Editorial Plan

This report is a compilation of the environmental activities conducted by the Mitsubishi Electric Group in fiscal 2000 in accordance with the "Environmental Reporting Guidelines" prepared by the Ministry of the Environment in Japan. In this year's report, environmental activities are introduced from the viewpoint of MET (for details, please see pages 3-4). In addition, this report provides more in-depth detail regarding the environmental considerations that go into our products than last year's report. The Mitsubishi Electric Group is involved in a wide range of business operations, so the company has made every effort to implement environmental management in accordance with the special characteristics of each business division. Accordingly, starting with the report for this fiscal year, we are providing data on the results of our environmental activities for each business division.

Report Coverage

Period: April 1, 2000-March 31, 2001
Companies: Mitsubishi Electric Corporation and 64 domestic and overseas affiliated companies

Circular denotes company included in environmental accounting.

Corporate Profile (as of March 31, 2001)

Name: Mitsubishi Electric Corporation
Head Office: Mitsubishi Denki Bldg., 2-2-3 Marunouchi, Chiyoda-ku, Tokyo 100-8310, Japan
Date Established: January 15, 1921
Paid-in Capital: 175.8 billion yen (non-consolidated)
Employees: 116,715 (consolidated) 40,906 (non-consolidated)
Sales: 4,129 trillion yen (consolidated) 2,932 trillion yen (non-consolidated)

Sales by Division

(Consolidated) (Non-consolidated)

The companies covered in the consolidated financial results presented above and the companies covered in the environmental accounting section in this report are not the same.
Creating Together… Towards a “Sustainable Society”

The curtain has risen on the 21st century, the “century of the environment.” From a socio-economic system of mass production, mass consumption and mass disposal that continuously places unsustainable burdens on the natural environment, this century will see the creation of a “sustainable society” in which scarce resources will be circulated efficiently and negative environmental impact limited. In society, and worldwide, we must join hands to build this new vision, and the members of the Mitsubishi Electric Group are actively playing their part.

The Mitsubishi Electric Group introduced its Environmental Plan company-wide in fiscal 1993. Since that time, we have made active efforts to commercialize technologies and products such as ozone technologies, photovoltaic and fuel-cell power generation systems, and environmentally friendly plant operations that contribute to environmental conservation and the development of a sustainable society. We have also striven to utilize resources and energy efficiently and reduce our reliance on the environmentally harmful substances used in production processes and products. Following implementation of the 3rd Environmental Plan, which sets targets for fiscal 2002 in fiscal 2000, in addition to strengthening the environmental protection activities of the entire Mitsubishi Electric Group, international operations included, we have continued to aggressively promote efforts to make our products more environmentally friendly by utilizing the data and product disassembly experience gathered from the operations of our home appliance recycling plant, the first of its kind in the industry.

Although realizing technologies capable of providing the required functionality at a minimal expenditure of energy while also being recyclable and having a low impact on the environment is no simple task, the Mitsubishi Electric Group has applied its superior technological capabilities and creativity to meet the many challenges involved. The corporate statement chosen to express the Mitsubishi Electric Group’s determination and fundamental position in this, the first year of the new millennium, is "Changes for the Better." Step by step, we are forging a path towards a better tomorrow.

This report provides information on the efforts of the Mitsubishi Electric Group with regard to the environment in fiscal 2000 and the results thereof. With your understanding and support, we at the Mitsubishi Electric Group hope you will join us in creating a sustainable society for the future.
Addressing Environmental Matters… From the Viewpoint of MET

The Mitsubishi Electric Group is working to reduce the environmental impact of the entire life cycle of its products by considering not only production processes, but also procurement measures, recycling (during and after use), and waste policies. In this report, we specify these areas of concentration with the keyword, “MET.”

M: Materials — Effective use of resources  
E: Energy — Efficient use of energy  
T: Toxicity — Avoid use of substances that cause environmental damage

After establishing concrete numerical targets for products and production processes with regard to these three areas, we commence a PDCA (Plan ➔ Do ➔ Check ➔ Action) cycle of activities. These voluntary efforts have been built into the corporate organization under the framework of a company-wide environmental plan. The Environmental Plan has three main pillars: a core environmental philosophy/action policy, a set of environmental objectives and an environmental management system. We believe that, by moving steadily forward with our Environmental Plan, we will be able to nurture the MET flower and help achieve the promise of a sustainable society.

