

**Protecting the Earth
For Future Generations**

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■ Corporate Profile

Company name: Yokogawa Electric Corporation

Founded: September 1, 1915

President and Chief Executive Officer: Isao Uchida

Capital (as of March 2000): 32.306 billion yen

Sales of fiscal year 1999: Non-consolidated sales – 172.8 billion yen; Consolidated sales – 313.4 billion yen

Number of employees (as of March 2000): Yokogawa – 5,952; Group – approx. 19,000

Location of headquarters: 2-9-32 Nakacho, Musashino-shi, Tokyo, Japan

Main scope of business: Development, engineering, manufacture, sales, and servicing of process measuring equipment and control systems, electronic instruments, measuring instruments, aerospace instruments, analytical instruments, recorders, LSI testers, power supply units, and medical image information processing systems.

■ Data Sources

This report is based on data from the following nine sites that obtained ISO14001 certification in fiscal year 1999.

Site	Function(s)	Number of Employees	Scope of Business (Main Products)
Headquarters, Yokogawa Electric Corporation	Headquarters, research and development, engineering, manufacturing, sales, and servicing	*5,305	Process measuring equipment and control systems, analytical instruments, information equipment, aerospace instruments, LSI testers, and power supply units
Kofu plant, Yokogawa Electric Corporation	Engineering and manufacturing	*998	Measuring instruments, transmitters, recorders, and analytical instruments
Yokogawa Fine Technology Corporation	Engineering, manufacturing, and sales	385	Metalwork, surface treatment, molds, dies, and production facilities
Yokogawa Flowtech Co., Ltd.	Manufacturing	133	Various flow meters, detectors, and transmitters
Kokusai Chart Corporation	Engineering, manufacturing, and sales	258	Recording charts, recording pens, and circular chart recorders
Yokogawa M&C Corporation	Engineering, manufacturing, and sales	359	Measuring instruments, measuring and control instruments, and energy-saving instruments
Yokogawa Electronics Corporation	Manufacturing	361	Power supply units, industrial instruments, and electronic devices
Manufacturing Yokogawa Precision Corp.	Engineering, manufacturing, and sales	395	Presentation equipment, DD motors, and laser-measuring machinery
Yokogawa Rental & Lease Corporation	Rental and lease services	579	Rental/lease of measuring and information equipment, commissioned calibrations, and commissioned measurements

* Includes personnel from affiliated companies working at the respective premises.

A Message from Management

It has been twelve years since the Yokogawa Group stepped up its environmental protection activities. In particular, a variety of activities that began in 1995 with the aim of becoming ISO14001 certified have resulted in the certification of not only the Group's two main plants, Yokogawa Headquarters and the Kofu plant, but also thirteen Group companies (four overseas and nine in Japan). This result greatly owes itself to indispensable advice from many of the companies to seriously tackle environmental protection; capable instructions from an accrediting body; and above all, the strong determination of every Group employee to develop business while remaining aware at all times of the need to protect the environment.

In January of this year, the Yokogawa Group introduced a new corporate strategy named VISION-21, which stipulates four directives the Yokogawa Group should advance. One includes our environmental mission: "The Group aims to contribute toward not only preservation of the global environment in the 21st century and the recycling of resources in society, but also the crowning achievement of a thriving global society." As an example of the actions being taken in this regard, we are working to achieve "zero refuse for landfill" by fiscal year 2002 in respect to our target of "zero emissions."

In accordance with part of the corporate mission—"Individually, we aim to combine good citizenship with the courage to innovate"—Yokogawa fosters environmental awareness in all employees and encourages them to consider protection of the environment in their work based on the principle of harmonious coexistence with local communities.

This public report summarizes the environmental protection activities of the Yokogawa Group over the last fiscal year. We hope you recognize our determination through the results reported herein, and we would be pleased to receive comments.



