

Striving for Harmony with the Earth

SII Group Green Plan



2002 Environmental Report

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Company Profile

Company Name:	Seiko Instruments Inc.
Established:	September 7, 1937
Capitalization:	1 billion yen
Fiscal Year-End:	March 31
Products:	Wearable
	Watches, PHS communication PC cards,
	electronic dictionaries, etc.
	Industrial Systems
	Measuring & analytical devices, LSI
	design systems, compressors, etc.
	Network Components
	LCD modules, CMOS ICs, micro-
	batteries, quartz crystal resonators,
	optical fiber connectors, etc.
	e-Solutions
	Store automation systems, time
	distribution/time authentication services,
	wireless credit/debit card authorization
	systems, mobile-phone content services,
	etc.
	Related Businesses
	High-tech motor components, thermal
	printers, color printers, network products
2001 Sales:	158.3 billion yen (non-consolidated);
	220.3 billion yen (consolidated).
Employees:	4,600 (non-consolidated);
	9,900 (consolidated)
Non-Consolidated	Sales for Last Five Years:
(in hundred millio	ns of yen)



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About This Report

The SII Group publishes this Environmental Report once each year, for the purpose of publicizing our environmentoriented activities and results. In producing this year's report, we have referred to Japan's Ministry of the Environment's *Environmental Report Guidelines (FY2000 Edition)* and other relevant guidelines.

This year's report is intended to provide a wide range of information about our environmental activities. It includes important information about our efforts to provide "ecofriendly" products, and it provides environmental data from each of our facilities. We consider this report to be a vital component of our effort to communicate with the general public, and we would very much like to get feedback that we can incorporate it into our future environmental activities. We invite your opinions, suggestions, and questions, and we encourage you to fill out and return the survey form at the back of this report.

Scope of this Report

This report focuses on efforts and achievements at the SII Group's twelve major facilities within Japan.

The report is based on results during fiscal 2001 (April, 2001 to March, 2002), but also includes information about subsequent activities and about our outlook for the future.

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MESSAGE



Junichi Hattori Chairman and CEO

Akio Irie President and COO

The SII Group has long recognized the importance of taking action to counter global warming and to reduce our environmental footprint. As early as April 1993 we established our "three-greens" plan, calling for green process, green products, and green life. Environmental issues remain a major management concern as we continue to promote environmental protection activities throughout the Group.

We are pleased to report that in November 2000 our Ohno unit in Chiba became our first unit to attain Zero Emissions, encouraging us toward our goal of achieving Zero Emissions at all of our units by fiscal 2003. And in October 2001 our Makuhari head office was awarded ISO 14001 certification, as we continue to strengthen our environmental protection activities at all levels-within our sales departments, development departments, design departments, and service departments.

With more than 60 years of experience as a leading producer of timepieces, we have a strong technological background in the manufacture of compact, high-precision goods. And we continue to use and improve this expertise to produce a wide range of energy-efficient, long-lasting, resource-saving products: ICs, liquid crystal displays, power cells, and many others.

We are now also moving ahead with our "SII Green Products" label, which we will attach to products that clear our "green product" evaluation criteria. The label should be of great help to customers who want to be sure that they are making eco-friendly purchases.

We shall continue to devote ourselves to developing our micromechanical technologies, low-power-consumption technologies, and nanotechnologies so that we can provide better eco-friendly products.

As a leading eco-aware company, we shall continue to play our part in the worldwide effort to counteract global warming and to realize true sustainability.

We began publishing these annual Environmental Reports in 1996, with the aim of publicizing our Group's efforts and achievements in the area of environmental protection and conservation. We welcome your opinions and suggestions, and we look forward to incorporating new ideas as we continue to enhance our environmental activities and initiatives.

September 2002

Junichi Hattori

Chairman and CEO

Akio Irie President and COO

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ENVIRONMENTAL POLICY OF THE SII GROUP

ENVIRONMENTAL CONCEPT

SII is concerned about every facet of the global environment and is aiming toward a world where all living things can exist in harmony together. SII works for the protection of the environment and its continual improvement in every corporate activity.

ENVIRONMENTAL ACTIVITIES GUIDANCE

- 1. Adjust the company structure and prepare relevant documents to implement improved management of the environment.
- 2. Observe legal regulations and agreements relevant to the environment, and work to prevent all environmental pollution.
- 3. Work for the continual reduction of the impact on the environment though the following.
 - (1) Provide environmentally friendly products and services.
 - (2) Save energy and contribute to the end of global warming.
 - (3) Conserve global resources through recycling and reducing waste with the eventual goal of Zero Emissions.
 - (4) Encourage employees to protect the environment in their personal life as well as their professional one.
- 4. Improve management and disposal of chemical materials and reduce the use of these materials.
- 5. Perform internal environmental audits to improve employee self-management.
- 6. Contribute to society through environmental activities.
- 7. Increase employee awareness of the corporate environmental policy. Also, establish an environmental policy at each and every plant.
- 8. Disclose any and all information about the state of our environmental management to outside parties, if necessary.

CONCEPTUAL GREEN PLAN SCHEME



INDUSTRIAL PROCESSES AND THEIR ENVIRONMENTAL IMPACT

The SII Group's industrial processes impact on the environment as shown below.

SII

ENVIRONMENTAL IMPACT: INPUTS AND OUTPUTS

				(STER						
Electricity	155 r	nillion kWh		Watches		CO ₂		78,394 tons		
-	Municipal	3,213,000 m ³					(21,380 tons-C)			
Gas	LP	205,000 m ³		Electronic dictionaries			9.5 tons			
	Kerosene	3,468 kl	<mark>68 kl</mark>	INPUT Data communication OUTPUT	Drainage	620,000 m ³				
Fuel	Heavy oil	532 kl				л	General			
			INPUT		OUTPUT		(non-industrial) waste	857 ton		
Water		940,000 m ³		cards		caros	L/		Recycling rate (including salable materials)	58% (501
Office Paper	93 tons			ICs		Other waste	Industrial waste	2,780 to		
Packaging		436 tons					Recycling rate (including salable materials)	79% (2,197		
Chemicals	79 tons						[Dumped waste (I	andfill) 7% (24		
				Analytical devices						

INPUTS

Electricity	Power purchased from electric company
Gas	Municipal and LPG
Fuel	Kerosene and heavy oil
Water	Tap water, industrial water, groundwater
Office Paper	Copy-machine paper, printer paper
Packaging	Recyclable paper (as set forth by packaging
	recycling statutes), plastics
Chemicals	PRTR chemicals, HFCs, PFCs, SF₀
	(PRTR: Pollutant Release and Transfer Register)

OUTPUTS

CO ₂	Generated by use of electricity, gas, oil, etc.
NOx	Generated by use of gas, oil, etc.
Drainage	Deposited into rivers and sewerage system
General waste	Paper waste and household-type waste
	generated by or attendant to industrial operations
Industrial waste	Waste oil, waste acids, waste alkalis, waste
	plastics, ash, sludge, and other such materials
	generated by industrial operations

ENVIRONMENTAL MANAGEMENT

The SII Group carries out environmental management at the Group level and within each of our business units. We follow a "Planning–Implementation–Checking–Review" cycle to ensure effective strategies to continuously reduce our environmental footprint.