Core Environmental Philosophy
Under the international principle of “sustainable development,” the Mitsubishi Electric Group is committed to protecting and improving the global environment through all business activities and employee actions, utilizing knowledge accumulated in the past as well as technologies developed in the future.

Environmental Action Policy
1 We will strive to reduce any negative environmental impact resulting from our products and activities. We will develop technologies and processes that are compatible with the environment. Products will be fully assessed over their entire lifecycle, and our facilities will promote resource efficiency, conservation and recycling.

2 We are committed to understanding environmental problems and contributing to a universal awareness of the need for businesses to integrate their activities with the natural cycles of nature.

3 We will establish environmental management systems at all of our business sites and operate them according to accepted standards. At the same time, we will continually improve environmental controls through environmental audits and similar methods.

4 We will educate, train and motivate employees to be good environmental stewards in their own right, as well as support employees when they engage in activities that promote environmental protection.

5 We will foster active communication and cooperation regarding environmental protection worldwide.
The Environmental Plan incorporates into the corporate organization the Mitsubishi Electric Group’s mid-to-long term voluntary initiatives for the environment. Running from fiscal 2000 through fiscal 2002, the 3rd Environmental Plan has five main themes.

A Strengthening of Environmental Management in Consolidated Operations

The 3rd Environmental Plan targets Mitsubishi Electric’s subsidiaries and major affiliated companies that are important for strengthening and expanding the efforts of the Mitsubishi Electric Group. Affiliated companies whose activities are deemed to have a relatively large impact on the environment are authorized as “plan-drafting companies.” These companies will introduce environmental management systems and draft annual implementations to meet the objectives set in the 3rd Environmental Plan.

B Setting of New Objectives to Reduce Negative Environmental Impact

In addition to expanding the existing objectives of the 2nd Environmental Plan, which began in 1996, we have also added new objectives to the 3rd Environmental Plan. The specifics of the new plan’s objectives appear in the chart on page 6.

C Strengthening of Environmental Policies Regarding Products

Although we have been actively involved in efforts to reduce the environmental impact of our products for some time, the 3rd Environmental Plan furthers our efforts by setting clear standards (as in fiscal 1999 B “Core Philosophy regarding Design for the Environment” and the “Design for the Environment (DFE) Guidelines,”*) which set tangible design and evaluation methods and quantitatively assessing the level of conformance to these standards product-by-product. In this manner, we are attempting to improve and expand the range of DFE application throughout the company. (For specifics on the “Core Philosophy regarding Design for the Environment” and the “DFE Guidelines,” please refer to page 17.) In addition to promoting environmental policies for products as a whole, we are also aware of the need to reduce the negative environmental impact created during materials procurement. For this purpose, we are working to lower this environmental impact by promoting “green procurement” through partnerships with our suppliers.

Preparation and Development of an Environmental Information System

We are continuing the preparation and development of an environmental information system that enables us to move forward in the area of environment-related operations more efficiently and effectively. The group’s “integrated environmental information system” is set up to support the 3rd Environmental Plan. This system will allow the entire Mitsubishi Electric Group to have joint access to environmental management data.

Improving Disclosure through the Introduction of Environmental Accounting and Other Measures

It is becoming more and more important to provide relevant parties with information regarding a firm’s efforts and achievements in environmental protection. In accordance with the 3rd Environmental Plan, we will publish environmental reports that provide more detailed information on the state of our group companies’ efforts. In addition, we will promote further disclosure of information regarding the environmental features of our products.

Environmental Action Objectives

The objectives of the 3rd Environmental Plan are as follows. Whether a manufacturing process or product, tangible numerical targets are set for each MET category.