内田 勲

Isao Uchida
President and Chief
Executive Officer

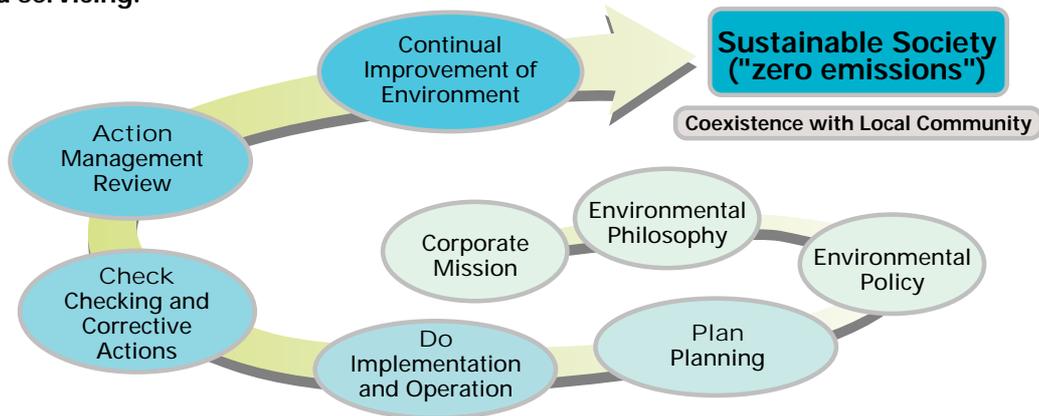


豊則有徳

Yuko Toyonori
Vice President, Environmental
Management

1 Management System

The environmental management system of the Yokogawa Group was configured and has operated in compliance with the requirements laid down in ISO14001. Based on corporate policy, the Yokogawa Group effected an Environmental Mission and Environmental Policy. Firmly adhering to these, each Group member has produced environmental management manuals and operation manuals, and formulated codes of conduct to make positive strides to protect the environment in order to achieve a sustainable society through its engineering, purchases, production, distribution, sales and servicing.



2 Environmental Philosophy and Policy



Yokogawa Electric Corporation recognizes the crucial importance of protecting the earth's environment for future generations, and acts appropriately in all its businesses by utilizing the skills of its employees and working closely with local communities.

The Company's ultimate goal is "zero emissions." Yokogawa has set up an environmental management system that meets the international standard ISO14001 across its global group companies, and continues to improve the system.

■ Environmental Policy

1) Promotion of Environmental Awareness

To promote awareness of global environmental protection, Yokogawa Electric Corporation provides training to ensure that all employees know and understand the Company's Environmental Management Rules and this Environmental Policy. Yokogawa Electric Corporation encourages employees to engage in environmental protection activities, such as at the local community level, in order to develop a sense of environmental awareness.

2) Continuous Improvement of Environmental Management System

While practicing the ISO14001 environmental management system, Yokogawa Electric Corporation continuously strives to improve the system and its environmental performance and thus help protect the earth's environment.

3) Practice of Environmental Protection Activities

Yokogawa Electric Corporation institutes a section at its headquarters to provide instructions and advice to each of its sites and Yokogawa group companies all over the world in order to develop environmental protection activities throughout the global Yokogawa network.

Each site and group company abides by this Environmental Policy of Yokogawa Electric Corporation; sets forth its

own environmental policy, objectives, and goals; and takes specific steps toward environmental protection. The state of implementation is reviewed periodically by internal and external environmental assessments so that the system may be continuously improved and environmental pollution prevented. The following aspects are considered when deciding such environmental policy, objectives, and goals:

- Adherence to legal controls and social agreements
- Development, manufacturing, sales, and services of environment-friendly products
- Activities to reduce the amount of waste and promote recycling, toward the target of "zero emissions"
- Reduction of consumption of resources and energy (to reduce greenhouse gas emissions)
- Harmonious coexistence with local societies

