvents used in the past.
In FY2003, we confirmed there was one plant who needed the measures. The fluoride concentration in part of soils on the site was beyond the environmental standard value. We asked a specialized company investigate and replace the contaminated soils as the measures. It was completed.
Groundwater has been monitored continuously, although the water remediation has been applied.
Neither soils nor groundwater around our sites has been environmentally affected.

Example of Soil Gas Survey
(Boring Investigations)

Boring investigations are performed at spots where contamination source in the ground is assumed according to soil gas investigations. Basically two samples of soils are collected per 1m, but more numbers are collected depending on the strata condition. Collected samples are analyzed to verify the contamination condition (depth, area and degree).



(Source: ORGANO Corporation.)

Ecologically Sound Building

The construction concept of Kyocera headquarters building completed in 1998 was "Environmentally Friendly and Coexist with Local Community".
The building was designed considering its good landscape and harmony with neighbors. There is about 3,300 m² of open public space offering local citizens a place for recreation and relaxation. Community space was also considered inside the building as well as its intelligent building features. Further more, museums of art and fine ceramics are located at the 1st floor and 2nd floor respectively as a part of the cultural work of Kyocera and contribution to development of regional culture. The building is further provided with environmental considerations given in aspect of regional environmental protection.

1 Solar Power Generation System

The system is placed on the rooftop and the southern sidewall face above the third floor. It is the largest capacity of solar power generation system installed on the vertical wall face of one high building in the world. There are 1,392 solar cell panels on the southern wall face and 504 panels on the roof. The total output is 214kW corresponding to 12.5% of the expected electric energy consumption in the building. The total annual generation amount is 182,860kW-h *1. This means we can save 45,000ℓ oil, and 97.2 ton-CO_2 reduction of CO_2 emission, 133 kg of SOx impact reduction and 92 kg NOx reduction annually. The system is designed to enable the backward flow. We can sale excess electricity in parallel operation with the electric power system.

*1: Calculated by Kyocera

2 Natural Gas Cogeneration System

Natural gas with little emission of CO_2 and NOx and not containing SOx is used as fuel. Gas engine was adopted as the prime mover since little heat is utilized in an office building, and power genelation officiency is more important than utilization of waste gas. The power generated is used for light and motive power. Waste heat is used very efficiency for absorption refrigeration machine. Approx. 70% of the currently used electricity of 1,500kW is supplied by two units of 520kW power generators.

3 Adoption of Ice Thermal Storage System

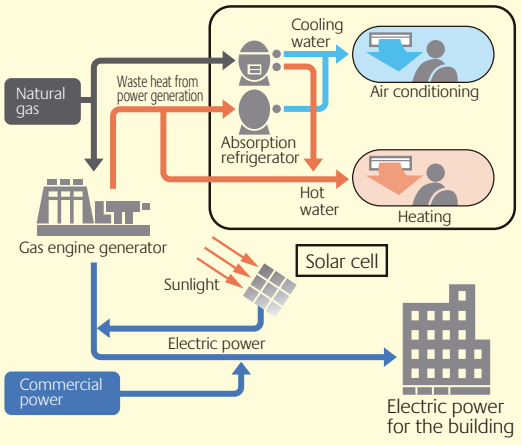
Kyocera is using Ice thermal storage system for effective utilization of surplus power of electric power companies during night. With use of this system for air conditioners at the daytime peak, the load is leveled, and also the difference of electric power consumption between daytime and nighttime, and a serious social issue in summer can be reduced.

4 Various Environment-friendly Systems

1. Adoption of peripheral ventilation system
2. Adoption of individual air conditioning systems
3. Adoption of inverters for air conditioner motors
4. Adoption of air volume adjustment system at air conditioner duct
5. Adoption of central air conditioning system
6. Reduction of wasteful lighting through subdivided system
7. Adoption of high-efficiency inverter lighting
8. Adoption of measuring system of energy consumption level per floor
9. Adoption of high-efficiency heat reflective glass
10. Automatic operation of escalators
11. Utilization of groundwater and rainwater

Combination System with Solar Power Generation, Natural Gas Cogeneration and Commercial Power

Electric power is supplied to the building in combination of the solar power generation, cogeneration and commercial power. Kyocera headquarters building is the first to adopt this 3 combination systems in Japan.



KYOCERA Mita Corporation

KYOCERA MITA Office Equipment (Dongguan) Co., Ltd

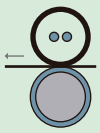
Environmentally Friendly Technology for Products
Energy Conservation Technology - Toner System

More than half of energy consumed by copying machines and printers is the heat source to fixate toners on paper.
Energy saving can be achieved by increasing the heater roller temperature, heat source of the fixation system, to required level in a short time, and reduce the energy consumption when it is not used.
To meet the requirements, Kyocera Mita is developing the technology to reduce energy consumption with thinner wall thickness of heating roller material used in the fixation system and improving other energy efficiencies.

Fixation System for High-Speed Printer

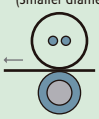
Conventional 50-sheet class printer required warm-up time of approx. 2 minutes since the fixation roller diameter was large and thick to stabilize fixation of toners on paper.
As to the 50-sheet class printer currently under development, the roller becomes smaller and tinner, the material was changed to iron to ensure the strength. As a result, the required warm-up time was shortened to 20 seconds, and the power consumption is drastically reduced through fine control of the fixation roller surface temperature.
(3/4 reduction compared to the conventional printer)

■Conventional fixation



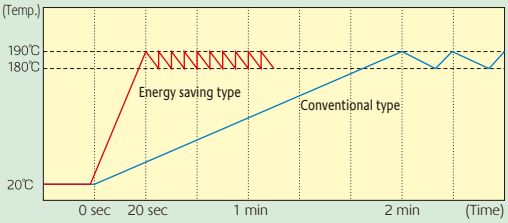
Fix. roller dia.	φ40mm
Fix. roller wall thickness	3mm
Press roller dia.	φ40.5mm
Press roller rubber thickness	5.25mm
Press roller core bar dia.	φ30mm

■Energy saving type fixation
(Smaller diameter, thinner wall thickness)



Fix. roller dia.	φ31.4mm
Fix. roller wall thickness	0.3mm
Press roller dia.	φ25mm
Press roller rubber thickness	6.5mm
Press roller core bar dia.	φ12mm

■Fixation roller heating characteristics



Pb-Free Solder Activities

Heavy metals such as lead contained in products may cause environmental problems such as soils and groundwater pollution depending on the disposal method, finally the influences on the human body is worried. Kyocera Mita is promoting total elimination of lead, and introducing Pb-free solder on the company-wide basis.
In the first half of FY2003, Kyocera Mita decided the type of Pb-free solders and started to design the printed circuit board patterns. Reliability evaluation for Pb-free solder type board was conducted in the second half. Pb-free solder was introduced to new products in FY2004. The types of Pb-free solder is as Sn-Cn, Sn-Ag-Cu, and others.
Since melting point of Pb-free solder is high compared with the convention solder, the high temperature may affects to electric and electronic components. Kyocera Mita is using the safe and high reliable components that can be used with Pb-free solder, to achieve high reliability.
In April 2003, the PbF mark certification system was established. This is Kyocera Mita original mark that is give to the product with Pb-free board as the result of its strict inspection.

▲Pb-free type board

Definition of printer circuit board with PbF mark
No lead shall be contained in solder, that is used for joining components and printer circuit board. Lead contained in components shall not be considered.

PbF

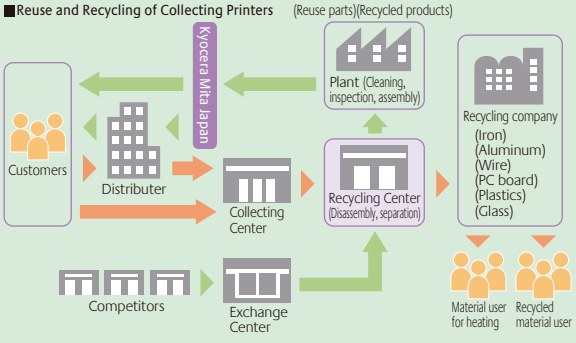
▲PbF mark

Purpose of PbF mark (Kyocera Mita Pb-free solder activity mark)
This is to prevent mixing of conventional solder with Pa-solde solder at production site

Effective Utilization of Resources
Reuse and Recycling of Collecting Printers

Collecting Printers are manually disassembled into individual parts and materials at the recycling center. Kyocera Mita considers the importance of reuse activities, that is leading reduction of environmental impact, out of 3R, and to promote tie-up with the recycling center. The parts selected according to the Reuse Selection Standard are used for recycled machines after cleaning and strict inspections. It is also used as service parts with the effort of increasing the types of parts. The parts unusable for reuse are finely separated per material for improvement of the recycling ratio. Information obtained through our reuse and recycling activities is reflected as valuable engineering information for product recycling design.

■Reuse and Recycling of Collecting Printers



KYOCERA International, Inc. Group (KII Group)

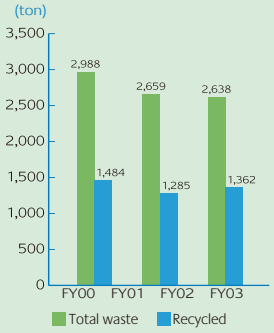
Main Environmental Activities

1) Industrial waste reduction
2) Industrial waste recycling
3) Electricty usage reduction
4) Natural gas usage reduction
5) Packing materials amount reduction
6) Gasoline usage reduction
7) Water usage reduction
8) Paper usage reduction

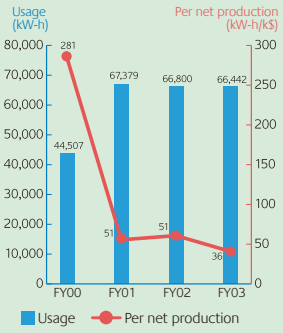
Activities for 100% Recycling of Waste

A group company, KAI (KYOCERA America, Inc.) has been working for "Pursueing 100% recycling of industrial waste in 2004".
The recycling rate for KAI is the best among KII group. 85% of waste produced is recycled, including industrial and office waste.
As the result, the waste sent to landfill has been decreasing. It contributes to the reduction of environmental impact and minimizing the risk.

Total Amount of Industrial Waste Discharged by KII Group and Recycled Amount



Electricity usage by KII Group



Implementation of Environment Awareness Week

"KWC Environment Awareness Week" was inplemented in February 2003 in San Diego and Boulder by the group company, KWC (KYOCERA Wireless Corp.), for enhancement of awareness of the environment and recognition of the required actions by the employees.
Main activities were distribution of fliers, PR on the environmental Web, environmental improvement proposal campaign and environment prize awarding.
As a result, the Week proved very useful for telling the intention of environmental protection of the Kyocera Group to all employees of KWC.

Exhibition for KWC environmental awareness week


Team members for implementation of KWC environmental awareness week


Training

Promotion of Ridesharing

Traffic congestion and air pollution due to exhaust gas are getting severer in San Diego as a result of increased moter vihicles. As the solution of traffic congestion and air pollution, the San Diego Regional Planning Agency (SANDAG) sponsored the Ridesharing Week in October 2002, and proposed drastically ease the traffic congestion and reduce the air pollution through stop of car commutation and use of public traffic facilities by citizens once a week.
In support to the proposal, KWC explained necessity of ridesharing, use of public traffic facilities and bicycle commutation to about 400 employees to positively participate in the week.


Participants in ridesharing week

Awards
"Industrial Environmental Association Awards"

The Integrated Waste Management Board in California presented companies promoting efficient utilization of resources as a part of the 2000 Waste Reduction Awards Program (WRAP).
KII and KWC were honored the "Industrial Environmental Association Awards" in San Diego in 2001.


WRAP Awards Winners

Personnel

The management rationale of Kyocera is "To provide opportunities for the material and intellectual growth of all our employees." "To realize the growth of all employees of the Kyocera Group" is basis idea of what personnel ought to be, based on the management rationale. The Kyocera Group is establishing its personnel system according to the idea, developing various personnel to meet the environment change and revitalizing the organization.

Personnel System Based on Management Rationale

Considering that the true happiness of people is not simply material growth but also the achievement of intellectual growth such as "worth working" and "worth living", "To realize the material and intellectual growth" is adopted as the idea of what personnel ought to be.
Based on this idea, the Kyocera Group is establishing the personnel system, and improving its creative and active corporate climate continuously .
Concretely, we have following two personnel principles.

1. Create work place climate to enable each employee to take pride in the company, feel worth working and share hardship and pleasure each other
2. Contribute to the management through the innovation in personnel system and personnel revitalization, by always thinking the future for continuous growth of the company

Main Personnel Activities

Various activities are implemented from the viewpoint of "Revitalization personnel and organization".