ENVIRONMENTAL MANAGEMENT SYSTEM

Group-wide environment targets are established each year in accordance with the Group's environmental policy. Each of our business units implements actions based on these targets, and periodically reports results back to the head office. The head office oversees the group's overall environmental management system.

Checking and Creective Action

SYSTEM ORGANIZATION

Our environmental management system operates both at the Group level and within each of our business units. Ultimate responsibility rests with our Environmental Management Director, who reports to the President of Seiko Instruments Inc.

The SII Environmental Promotion Committee implements top-level decision-making. General environmental issues—such as energy conservation—are promoted by Group-level subcommittees under the coordination of the head office's Environmental Administration Department.

• SII Environmental Promotion Committee

Considers and approves the Group's environmental activity targets and plans. Exchanges information with business units, and receives environmental-activity status reports from them.

• SII Special Subcommittees

Each subcommittee proposes Group targets and actions related to reduction of environmental impact in a specific area, and carries out appropriate information exchange and communication.

ISO 14001 CERTIFICATION

As of March 1999, all of our major manufacturing units within Japan are ISO 14001 certified.

Our business units in Singapore, Dalian (China), and Thailand have also gained certification.

In October 2001 our Makuhari head office became the Group's first non-manufacturing unit to receive certification. At that time we implemented a new point-scoring system aimed at assessing and evaluating environmental impact from a variety of angles, with the goal of identifying not only direct impact-reducing activities but also indirect approaches that may lead to continuous improvements.



ISO 14001 Certification List

Certified Units and Subsidiaries	Location	Date of Certification
Takatsuka Unit	Matsudo City, Chiba	11/96
Narashino Unit	Narashino City, Chiba	1/97
Miyakubo Unit	Ichikawa City, Chiba	3/97
SII Microtechno Inc.	Omagari City, Akita	4/97
Morioka Seiko Instruments Inc.	Iwate County, Iwate	4/97
Seiko Instruments Singapore Pte. Ltd.	Singapore	5/97
SII Quartz Techno Ltd.	Tochigi City, Tochigi	2/98
Waga Precision Co., Ltd.	Kitakami City, Iwate	6/98
Oyama Unit	Sunto County, Shizuoka	8/98
Akita Seimitsu Denshi Kogyo Co., Ltd.	Omagari City, Akita	1/99
SII Micro Parts Ltd.	Sendai City, Miyagi	2/99
Ohno Unit	Ichikawa City, Chiba	3/99
Nastec Precision Co., Ltd.	Nasu County, Tochigi	3/99
Dalian Seiko Instruments Inc.	Dalian, China	6/01
Sukagawa Precision Co., Ltd.	Sukagawa City, Fukushima	9/01
Makuhari Head office	Chiba City, Chiba	10/01
Seiko Instruments (Thailand) Ltd.	Thailand	3/02

ENVIRONMENTAL EDUCATION

Success of our environmental activities rests on the meaningful and informed participation of all of our employees. The SII Group provides various types of education designed to provide employees with the awareness, knowledge, and skills necessary to support these activities and produce continuous improvements.

ENVIRONMENTAL EDUCATION

SII headquarters holds various education courses, and business units are also active in planning and implementing education at their sites. In FY2001 SII headquarters held courses for 289 employees, bringing the total number of employees who have passed through these courses to 1,202.

Following each course we distribute a questionnaire to participants, and we use this feedback to continuously improve the quality of the education that we offer.

• Education Held at SII Headquarters

General Education

Theme	Participants	Content			
Global environmental issues, and the SII Group's measures for addressing them.	New employees	SII Group's environment-related actions and policies			
Environment overview, and ISO 14001	Mid-level staff	Environmental concepts and management techniques			
Improving systems and performance	Managers	Global environmental trends, and policies and plans for improving performance			

Special Education

Theme	Participants	Content			
Chemical handling and waste management	Employees who handle chemicals and wastes Operators of environment-related	Overview of chemical concepts; management of chemicals; prevention of water and air pollution; understanding of issues related to wastes and waste materials			
Energy saving	 equipment Manufacturing and production engineers 	Energy-saving manufacturing techniques, and trends at other companies			
Product design assessment	Product development personnel	Methods for reducing environmental impact of products; case study of eco-friendly products from other companies			
Handling of hazardous materials and high-pressure gases	Employees and technicians who handle these items	Safe storage, monitoring, and management			

Auditor Education

Theme	Participants	Content
Training to become an	Auditor candidates	Skills and knowledge required to
internal environmental	from each of our	conduct internal audits in accordance
auditor	business units	with ISO 14001

CONSCIOUSNESS-RAISING

The "Eco-Town" bulletin board on the SII intranet offers a wide variety of useful information about environmental issues and activities. Employees can visit this site to learn about environmental terminology, to view information about current laws and statutes, and to access a wide range of other information.

Ongoing articles in our newsletter, and environment-related posters and signboards placed throughout our business unit, also serve to remind employees about the importance of environmental issues.

We also post detailed explanatory signs near environment-related equipment at our production sites. These signs explain what this equipment does, how it works, and how it is configured.





Environment Education Class





(on the SII Intranet)



Poster with Information about Environment-Related Equipment

FY2001 RESULTS, AND ACTION PLANS FOR FY2002 AND BEYOND

FY2001 RESULTS

In FY2001 we started a new phase in our environmental management, as we expanded our view and undertook several new initiatives after reaching the conclusion of our previous phase in FY2000. These new initiatives include activities to reduce total waste generation, and the introduction of an "SII Green Products" labeling system (ISO 14021 Type II environmental labeling).

	Score — O:Achieved $ riangle$:In Progress $ imes$:Not Achieve				
Action Item	Medium-Term Target	FY2001 Target	FY2001 Actual	Score	See page
Energy Conservation	By end of FY2010, reduce CO₂ emissions by 3% from FY1990 level. ● 76,706 tons-CO₂ (20,920 tons-C) → 74,405 tons-CO₂ (20,292 tons-C)	83,981 tons-CO₂ (22,904 tons-C) FY2000 −1%	78,394 tons-CO₂ (21,380 tons-C) FY2000 – 7.6%	0	11
Wests Deduction	By end of FY2010, reduce total waste generation by 50% from FY2000 level. ● 4,322 tons → 2,161 tons	4,322 → 4,192 tons FY2000 – 3%	3,637 tons FY2000 –16%	0	14
Waste Reduction	Reduce dumped waste (landfill) to zero by end of FY2003. (Achieve Group-wide Zero Emissions within Japan.)	427 → 414 tons FY2000 – 3%	247 tons FY2000 – 42%	0	
Effective Use of Paper Resources	By end of FY2005, reduce office paper use by 42% from FY1993 level. ● 153 tons → 89 tons	97 tons FY2000 –1%	93 tons FY2000 – 5%	0	12
Eco-Friendly Products	Introduce "SII Green Products" Labeling		Labeling system introduced.	0	15,16

ENVIRONMENT-PROTECTION ACTION PLANS FOR FY2002 AND BEYOND

To aggressively respond to societal concern about environmental issues, we have established a number of new goals and indicators for FY2002 and beyond.