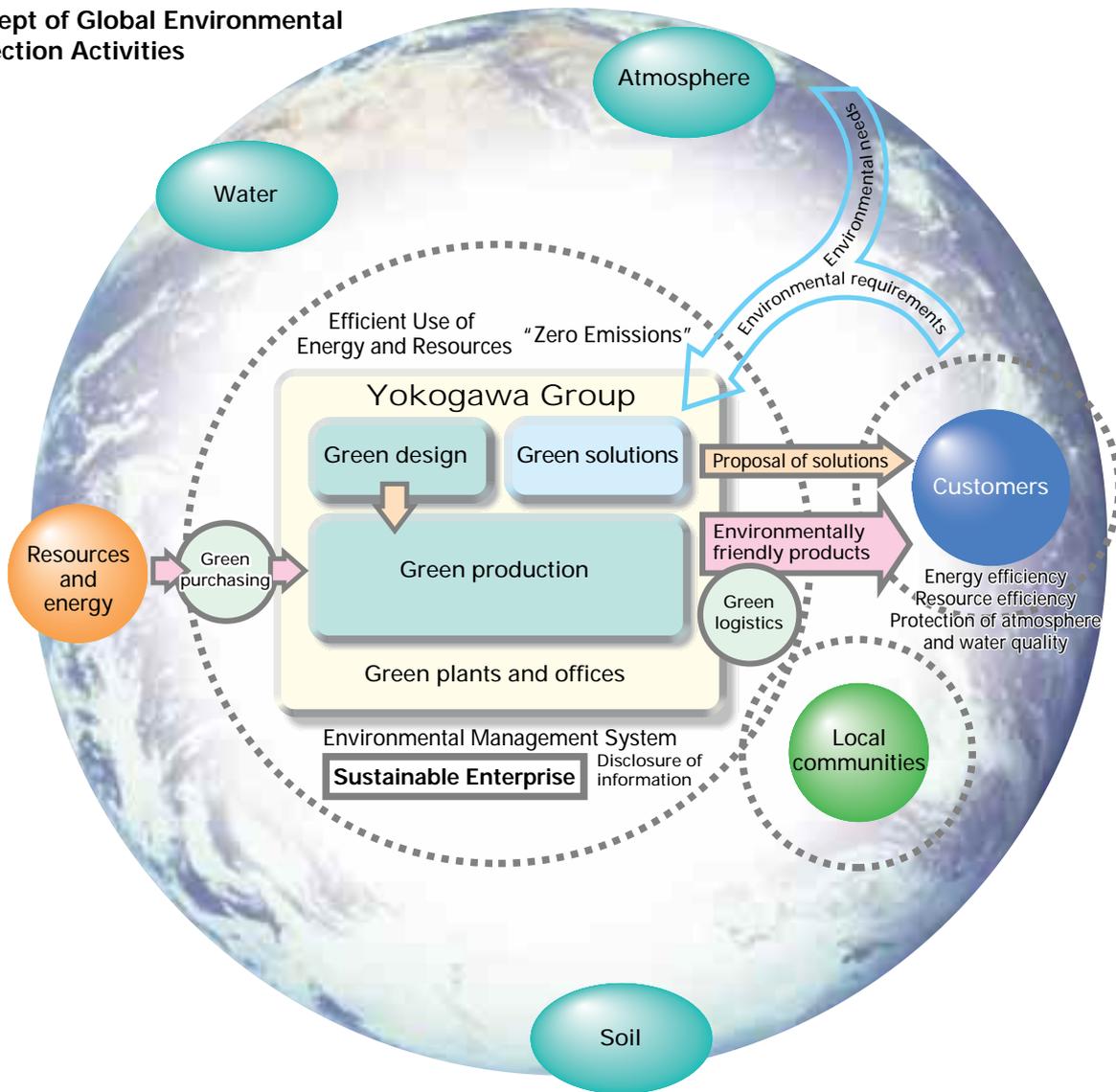
4) Environmental Protection as a Business Principle

In all of its activities, Yokogawa Electric Corporation endeavors to supply environment-friendly products and solutions and thus help protect the environment.