Organization and System

The company changed its previous business group structure, and newly organized corporate business division structure and business division structure directly controlled by president in FY2003.
In addition, the executive officer system was introduced to speed up the management and train for executives of the next generation.

Personnel Development

We started a support program to promote the company-wide management improvement activity CCG*.
This is a personnel development program designed to promote positional changeover of personnel to more creative business after development of potential ability, through acquisition of professional knowledge according to lectures and improvement of problem-solving ability according to practice.
Personnel are optimally posted and grown through this program.
*CCG : Create, Change, Grow

Wage Structure

Based on the concept of the merit system and the performance improvement system as well as managing both competitive power and maintenance of employment, the wage structure and the assessment system are being reviewed.
The merit system is practiced through more reflection of the merit of individual employees and their contribution to improvement of performances on wages and bonus instead of the seniority wage system.
By reviewing of these wage structure, the Kyocera Group is keeping and improving the creative and active corporate climate.

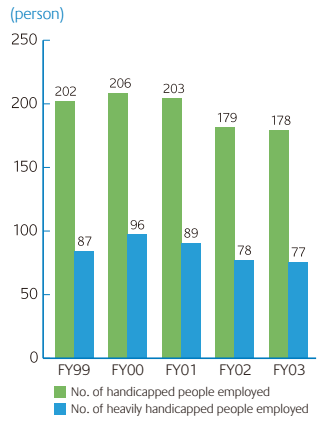
Working Environment

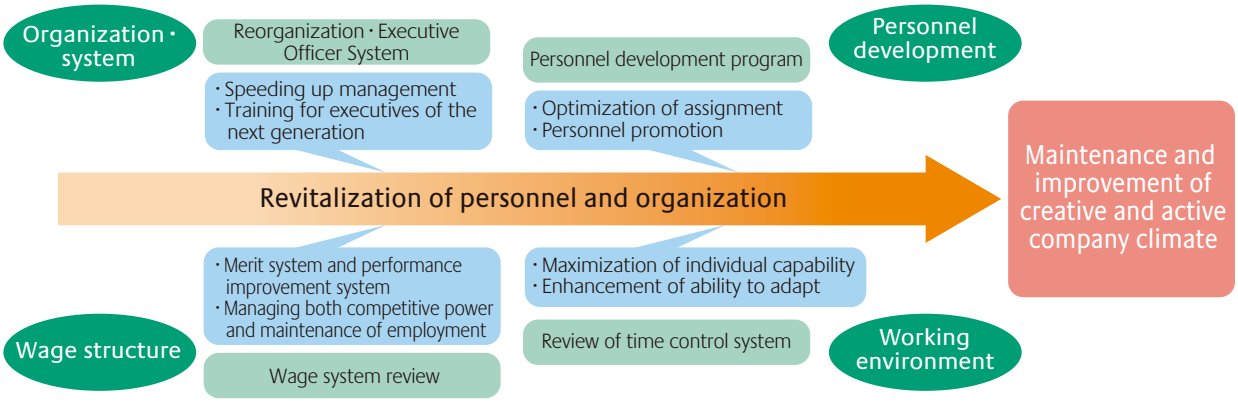
Business environment is drastically changing. Improvement of the ability to adapt to the change is imperative. For that purpose, it is important to maintain the environment so that individual person may fully display their possessed capabilities.
Based on this, an easy-to-work environment is created through introduction of time control system that is suitable for each occupation and organization.

Employment Status of Handicapped People

It is wonderful for people, handicapped or not, to feel "worth living" by contributing to the society through works with own capabilities and aptitudes used.
Kyocera is continuously promoting employment of handicapped people and creation of environment to allow easy working for them. The assignment and job are well considered for handicapped people so that they can work with ordinary people together at the same work place.
Handicapped people are working in our plants and offices, largely contributing to expansion of the employment opportunity of handicapped people in the regions where our plant/office is available, through activities to employ handicapped people per each plant/office.
The handicapped people employment ratio is 1.85% as of June 2002, exceeding the legally specified ratio.

No. of handicapped people employed
(Kyocera Corporation only)





"To ensure safety and health of all employees" is considered as important activities for the company base on the management rationale. Safety and health is continuously promoted to realize "Comfortable place where the employees can work safety and healthy."

The following six policies were established for safety and healthy activities.

Activity Policy

1. Observance of laws and ordinances
2. Introduction of risk assessment
3. Creation of comfortable working environment
4. Establishment of emergency manual
5. Promotion of maintenance of physical and mental health (Mental health care)
6. Global activities

1. Observance of Laws and Ordinances

From the viewpoint of accomplishing the social responsibility and compliance management, Kyocera observes applicable laws and ordinances relating to industrial safety and health.
Legal observance is audited by the exclusive audit department and multiple exclusive departments.

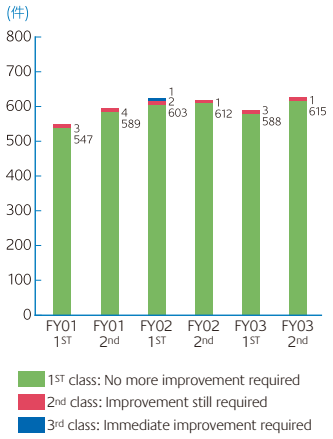
2. Introduction of Risk Assessment

Safety measures severer than laws and ordinances are established for equipment and facilities in order to eliminate industrial accidents and troubles.
The requirements severer than laws and ordinances are also considered when procedures are made or training is implemented.
Further more, "Risk Assessment" system is made for establishing safe and comfortable work place. It is made with 4 factors - operation, facilities, fire and explosion, and working environment.

3. Creation of Comfortable Working Environment

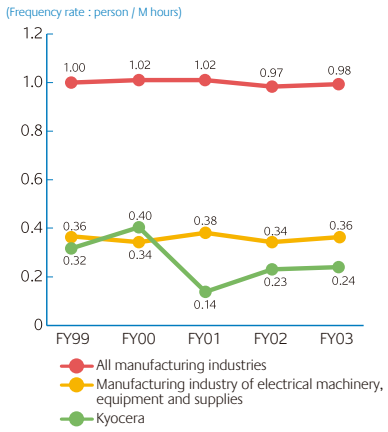
The improvement of working environment is promoted for healthy and confortable condition of working place where chemical substances are used.
As standard, the working environment is controlled with the concentration value less than 1/10 of the legal specification which closes to the lower detection limit.

Working Environment Measurement Result: Classified (KYOCERA Corporation only)



99.8% of Kyocera work places belong to the 1ST class, indicating good working environment.

Industrial Accident Record (KYOCERA Corporation only)



4. Establishment of Emergency Manual

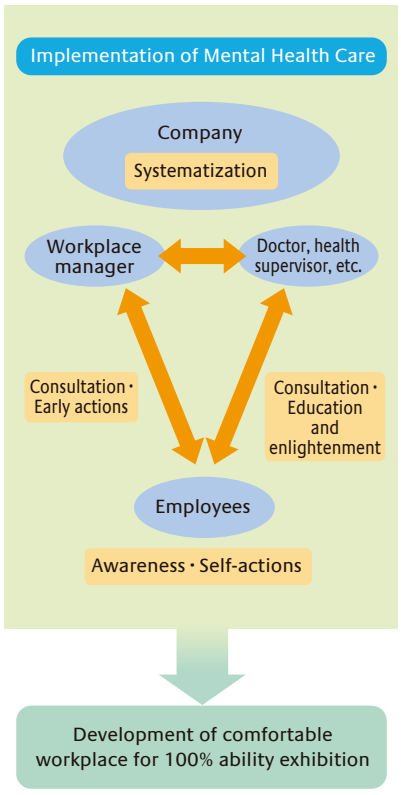
General manual is established to quick and accurate actions for emergency that may influence the human life and business activities such as earthquake, flood and windstorm. The effectiveness of those actions are enhanced through periodical training.

5. Promotion of Maintenance of Physical and Mental Health (Mental Health Care)

Organized and comprehensive activities for mental health support is conducted toghther with the company and its employees. This is proceeded positively for creating mentally bright and active workplace.

Main Activities

1. Mental health care doctors stationed (19 places of Kyocera sites)
2. Implementation of education and enlightenment activities to all employees relating to mental health care
3. Handbook and manual issued relating to mental health care
4. Installation of "mental health clinic" and "telephone clinic system"
5. "Mental health self-check" items added to health examination forms



6. Global Activities

Same as business activities, safety and health activities are also conducted from the global viewpoint. In FY2004, introduction of enhancement of systems to Japanese subsidiaries, and safety and health audits at 160 subcontactors are implemented as priority items, as well as supporting to the manufacturing sites in China from engineering standpoint.

Employee Education

Kyocera has been managing the company based on Kyocera corporate philosophy since its foundation. Kyocera corporate philosophy is certainly the motive power of the development of Kyocera. It is important for us to hand down Kyocera corporate philosophy correctly to the employees continuously. Based on such an understanding, the philosophy training is considered very important in educations to the Kyocera Group employees. At the same time, management training and engineering skill training are done for developing personnel who contributes the growth of the Kyocera Group, at the Kyocera Management Research Institute and the Kyocera Kagoshima Training Center.

Education Principle

The education principle is based on the management rationale of Kyocera. The management rationale is the fundamental way of thinking created by the founder, Kazuo Inamori, after full thinking about "What's the object of the company?"
The education principle is specified as follows to educate competent personnel who contributes to realize the management rationale.

To provide opportunities for global growth of Kyocera and growth of all our employees by learning Kyocera corporate philosophy with sincere and indefatigable efforts. To develop competent personnel who contributes to advancement of society and humankind at the same time.

Purposes of Education

To realize our education principle, we have four particular purposes of education.

1. Permeation of Kyocera corpolate philosophy into all employees
2. To develop management executives with advanced management capability
3. To develop professional personnel with advanced expert knowledge and high technical faculty.
4. To train employees having mastered the basic knowledge and skill required for business activities

Kyocera Management Research Institute

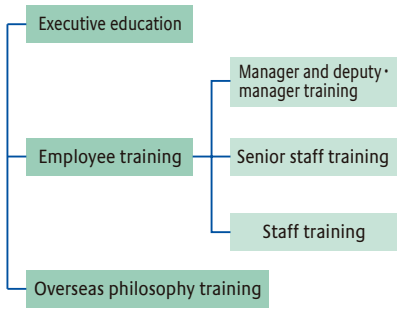
Kyocera Kagoshima Training Center

Education System

Kyocera education system consists of four kinds of educations, Philosophy education, Management education, Engineering and skill education, and Fundamental education corresponding to four purposes of education.
Those four educations are implemented to achieve the purposes of education specified for realization of the education principle.
Those four educations are implemented properly to develop the personnel who contributes to further development of the Kyocera Group.

Education System

(Ex.) Philosophy Training System



Philosophy training by internal lecturer

Group discussion

1. Philosophy training

Kyocera corporate philosophy, motive power of development of Kyocera, is a universal rationale based on "Which is to do the right things as a human being?", plays as the judgment criteria and the guide for business activities.
The philosophy training is implemented to all employees in continuous repetition with the objectives to deeply and correctly understand, practice and realize Kyocera corporate philosophy.
Kyocera corporate philosophy is introducted to the overseas subsidiaries as well as the domestic subsidiaries of the Kyocera Group.

2. Management training

This is training for leaders and to develop executive who has advanced management capabilities.
In particular, educations are intended to management level employees for acquisition of management administration techniques such as amoeba management, hourly efficiency system and Kyocera accounting based on Kyocera corporate philosophy.

3. Engineering and skill training

This is training for developing personnel who has advanced professional knowledge, high engineering and skill at overall departments of production, engineering, development, sales and administration.
In particular, more efforts are extended to training of technologies to employees engaged in technology-related work.

4. Fundamental training

The training is implemented to younger generation employees for development of creativity and problem-solving capability as well as learning of basic capability required for the business activities.
Language teaching is also conducted as a part of the fundamental training.

To promote the environmental protection activities, all individual employees have to deepen understanding about the relation with the environment.
To make activities of employees more effective, the Kyocera Group is improving the environment awareness of employees with emphasizing internal environmental enlightenment activities and environmental educations.

Environmental Education to Employees

Several environmental educations are implemented - "hierarchical education" for new employees and management, "functional education" for employees who engage in environmental management, and "specific environmental operation education" for employees who engage in any work that may affect to environmental.
In FY2003, environmental educations were conducted to 20,304 persons in total of the Kyocera Group for enhancement of the environment awareness.