• Environmental Performance Indicators

Action Item	Medium-Term Target	Base Fiscal Year	Target Fiscal Year	FY2002 Target	
Action item	Mediain ferni farget	(Base Value)	(Target Value)	1 12002 larget	
	Reduce CO ₂ emission by 3%.	1990	2010	FY2001 –1%	
Action Against		76,706 tons-CO2	74,405 tons-CO2	112001 170	
Global Warming	Reduce greenhouse gas emissions (HFCs, PFCs, SF ₀) by 20%.	2001	2010	FY2001 – 3%	
		9,937 tons-CO2	7,950 tons-CO2	112001 070	
	Reduce total waste generation by 50%.	2000	2010	FY2001 - 3%	
Reduce Waste and		4,322 tons	2,161 tons	F12001-3%	
Promote Recycling	Achieve Group-wide Zero Emissions within Japan.	_	2003	_	
	Reduce emissions of reportable (PRTR)	2001	2010	FY2001 – 3%	
Reduction/Control	chemical materials by 20%.	20 tons	16 tons		
of Chemical Materials	Eliminate lead solder	_	2003	_	
Effective Use of	Darland office memory has 400/	1993	2005	EX(0001 40)	
Resources	Reduce office paper use by 42%.	153 tons	89 tons	FY2001 –1%	
Production of Eco-Friendly	Increase SII green products sales share to at least 50%.	_	2004	10%	
Products	Raise LCA* implementation rate to at least 70%.	—	2004	_	
Green Purchasing	Achieve 100% green purchasing of production inputs.	_	2002	100%	

• Environmental Management Indicators

Action Item	Medium-Term Target	
Environmental Management System	Achieve ISO 14001 certification of Japan business units by end of FY2002.	
Organization	Establish Environmental Promotion System that covers overseas as well as Japan business units, by end of FY2003.	
Environmental Training Establish and implement training curriculum for business managers, by end of FY2003.		
Environment-Related Communication	Issue increasingly comprehensive annual environmental reports.	

*LCA (Life Cycle Assessment): Comprehensive evaluation of environmental impact though all stages in the life of a product, from procurement of inputs, through production, distribution, use, and disposal.

ENVIRONMENTAL ACCOUNTING

The SII Group began carrying out "environmental accounting" in FY1999. Environmental accounting provides a guantitative assessment and evaluation of the results, costs, and savings attributable to our environmental protection activities.

ENVIRONMENTAL ACCOUNTING RESULTS

As with previous years, we have calculated FY2001 results based on guidelines provided by Japan's Ministry of the Environment.

Environmental-protection investment in FY2001 was down about 90% from FY2000, to 109.4 million yen. The change was the result of a decline from particularly high capital investment in FY2000 owing to significant plant expansion undertaken during that period. Expenses rose about 193 million yen, to 1.631 billion, with the increase attributable to depreciation of FY2000's capital investment.

FY2001 is the first year for which we are including "materials purchasing reduction" as one of our accounting categories. This item refers to reduction in purchase of input materials owing to recycling and reuse of wastes.

Calculations indicate that total savings attributable to environmental protection activities in FY2001 was 743 million yen, of which 385 million was actual savings and 357 million was attributable to avoidance of environmental risk.

Costs of Environmental Protection

For SII Headquarters and all 11 manufacturing units, 4/1/2001 to 3/31/2002 (in millions of yen **Costs of Environmental Protection** Category Content Investment¹ Expense² (1) Internal Costs (within each operational area) 1 Anti-Pollution Water, atmosphere, noise, vibration 28.6 577.5 ② Global Protection Measures related to global warming, ozone-layer depletion, etc. Breakdown 40.0 238.5 05.0

Tota	ls		109.4	1,630.9
(6) Reclamation Cos	ts	Reclamation of contaminated soil, etc.	0.0	0.0
(5) Social Activities Costs		Support for environmental protection groups, localities, etc.	0.0	10.5
(4) Research & Development Costs		Lead-free soldering technology, etc.	5.5	74.9
(3) Administrative Ac	tivities Costs	Environment training, information releases, running of Environment Management System, etc.	0.0	284.8
(2) Upstream and Downstream Costs		Development of eco-friendly products, recycling of products and packaging, etc.	0.0	45.4
(3) Reso	burce Efficiency	Resource saving, reduction and recycling of waste, procurement management, etc.	35.3	399.3

1. Investment amounts are for FY2001only. In cases where we judge that total outlay covers purposes in addition to environmental protection, we have counted only the portion deemed to apply to environmental protection. 2. Expenses include depreciated over 5 and 10 years, respectively, in equal yearly increments,

In cases where we judge that total outlay covers purposes in addition to environmental protection, we have counted only the portion deemed to apply to environmental protection.

Environmental Protection Results, and Savings From Environmental Protection Activities

 Environmenta 	Protection Results, and Sav	vings From Environmental Pr	otection Activ	vities	(in millions of yen)	
Environm	ental Protection Results	Economies Achi	Total: 742.5			
Environmental Impact	Quantity of Reduction (FY2000-FY2001)	Actual Savings	(subtotal)385.1	Estimated Savings from Risk Reduction	(subtotal)357.4	
CO2	6,437 tons-CO₂	Expense reduction attributable to energy conservation	213.2			
Water	291,000 m₃	Expense reduction attributable to	31.7	Avoidance of stoppage due to air or water pollution, etc.	270.0	
Paper Resources	5 tons	resource conservation (water, paper)				
Industrial Waste	453 tons	Reduction of waste processing expense	27.4			
General Waste	51 tons	Income from sale of salable materials	35.3	Avoidance of penalties for illegal dumping, etc.	87.4	
Materials Purchasing Reduction	139 tons	Savings from reduction in purchasing of inputs	77.5	inga damping, etc.		

ENVIRONMENT-RELATED TECHNOLOGIES

We are actively directing our technological expertise to the task of addressing environmental issues and needs.

DEVELOPMENT OF A MINIATURE PRODUCTION SYSTEM

The SII Group has developed a test version of a miniature machining system suitable for production of small components such as used in watches and communications applications. This work was part of an R&D effort commissioned by NEDO.* The system consists of a grinding cell, washing cell, inspection cell (to check size and cylindricity), and loading and unloading unit. The grinding, washing, and inspection cells were each kept smaller than 200 mm in all dimensions, thereby achieving significant space and energy savings. Specifically, the system consumes only 1/5 the energy and 1/30 the space of a conventional compact grinder. The system's dimensions are: 1000 (W) \times 600 (D) \times 450 (H) mm. Miniaturization poses numerous problems, such as poor static rigidity and reduced processing capability. By incorporating new mechanisms and forming controls, however, we were able to counter these difficulties, and our new system is able to achieve machining accuracy and productivity that matches what is available from conventional setups. We are approaching the day when we will be able to use energy-saving, space-saving, environment-friendly systems such as this to manufacture real products.