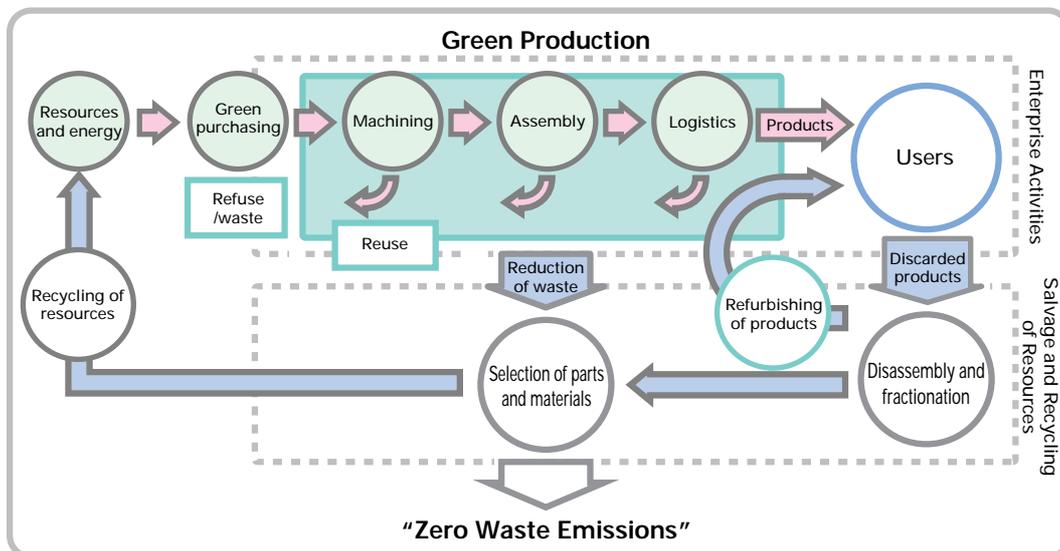
5) Disclosure of Information

This Environmental Policy of Yokogawa Electric Corporation is disclosed to the public.

■ Concept of Global Environmental Protection Activities



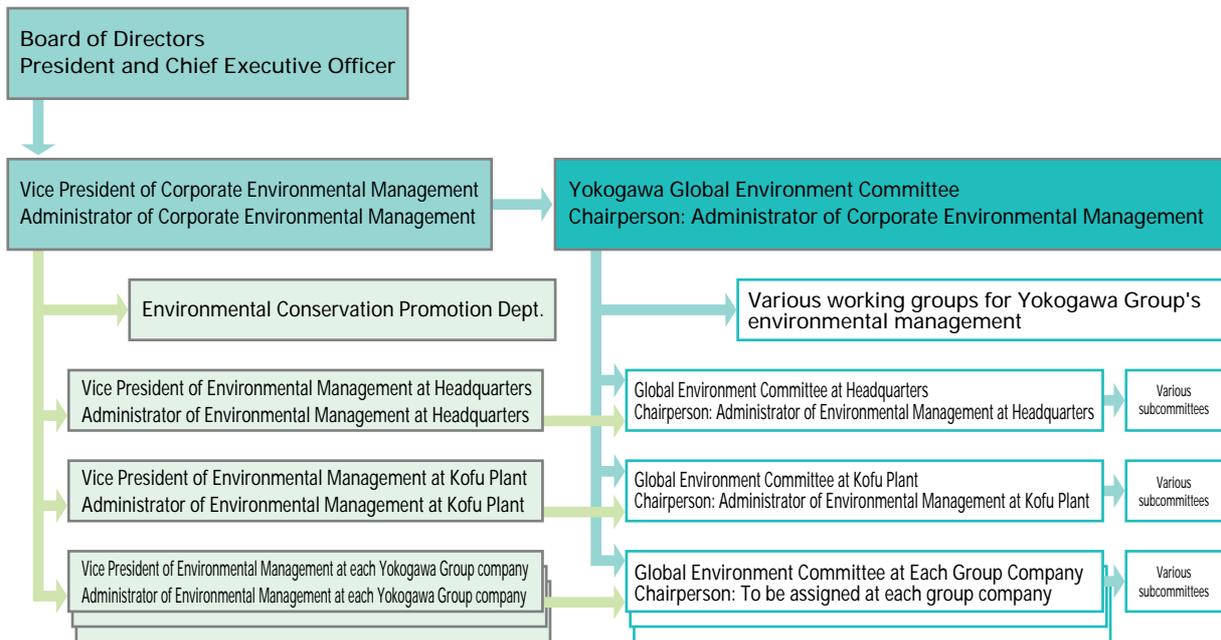
■ Resource Recycling System



3 Organization

In October 1995, we formed the Yokogawa Global Environment Committee. This committee sets the Company's policy on general environmental protection activities and then publicizes the policy; coordinates between sites; surveys affiliated working groups; and approves issues of major importance to be reported on to the Board of Directors. Based on corporate policy, individual sites and Group companies then draw up environmental protection plans and implement them. At Yokogawa Electric Corporation, no special department is assigned to environmental protection activities; rather, each employee is encouraged to help preserve the global environment through his or her work.

■ Environmental Management Organization



The vice president of environmental management has a direct channel to the president, oversees activities related to environmental protection for the president, and appoints someone to carry out administrative work who is responsible for corporate environmental management. The vice president of environmental management and the appointed administrator assess the effectiveness of the environmental management system for efficient implementation and are responsible for planning, adjusting, and administering the system from a Group global standpoint.