Environmental education

FY2003 Environmental Education Implementation Status

Type	Class	Number of persons
Hierarchical educations	New employee education	749
	Group leader education	600
Functional educations	Corporate environment department staff education	2
	Office / Plant manager education	12
	Office / Plant environmental manager education	15
	Office / Plant environment department staff education	30
	Division manager education	63
	Environmental activity promotion leader education	125
	Environmental activity staff education	203
Specified environmental operation educations	Specified environmental operator education	13,377
	Subcontractor education	1,007
Qualifying educations	Internal environmental audit education	59
	Senior Internal environmental auditor education	16
General educations	General environmental education	4,046
	Total	20,304

Internal Environmental Auditor Training Seminar

Since internal environmental auditors are important for continuous improvement of the environmental system, internal auditor training is held periodically for its qualification.
Both internal environmental auditors and senior internal environmental auditors are qualified. Senior internal environmental auditors are expected to manage the audit and conduct environmental audit at the group companies or suppliers.

Certified Employees (as of March 2003)

Senior internal environmental auditor	55 persons
Internal environmental auditor	264 persons

Internal environmental auditor training seminar

Kyocera Group Environment Month

Kyocera has designated June of every year to be the "Kyocera Group Environment Month" and have many events for improvement of environment awareness and management systems in the office/plant.
In this month, environment improvement activities are implemented with particular targets relating to the environment every year
In FY2003, our targets for the month were "Achievement of zero emission and promotion of global warning prevention".

Further, we invite the employees to enter the "Environment poster and slogan" contest and excellent works are posted in the group companies as our enlightenment activities.

Environmental survey

Environment Month posters

Products and Services

The Kyocera Group wants to be the global leader in quality with the policy of putting the customer first, quality policy and promotion system for improving its quality level.
Further, the Kyocera Group is making efferts to its product safety with putting global environment and product safety first, with policy for product quality and strict management of chemicals and hazardous substances.

Quality Policy

The quality policy specifies the following three points.

1. Create and promote products that improve the earth's environment and are safe to mankind
2. Provide our customers with products and services that exceed their expectations by putting our customers first
3. Make Kyocera the world leader in quality by doing the right things from the beginning

Promotion System for Quality Policy Observance

Each corporate business division is responsible for its product quality assurance.
The quality assurance promotion division is responsible for support to improvement of the company-wide quality system, ISO 9001 certification maintenance activities and quality improvement activities at each business division.

Main Activities

1. All corporate business divisions are enforcing improvement activities with the quality goals (master plan) specified every year based on the management policy and the quality policy.
2. The quality system is enhanced and improved through the ISO 9001 certification maintenance activities.
3. Quality improvement activities (materialization of 100% yield) are conducted per division as company-wide management improvement activities. (CCG activity)

Product Safety Policy

The product safety policy specifies the following three points with "The practice of product safety in pursuit of the safety at all stages form planning to development, design, procurement, manufacturing, sales, services and disposal of products".

1. Be acquainted well with latest information relating to PL and product safety.
2. Maintain the world leading product safety standard.
3. Systematically practice product safety in accordance with the manual.

Management of Chemicals, Hazardous Substance in Products

The Kyocera Group has listed the prohibited substances and restricted substances for management of chemicals and hazardous substances in products.
When we purchase chemical substances, suppliers are required to provide the material information such as MSDS (Material Safety Data Sheet).
Maximum efforts are thus extended through management of such information for product safety to mankind and society from manufacturing to disposal or reuse.

Product Safety Promotion System

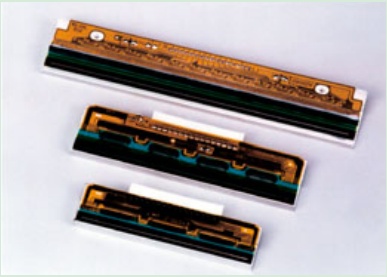
The Kyocera Group investigates environmental impact of individual products to mankind and society. It is reflected on the products.
To appropriately cope with business activities in diversified fields, individual corporate business division is responsible for safety management of products.
Relating to product safety management, the environmental safety division and the quality assurance promotion division are supporting activities together on the company-wide basis.
Based on such promotion system and product safety policy, the Kyocera Group is promoting product safety activities with particular targets and plan.
To enable actions conforming to business contents, the results of implementations are reviewed by the survey and audit, and reported to individual division.

Prohibited substances in procurement materials	Asbestos, PCB, PBB, etc.
Restricted substances in procurement materials	Mercury, selenium, organic phosphorus, hexavalent chromium, etc.
Prohibited substances in packing materials	PCB, cadmium, mercury, hexavalent chromium, etc.
Prohibited substances for manufacturing	Trichloroethylene, tetrachloroehylene, carbon tetrachloride, etc.

Development of Lead-Free Thermal Print Head

Kyocera Corporation announces that we have developed a "lead-free thermal print head" in our Thin Film Devices. (from news release on March 19, 2003)

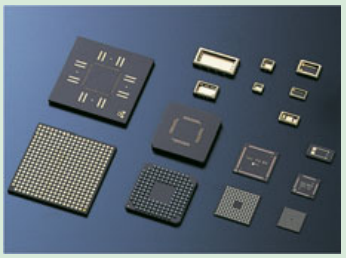
We have completely eliminated lead from the ICs and electronic parts to be mounted and their manufacturing processes, as well as the soldering in the assembly process of thermal print head.
Since the Kyocera thermal print head forms a thin film for the heating element, the dot pattern is precise and equal, and it excels in heat response. This characteristic makes it possible to perform high-speed, superfine printing.

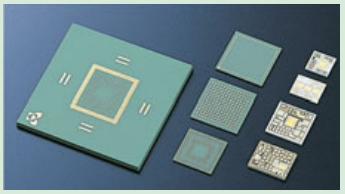


Materialization of Lead-Free in Package Production Process

Kyocera is promoting development for lead-free in the production process of ceramic packages using electroless plating.

In the final finish process of ceramic packages manufacturing, metal portions such as lines and connection terminals are covered with nickel and gold plating in considerations of the good assembly condition in the next process of components mounting, and from the viewpoint of ensuring product reliability against corrosion.
There are 2 plating method, electrolytic method and electroless method. Almost all the electrolytic plating has been already switched to the method without using of lead. In the electroless plating, however, treatment liquid containing a small amount of lead is still used as an activator, since it is required for accelerating the chemical reaction.
Kyocera is under development of new treatment liquid with new activator materials to enable plating that is equivalent to the conventional method but without using lead.
This is expected to be certified by the end of 2003 as a goal to materialize total abolition of lead from the plating process.





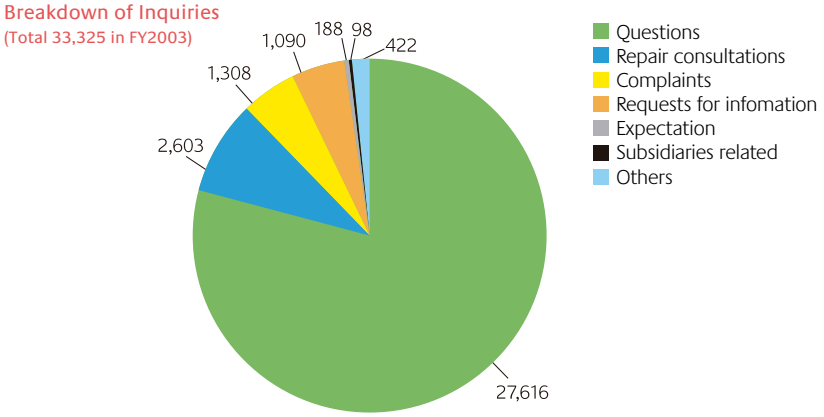
Improvement of Services

Establishment of Customer Call Center

Customer call center is working for better services and further customer satisfaction through communications with various stakeholders. Customer call center started in June 2001 for inquiries and consultations by direct telephone and e-mail from our customers relating to our products such as telecommunications and optical equipment, solar power related products and various applied ceramic products. The center is operated by 7 members covering 9 a.m. to 7 p.m. everyday including company holidays.
The number of inquiries in FY2003 was 33,325. Approx. 80% of them were questions, approx. 10% were request for information or repair consultation.
There were 1,308 complaints. Most of them were about inferior goods.

To reduce complaints, Kyocera considers there is no other solution than supplying good quality products. Considering the management base on "Customer First", two persons were increased from communications equipment division and optical equipment division occupying approx. 85% of inquiries in February 2003. At least, one person in each division has been available after that.
As a result, the issues requiring any actions to ask applicable divisions were reduced. At the same time, we have been able to spend more time for other than communication with customers such as analysis of collected information.
We are planning to open website of customer call center in the future, so that customer can obtain the nessesary information at any time, considering further customer satisfaction.

Breakdown of Inquiries
(Total 33,325 in FY2003)



Environmental Communications

It is considered as social responsibility that company discloses its environmental activities and social contribution activities widely to society.
The Kyocera Group is continuously extending efforts for communications with various media considering importance of communications between company and society.

Environmental Report

To introduce environmental protection activities of the Kyocera Group, environmental report has been published. This is our 4th report since we published the report for 2000. In the past, the report was published on only website considering environmental impact when it was published with printed matter.
From the report for 2003, the report was revised with more information covering both environmental and social activities. We decided to publish it with a booklet since it has been expected. (Japanese Edition only) The title was changed to "Sustainability report" accordingly.

House Organ

The latest information and feature articles relating to the environment are announced on the house organ issued monthly, and used for internal environmental enlightenment activities.

Showroom for Environmental Preservation Products in Headquarters

The global environmental products exhibition corner is located at the second floor of the Kyocera headquarters building, where solar cell panels, "ECOSYS" printer, gas turbine ceramic parts, and etc. are displayed for the neighbors and other visitors.

Information Published on Website

To introduce environmental protection activities of the Kyocera Group more widely, environment-related information has been published on our website since November 2000.
http://www.kyocera.co.jp

Participation in Environment Exhibition

To introduce our environmental protection activities and related products more widely, Kyocera participated in the "Shiga International Environmental Business Exhibition" and the "Eco Products Exhibition" in FY2003.
We introduced our environmental protection activities and related products such as solar power generating system and ECOSYS printer.

Social Assessment

The Kyocera Group is complying with many requests for investigations about our environmental and social activities from both domestic and overseas every year.
At present, Kyocera is selected as a brand of many SRI (Socially Responsible Investing) funds and highly assessed by various environmental rating institutions. Kyocera is incorporated in funds such as the "Nikko Eco Fund", "Buna no Mori (Beech Forest)" and "Umi to Sora (Sea and Sky)" as of March 2003. Further, Kyocera is incorporated in the indexes of the German rating company, Oekom G.m.b.H. and in Entibell sustainability indexes of Belgian special SRI consultant.

The Kyocera Group is contributing to the society through many activities.

Kyoto Prizes

Each year since 1985, the Inamori Foundation has presented its Kyoto Prizes to individuals and groups from all over the world who have made significant contributions to the betterment of humankind. The foundation was established in the spirit of Kazuo Inamori's belief that there is "no higher calling than to strive for the greater good of humankind and all the world." The prizes, awarded in the categories of "Advanced Technology," "Basic Sciences" and "Arts and Philosophy," are open to anyone regardless of nationality, race, gender, age or religious beliefs. Since their inception, the Kyoto Prizes have been presented each November 10, a time when Kyoto's autumn leaves are ablaze with color. Like the leaves, the Kyoto Prizes have captured attention of young dreamers in Japan and around the world.

2002 Prize winners

Kyoto Prize in the Kyoto International Conference Hall

Kyoto Purple Sanga

Because dreams and sports go hand in hand, Kyocera sponsors Kyoto Purple Sanga, a professional soccer team in Japan's J.League. The players inspired hometown fans in Kyoto and spectators throughout Japan with their thrilling victory at the recent 82nd Emperor's Cup Championship.

Final match at National Stadium - Cup winner

The Kyocera Museum of Fine Ceramics, Museum of Art

Because Kyocera has long explored the possibilities of fine ceramics and developed technologies to benefit industry and society, we decided that an exhibition of the relevant history might contribute to future innovations. Therefore, we created the Kyocera Showroom and Museum of Fine Ceramics in 1998 on the second floor of our global headquarters in Kyoto to share a wealth of information on this remarkable family of materials. In the same year, we opened the kyocera Museum of Art, just one floor below. Visitors can admire a wide range of cultural assets, including Qianlong glassware, Picasso's copper plate print series "347," modern Japanese "Nihon-ga" paintings and an assortment of Western-style paintings and sculptures.
Permanent exhibitions are open to the public at both museums.