LEAD-FREE SOLDER

We started our "Lead-Free Solder Promotion Project" in July 1999. We give high priority to utilizing lead-free electrical terminals within our electronics product, and we are committed to developing new technology to allow lead-free solder to be used for mounting of electronic components onto PC boards. In FY2000 we issued guidelines and other internal standards for use of lead-free solder, and thereafter we completed development of mounting technology suitable for mass production. Starting in August 2001 we began mass production of display units, semiconductors, and other such electronic components using lead-free solder. We have also set up a "Lead-Free" bulletin board on our company's intranet, where employees can share the latest information about our lead-free initiatives



Lead-Free Solder Mount

Lead-Free Semiconductor Terminals

ANALYTICAL TECHNOLOGY

Analytical technology plays an important role in addressing environmental issues. We use such technologies to analyze the components in soil and waste (waste water, incinerator ash, etc). These technologies are also used widely in the food industry, the electrical and electronics industry, and in many other environmently critical applications.

*New Energy and Industrial Technology Development Organization

Miniature Grinding System



Our X-ray fluorescence analyzer makes it possible to economically measure the cadmium content within products. Measurement is rapid and non-destructive.

The analyzer is also useful in measuring thin films formed on leadfree solder plating on PC boards.

We are confident that this analyzer will continue to find new applications in a wide variety of fields.

At SII we have set up a system to provide analytic services on consignment. We also provide seminars as well as other services.



SEA5100 X-ray Fluorescence Analyzer

GREEN PURCHASING

If we wish to produce environment-friendly products, we must pay close attention to the eco-friendliness of the materials and components that we use as our inputs. From input materials to office supplies, the SII Group is fully committed to green purchasing.

GREEN PURCHASING OF PRODUCTION INPUTS

The SII Group is committed to using eco-friendly materials in the products that we manufacture. We published our SII Group Green Purchasing Standards in October 1999, and our purchasing departments actively pursue the concept of "green purchasing." Our standards cover not only the materials themselves but also the environment-management systems in place at our suppliers' facilities. Consequently, we ask potential suppliers to cooperate as we investigate their systems and materials and create a master list of items that qualify as green purchases. In FY2001, 74% of our input purchases were "green." We are aiming at 100% by the end of FY2002.

SII's Definition of "Green Items"

An input material or component qualifies as a "green input" if it meets all of the following criteria.

- It contains no banned substances or materials.
- Its manufacture does not involve use of banned substances or materials.
- The supplier's environmental-protection systems have been found to meet SII's green purchasing standards.

GREEN PURCHASING OF OFFICE AND MRO SUPPLIES

The SII Group uses the *Benrinet* online procurement service to purchase office supplies and MRO (maintenance, repair, and

operations) supplies. An Internet-based procurement system run

products and clearly displays Ecormark labels, Green Mark labels,

and other established indicators of eco-kindness. The site makes it

easy to carry out green purchasing, and to learn more about eco-

by Net Kokuyo Ltd., Benrinet gives priority listing to eco-friendly



Green Purchasing Rate for Office and MRO Supplies





BUYER EDUCATION

friendly products.

We provide "green purchasing" training to our buyers as a matter of course. In FY2001, we extended the scope of this education beyond our purchasing departments so as to raise general awareness about this important issue. "Green purchasing" education is now provided also to our Research and Development and production departments, and to various managers throughout the group.

INITIATIVES RELATED TO GLOBAL WARMING

The SII Group recognizes that global warming is currently the most important environmental issue that we face. We address this issue by following a broad energy-reduction approach that covers our worksites, our machinery, and our daily living. We are committed to reducing the energy content of products, and to carrying out various Group-wide activities to fight global warming.

ENERGY-SAVING ACTIVITIES

FY2000 marked the end of the previous phase of our energysaving initiatives. In FY2001 we entered a new phase in this effort, and we established new medium-term targets. Thanks to more careful control of air-conditioning use, and also partly as a result our production output, CO2 emissions in FY2001 were down 7.6% from the previous year, a drop of 6,438 tons-CO₂ (1,756 tons-C).

REDUCTION OF GREENHOUSE EMISSIONS

In June 2002 we issued an "SII Greenhouse-Gas Reduction Scenario," an initiative that aims at bringing the entire Group into the battle against global warming in line with the terms set forth in the Kyoto Protocol. The scenario calls for reduction of CO2 emissions so as to bring the level at the end of FY2010 to 3% below the level recorded in FY1990. Separately established targets call for HFC, PFC, and SF6 emissions to drop to a full 20% below their FY2001 levels by the end of FY2010.

To achieve these goals, we continue actively working to improve our operations and processes.

ENERGY-SAVING EQUIPMENT

We always consider environmental impact when upgrading existing equipment and installing new equipment. When installing a new freezer, for example, we consider factors such as the machine's energy efficiency, its impact with respect to ozone depletion and global warming, its heat discharge method, and the method used by the makeup unit to humidify incoming air. Introduction of a high-efficiency freezing machine at our Takatsuka unit (Chiba) led to energy savings that have reduced CO2 emissions by 620 tons to date. Installation of inverter controls on air-conditioning cold-water pumps has also helped to improve our energy efficiency.

DAY-TO-DAY ENERGY SAVINGS

Common awareness is an essential component of meaningful energy savings. At SII, all employees participate in simple energysaving practices: switching off idle office machines, turning off unnecessary lights in their work areas, and so on. We also run periodic "energy patrols" to assess how well we are doing on this front. Our so-called "Idling Stop" campaign-aimed at reminding people to reduce car idling-started in FY1997 and continues to this day.







Freezing machine



ECO-AWARE DISTRIBUTION, AND EFFICIENT USE OF RESOURCES

The SII Group is aggressively working to reduce air pollutants and CO₂ emissions generated by our shipping and distribution operations. We are also working to reduce our usage of disposable packing materials, and to utilize resources more efficiently.

ECO-FRIENDLY DISTRIBUTION

SII Logistics Inc. handles the Group's inventory management, packaging, and shipping operations. Rather than using separate transport runs for individual departments, SII Logistics has been working to set up more efficient transports that jointly meet the needs of multiple departments.

Specifically, Logistics is engaged in an ongoing joint project with SII business units aimed at building an optimal Group-wide transport network. It is closely monitoring and revising loads, routes, and schedules so as to improve efficiency and to reduce and rationalize inventories throughout the Group. As a result of these efforts, CO₂ emissions from transport operations in FY2001 were down 9.7% (a drop of 5.8 tons-CO₂) relative to the preceding year. We continue to expand our usage of reusable container-type boxes in place of conventional, disposable cardboard boxes.

We are also aware that whenever we move one of our business units we generate a large quantity of surplus office fixtures and furniture. Rather than throwing these goods away, we use a bulletin board on our intranet to auction them off within the company—thereby encouraging their reuse and discouraging unnecessary purchases.