The vice president of environmental management at each site and the person responsible for environmental management at each site establish an organization at the site to improve the environmental performance of the site as well as to manage potential environmental risks to

prevent harm to in-company business resources or the outside environment. For these tasks, an environmental policy is drawn up based on the environmental policy of the Group while taking factors specific to each site into consideration, and the environmental protection activities are carried out.

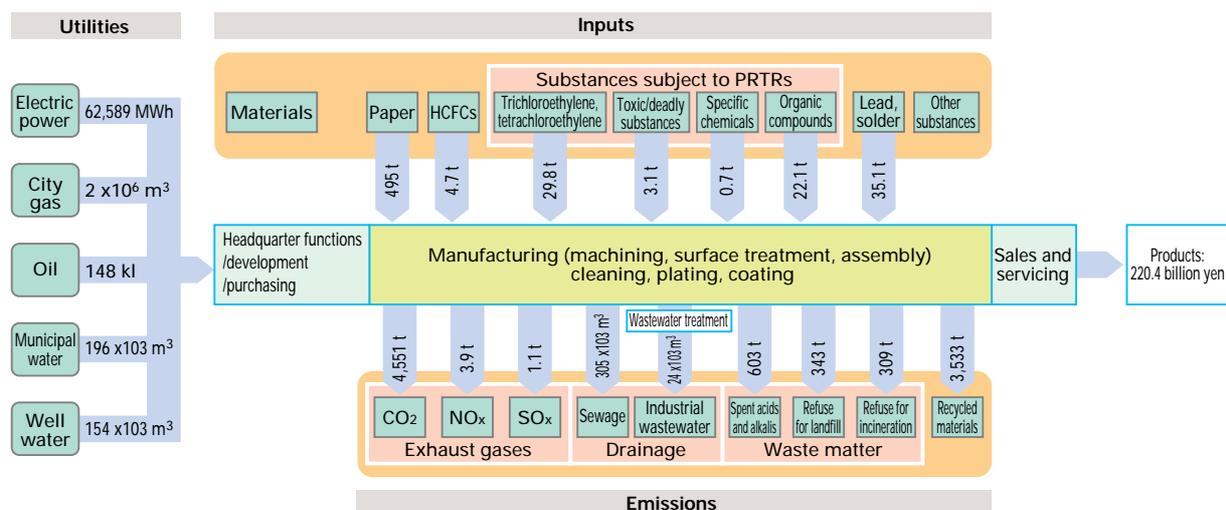
The Environmental Conservation Promotion Department at the Headquarters provides training for the in-house environmental auditors of each site and information on environment-related legislation and know-how, and boosts the environmental awareness of the sites, all in order to support the global environmental protection activities of the Yokogawa Group.

4 Targets

Each site, based on the environmental policy, grasps the situation and assesses the impact of its business activities on the environment, and sets appropriate medium- to long-term targets that can be achieved as well as targets that can be achieved within the current fiscal year.

To grasp the current situation of environmental impact, we incorporated the energy balance in a material balance chart and drew up an "eco-balance" diagram, shown on the next page, that illustrates the overall inputs and emissions. In the near future, we will break down this eco-balance to show "environmental effectiveness" in order to quantitatively assess improvements in the environment.

■ Eco-Balance (annual consumption and emissions)



For fiscal year 1999 covering the nine sites listed on page 1

■ Results for 1999 and Targets for 2000

Each site has assessed its environmental impact independently and set its targets to meet the conditions specific to the site. The table below summarizes the common targets for 2000, as well as the targets and results for 1999. (The years in this table are fiscal years. For the categories **Effective use of energy**, **Amount of waste**, and **Amount of paper used**, the targets and results from the nine sites have been converted to absolute values and then totaled.)