The Kyocera Museum of Fine Ceramics

The Kyocera Museum of Art

Overseas Eductation Tours

Kyocera believes that young people who experience life in different cultures will develop a more sensitive, unbiased view of the world - and perhaps become better leaders. To stimulate this type of international exchange, Kyocera invites groups of children from the U.S.A. and China to visit Japan each year since 1976.

Kyocera Library "British Parliamentary Documents"

Kyocera has donated 12,806 volumes of British parliamentary documents, encompassing some 8 million pages written between 1801 and 1986, to Japan's National Museum of Anthropology . This valuable collection, representing a sizeable chunk of official British record, will be useful in academic research in Japan and neighboring nations.

Shejiang Civilization Survey

In 1995, the Japan-China Shejiang Civilization Academic Survey Society, sponsored by Kyocera, excavated the relics of an urban civilization existing approximately 5,000 years ago, in an area which is now the city of Chengdu in Szechuan Province. The unearthed site is believed to be the earliest known rice-cultivating civilization, predating even the Yellow River Civilization, making it a historical find of global significance.

Inamori-Kyocera Western Districts Development Scholarship Fund

Kyocera and Kazuo Inamori, our Chairman Emeritus, established this scholarship fund to assist needy students from the western districts of the People's Republic of China. The goal of the fund is to cultivate human resources to develop the area's educational services and scientific technologies. Each year, this fund grants scholarships to 360 students from 12 provinces and autonomous regions.

Kyocera Administration Course at Kagoshima University

Hoping to embolden young engineers with the skills to manage or start an enterprise, Kyocera donated an operating fund in 1999 for the establishment of business administration lectures in the Faculty of Engineering at Kagoshima University.

Support to Establishment the "Northeast Normal University Kazuo Inamori Management Philosophy Research Center"

In October 2001, Kyocera supported the establishment of "Kazuo Inamori Management Philosophy Research Center" at the Northeast Normal University, Chinese oldest normal university, which exists to carry out specialized research in the management philosophies of Kazuo Inamori and its wide promotion.

Campaign to Beautify the Regions

Each office, plant has been focused on being a "Regionally-oriented company" by cleaning around the site and participating in the environmental beautification campaigns promoted by administrations and local government every year.

Support to National Wheelchair "Ekiden" Road Relay

The Kyocera Group supported the National Wheelchair "Ekiden" Road Relay Race held on February 23, 2003 in attendance of Her Highness Takamado no Miya. The race is held in Kyoto every year for participation of handicapped people in the society and promotion of sports by handicapped people. The 14th race was very much successfully held this year in participation of 30 teams from all over the country with many citizens giving encouragement.
The Kyocera Group has been extending support to the National Wheelchair "Ekiden" Road Relay Race every year since 1996 and received a letter of thanks from the Governor of Kyoto Prefecture and Chairman of the event, Keiji Yamada.


感謝状

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Donation to Sports Promotion Fund

The Kyocera Group has been offering donations to the Kyoto Prefectural Athletic Association for promotion of sports such as National Athletic Meet and development of regional culture since 1995.

Support for Environmental Learning

Kyocera has been extending support to the "Environmental education program for school children" at the request of Kyoto Chamber of Commerce and Industry since 2001.
Kyocera has been providing the characteristic lessons such as enjoyable explanations of the solar power generating system from its introduction to details as well as showing the actual solar power generating panels. It has been well received by children.

8th Global Environmental Grand Prix "Fuji-Sankei Group Prize"

Kyocera was awarded the "Fuji-Sankei Group Prize" at the 8th Global Environmental Grand Prix awards sponsored by the Japanese Industrial Journal Co., Ltd., the newspaper publishing company of the Fujisankei Group in 1999.

Contents of Awards

Kyocera was awarded for achieving environmentally oriented management as well as its environmental activities. These achievement were carried out based on the management rationale of "contribution to advancement of society and humankind" under the company policy "Respect the Divine and Love People."

1. Constructing ecologically sound building (Kyocera headquarters building)
2. Development and sales of global environment-preserving products
3. Achievement of environmental protection activities.

New Energy Award "New Energy Foundation Chairman Award"

Kyocera was awarded the "New Energy Foundation Chairman Award" at the "New Energy Award (Award for 21st Century type new energy equipment)" sponsored by the New Energy Foundation in 1999.

Contents of Awards

The reduction of carbon dioxide (CO_2) that causes global warming is one of major issues.
Kyocera constructed an environmentally friendly high building with the solar power generating system and the natural gas cogeneration system (Kyocera headquarters building).
This environmentally friendly high building was highly appreciated as advanced model for introducting high building toward the 21st Century.

1st Japan Sustainable Management Award "Excellent Sustainable Management Award"

Kyocera was awarded the "Excellent Sustainable Management Award" at the "1st Japan Sustainable Management Award" in March 2003 as a result of various environmental protection activities in the Kagoshima Kokubu plant.

Contents of Awards

Larger effects of various activities done in FY2002 than the preceding year were appreciated.

1. 10.87 million kW-h reduction of electricity consumption with facilities improvement conducted by energy saving project.
2. Achieved zero emission in FY2002 by the effort of industrial waste reduction project.
3. 0.4 billion yen reduction of transport cost by reducing packing materials as well as using reusable container.
4. The Kagoshima fine ceramics museum was established in the site for more communications with the neighbors.

The Environmental Conservation Service Award "Minister's Award for Global Warming Prevention Measures"

The Japanese Ministry of Environment (formerly the Environmental Agency) established an award to officially praise persons having done particularly distinguished services to the environmental preservation, regional environmental preservation and regional environmental beautification. The Global Warming Prevention Segment was newly established in 1997, and the first awards were given to three persons and 11 groups including Kyocera.

Contents of Awards

Kyocera was appreciated with its contributions of promotion of solar cell panels, energy saving activities to reduction of greenhouse gases and prevention of global warning. The following two points were particularly evaluated.

1. Development of solar energy utilization technologies with solar cell panels and improvement of conversion efficiency. World highest level of conversion efficiency achieved with multi-crystalline silicon cells.
2. Activities for energy saving and utilization of waste heat at plants, offices and sales offices by establishing "Energy Saving Subcommittee"

History of Environmental Activities

Major domestic and overseas environmental movements	Year	Kyocera environmental actions
	1985	Environment division established
Vienna Convention for the Protection of the Ozone Layer	1989	CFC regulation started
	1990	Kyocera Green Committee (KCGC) established
Law Promoting the use of recycled raw materials (Recycling Law)	1991	Kyocera Environmental Charter established, environmental officer assigned
		Paper recycling started
		Kyocera Group Green Committee (KGGC) established
United Nations Framework Convention on Climate Change (UNFCCC)	1992	First environmental protection promotion plan started, "Kyocera Environmental Management Standard" established
United Nations Conference on Environment and Development (The Earth Summit)		Specified CFC and others completely eliminated
		Kyocera Eco Label established
		World first non-cartridge type LBP "FS-1500" ECOSYS released
Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal	1993	ECOSYS printer authrized as the first Eco mark product in OA equipment
"Industrial and Environmental Vision Report" of Industry Structure Council	1994	Methyl bromide and trichloroethylene completely eliminated
	1995	Tetrachloroethylene and HCFC-141b completely eliminated
Environmental Management System, International Organization for Standardization ISO 14001 issued	1996	Second environmental protection promotion plan started, Kyocera Global Environmental Contribution Award established
Environmental Basic Plan		ISO 14001 certified (Mie plant)
Containers and Package Recycling Law		
3rd Framework Convention on Climate Change (COP3)	1997	ISO 14001 certified (9 plants)
Designed Household Appliance Recycling Law (The Household Appliances Recycling Law)	1998	Green procurement started
		Ecology headquarter building completed
Revised Energy Saving Law	1999	ISO 14001 multi-sites certified at 6 non-manufacturing sites (March)
PRTR Law		Third environmental protection promotion plan started
Law Concerning Special Measures against Dioxins		ISO 14001 multi-sites certified at company-wide 42 sites (August)
		Certification of Kyocera global environment-preserving products started
		Global Environmental Grand Prix (Fujisankei Group Prize) received
		Substitute CFCs completely eliminated
Basic Law for Establishing a Recycling-Based Society	2000	ISO 14001 multi-sites certified with the Kyocera Group companies (Certification Scope extended)
		2000 Environmental Report released on the website
Law on Promoting Green Purchasing	2001	Manifested the support to e-mission55 which agrees on enactment of the Kyoto Protocol
Ratification of Kyoto Protocol by Japan	2002	Fourth environmental protection promotion plan started
Soil Pollution Prevention Law	2003	Kagoshima Kokubu plant awarded with Japan Sustainable Management Award (Excellent Environmental Management Award)

KYOCERA Group Topics in the Past 5 Years

Year	Month	Management related
1998	7	Kazuo Inamori, Chairman Emeritus received "Lifetime of Innovation (Material Innovation)" Award from the International Union of Materials Research Societies
	8	New headquarters building is completed at Takeda, Fushimi-ku, Kyoto. Head office operations are transtered to the new building
	8	Capitally participated in Kinseki.
	8	Cutting tool production company "KYOCERA PRECISION TOOLS KOREA" CO., LTD. established in Korea
	9	Capitally participated in SK Teletech Co., Ltd., Subsidiary of SK Telecom Co., Ltd., the largest cellular phone company in Korea
	10	"Kyocera Asia Pacific Pte. Ltd. (KAP)" established in Singapore
1999	6	"KYOCERA Advanced Wireless Communciaitons Research Laboratory" opened in the Telecommunications Information Center of Technion Israel Institute of Technology in Israel
	6	Stock option system introduced
	7	Beijing representative office opened
	7	"ECOSYS" printer awarded Swedish Eco Label "Nordic Swan" as the world first certified page printer.
	8	Solar cell sales company "KYOCERA Solar, Inc." established in US
	9	"Kyocera Administration Course" opened in the Faculty of Engineering at Kagoshima University
2000	1	Mita Corporation was reorganized and became "Kyocera Mita Corporation"
	2	"KYOCERA Wireless Corp." established with cellular phone business pruchased from Qualcomm of US
	7	"Osaka Tamatsukuri office" established for joint R&D of printers with Kyocera Mita Corporation.
	9	Assembly line for solar power generating system newly installed in the Mie plant Ise block (currently Mie Ise plant)
	10	Taito Corporation merged with Kyocera Multimedia Corporation
	11	"Osaka Tamatsukuri New Technique Development Center" established in Osaka Tamatsukuri office for development of new technique and next-generation manufacturing equipment.
2001	1	PCB cutting tool manufacturer "TYCOM Corporation." in US purchased
	2	"Inamori-Kyocera Western Districts Development Scholarship Fund" established to assist university students in the western districts of China
	2	Japan-US Leadership Conference held in Tokyo, originated by Kazuo Inamori, Chairman Emeritus
	3	First plant of SHANGHAI KYOCERA ELECTRONICS CO., LTD." completed
	9	CDMA cellular phone sales company "KYOCERA ZHENHUA COMMUNICATION EQUIPMENT CO., LTD." established in Guiyang City, Guizhou Province jointly with the electric machine manufacturer, China Zhenhua Electronics Group Company, LTD. located in the province
	10	"Kazuo Inamori Management Philosophy Research Center" established at the Northeast Normal University (Changchun city) for research the management philosophy of Kazuo Inamori, Chairman Emeritus
	10	"Kyocera CCG (Create, Change, Grow) activities" started to promote structural reform of business toward materialization of creative company
	12	First and second blocks of Dongguan Shilong plant, the largest plant of the Kyocera Group, completed
2002	1	Specialty store "Lil Lil Ginza Store" of new ornament brand "Lil Lil" opened at Ginza Namiki street in Tokyo
	3	"Kyocera Management Research Institute" opened with the former Kyocera Yamashina headquarters building modified
	4	Education Research Institution "Abshire-Inamori Leadership Academy" to offer young leaders an education established by Kazuo Inamori, Chairman Emeritus, in CSIS, Washington D.C. US, jointly with the US think tank "Center for Strategic and International Studies" (CSIS)
	4	Printer business integrated with and transferred to KYOCERA Mita Corporation.
	6	Capital increase of Kyoto Broadcasting System Company through third party allocation accepted and become the largest stockholder
	8	Toshiba Chemical Corporation purchased through exchange of stocks to be the 100% subsidiary "KYOCERA Chemical Corporation."
	8	Organization changed and subdivided into corporate business division and business divisions from conventional corporate business division system
	10	Personnel and pay systems reviewed, and new skill-based pay system introduced
2003	1	KYOCERA (Tianjin) Sales & Trading Corp. established in Tianjin city, China to sell Kyocera products in China in joint venture with "Yiqing Group"
	3	"International Golf Resort Kyocera" opened in Satsuma-cho, Kagoshima after renewal of purchased resort facility