EFFICIENT USE OF OFFICE PAPER

Efficient use of office paper has been a major environmental issue for us since 1993. We reduce paper consumption by promoting duplex copying, by encouraging employees to use blank sides of used sheets, and by migrating to electronic documentation and document distribution. In FY2001 we consumed 93 tons of office paper, down 5 tons (5%) from the preceding year and down 60 tons (about 40%) compared to 1993, when paper-saving activities first began.

EFFICIENT USE OF WATER

Manufacturing processes consume large quantities of water. To reduce our water consumption, we recover waste water from these processes and filter it for reuse. In FY2001, the reverse-osmosis filtering system in place at our Miyakubo unit (Chiba) recovered and purified 9,500 m³ of water, all of which was fed back into the manufacturing process. Thanks to similar efforts throughout the Group, overall water consumption in FY2001 was down 291,000 m³ (24%) from the preceding year.



Container-Type Boxes

• Consumption of Office Paper (copy-machine paper, printer paper, etc.)





Waste-Water Filtering Device

CONTROL OF CHEMICAL SUBSTANCES

Safe and correct handling of chemical substances is essential not only for environmental reasons but also as a risk-management issue. The SII Group manages chemicals carefully at all stages: purchase, use, storage, and disposal.

SUBSTANCE MANAGEMENT

In 1998 we issued SII Chemical Management Guides that classified chemical substances into three groups: (a) usage banned, (b) usage and discharge to be reduced, and (c) usage and discharge to be carefully controlled. These Guides also include plans for reducing reliance on those substances whose usage must be reduced. We use these Guides to carry out periodic training, as we continue working to improve substance management in all operational areas.

ON-SITE MANAGEMENT AND EDUCATION

To facilitate effective management, we prominently post information at each location where chemical substances are used and stored. At usage sites we post MSDSs (material safety data sheets) that describe the substance characteristics and present relevant usage precautions. At storage locations we post information about the materials and quantities being held. We also carry out periodic training, including instruction about how to respond to emergencies.



SII Chemical Management Guides





PCBs in Storage

Substance Storage and Information Display

• Results of PRTR Assessments for FY2001

The following table shows results of chemical-substance quantity investigations carried out in accordance with the PRTR (Pollutant Release and Transfer Register) Law.* In EV2001 we handled 72 tons of chemicals covered under this law.

			Emitted		Transported Recycled			Consumed	Eliminated	
Substance	Amount Handled	 Discharged to air 	② Discharged to public water	③ Discharged to earth at business unit	Landfill -processed at business unit	Waste water transported to sewerage system	Waste matter transported out of business unit	Reusable material transported out of business unit	Transported as product, etc.	 By decompositior chemical reaction, etc.
2-aminoethanol	7.24	1.45	0.00	0.00	0.00	0.00	0.00	5.43	0.00	0.36
Antimony and its compounds	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.15	0.00
Ethyl benzene	0.21	0.06	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
Xylene	14.36	1.36	0.00	0.00	0.00	0.00	12.02	0.98	0.00	0.00
Chlorodifluoromethane	5.74	5.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cobalt and its compounds	15.10	0.00	0.00	0.00	0.00	0.00	0.00	3.00	12.10	0.00
2-ethoxyethyl acetate	0.47	0.27	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00
Inorganic cyano compounds (excluding complex salts and cyanates)	1.34	0.01	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.33
Dichloropentafluoropropane	1.48	1.31	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00
N,N-dimethylformamide	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mercury and its compounds	0.31	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.30	0.00
1,3,5-trimethyl benzene	0.22	0.01	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00
Toluene	2.20	1.72	0.00	0.00	0.00	0.00	0.35	0.13	0.00	0.00
Lead and its compounds	0.19	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.12	0.00
Nickel compounds	2.82	0.00	0.05	0.00	0.00	0.00	0.20	1.87	0.70	0.00
Hydrazine	0.13	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenol	0.44	0.07	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.02
Hydrogen fluoride and its water- soluble salts	13.49	0.26	0.02	0.00	0.00	0.00	0.00	4.91	0.00	8.31
Boron and its compounds	0.58	0.00	0.16	0.00	0.00	0.00	0.00	0.14	0.00	0.29
Poly (oxyethylene) nonylphenyl ether	0.32	0.00	0.00	0.00	0.00	0.00	0.14	0.09	0.00	0.09
Manganese and its compounds	4.73	0.00	0.00	0.00	0.00	0.00	0.56	0.00	3.66	0.52
Total	72.05	12.46	0.36	0.00	0.00	0.00	14.49	17.79	17.03	9.92

*Japanese law intended to help assess emission levels of specified substances, and to promote improvements in management of these substances.

WASTE REDUCTION ACTIVITIES

The SII Group is aggressively working to reduce waste generation as we move toward our goal of Zero Emissions.

CONTROL OF TOTAL WASTE GENERATION

In FY2001 we rededicated ourselves to reducing total waste generation. Total waste produced during the year was 3,637 tons, down 16% from FY2000. Our recycling efforts also showed good progress: we dumped only 247 tons of waste into landfill, down 42% from FY2000 and a big step toward our ultimate goal of Zero Emissions.

• Trend in Total Waste Generation (including salable materials)



ON-SITE WASTE REDUCTION

Our Ohno unit (Chiba) achieved Zero Emissions in FY2000. The Ohno unit uses special chip processor to separate out and recover cutting oil from the chip debris generated during automated machine processing. As a result, reused oil now accounts for about 40% of all the oil utilized at the Ohno unit. These devices have proven very effective in enhancing resource efficiency and reducing waste.

REDUCTION AND RECYCLING OF COMMON WASTE

Careful handling of common non-industrial waste is also important. We ask our employees to sort their garbage into numerous categories: magazine paper, newsprint, "confidential" paper, cardboard, glass bottles, PET bottles, cans, combustible, batteries, non-combustibles, and so on.

And as an early believer in paper recycling, in 1993 we introduced a special recycling truck to collect used paper from our business units in the Keiyo area (waterfront industrial area in Chiba) and carry it to a paper manufacturer for reuse. Confidential documents are also faithfully delivered up for recycling, after passing through industrial-size shredders.

We also run special machines for reducing and composting the wastes from our cafeteria. The resulting material can be used as fertilizer, and is made available to our employees for use in their gardens.







Garbage Sorting



"Clean Arrow" Paper Recycling Pickup Truck

"GREE<mark>N" PRO</mark>DUCTS

As a major manufacturing company, we recognize our responsibility to create eco-friendly products using eco-friendly processes. We are aggressively addressing this issue through various initiatives, including SII "Eco-Labeling" and Life Cycle Assessment trials.

THE SII "GREEN PRODUCTS" LABEL

To raise general awareness of our Group's eco-friendly products, we introduced our "SII Green Product Label" in December 2001. This is a Type II environmental label as defined under ISO 14021, meaning that it represents a self-declared environmental claim. To determine whether a product qualifies for this label, we evaluate it using our own "green product standards." Specifically, we assign a score of 1 to 5 for each of 18 evaluation parameters. Products that receive an average score of 3.5 or above are classified as "Green products" and carry the Green Products label.