Category	Action	Target for 1999	Result for 1999	Target for 2000
Environmentally friendly product development	Enforce the Environmental Assessment Standard for Product Design to improve development and design of products.	In each section, enforce the improved development and design systems for at least one model.	Done for 11 models.	Identify developed products on which the Environmental Assessment Standard for Product Design and the lifecycle assessment should be enforced in order to improve development and design of products.
	Complete the policy for designing environmentally friendly products.	Make a database of life-cycle assessments.	Establish a life-cycle assessment standard.	Establish a design method that incorporates recycling.
Effective use of energy	Reduce carbon dioxide emissions in energy consumption.	Reduce by *7.4% from the level in 1991.	Reduced by *9.4% from 1991.	Reduce by *10.4% from the level in 1991.
Amount of waste (excluding recycled amounts)	Reduce the amount of waste.	Reduce by 50.2% from the level in 1995.	Reduced by 51.6% from 1995.	Reduce by 64.0% from the level in 1995. (At Headquarters, also achieve "zero refuse for landfill.")
Amount of paper used	Reduce the amount of paper used.	Reduce by 18.6% from the level in 1996.	Reduced by 27.1% from 1996.	Reduce by 30.0% from the level in 1996.
Recycling of paper (only at Headquarters)	Increase the percentage of recycled paper.	Increase to 85%.	Increased to 96.7%.	(Recycling has nearly reached 100% and, therefore, no new target has been set.)
Reduction in amount of toxic substances used	Reduce the amounts of trichloroethylene and tetrachloroethylene used.	Install warm water cleaning baths at nine manufacturing lines.	Done.	Phase out these substances during 2000 at both Headquarters and the Kofu plant.
	Reduce the amounts of HCFCs (substitutes for CFCs) used.	Implement a cleaning method using substitute materials at two manufacturing lines.	Implemented at three lines.	Monitor the amount of HCFCs to prevent an increase and implement reduction measures.
"Green" purchasing	Stimulate the "green" purchasing program.	Investigate and make a database of toxic substances contained in purchased parts.	Began making the database.	Maintain and improve the "green" purchasing program. Issue a "green" purchasing guideline.
		Provide instructions and advice for environmental protection to more suppliers and subcontractors.	Done for eight vendors.	

* Last year's report showed the target figures based on the equivalent carbon weight of the carbon dioxide emissions in energy consumption. However, as the Japanese electric industry association has changed the respective data in its publication to the equivalent carbon dioxide weight, the target and result figures have been changed accordingly to those figures based on the equivalent carbon dioxide weight.

5 Audits

Since obtaining ISO14001 certification (an international standard for environmental management systems), we have been carrying out internal ISO14001 audits of our environmental management systems and procedures in compliance with the ISO standards from 14010 to 14012. The findings of the internal audits are reported to the vice president of environmental management and reviewed periodically by management. Also, an external authorized accreditation body carries out an audit annually.

1) Result of Internal Environmental Audits

An internal environmental audit assesses, for each section, (1) implementation and improvement of the environmental management system; (2) whether the program for achieving the environmental objectives and targets based on the Environmental Policy is actually being carried out; and (3) control of legally regulated items. More than one internal audit a year has been held at each of the sites that have already obtained ISO14001 certification.

In fiscal year 1999 at Headquarters and the Kofu plant, the audit checklists were entirely revised for the purpose of raising the skill levels of the auditors. By requiring that, prior to an internal audit, each section must check itself and record the results in a self-evaluation column added to the checklist, the number of flaws pointed out decreased dramatically.

■ Number of Flaws Pointed Out at Internal Audits

Site	Number of Sections	Number of Flaws	
		Fiscal 1998	Fiscal 1999
Headquarters	38	157	69
Kofu plant	12	97	51



Checklists

2) Training Course for Internal Auditors

Since July 1996, a periodic in-house training course for internal auditors has been held four times every year. In fiscal year 1999, 115 employees were newly licensed as internal auditors, totaling 464 licensed employees by the end of the fiscal year. These in-house courses are taught by instructors who are certified by the Japanese Auditors Board (JAB) as official environmental management system auditors.

3) External Environmental Audits

In addition to the internal audits, even after ISO14001 certification, an authorized organization for ISO14001 accreditation (a third-party inspection body) conducts an annual survey, and every three years assesses whether the certification should be renewed. Thus, strict maintenance and control as well as continuous improvement of the environmental management system are required. The sites that have already undergone this review were highly commended. The comments included:

- The activities that are being implemented match the level of impact on the environment and meet the real-life situations.
- The sales activities are assessed in respect to the environment and the targets for a "green" environmental materials solution are set in such a manner as to achieve a true linking between sales and the environment.
- All areas of the environmental objectives and targets are tackled unmistakably, and all departments are able to achieve them from the participation of all employees.
- The life-cycle assessment database and the Environmental Assessment Standard for Product Design have begun being used effectively.
- The self-evaluation column in the internal audit checklist is used effectively, and training to raise the skill levels of internal auditors has been carried out.