Year	Month	Product and technology related
1998	2	World first adaptive array antenna type PHS base station developed
	4	Automotive ceramic capacitor "DR series" developed
	5	Alumina chip-size package "Alumina ceramic CSP" announced
	7	First cdmaOne cellular phone "CD-10K" developed
	9	"KT17 series", smallest and lightest analog TCXO in the world, developed
1999	2	First 645 CONTAX camera "CONTAX 645" released
	3	First ultra high precision organic packaging technology "High Density Build Up" using the laservia method developed
	3	Inlet temperature of 1412C° and thermal efficiency of 40.5% were achieved with ceramic gas turbine jointly developed with Kawasaki Heavy Industries, LTD. This was the first ceramic gas turbine to go beyond 40% in thermal efficiency in the world.
	3	Ceramic substrate "MFC (Micro Fine Carrier)", as small as 1/10 in volume and 1/4 in packaging area and weight of conventional SSOP (Shrink Small Outline Package), developed
	4	"KST seried", high efficiency and quality optically recordabe thermal color print type thermal print head announced
	6	Single-mode cdmaOne cellular phone "C120K" developed
	9	"Super PHS-WLL System" developed
	9	World first cellular color-TV phone PHS "VisualPhone VP-210" announced
	9	"Dual band antenna switch module" with lower insertion loss, compact design for E-GSM/DCS cellular phone announced
2000	1	World first "Stage system of charge beam device for VLSI manufacturing with supersonic linear motor" jointly developed with Tohoku University awarded the "42nd The Best 10 new Product Prize" of THE NIKKAN KOGYO SHIMBUN LTD.
	3	"ECOSYS" printer awarded the "46th Okochi Memorial Engineering Award" for development of very long life electrophotography process and development of environmentally friendly printers
	4	Automotive electronic module "ECU" developed
	4	Antenna switch module with low-temperature cofired ceramic for GSM/DCS dual band cellular phone developed
	7	Kyocera first PHS (H") handset "PS-T25" released
	9	Single-lens reflex auto-focus camera "CONTAX N1" with driver unit built in lens released
	10	All-in-one type large (10.4") VGA STN color liquid crystal display "KA5M-VGA series", with analog RGB interface and inverter, announced
	10	World first very small and lightweight filter "SF38-1575T" with two-high frequency SAW filters necessary for cellular phone in one package developed
	11	Recrystallized "Star Sapphire" released
2001	4	"KYOCERA Finecam S3", world smallest and lightest digital camera with 3.34-megapixel CCD and optical 2X zoom released
	4	First color "ECOSYS" printer "LS-8000C/LS-8000CD" released
	8	"KYOCERA YASHICA ZOOMATE 105SE" selected as the "2001-2002 European Compact Camera of the Year"
2002	3	Semiconductor Component Division totally eliminated the use of lead, first in the industry
	3	Alumina electrostatic chuck "A493" with electrostatic adsorption under Coulomb force instead of conventional Johnson-Rahbeck force released
	3	"A1012K" First CDMA2000, third-generation cellular handset with 144kbps high-speed data communications released
	4	First liquid heating "GPS" heater, hollow cylindrical heater, fired through GPS firing released
	5	World first single-lens reflex digital camera "CONTAX N DIGITAL" with 35-mm full size large CCD released
	6	World first GSM dual band front-end module jointly developed with Mitsubishi Electric Corporation
	7	First PDA of Kyocera "Pocket Cosmo" having the advantage of Java function released
	12	"TN6020" and "V7020" cutting tools for finishing with enhanced strength by using ultrafine cermet released
2003	3	Fine ceramic high-class tea service "Gyokuji" in combination of fine ceramic technology with traditional Satsuma technique released
	4	"Lead-free thermal print head" developed

Glossary of Terms

Sulfur oxide and nitrogen oxide

Sulfur oxide (SOx) emitted through stacks in plant and others is considered as the cause of acid rain, since it changes to strong sulfuric acid in reaction with moisture in the atmosphere. On the other hand, nitrogen oxide (NOx) and hydrocarbons happened by fossil fuels combustion (cars or plants) cause photochemical reaction with ultraviolet rays of the sun and become nitric acid in reaction with moisture in the atmosphere.

Eco Mark

The marks belong to the Type I Environment Labels of the International Standard ISO 14024 such as "Eco Mark" in Japan, "Blue Angle Mark" in Germany, "Swiss Energy 2000" and "Energy Star" in Japan, US and Europe.

Ozone layer depleting substances

The substances, mainly represented by specified CFCs, deplete the ozone layer that has the function to absorb ultraviolet rays of the sunlight. Specified CFCs were used mainly for cleaning components. The CFCs are hardly used today, however, as a result of adoption of pure water cleaning and non-cleaning method.

Greenhouse gases

Gases having the greenhouse effect in the materials floating in the troposphere of the earth. They are carbon dioxide, nitrogen oxide, methane gas, chlorofluorocarbon gas and water vapor. These gases are called greenhouse gases, since thay have a nature to absorb infrared rays emitted by the ground , and warm the surface and atmosphere like the glass in a greenhouse.

Environmental accounting

The system to recognize and measure quantitatively (indicated at the monetary unit or physical unit) as much as possible and transmit the cost spent for environmental preservation in business activities as well as the effects from the activities.

Environmental report

The report company summarizes systematically and publishes periodically to society about its policy, actions, results, future targets for environmental preservation, and status of environmental impact and others. This is for promoting environmental communications and fulfilling accountability relating to environmental preservation.

EMS (Environmental management system)

International standardization system established to allow materialization of sustainable development with coexistence of economic growth and environmental protection.

Environmental labeling

The system providing environmental information of products to be supplied, with the labeling on products or adding the information on sales promotion materials and other documents. This provides the information of environmental aspect of products to consumers and promotes environmental friendly products widely. "Type I, II and III" labeling are available in ISO as international standards.

Green procurement

This is the activities for all purchasers, from company to government, local government and general consumers, to contribute the creation of environmentally friendly society widely by purchasing environmentally considerate goods or raw materials.

Thermal recycling

Collecting heat energy from burning waste plastics, solvents and so on. Type of waste does not matter, so far as it is combustible. For example, in case of mixed plastics, the average heat value is considered as 8,800 to 9,700kcal/kg. High heat can be used since the average heat value of waste is 2,500 kcal/kg.

Industrial waste

19 kinds of waste produced from business activities are defined as industrial waste by law. Industrial waste which are explosive, toxic, corrosive and infectious likely to impair health of people and living environment are defined as specially controlled industrial waste. Waste other than industrial waste and specially controled industrial waste is general waste.

Water Pollution

Contamination caused by industrial waste water, eutrophication caused by domestic wastewater, and pollution caused by pesticides and hazardous chemical substances of rivers, lakes and sea. This is being watched as a serious issue all over the country.

Air pollution

Air pollution such as industrial pollution, regional pollution, photochemical smog, acid rain, depletion of ozone layer, global warming are more complicated and expanded as a global issue.

Dioxin

Produced unintentionally from incineration under existence of chlorine. It has very high toxicity and induces carcinogenesis. Small incinerators were abolished one after another, since dioxin is produced from incineration at low temperature.

Specified CFCs

In spite of superb characteristics such as incombustibility, harmlessness to human body, low boiling point and selective solubility, specified CFCs react with ultraviolet rays of the sun and deplete the ozone layer and have the function to absorb harmful ultraviolet rays drenching on the earth. 5 items of CFCs of high destructive power were defined as specified CFCs and restricted the production and use. Today, collecting and harmless treatment such CFCs are in progress.

Soil pollution

Soil pollution with heavy metals or toxic substance. If it is left, damages will extend to health of people and agricultural products. When pollution is verified after investigations into the soil history, measures such as replacement of soils are conducted.

Fuel cell

Fourth-generation power generation technology after hydroelectric power generation, thermal power generation and atomic power generation. Different from the conventional power generation technologies, electric power can be obtained directly. Thus, the power generation efficiency is high with littel influence on the environment.
Power is generated according to the method contrary to electrolysis of water. Hydrogen is taken out of natural gas or methanol and sent to the cathode of fuel cell. At the same time, oxygen is sent to the anode so that hydrogen is ionized and obtain electric power.

Illegal dumping

Dumping of industrial waste at places other than legally specified disposal sites. To prevent illegal dumping, it is required to issue manifest after revision of the "Waste Disposal and Public Cleaning Law. "

Material recycling

As recycling method of plastics for example, there are 3 methods; Use as plastic materials again, use as oil (chemical recycling) and utilize heat of the combustion (thermal recycling). It is difficult, however, to keep the quality even if the products are same, since the material may not be same depending on the timing of production, or due to additive materials such as coloring matter or combustion material.

Manifest system

Manifest called the "industrial waste management voucher" is issued covering the whole progress of disposal up to the final stage. For prevention of illegal dumping, the industrial waste management voucher system applies to all industrial waste.

Modal shift

Switchover of distribution method. Concretely, this is a physical distribution management to shift the distribution method from trucks to railways or coastal shipping, since concentration on trucks causes the environmental problems such as energy issue, traffic jam, air pollution with carbon monoxide and others.

3R

Means "Reduce" "Reuse" and "Recycle". "Reduce" means to use less material. "Reuse" means to use material again without changing. "Recycle" means to use material with changing.

GRI guideline

Guideline to the sustainability report commonly used all over the world for establishment of the sustainable society. The institution to make the guideline is organized with consultants, business federations and enterprises in the world. In Japan, many companies are referring the GRI guideline for preparation of environmental reports.
GRI=Global Reporting Intiative

HCFC

One of specified CFCs that depletes the ozone layer. HCFC is the second-generation chlorofluorocarbon and decomposed before reaching the ozone layer. It is necessary to develop, however, any substitute not to deplete the ozone layer at all or chlorofluorocarbon gas decomposition technology in the future.
HCFC=Hydro Chloro Fluoro Carbon

ISO 14001

This is the "Environment management systems - Specification with guidance for use". The objective is to improve the management system, reduce environmental impact caused by the activities, products and services, and maintain continual improvement with definite management responsibilities to the environment and operations, repeated the cycles Plan, Do, Check and Action that is the principle of management.
ISO=International Organization for Standardization.

LCA

The system to measure energy consumption and discharged materials at all stages of raw materials, manufacturing, distribution, use and disposal, and evaluate the environmental impact of products totally. ISO is promoting standardization of LCA by specifying the individual standards for the principle, framework, establishment of objective and scope, inventory analysis, and evaluation.
LCA=Life Cycle Assessment

MSDS

Material Safety Data Sheet describing the properties, influences on people and environment, and terms of use of procurement products with chemical substances. This is required for improvement of self-management and prevention of environmental preservation issues. Industrial Safety and Health Law obliges the MSDS and specifies the substances to be notified from the viewpoint of prevention of health damage of workers.
MSDS=Material Safety Data Sheet

PCB

Very stable, extremely slow in decomposition and extinction, and extremely high toxic material. This is organic chlorine compound much used in insulating oil but its manufacturing was banned in 1972. Persons responsible for its storage are rigidly obliged to control PCB. The PCB Special Measures Law was established in April 2001 and planned the treatment of PCB in the future.
PCB=Poly Chlorinated Biphenyl

PFC

Per Fluoro Carbon widely used as a substitute for specified CFCs that deplete the ozone layer. PFC was added to emission reduction items as well as HFC and SF6 at the 3rd Framework Convention on Climate Change (COP3) held in 1997, however, since it has several thousands higher GWP compared with carbondioxide.
PFC=Per Fluoro Carbon

PRTR Law

The law relates to manage of release of specified chemical substances into the environment and promotion of its improvement. This was promoted from self-management according to the Air Pollution Control Law, Water Pollution Control Law, etc. This is the system to regist environmental pollutant release and transfer. It obligates investigations of the volume of transfer to hazardous 354 substances into the environment (air, water, waste, etc.), and notifications of the results to the nation via prefectural offices. Administrations can disclose the information. This method was incorporated in Agenda 21 as an effective method for reduction of environmental risks caused by chemical substances at the Global Summit in 1992.
PRTR=Pollutant Release and Transfer Register

RoHS Directive

The Directive prohibits the use of specified substances as the "EU Directive" which obligates establishment of environmental countermeasures by automobile and electric manufacturers such as product recycling in EU. The objective is to achieve non-content of heavy metals of lead, mercury, cadmium and hexavalent chromium, and bromide flame retardants pbb and pbde in new electric equipment by July 1, 2006.
RoHS=Restriction of Hazardous Substances