Green-Product Evaluation System

We use the 18 environmental compatibility factors on Table 1 to evaluate all of our products. Each SII product is rated in terms of its environmental compatibility based on the five-point assessment scale on Table 2 for each factor. We place priority on the absolute assessment standards, which are set up in accordance with SII's own surveys about the environmental compatibility of other companies' similar products. Factors that are difficult to evaluate with the absolute assessment standards are rated on the relative assessment standards, which indicate the improvement in environmental compatibility in comparison with SII's previous products. To ensure that our evaluations remain meaningful and objective, we review and revise our assessment standards once every two years.

ADVANTAGES OF OUR GREEN PRODUCT STANDARDS

Our "green product standards" encourage our entire Group to focus on eco-friendly production. Our "front-runner" category, in particular, encourages us to set our sights high. And the inclusive approach we use to set up these standards helps to promote Group-wide awareness: members from all business units are expected to make a direct contribution by reviewing features of other SII green products and by looking carefully at products created by other manufacturers.

Worldwide awareness of environmental issues is continually developing, and new technologies and approaches are introduced daily. By carefully monitoring worldwide progress, we continue to learn and grow and we become ever more capable of creating top quality eco-friendly products.

Table 1 Environmental Compatibility Factors for SII Green Product Standards

No.	Parameter
1	Power consumption during use
2	Power consumption during standby
3	Weight of product
4	Use of reused parts and recycled materials
5	Ability of used product to be recycled
6	Extended product life
7	Reduction of harmful ingredients that should be reduced or avoided*
8	Avoidance of forbidden harmful ingredients*
9	Smaller or lighter packaging
10	Reduction of foam packaging materials
11	Avoidance of polyvinyl chloride and heavy metals in packaging
12	Reduced energy consumption during manufacturing process
13	Reduced resource consumption during manufacturing process
14	Reduction of harmful substances that should be reduced or avoided* during manufacturing process
15	Avoidance of forbidden harmful substances* during manufacturing process
16	Easy disassembly
17	Easy sorting of materials
18	Information disclosure in instruction manuals, etc.

*Based on SII Group standards

Table 2 Concepts for Assessment Scale Ratings		
No. of points	Absolute assessment standards	Relative assessment standards
5	Lead runner	Outstandingly better than previous products
4	In the leading pack	Much better than previous products
3	In the second pack	Better than previous products
2	Average	Same as previous products
1	Inferior	Worse than previous products

• Targets for SII Group's Green Product Share





SII GREEN PRODUCTS

The SII Group is aiming to reach 50% green-product share (half of our product list to be filled by "green products") by 2004. To find the latest information about our products, please visit our website.





Remote Access Server

POPULAR ECO-FRIENDLY PRODUCT: THE MC-P300 PHS COMMUNICATION PC CARD

Our MC-P300 communication card is a popular product that fits into a computer's PC slot and enables mobile Web and email access.

Eco-Friendly Features

- Power consumption during use is only 500 mW, significantly lower than our previous cards. (When used at 32 Kbps)
- Packaging weight is reduced by 35% (compared to our previous cards).
- Packaging includes no packing foam, PVC, or heavy metals; and both the packaging and the instruction manual are printed with soy ink.



MC-P300 PHS Communication Card

COMPATIBILITY WITH JAPAN'S "GREEN PURCHASE PROMOTION" LAW

Seiko I Infotech Inc. (SIIT), one of our Group companies, is engaged in design, manufacture, and marketing of printers and plotters. The company produces products that comply with Japan's "Green Purchase Promotion Law" and with the International Energy Star Program. It also maintains a recovery center which collects and recycles used ink cartridges, used waste-toner bottles, and other such consumables.



LCA TRIALS

SII has run life-cycle assessment trials on the moving parts in our watches, and in March 2002 we drew up LCA guidelines based on the results and on the experience we gained. These SII LCA Guidelines will serve as the basis for full-scale expansion of our LCA activities.

SII's LCA Guidelines

Component • CC





• CO2 Analysis by Movement Mechanism



RECYCLING OF PLASTICS

We regenerate plastic material created in our forming processes so as to re-create high-quality plastics, and we then use these plastics in precision components for our watches. This is just one more of the many ways that we are working to recycle our resources.

ENVIRONMENT PROTECTION AT PRODUCTION PLANTS

While various laws and statutes place limits on permissible emissions, we at the SII Group have set our own more stringent limits for the emissions we generate. We are aggressively managing our air and water emissions, and proactively working to reduce the environmental impact of our operations.

SOx AND NOx

To reduce our NOx output, we operate our boilers efficiently and we aggressively manage our exhaust. NOx emission in FY2001 was 9.5 tons. To reduce SOx output, we are moving away from use of heavy oil and migrating to gas and kerosene.

In our Takatsuka unit (Chiba), we have eliminated the need for boiler-driven steam humidification by using a vapor humidifier in our makeup air unit in combination with warm water heated by the heat output from our freezing machine. By doing away with the boiler, we have reduced annual heavy-oil use by 83,464 liters (a 96% drop from the preceding year), which in turn has driven down our SOx emissions.



Boiler

DRAINAGE PROCESSING

Our own drainage standards are much more stringent than those set by national regulations. We periodically analyze and measure our drainage and always maintain safe and stable levels.

Our business units in the Keiyo area of Chiba are faced with the additional problem of the ongoing eutrophication (nutrient pollution) of Tokyo Bay, and must consequently make special efforts to reduce drainage of nitrogen and phosphorous. We continue to make period investments to deal with this problem on a timely basis.



Equipment





Noise Barrie

SOUND POLLUTION

We are well aware that it would be unacceptable to burden our neighbors with sound pollution from our manufacturing units. Consequently we have erected noise barriers and taken other steps to reduce sound pollution as best we can.

ENVIRONMENTAL MEASUREMENTS BY BUSINESS UNIT

Water quality and air quality measurements for FY2001 are shown below. All regulated items were within their limits.