Conducting a periodic survey.

4) Inclusive Certification

Yokogawa Fine Technology Corporation was established in October 1998 by merging Yokogawa MEC Corporation and Yokogawa Mechatronics Corporation with the Komine plant that had already obtained ISO14001 accreditation in February of that same year. A periodic survey in February 2000 was carried out in order to extend certification to cover the four plants of the company (Komine plant number 1, Komine plant number 2, Hachioji plant, and Yamanashi plant), and the company successfully obtained an inclusive certification of the four plants.

6 Communication

We value the views of others about our environmental protection activities.

1) Communication Outside the Yokogawa Group

We have two ways to communicate our environmental protection activities outside the Yokogawa Group: the printed Environmental Report (in Japanese only) and the Internet homepage for Yokogawa Environmental Protection Activities (in both English and Japanese). The web site provides the basics of our environmental protection activities, current topics, and back issues of the Environmental Report (as PDF files) up to last year.



YOKOGAWA Environmental Report on the Internet at:
http://www.yokogawa.co.jp/Environment/index_e.htm

2) Communication Within the Yokogawa Group

From April 1997, when we started activities aiming to obtain ISO14001 certification, until May 1999, the newsletter "Green Times" was issued periodically and distributed to all employees to boost their environmental awareness. Along with the movement towards paperless offices, the publication and announcements within the Yokogawa Group were moved to our intranet.

3) Responses to Survey Results, Requests, and Complaints

The Environmental Conservation Promotion Dept. promptly responds to requests, suggestions, and survey results on the environment, and centrally manages records. The department responsible for general affairs responds to claims and complaints from local communities, and carries out measures in cooperation with the respective departments. In fiscal year 1999, eight unusual complaints were sent to Headquarters about the vibration and noise caused during the demolition of the old factory buildings after the completion of the new headquarters building. Each of these was promptly answered and resolved.

7 Training

To minimize the environmental impact of corporate activities as a whole, each employee must consider the environment in his or her work. To this end, we continuously provide systematic environmental training.

Our environmental training is divided into two kinds of programs: training conducted by the Environmental Conservation Promotion Dept. and training conducted by a department or section for a specified purpose.

■ Training Conducted by Environmental Conservation Promotion Dept.

Program	Appropriate Personnel	Coverage of Training
Fundamentals of Environmental Protection	All	Fundamentals of global environmental issues including effective use of energy and resources.
Environmental Protection for Managers	Managers	Trends in environmental issues and legal regulations, and measures by Yokogawa.
Specialized environmental training	Personnel involved	Focuses on such topics as life-cycle assessment in design.
Training for In-house Auditors	Applicants for auditor positions	Overview of environmental issues, environmental management system, legal regulations; auditing exercises.
Environmental Management	Personnel responsible for environmental management within section	Administrative work for environmental protection activities within section.

■ Training Conducted by Departments or Sections

Program	Appropriate Personnel	Coverage of Training
Environmental Management of Department	All personnel in department	Environmental targets of a department and activities of the department.
Specific training	All personnel assigned to particular work	Specific training according to documented procedures for particular work that could potentially have a major environmental impact.

In addition to these various training programs, we held a Technology Fair (promoted by the Engineering and Development Div. and gave presentations on our quality control activities (called "LETS" at Yokogawa) in the area of environmental protection (promoted by the Corporate Quality Assurance Dept.). At the Technology Fair, a wide range of environmental technologies, from an overview of

environmental business to various cutting-edge measurement technologies, such as measurement of volatile organic compounds, were introduced. The theme that won the "Best Presented Theme" award at the LETS presentations in the area of environmental protection was "Development of a Power Monitoring System and Achievement of Energy Efficiency."

In June, which is designated annually as "Environmental Protection Month," various events, including an awards ceremony and addresses by speakers invited from other companies leading in environmental protection, were held to help raise employee awareness.

In addition, we also support the expansion of environmental awareness in other situations by encouraging all employees to help protect the environment at home through the effective use of energy and resources, separation of refuse for recycling, and voluntary participation in environmental activities.



Addressing employees on activities of other company.