Source: "Minnano Kankyo Hyakka (Environmental Encyclopedia for People)", the Japan Business Machine and Information System Industries Association and others

ISO 14001 Certification Status

Region	Company	Site				Date of Registration
Japan	KYOCERA Corporation	Hokkaido Kitami plant	Kyoto Fushimi office	Kanazawa sales office	Okinawa sales office	Oct. '96
		Fukushima Tanakura plant	R&D Center, Keihanna	Matsumoto sales office	CRESCENT VERT Ginza store	
		Chiba Sakura plant	Kagoshima Sendai plant	Hamamatsu sales office	CRESCENT VERT Nagoya store	
		Tokyo Yaesu office	Kagoshima Kokubu plant	Yamanashi sales office	CRESCENT VERT Kyoto Kawaramachi store	
		Tokyo Harajuku office	Kagoshima Hayato plant	Nagoya sales office	CRESCENT VERT Osaka Umeda store	
		Tokyo Yoga office	Sapporo sales office	Mikawa sales office	CRESCENT VERT Osaka Minami store	
		Yokohama office	Tohoku sales office	Osaka sales office	CRESCENT VERT Kobe Sannomiya store	
		Nagano Okaya plant	Takasaki sales office	Nishi-Akashi sales office	CRESCENT VERT Hiroshima Store	
		Mie Ise plant	Utsunomiya sales office	Okayama sales office	CRESCENT VERT Hiroshima Hondori store	
		Shiga Gamo plant	Omiya sales office	Hiroshima sales office	Tamatsukuri office	
		Shiga Yohkaichi plant	Tachikawa sales office	Takamatsu sales office		
		Headquarters	Atsugi sales office	Kyushu sales office		
	KYOCERA Elco Corp.	Headquarters	Okaya office			
	KYOCERA Optic Co., Ltd.	Headquarters	Chigase plant	Tokyo sales office		
	KYOCERA Mita Corporation	Headquarters	Hirakata plant	Tamaki plant	Yoga office	
	KYOCERA Mita Japan Corporation	Headquarters				
	DAIKEN Co.	Headquarters				

Multi-sites certificied as Kyocera group environment management system in Japan.

Region	Company	Site	Date of Registration
US	KYOCERA America, Inc.	San Diego	Aug. '97
	KYOCERA Industrial Ceramics Corp.	Vancouber	Apr. '98
		Mountain Home	Dec. '98
	KYOCERA Wireless Corp.	San Diego	Nov. '00
	KYOCERA MITA South Carolina.Inc.	South Carolina	June '02
UK	AVX Ltd.	Paignton	June '00
		Coleraina	Aug. '00
		New Market	Dec. '02
Mexico	KYOCERA Mexicana, A.S.de C.V.	Tijuana	Sept.'98
Brazil	KYOCERA YADHICA do Brasil Indústria e Comércio Ltda.	Sorocaba	Sept.'00
China	SHANGHAI KYOCERA ELECTRONICS CO., LTD.	Shanghai	July '00
	DONGGUAN SHILONG KYOCERA OPTICS CO., LTD.	Shilong	Dec. '00
	KYOCERA MITA OFFICE EQUIPMENT (DONGGAN) CO., LTD.	Shilong	Oct. '01
	WUXI KYOCERA ELECTRO CHEMICAL CO.,LTD.	Wuxi	Apr. '01
	KYOCEAR MITA Industrial Co.,(H.K.)Ltd.	New Territories	Nov. '00
Singapore	KYOCEAR ELCO Singapore Pte.,Ltd.	Kolam Ayer Industrial Park	Sept.'01
	KYOCEAR Chemical Singapore Pte.,Ltd.	Singapore	June '99
Korea	KYOCEAR ELCO Korea Co.,Ltd.	Seoul	Sept.'99
Indonesia	P.T.KYOCEAR Indonesia	Batam	Apr. '00

Shiga Gamo Plant and Shiga Yohkaichi Plant

Shiga Gamo Plant

(Exhaust Management)

Listed 3 major facilities

Item	Facility	Control limit	Measurement		
			Average	Max.	Frequency
Soot (g/Nm^3)	Cart type kiln No. 12	0.25	0.0014	0.0018	Twice/year
	Cart type kiln No. 13	0.25	0.0022	0.0024	Twice/year
	Takuma heater	0.1	0.0014	0.0014	Once/year
NOx (ppm)	Cart type kiln No. 12	180	16	19	Twice/year
	Cart type kiln No. 13	180	11	16	Twice/year
	Takuma heater	150	50	50	Once/year
SOx(Nm^3/h)	NA	–			

(Water quality management)

(unit: mg/ℓ)

Item	Control limit	Measurement		
		Average	Max.	Frequency
Hydrogen ion concetration (pH)	6.0~8.5	7.1	7.6	3 times/day
Biochemical oxygen demand (BOD)	15	2.1	4	Once/week
Chemical oxygen demand (COD)	15	4.4	8.8	Once/day
Suspended solid (SS)	20	2.5	11.7	Once/week
Normal hexane extract weight	3	<0.5	<0.5	Once/month
Phenols content	1	<0.1	<0.1	Once/year
Copper content	1	<0.01	0.02	Once/year
Zinc content	1	<0.01	0.02	Once/year
Soluble iron content	10	<0.1	<0.1	Once/year
Soluble manganese content	10	<0.1	<0.1	Once/year
Coliform group number (pieces/ℓ)	3000	0	0	Once/month
Nitrogen content	8	2.6	6.1	Once/week
Phosphorus content	0.8	0.04	0.22	Once/week

(PRTR substances)

(unit: ton)

No.	Substance name	Amount handled	Amount released			Amount transfered		Others		
			To atmosphere	To water	To soil	As waste	To sewage	Recycled	Consumed	Removed and treated
68	Chromium and chromium (III) compounds	6.4	0	0	0	0.6	0	0.1	5.7	0
232	Nickel compounds	12.3	0	0	0	1.3	0	0	11.0	0
304	Baron and its compounds	10.6	0	0.2	0	0.6	0	0.3	9.5	0
311	Manganese and its compounds	7.0	0	0	0	0.2	0	0	6.8	0
346	Molybdenum and its compounds	14.5	0.1	0	0	2.5	0	7.7	4.2	0
	Target chemical substances total	50.8	0.1	0.2	0	5.2	0	8.1	37.2	0

Profile

Plant name : KYOCERA Corporation Shiga Gamo plant
Location : 10-1 Kawai, Gamo-cho, Gamo-gun, Shiga.
Production items : Fine ceramic components, telecommunications devices, BIOSERAM, etc.
Area : 140,504 m^2

(Air emission: Total impact)

(unit: ton)

Item	Total emission
NOx	0.66
SOx	0

(Water pollution: Total impact)

(unit: ton)

Item	Total pollution
Chemical oxygen demand (COD)	3.06
Biochemical oxygen demand (BOD)	1.46
Nitrogen	1.81
Phosphorous	0.03

(Noise and vibration)

Not exceeded the control limit

(Offensive odor)

Not exceeded the control limit

(Environmental performances)

Item		Amount
Electricity	kW·h	79,523,718
Fuel (LPG, A-heavy oil) kℓ (Conversion to crude oil)		3,747
Water	m^3	702,828
Industrial waste discharge	kg	1,219,723
Water discharge	m^3	695,825

Shiga Yohkaichi Plant

(Exhaust Management)

Listed 3 major facilities

Item	Facility	Control limit	Measurement		
			Average	Max.	Frequency
Soot (g/Nm^3)	Complex intermediate processing system	0.15	0.019	0.024	Twice/year
	"KEIAI" Dormitory boiler	0.3	0.0087	0.011	Twice/year
	1-1 plant electric furnace	0.25	0.0024	0.003	Twice/year
NOx (ppm)	Complex intermediate processing system	250	26	40	Twice/year
	"KEIAI" Dormitory boiler	260	60.5	63	Twice/year
SOx (Nm^3/h)	Complex intermediate processing system	—	0.0061	0.008	Twice/year
	"KEIAI" Dormitory boiler	17.5	0.0081	0.0093	Twice/year

(Water quality management)

(unit: mg/ℓ)

Item	Control limit	Measurement		
		Average	Max.	Frequency
Hydrogen ion concentration (pH)	6.0~8.5	7.0	8.0	3 times/day
Biochemical oxygen demand (BOD)	20	2.2	5.0	Once/week
Chemical oxygen demand (COD)	20	4.4	8.8	Once/day
Suspended solid (SS)	20	1.2	4.1	Once/week
Normal hexane extract weight	3	<0.5	<0.5	Once/month
Phenols content	1	<0.1	<0.1	Once/year
Copper content	1	<0.01	<0.01	Once/month
Zinc content	1	0.03	0.06	Once/month
Soluble iron content	10	<0.1	<0.1	Once/year
Soluble manganese content	10	<0.1	<0.1	Once/year
Coliform group number (pieces/ℓ)	3000	0	0	Once/month
Nitrogen content	8	1.8	4.9	Once/week
Phosphorous content	0.5	0.01	0.14	Once/week

(PRTR substances)

(unit: ton)

No.	Substance name	Amount handled	Amount released			Amount transfered		Others		
			To atmosphere	To water	To soil	As waste	To sewage	Recycled	Consumed	Removed and treated
64	Silver and its water-soluble compounds	17.5	0	0	0	0	0	0.4	17.1	0
179	Dioxins (unit: mg-TEQ)	0.297	0.163	0	0	0.134	0	0	0	0
230	Lead and its compounds	8.5	0	0	0	0.4	0	2.5	5.6	0
232	Nickel compounds	5.0	0	0	0	2.0	0	0	3.0	0
283	Hydrogen fluoride and its water-soluble salts	36.3	0	0.2	0	0	0	0	36.1	0
307	Poly (oxyethylene) alkyl C=12-15	7.2	0	0	0	7.2	0	0	0	0
	Target chemical substances total	74.5	0.0	0.2	0	9.6	0	2.9	61.8	0

Profile

Plant name : KYOCERA Corporation Shiga Yohkaichi plant
Location : 1166-6 Nagatanino, Hebimizo-cho, Yohkaichi, Shiga.
Production items : Fine ceramic components, solar energy equipment, electronic components, thin film devices, cutting tools, LED, etc.
Area : 279,435 m^2

(Air emission: Total impact)

(unit: ton)

Item	Total emission
NOx	0.90
SOx	0.16

(Water pollution: Total impact)

(unit: ton)

Item	Total pollution
Chemical oxygen demand (COD)	1.45
Biochemical oxygen demand (BOD)	0.73
Nitrogen	0.59
Phosphorous	0.00

(Noise and vibration)

Not exceeded the control limit

(Offensive odor)

Not exceeded the control limit

(Environmental performances)

Item		Amount
Electricity	kW·h	81,860,780
Fuel (LPG, A-heavy oil) kℓ (Conversion to crude oil)		4,344
Water	m^3	469,369
Industrial waste discharge	kg	2,766,187
Water discharge	m^3	329,357

Kagoshima Sendai Plant and Kagoshima Kokubu Plant

Kagoshima Sendai Plant

(Exhaust Management)

Listed 3 major facilities

Item	Facility	Control limit	Measurement		
			Average	Max.	Frequency
Soot (g/Nm^3)	Incinerator	0.25	0.001	0.021	Twice/year
	Boiler	0.1	0.001	0.012	Twice/year
NOx (ppm)	Incinerator	0.15	0.038	0.07	Twice/year
	Incinerator	180	25	32	Twice/year
	Boiler	150	59	93	Twice/year
	Incinerator	–	46	46	Once/year
SOx(Nm^3/h)	NA	–			

(Water quality management)

(unit: mg/ℓ)

Item	Control limit	Measurement		
		Average	Max.	Frequency
Hydrogen ion concentration (pH)	6.2~8.2	7.1	7.5	Once/day
Biochemical oxygen demand (BOD)	20	3.5	6.8	Twice/week
Chemical oxygen demand (COD)	–	2.9	6.6	Twice/week
Suspended solid (SS)	20	1.4	4	Twice/week
Normal hexane extract weight	5	0.04	0.6	Once/year
Phenols content	5	<0.01	<0.01	Once/year
Copper content	3	0.03	0.05	Once/year
Zinc content	5	0.02	0.03	Once/year
Soluble iron content	10	0.03	0.08	Once/year
Soluble manganese content	10	0.04	0.1	Once/year
Coliform group number (pieces/ℓ)	1000	12	52	Once/week
Nitrogen content	60	5.46	8.9	Once/year
Phosphorous content	8	0.2	0.74	Once/year

(PRTR substances)

(unit: ton)