• Water-Quality Measurements

• W	Water-Quality Measurements ND: Not detected										
Unit	s: mg	g / liter; pH; parts per cubic m	eter					indicates that	-	gulated or was	not measured
		Business Unit Regulated Substance	Takatsuka (Matsudo City, Chiba)	Ohno (Ichikawa City, Chiba)	Miyakubo (Ichikawa City, Chiba)	Narashino (Narashino City, Chiba)	Oyama (Sunto County, Shizuoka)	SII QuartzTechno Ltd. (Tochigi City, Tochigi)	SII Micro Parts Ltd. (Sendai City, Miyagi)	Morioka Seiko Instruments Inc. (Iwate County, Iwate)	SII Microtechno Inc. (Omagari City, Akita)
	1	pH	6.3-7.4	6.8–7.8	7.1–7.8	6.8-7.5	6.6–7	6.2-7.2	6.4–7	7–7.8	6.4-7.5
s	2	BOD	6.6	8.7	6.7	6.4	6.2	8.5	86	14.8	27
Values	3	COD	_	_	_	19	19	8	_	12	_
Va	4	Suspended solids	4	3	14	6	4	6	9	4.5	12
nt	5	n-Hex	ND	0.5	ND	ND	_	ND	5	ND	2
Life-Environment	6	Phenols	ND	ND	0.05	ND	_	ND	_	ND	_
on	7	Copper	0.04	0.05	0.18	ND	_	ND	_	0.1	ND
<u> </u>	8	Zinc	0.16	0.05	0.26	0.02	—	ND	_	0.29	ND
Ш	9	Iron	0.25	0.03	0.1	0.06	—	0.86	_	0.11	_
fe-	10	Manganese	0.02	ND	0.02	0.06	_	ND	_	0.01	_
1	11	Total chromium	ND	ND	0.02	ND	_	0.17	_	ND	_
	12	Number of coliform group	20	ND	ND	ND	ND	1	_	ND	_
	1	Cadmium	ND	ND	ND	ND	_	_	ND	ND	ND
	2	Cyanogen	ND	0.1	ND	ND	_	ND	ND	ND	ND
	3	Organic phosphorus	ND	ND	ND	ND	—	—	<0.1	ND	<0.1
	4	Lead	0.01	ND	ND	ND	—	ND	ND	ND	ND
	5	Hexavalent chromium	ND	ND	ND	ND	—	—	<0.05	ND	<0.05
	6	Arsenic	ND	ND	ND	ND	—	_	ND	ND	<0.01
	7-1	Total mercury	ND	ND	ND	ND	—	_	ND	ND	ND
	7-2	Alkyl mercury	ND	_	_	ND	_	_	_	ND	ND
Se	8	PCB	ND	_	ND	ND	—	_	ND	ND	ND
u C	9	Trichloroethylene	ND	ND	ND	ND	—	—	ND	ND	ND
stal	10	Tetrachloroethylene	ND	ND	ND	ND	-	—	ND	ND	ND
Substances	11	Dichloromethane (methylene chloride)	ND	ND	ND	-	—	—	<0.002	ND	<0.02
ic.	12	Carbon tetrachloride	ND	ND	ND	_	_	_	ND	ND	ND
Toxic	13	1,2-dichloroethane	ND	ND	ND	_	_	_	ND	ND	<0.004
· ·	14	1,1-dichloroethylene	ND	ND	ND	_	_	_	ND	ND	ND
	15	cis-1,2-dichloroethylene	ND	ND	ND	_	_	_	ND	ND	<0.04
	16	1,1,1-trichloroethane	ND	ND	ND	ND	—	—	ND	ND	ND
	17	1,1,2-trichloroethane	ND	ND	ND	—	—		ND	ND	<0.006
	18	1,3-dichloropropane	ND	ND	ND	_	—		ND	ND	<0.002
	19	Thiuram	ND	ND	ND	_	—		ND	ND	<0.006
	20	Simazine	ND	ND	ND	_	—		ND	ND	<0.003
	21	Thiobencarb	ND	ND	ND	-	—	_	ND	ND	<0.02
	22	Benzene	ND	ND	ND	_	_	ND	ND	ND	<0.01
	23	Selenium	ND	ND	ND	ND	—	—	ND	ND	<0.01

 Air-Quality Measurements 	ND: Not detected Dash ("—") indicates that item is not regulated or was not measu						was not measured.
Business Unit Regulated Substance	Takatsuka	Ohno (Ichikawa City, Chiba)	Narashino (Narashino City, Chiba)	Oyama (Sunto County, Shizuoka)	SII Micro Parts Ltd. (Sendai City, Miyagi)	Morioka Seiko Instruments Inc. (Iwate County, Iwate)	SII Microtechno Inc. (Omagari City, Akita)
Particulate matter (g/m ³ N)	0.001	ND	<0.001	0.001	<0.005	<0.01	<0.01
SOx (m ³ N/h)	0.01058	0.0137	0.0514	0.0609	—	0.0018	<0.005
NOx (ppm)	68.4	38.4	52.5	85.6	66	52	50

ENVIRONMENTAL AUDITING AND RISK MANAGEMENT

Auditing and Risk Management are crucial components of an effective environmental management system.

AUDITING SYSTEM

All of our business units carry out internal environmental audits to check on the progress of our environment protection activities. These audits are an essential part of our efforts to strengthen our environmental management system and improve our performance.

Internal auditors must of course be trained so that they can carry out meaningful and reliable audits. Consequently we hold periodic auditor training, and we certify qualified individuals as internal auditors in accordance with our Auditor Certification System. These certified SII auditors and official CEAR* examiners both participate in our audits, offering valuable advice and helping to promote a consistent level of environmental actions throughout the Group.

We also receive periodic inspections from outside certification authorities, whose objective evaluations help to ensure that we are always moving in the right direction.

Environmental Auditing

Internal Auditing
 Audit of Environmental Management System
 Performance Audit
 Compliance Audit

Audit by Certification Organization

SII Environmental Audit

Qualification	Number of Qualified Employees	
SII Certified Environmental Au	36	
Trainees who completed Environmental Auditor Education		350
	Lead Auditors	5
Official Environmental Auditors	Auditors	1
(CEAR* Registered Auditors)	Provisional Auditors	13

As of June 2002

RISK MANAGEMENT

We recognize the importance of taking a proactive stance to prevent contamination of air, water, and soil around our business units. The standards that we set for ourselves are stricter than the legal requirements, and we conduct periodic auditing and measurements to make sure that we are within our limits. We also come up with various emergency scenarios, and we implement appropriate measures to reduce the risk of accident and to contain any damage in the event that an accident does occur.

We are aware, for example, that equipment may not always function as expected. And so we install barriers around our chemical tanks so as to contain any accidental spillage. We also install emergency cutoff devices in our rainwater drains, for the same reason. And we act promptly to replace or renew aging equipment.

At each of our business units, we think about ways that accidents might occur and we work out appropriate countermeasures and communication procedures. We carry out periodic emergency drills to ensure that these procedures are effective and that our people will know how to act to prevent the spread of contamination in the event of an accident.



Emergency Training



Leakage Containment Barrier

^{*}CEAR: Center of Environmental Auditors Registration

COMMUNICATION

We are actively working to promote two-way communication about our environmental activities with all of our stakeholders.

SPREADING THE WORD

We began publishing our annual Environmental Report in 1996, as a way of periodically informing our stakeholders about our environmental activities and results. In 1999 we opened our environment website, allowing us to reach a worldwide audience. In June 2002, we upgraded the website so that it always provides pertinent, up-to-the-minute information. Newsworthy eventssuch as ISO 4001 certifications and release of eco-friendly products-are publicized not only through these channels but also through newspapers, magazines, and other mass-media outlets. We are conscientiously working to gain widespread understanding of our environmental initiatives and activities.



OUESTIONNAIRES AND INOUIRIES

Communication is a two-way street, and at the back of this Environmental Report you will find a guestionnaire form that you can use to send us your opinions, suggestions, and questions. Many respondents to last year's guestionnaire indicated that they felt that our FY2000 report contained too little information; and based on that feedback we have worked to provide a fuller report this year.

You can also talk to us by going to our website-where you can fill out the questionnaire online, request copies of reports and pamphlets, and enter your comments and questions. In FY2001 we received 70 online comments and requests through this site. We shall continue working to maintain and improve two-way communication with all of our stakeholders.

COMMUNICATION WITH NEIGHBORS AND EMPLOYEES

We believe that communication with local residents is of vital importance, and we actively encourage field trips from neighboring schools. We are pleased that many of the students who have visited us have reported that their visits helped them "gain a good understanding of SII's environmental activites."

We also want to promote meaningful communication with our employees. The Eco-Town bulletin board on the SII intranet includes an area where employees can submit their questions, opinions, and suggestions. We are always interested in incorporating the "voice of our employees" into our environmental initiatives, and the Eco-Town site helps us to achieve this.

Number of Contacts

Total

Questionnaires Returned 23 Number of Internet Queries Requests for Environmental Report 44 Environmental Accounting 3 3 Eco-Friendly Products 5 Waste Processing 1 2 ISO 14001 Others 15

70

Number of Internet Queries





Business Unit Trip

SOCIAL AND COMMUNITY ACTIVITIES RELATED TO THE ENVIRONMENT

The SII Group is always thinking of how best to be of service to and within our environment.

PARTICIPATION IN "THINK THE EARTH"

Think the Earth is a nonprofit project whose theme is the "coexistence of ecology and economy." Think the Earth provides a mechanism for businesses to contribute to society, and it promotes new concepts of production with the aim of inspiring people to think about the Earth. The project receives a portion of the revenues generated by sales of related products and services, and uses these funds to support its own operations and to contribute to NGOs and to other nonprofits.

We fully support the project's goals, and we actively participate in it. We are pleased to have developed the project's kickoff product: the "wn-1 Earth Watch," a dome-shaped watch with a threedimensional model of the northern hemisphere as its face. We have also produced a southern-hemisphere version, the "ws-1."

CULTIVATION OF AMBARY HEMP

Our Oyama unit in Shizuoka cultivates a large garden of ambary hemp, an annual plant known for its high CO_2 absorption. In FY2001 the garden produced a harvest of 265 kg (583 lb), with maximum plant height reaching 3.85 m (12.6 ft). The harvest is donated to local welfare homes, where residents use the stalks to product picture frames, the sheaths to produce fancy writing paper, and the color to produce dyed shawls. The garden is fertilized with compost produced by processing of the business unit's cafeteria waste.



The wn-1 Earth Watch Visit the Think the Earth website at: www.thinktheearth.net



The "Earth Watch" sports a 24-hour

dial and an impressive 3D model of

The product plays on the double

meaning of the word watch. It is

about the Earth.

hoped that the watch will inspire the

wearer to think more, and more often.

the northern hemisphere (model wn-1) or the southern hemisphere (ws-1).

Ambary Hemp

COMMUNITY ACTIVITIES

We actively support community-based environmental activities. We carry out periodic cleanups of the areas around our business units, and we participate in a wide variety of communitysponsored events.

Our Makuhari head office is an active participant in the annual EcoMesse Chiba fair* in Makuhari New City. We contribute exhibition space for the fair, we develop questions for environment-related quizzes, and we participate in many of the fair's various eco-events.



*Started in 1996 and sponsored in part by Chiba Prefecture, the fair brings together citizens, businesses, and government administrators for the purpose of working toward solutions of environmental problems.

TIMELINE OF ENVIRONMENTAL ACTIVITIES AND ACCOMPLISHMENTS

Major Activities and Accomplishments

Dec. 1988	Establish "Fluorocarbon Countermeasures Promotion Committee"
Aug. 1992	Abolish usage of CFCs
Dec. 1992	0
Apr. 1993	Establish Environmental Protection Plan, "SII Green Plan"
Aug. 1993	Introduce the "Clean Arrow" used-paper collection truck
Nov. 1993	Abolish usage of trichloroethane
Apr. 1994	Begin monthly management of energy, paper use, and waste
Aug. 1995	Executive council kicks off on Environmental Management
	System (based on ISO 14001)
Aug. 1996	Revise "SII Green plan" (and start publication of annual
	Environment Report)
Oct. 1996	Chiba Keiyo 6 business unit receive award for paper recycling
	activities
Nov. 1996	Takatsuka unit (Chiba) becomes first SII Group business unit
	to receive ISO 14001 certification
Dec. 1997	Begin our "Idling Stop" campaign
Feb. 1998	Publish our "SII Chemical Management Guides"
June 1998	SII Microtechno Inc. (formerly Akita Precision Ltd.) receives
	Akita prefecture's "Best Environmental Activities" award
June 1998	Morioka Seiko Instruments Inc. receives Iwate prefecture's
	award for "Excellence in Environmental Protection"
Mar. 1999	We complete acquisition of ISO 14001 certification for all of
	our 11 major business units in Japan
Mar. 1999	Abolish use of chlorine solvents (trichloroethylene, methylene
	chloride)
Oct. 1999	Issue "SII Group Green Purchasing Standards"
Feb. 2000	Begin environmental accounting
Nov. 2000	Ohno unit achieves Zero Emissions

Major Events In FY2001

Apr.	2001	Start LCA trials
June	2001	Dalian Seiko Instruments Inc. (China) earns ISO 14001
		certification
Sep.	2001	Sukagawa Precision Co. Ltd (Fukushima) earns ISO 14001
		certification
Oct.	2001	Makuhari head office (Chiba) earns ISO 14001 certification
Dec.	2001	Introduce SII "Green Products" labeling system
Mar.	2002	Seiko Instruments (Thailand) Ltd. earns ISO 14001
		certification
Mar	0000	Delegan first product begring "Organ Dreducts" label

Mar. 2002 Release first product bearing "Green Products" label

Environmental Awards

Oct. 1996	Chiba Keiyo 6 business units receive Recycling Promotion
	Committee's Chairman's Award for paper recycling activities
June 1998	SII Microtechno Inc. (formerly Akita Precision Ltd.) receives
	Akita prefecture's "Best Environmental Activities" award
June 1998	Morioka Seiko Instruments Inc. receives Iwate prefecture's
	award for "Excellence in Environmental Protection"
May 2000	Makuhari head office receives the Chairman's Award from the
	Chiba City Building Conference



Headquarter Building (Makuhari)

This modern building incorporates leading-edge information technology and was designed to promote high productivity while providing an ideal working environment. It is also, of course, environmentally friendly. The building has received considerable recognition, receiving Nihon Keizai Shimbun's "modern office excellence" award in 1993, and the Chairman's Award from the Chiba City Building Conference in 2000.





Seiko Instruments Inc. / Environmental Administration Department

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