No.	Substance name	Amount handled	Amount released			Amount transfered		Others		
			To atmosphere	To water	To soil	As waste	To sewage	Recycled	Consumed	Removed and treated
68	Chromium and chromium (III) compounds	30.6	0	0	0	0.7	0	11.3	18.6	0
100	Cobalt and its compounds	20.1	0	0.4	0	1.8	0	0.5	17.4	0
108	Inorganic cyanogens compounds (except for complex salt and cyanurate)	6.0	0	0	0	0	0	0	0	6.0
179	Dioxins (unit- mg-TEQ)	1.06	0.12	0	0	0.35	0	0.59	0	0
227	Toluene	346.8	82.4	0	0	10.5	0	0	253.9	0
231	Nickel	41.3	0	0.4	0	3.9	0	0.5	36.5	0
232	Nickel compounds	5.0	0	0	0	0	0	0.6	4.4	0
270	Di-n-butyl phthalate	23.1	0.1	0	0	0.8	0	2.9	19.1	0.2
272	Bis (2-ethylhexyl) phthalate	17.0	0	0	0	1.1	0	2.7	13.1	0.1
311	Manganese and its compounds	7.2	0	0.1	0	0.6	0	0.5	6.0	0
346	Molybdenum and its compounds	10.9	0	0.1	0	0.4	0	2.4	8.0	0
	Target chemical substances total	508.0	82.5	1.0	0	19.8	0	21.4	377.0	6.3

Profile

Plant name : KYOCERA Corporation Kagoshima Sendai plant
Location : 1810 Taki-cho, Sendai, Kagoshima
Production items : Ceramic components, electronic components, semiconductor components, cutting tools, etc.
Area : 180,652 m²

(Air emission: Total impact)

(unit: ton)

Item	Total emission
NOx	12.33
SOx	0

(Water pollution: Total impact)

Item	Total pollution
Chemical oxygen demand (COD)	4.94
Biochemical oxygen demand (BOD)	5.96
Nitrogen	9.36
Phosphorous	0.34

(Noise and vibration)

Not exceeded the control limit

(Offensive odor)

Not exceeded the control limit

(Environmental performances)

Item		Amount
Electricity	kW·h	180,956,800
Fuel (LPG, A-heavy oil) kℓ (Conversion to crude oil)		13,861
Water	m^3	1,878,678
Industrial waste discharge	kg	2,156,050
Water discharge	m^3	1,701,618

Kagoshima Kokubu Plant

(Exhaust Management)

Listed 3 major facilities

Item	Facility	Control limit	Measurement		
			Average	Max.	Frequency
Soot (g/Nm^3)	Large gas furnace #2	0.25	<0.005	<0.005	Twice/year
	Toluene deodorization boiler	0.1	<0.005	<0.005	Twice/year
	Gas boiler R-1	0.1	<0.005	<0.005	Twice/year
NOx (ppm)	Large gas furnace #2	180	25	37	Twice/year
	Toluene deodorization boiler	150	65	80	Twice/year
	Gas boiler R-1	150	78	90	Twice/year
SOx(Nm^3/h)	Out of application	–			

(Water quality management)

(unit: mg/ℓ)

Item	Control limit	Measurement		
		Average	Max.	Frequency
Hydrogen ion concentration (pH)	5.8~8.5	7.4	7.7	Once/week
Biochemical oxygen demand (BOD)	30	3.6	7.5	Once/week
Chemical oxygen demand (COD)	–	4.8	7.9	Once/week
Suspended solid (SS)	30	1.9	4.2	Once/week
Normal hexane extract weight	5	0.22	0.9	Once/month
Phenols content	5	<0.01	<0.01	Once/year
Copper content	3	0.1	0.41	Once/month
Zinc content	5	0.11	0.31	Once/month
Soluble iron content	10	0.05	0.13	Once/month
Soluble manganese content	10	0.002	0.02	Once/month
Coliform group number (pieces/ℓ)	3000	15	56	Once/month
Nitrogen content	60	1.8	11	Once/month
Phosphorous content	8	0.4	1.2	Once/month

*There are two outlets. Amounts measured at outlet 2B are listed.

(PRTR substances)

(unit: ton)

No.	Substance name	Amount handled	Amount released			Amount transfered		Others		
			To atmosphere	To water	To soil	As waste	To sewage	Recycled	Consumed	Removed and treated
40	Ethylbenzene	14.5	3.1	0	0	0.1	0	11.3	0	0
63	Xylene	8.3	2.3	0	0	0.7	0	5.3	0	0
64	Silver and its waster-soluble compounds	27.4	0	0	0	3.1	0	2.1	22.2	0
68	Chromium and chromium (III) compounds	12.1	0	0	0	0.2	0	5.8	6.1	0
179	Dioxins (unit- mg-TEQ)	0.03	0.03	0	0	0	0	0	0	0
207	Copper water-soluble salts (except for complex salt)	7.9	0	0	0	0.4	0	0	0	7.5
227	Toluene	203.9	62.3	0	0	7.8	0	103.8	30.0	0
230	Lead and its compounds	77.6	0	0	0	26.9	0	0.7	50.0	0
231	Nickel	32.8	0	0	0	0.4	0	2.8	29.6	0
232	Nickel compounds	8.7	0	0	0	1.4	0	2.9	4.4	0
270	Di-n-butyl phthalate	26.3	1.0	0	0	4.1	0	2.1	15.4	3.7
272	Bis (2-ethylhexyl) phthalate	21.2	0.4	0	0	3.5	0	1.2	14.7	1.4
304	Baron and its compounds	6.8	0	0.1	0	1.8	0	2.2	2.7	0
311	Manganese and its compounds	13.0	0	0	0	0.5	0	1.7	10.8	0
346	Molybdenum and its compounds	8.3	0	0	0	0.2	0	3.9	4.2	0
	Target chemical substances total	468.8	69.1	0.1	0	51.1	0	145.8	190.1	12.6

Profile

Plant name : KYOCERA Corporation Kagoshima Kokubu plant
Location : 1-1 Yamashita-cho, Kokubu, Kagoshima
Production items : Semiconductor components, electronic components, mechanical structural components, automotive components, etc.
Area : 264,474 m²

(Air emission: Total impact)

(unit: ton)

Item	Total emission
NOx	29.82
SOx	0

(Water pollution: Total impact)

Item	Total pollution
Chemical oxygen demand (COD)	9.92
Biochemical oxygen demand (BOD)	7.00
Nitrogen	13.38
Phosphorous	1.07

(Noise and vibration)

Not exceeded the control limit

(Offensive odor)

Not exceeded the control limit

(Environmental performances)

Item		Amount
Electricity	kW·h	187,254.262
Fuel (LPG, A-heavy oil) kℓ (Conversion to crude oil)		14,491
Water	m^3	1,867,579
Industrial waste discharge	kg	2,920,147
Water discharge	m^3	1,881,541

KYOCERA Mita Corporation Hirakata Plant

Profile

Plant name : KYOCERA Mita Corporation Hirakata plant
Location : 1-38-12 Tsuda Kita-machi, Hirakata
Production items : Information equipment such as copying machines, printers, digital copying machines, etc.
Area : 46,085 m²

(Exhaust Management)

Listed 3 major facilities

Item	Facility	Control limit	Measurement		
			Average	Max.	Frequency
Soot (g/Nm³)	Oil fired boiler 3TON	0.15	0.017	0.026	Twice/year
	Oil fired boiler 5TON	0.15	0.022	0.042	Twice/year
	Gas fired boiler No.1	0.05	0.0033	0.0045	Twice/year
NOx (ppm)	Oil fired boiler 3TON	180	39.65	54	Twice/year
	Oil fired boiler 5TON	180	44.05	66	Twice/year
	Gas fired boiler No.1	150	6.95	10	Twice/year
SOx(Nm³/h)	NA	—			

(Water quality management)

(unit: mg/ℓ)

Item	Control limit	Measurement		
		Average	Max.	Frequency
Hydrogen ion concentration (pH)	5.8~8.6	7.3	7.6	Once/month
Biochemical oxygen demand (BOD)	20	5.6	8.6	Once/month
Chemical oxygen demand (COD)	20	3.2	5.5	Once/month
Suspended solid (SS)	70	3.6	6	Once/month
Normal hexane extract weight	4	1.1	1.4	Once/month
Phenols content	1	0.5	0.5	Twice/year
Copper content	3	0.05	0.06	Twice/year
Zinc content	5	0.1	0.1	Twice/year
Soluble iron content	10	0.2	0.29	Twice/year
Soluble manganese content	10	0.02	0.02	Twice/year
Coliform group number (pieces/ℓ)	3000	8.1	93	Once/month
Nitrogen content	60	12.0	19.2	Twice/year
Phosphorous content	3	1.1	1.48	Twice/year

*No specified facilities exist. But, measurements are conducted voluntarily.

(PRTR substances)

(unit: ton)

No.	Substance name	Amount handled	Amount released			Amount transfered	
			To atmosphere	To water	To soil	As waste	To sewage
	NA	—					

(Air emission: Total impact)

(unit: ton)

Item	Total emission
NOx	0.74
SOx	0

(Water pollution: Total impact)

Item	Total pollution
Chemical oxygen demand (COD)	NA
Biochemical oxygen demand (BOD)	NA
Nitrogen	NA
Phosphorous	NA

(Noise and vibration)

Not exceeded the control limit

(Offensive odor)

Not exceeded the control limit

(Environmental performances)

Item		Amount
Electricity	kW·h	16,794,862
Fuel (LPG, A-heavy oil) kℓ (Conversion to crude oil)		460
Water	m³	118,604
Industrial waste discharge	kg	498,368

SHANGHAI KYOCERA ELECTRONICS Co., LTD.

Profile

Plant name : SHANGHAI KYOCERA ELECTRONICS CO., LTD.
Location : No. 2077 New Jin Qiao Road, Pu Dong, Shanghai
Production items : Electronic components, semiconductor components, optical communication components, functional parts, etc.
Area : 80,120 m²

(Exhaust Management)

Item	Facility	Control limit	Measurement		
			Average	Max.	Frequency
Soot (g/Nm³)	NA	—	—	—	—
NOx (ppm)	NA	—	—	—	—
SOx (Nm³/h)	NA	—	—	—	—

(Water quality management)

(unit: mg/ℓ)

Item	Control limit	Measurement		
		Average	Max.	Frequency
Hydrogen ion concentration (pH)	6~9	7.5	8.4	Once/day
Biochemical oxygen demand (BOD)	30	13.7	24.5	3 times/week
Chemical oxygen demand (COD)	100	42.4	73.5	Once/day
Suspended solid (SS)	150	15.0	80.5	Once/day
Baron	5	1.1	2.5	Once/day
Nickel and its compounds	1	0.1	0.95	Once/day

(PRTR substances)

(unit: ton)

No.	Substance name	Amount handled	Amount released			Amount transfered	
			To atmosphere	To water	To soil	As waste	To sewage
	NA	—					

(Air emission: Total impact)

(unit: ton)

Item	Total emission
NOx	NA
SOx	NA

(Water pollution: Total impact)

Item	Total pollution
Chemical oxygen demand (COD)	9.19
Biochemical oxygen demand (BOD)	3.00
Nitrogen	NA
Phosphorous	NA

(Noise and vibration)

Not exceeded the control limit

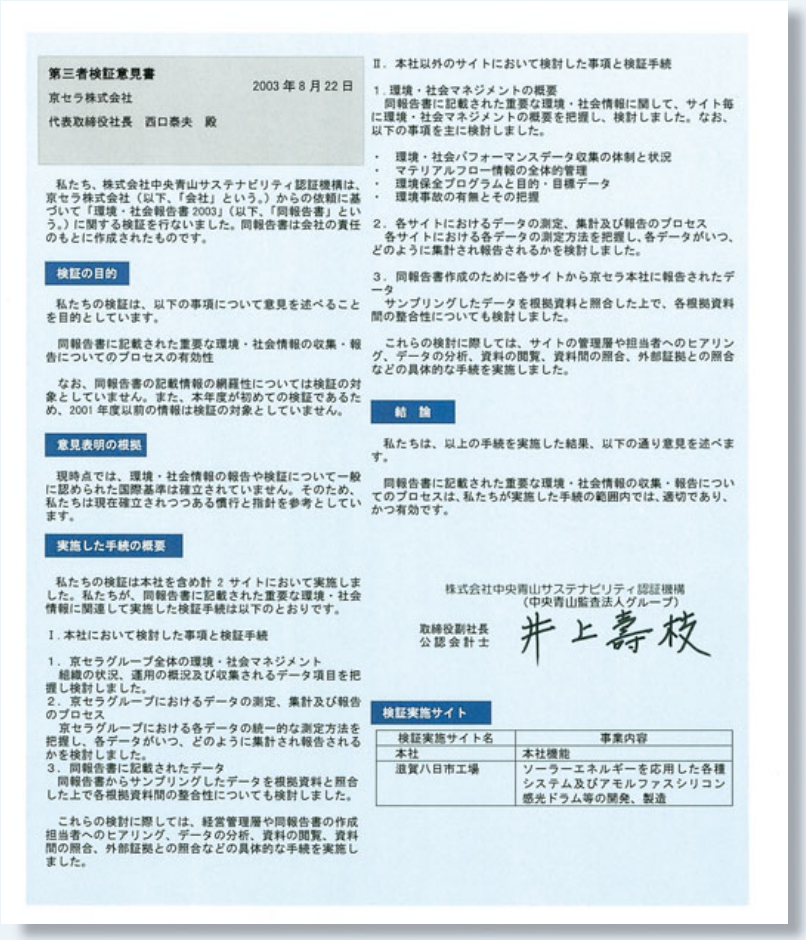
(Offensive odor)

Not exceeded the control limit

(Environmental performances)

Item		Amount
Electricity	kW·h	63,084,000
Fuel (LPG, A-heavy oil) kℓ (Conversion to crude oil)		361
Water	m³	608,777
Industrial waste discharge	kg	1,075,160
Water discharge	m³	216,555

Kyocera obtained third party verification to ensure reliability of the report from this time.



第三者検証意見書

2003 年 8 月 22 日

京セラ株式会社

代表取締役社長　西口泰夫　殿

私たち、株式会社中央青山サステナビリティ認証機構は、京セラ株式会社（以下、「会社」という。）からの依頼に基づいて「環境・社会報告書 2003」（以下、「同報告書」という。）に関する検証を行いました。同報告書は会社の責任のもとに作成されたものです。

検証の目的

私たちの検証は、以下の事項について意見を述べることを目的としています。

同報告書に記載された重要な環境・社会情報の収集・報告についてのプロセスの有効性

なお、同報告書の記載情報の網羅性については検証の対象としていません。また、本年度が初めての検証であるため、2001 年度以前の情報は検証の対象としていません。

意見表明の根拠

現時点では、環境・社会情報の報告や検証について一般に認められた国際基準は確立されていません。そのため、私たちは現在確立されつつある慣行と指針を参考としています。

実施した手続の概要

私たちの検証は本社を含め計 2 サイトにおいて実施しました。私たちが、同報告書に記載された重要な環境・社会情報に関連して実施した検証手続は以下のとおりです。

Ⅰ．本社において検討した事項と検証手続

1．京セラグループ全体の環境・社会マネジメント
組織の状況、運用の概況及び収集されるデータ項目を把握し検討しました。
2．京セラグループにおけるデータの測定、集計及び報告のプロセス
京セラグループにおける各データの統一的な測定方法を把握し、各データがいつ、どのように集計され報告されるかを検討しました。
3．同報告書に記載されたデータ
同報告書からサンプリングしたデータを根拠資料と照合した上で各根拠資料間の整合性についても検討しました。

これらの検討に際しては、経営管理層や同報告書の作成担当者へのヒアリング、データの分析、資料の閲覧、資料間の照合、外部証拠との照合などの具体的な手続を実施しました。

Ⅱ．本社以外のサイトにおいて検討した事項と検証手続

1．環境・社会マネジメントの概要
同報告書に記載された重要な環境・社会情報に関して、サイト毎に環境・社会マネジメントの概要を把握し、検討しました。なお、以下の事項を主に検討しました。

・ 環境・社会パフォーマンスデータ収集の体制と状況
・ マテリアルフロー情報の全体的管理
・ 環境保全プログラムと目的・目標データ
・ 環境事故の有無とその把握

2．各サイトにおけるデータの測定、集計及び報告のプロセス
各サイトにおける各データの測定方法を把握し、各データがいつ、どのように集計され報告されるかを検討しました。

3．同報告書作成のために各サイトから京セラ本社に報告されたデータ
サンプリングしたデータを根拠資料と照合した上で、各根拠資料間の整合性についても検討しました。

これらの検討に際しては、サイトの管理層や担当者へのヒアリング、データの分析、資料の閲覧、資料間の照合、外部証拠との照合などの具体的な手続を実施しました。

結　論

私たちは、以上の手続を実施した結果、以下の通り意見を述べます。

同報告書に記載された重要な環境・社会情報の収集・報告についてのプロセスは、私たちが実施した手続の範囲内では、適切であり、かつ有効です。

株式会社中央青山サステナビリティ認証機構
（中央青山監査法人グループ）
取締役副社長
公認会計士　井上壽枝

検証実施サイト

検証実施サイト名	事業内容
本社	本社機能
滋賀八日市工場	ソーラーエネルギーを応用した各種システム及びアモルファスシリコン感光ドラム等の開発、製造

Proposal from the third party who verified Kyocera

We proposed several suggestions to Kyocera (hereafter Company) for its better management in the process of verification in addition to our opinions about the reliability of this report. For information to readers of the report, our main suggestions are summarized below.

1. Corporate environmental accounting

Company established the detailed procedures relating to the environmental accounting, collected the data based on the procedures and verified the results. It is highly evaluated that Company established such a system in a short period and announced the result in the report. In the future, it is expected to take more actions for the following points.

(1) Practical use for business management

Practical use of the environmental accounting needs more consideration in the future. In addition to external disclosure of information, it is expected to make use of the environmental accounting as a tool for providing information to business activities such as R&D, facility investment, product information disclosure to customers and environment activities.

(2) Expansion of applicable scope and items

R&D conducted by Company has the effects not only internally but also at the customer level through the use of related products. In the future, it is suggested that the environmental accounting would be more substantial and useful when its effects at the customer level are included in the scope of corporate accounting.

(3) Prompt and efficient accounting

The environmental accounting is practically used more widely as a result of prompt and efficient accounting. We suggest to develop automatic accounting system.

2. Product environmental accounting

The effects of the solar power generating system in terms of the generated electric energy and its economic effect is reported. This is highly evaluated, since effects of the system are known clearly as a result of quantitative environmental information of environmentally friendly products. Such information can be used on pamphlets and advertisement to appeal the performances of products to customers in addition to disclosing such information on the report. We suggest to use the information more practically.

3. Waste management (Prevention of illegal dumping of waste)

As described on P.59 (Interview to environmental officer as a part of procedures of verification), Company collected the waste as waste generator's responsibility in the past when the subcontractor of waste disposal was bankrupted. Based on the experiences, Company has been making the on-site survey of disposal subcontractors twice a year, in addition to interview to the management of subcontractors before concluding the contract and investigations into credit standing of individual companies every year, even after conclusion of contract. It is seen sometimes that subcontractor used to be reputed excellent resorts to illegal dumping due to its worsened management. In this meaning, periodical on-site survey of actual disposal condition and investigation of financial status of subcontractors are considered effective as measures for prevention of illegal dumping.

4. Social information

Company began to fully publish social information in FY2003. Corporate governance, relationship with employees and customers are reported. This is highly evaluated since people has more interest in CSR. In the future, we expect to expand the items to be published considering the role of the Sustainability Report in Company and expectation from stakeholders. In addition, we expect to disclose the actual activities in more details in cooperation with the division who conducted the activities.

The environmental officer had an interview with ChuoAoyama Sustainability Certification Organization CO., LTD. as a part of procedures of verification by a third party.

Yoshie Inoue,
Vice President
ChuoAoyama Sustainability Certification Organization CO., LTD.

Hisashi Sakumi,
Managing Executive Officer
Deputy General Manager of Corporate General Affairs Division & Environmental Officer

Inoue
Now, I would like to start the third party verification top management interview. This time, the title was changed to the Sustainability Report. First, I'm pleased if you tell me your opinion about social responsibilities of a company.

Sakumi
There are many views of social responsibilities. For the manufacturing or service industry, I consider the most important point is to supply the good products or services. In addition, employment, relationship with society and mecenat activities are considered. With the management rationale of "To provide opportunity for the material and intellectual growth of all our employees, and through our joint effort, contribute to the advancement of society and humankind", Kyocera has been conscious of contribution to the society since its foundation.

Inoue
I feel that management rationale you mentioned has taken root in the corporation as corporate culture. You said most important is to supply the good products, I can understand that the rationale plays an important part in your business activities. Now, would you kindly tell me the position of your environmental management?

Sakumi
As stated in the Kyocera Environmental Charter, the basic understanding of the environment is to uphold the dignity of mankind and contribute to the sustainable development of human society.
We have used various chemical substances for manufacturing the products, we have been taking activities based on the policy "Water discharged from our plant must be clearer than water of the river discharged" since its foundation.
This is the policy to make wastewater harmless as much as possible with the technologies available.
Further, we have been developing various environment-preserving products one after another. We have been conscious of the environmental management for more than 40 years since its foundation, because that's the way of Kyocera itself.

Inoue
I well understand that you have been conscious of the environmental management since the foundation. Next, I would like you tell me to what activities you consider for FY2004 or on the middle term basis.

Sakumi
We started environmental accounting system newly in FY2003. We would like to expand the scope further and improve its accuracy.
To group companies having not ISO 14001 certified such as overseas sales companies, we will introduce the common environmental management system.
We started the 4th environmental protection promotion plan in April 2002. This is the second year. Our utmost efforts are extended to three activities, prevention of global warming, energy saving and reduction of industrial waste.

Inoue
It seems that zero emission has been achieved up to a very high level. But, what actions are you taking for the problem of illegal dumping of waste that becomes a topics recently?

Sakumi
In the past, we collected the waste we genelates as waste generator's responsibility when our subcontractor of waste disposal was bankurupted. Based on the experience, we have had our basic policy "First, we should minimize industrial waste generation itself. Then, unavoidable industrial waste should be recycled. If complete recycling is unavailable, waste is discharged after making harmless through internal intermediate treatment." This is strictly maintained.
We consider that we should not discharge waste that can't be changed into harmless with the current technologies in the world. We further consider that we should not discharge waste, unless it is confirmed that truly technically problem-free treatment was applied to the waste. Contrarily speaking, I should say that we cannot manufacture any product that cannot be treated at the time of its disposition. As to chemical substances, too, our understanding has been those manufactured from the nature should be returned the nature as it should be since the foundation.
Therefore, we consider that we are not allowed to use anything that cannot be treated internally at the time of disposition.

Inoue
It is just the conception of recycling. If everyone had such way of thinking, I think the various problems currently taken up would not become so serious. Finally, let me tell your positive opinion about disclosing information, if any.

Sakumi
As to information in the Sustainability Report, it should be clearly described so that everyone can understand the information without different understanding.
At present, the appropriate style of financial report is established, but I consider that there is a portion about basis of company that is not covered with the current financial report, and we should explain it, too. For example, healthness of company is not covered only by the financial report, but it should be including the total image of company such as rationale and policy. Accordingly, I think we are required to disclose information including the degree of contribution to environment and society.
I believe the Sustainability Report is required for this purpose.

Interview by ChuoAoyama Sustainability Certification Organization CO., LTD.

THE NEW VALUE FRONTIER

KYOCERA

Communication Sheet

Q1: What do you thing about the total image of the report?

1. Excellent 2. Good 3. Average 4. Poor 5. Very poor

Please feel free to comment about the reason why you think so, especially about contents and understandability.

( )

Q2: Which articles interested or were useful for you?

1. Management Rationale 2. Management Policy 3. Corporate Governance
4. Kyocera Environmental Charter 5. Environmental Management System
6. Kyocera Global Environmental Contribution Award 7. Environmental Accounting
8. Environmental Protection Promotion Activities 9. Topics 10. Relationship with Employees
11. Relationship with Customers 12. Relationship with Society 13. Facts and Figures
14. Sites Information 15. Third Party Verification

What impressed you actually?

( )

Q3: Which contents you need more information? Please select items from Q2.

No.	Comments

Q4: Please feel free to comment about the points we should improve in the report?

1. Not Available 2. Available ( )

Q5: What do you thing about Kyocera's environmental protection activities after looking at this report?

1. Excellent 2. Good 3. Poor 4. Very poor

( )

Q6. Please feel free to comment about environmental protection activity that you expect Kyocera to do.

( )

Q7. Which of the following(s) best describes you?

1. Resident near a Kyocera plant or office 2. Business partner 3. Government agency
4. Environment NPO 5. Mass media 6. Kyocera group employee or family member
7. Others ( )

Q8. Please feel free to comment if any.

TO:Industrial Environment and Safety Division,
Corporate General Affairs Division KYOCERA Corporation

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