Manufacturing Processes

<table>
<thead>
<tr>
<th><strong>Prevention of Global Warming</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Targetable Targets</strong></td>
</tr>
<tr>
<td>Reduce greenhouse gas emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
</tr>
<tr>
<td><strong>Tangible Targets</strong></td>
</tr>
<tr>
<td>Reduce greenhouse gas emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reduction of HFC and HCFC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Targetable Targets</strong></td>
</tr>
<tr>
<td>Reduce HFC emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
</tr>
<tr>
<td><strong>Tangible Targets</strong></td>
</tr>
<tr>
<td>Reduce HFC emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
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<table>
<thead>
<tr>
<th><strong>Reduction of SF6</strong></th>
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<tbody>
<tr>
<td><strong>Targetable Targets</strong></td>
</tr>
<tr>
<td>Reduce SF6 emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
</tr>
<tr>
<td><strong>Tangible Targets</strong></td>
</tr>
<tr>
<td>Reduce SF6 emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
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<table>
<thead>
<tr>
<th><strong>Reduction of CFCs</strong></th>
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<tbody>
<tr>
<td><strong>Targetable Targets</strong></td>
</tr>
<tr>
<td>Reduce CFC emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
</tr>
<tr>
<td><strong>Tangible Targets</strong></td>
</tr>
<tr>
<td>Reduce CFC emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
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<table>
<thead>
<tr>
<th><strong>Reduction of HCFCs</strong></th>
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<tbody>
<tr>
<td><strong>Targetable Targets</strong></td>
</tr>
<tr>
<td>Reduce HCFC emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
</tr>
<tr>
<td><strong>Tangible Targets</strong></td>
</tr>
<tr>
<td>Reduce HCFC emissions by 25% by fiscal 2010 (compared to fiscal 1990 level)</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Set reduction targets for greenhouse gas (GHG)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Targetable Targets</strong></td>
</tr>
<tr>
<td>GHG emissions: 20% below fiscal 1990 level (by 2010)</td>
</tr>
<tr>
<td><strong>Tangible Targets</strong></td>
</tr>
<tr>
<td>GHG emissions: 20% below fiscal 1990 level (by 2010)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Resource Conservation/Recycling and Waste Reduction</strong></th>
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<tbody>
<tr>
<td><strong>Consider resource conservation and recycling, and control the generation of wastes</strong></td>
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<table>
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<tr>
<th><strong>Chemical Substances</strong></th>
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<tbody>
<tr>
<td><strong>Reduce emissions of chemical substances by controlling their use in manufacturing processes.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Control of Chemical Substances</strong></th>
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<tbody>
<tr>
<td><strong>Reduce emissions of chemical substances by controlling their use in manufacturing processes.</strong></td>
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<table>
<thead>
<tr>
<th><strong>Effective Use of Resources</strong></th>
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<tbody>
<tr>
<td><strong>Make efforts to maximize the effective use of resources for products and packaging materials.</strong></td>
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</table>

<table>
<thead>
<tr>
<th><strong>Effective Use of Energy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improve energy efficiency and reduce power consumption in the active and standby modes of our products.</strong></td>
</tr>
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<table>
<thead>
<tr>
<th><strong>Avoid Use of Substances that Cause Environmental Damage</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maintain thorough control of all chemical substances used in our products, and make progress in the reduction/substitution of substances that pose risk to the environment.</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Eliminate the use of substances that cause environmental damage</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Eliminate the use of substances that cause environmental damage</strong></td>
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</tbody>
</table>

Products

<table>
<thead>
<tr>
<th><strong>Design for the Environment</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce negative environmental impact by applying the internal standards set in the “Core Philosophy regarding Design for the Environment” as well as the “DFE Guidelines” to all our products.</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tangible Targets</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce negative environmental impact by applying the internal standards set in the “Core Philosophy regarding Design for the Environment” as well as the “DFE Guidelines” to all our products.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reduction of hazardous substances</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce the amount of hazardous substances used by 20% by fiscal 2010 (compared to fiscal 1990 level)</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reduction of hazardous materials</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Reduce the amount of hazardous materials used by 20% by fiscal 2010 (compared to fiscal 1990 level)</strong></td>
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<tr>
<th><strong>Eco-friendly</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Reduce the amount of eco-friendly materials used by 20% by fiscal 2010 (compared to fiscal 1990 level)</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Compliance with regulations</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compliance with regulations on the use of hazardous substances and materials</strong></td>
</tr>
</tbody>
</table>

*1) Targeted companies: 104 domestic and 39 overseas companies (as of April 2001) This includes 66 affiliated companies operating the same environmental management systems as a related Mitsubishi Electric facility.

*2) 200 affiliated companies: 60 domestic and 14 overseas companies (as of April 2001).

*3) ISO 14001: Guidelines for creating product designs that reduce environmental impact.

*4) Greenhouse gas: GHG (global warming gas)

*5) Fugitive emission reduction: Reduction of emissions that cannot be captured by equipment as a result of manufacturing processes.

*6) ISO 14001: ISO 14001 is an international standard for environmental management systems. The system aims to provide a framework for an organization to manage its environmental responsibilities. The standard was developed by the International Organization for Standardization (ISO) and was first published in 1996.

*7) DFE (Design for the Environment) is a set of guidelines and principles for designing products and processes to ensure they are environmentally friendly. The DFE guidelines aim to reduce the environmental impact of products throughout their lifecycle, from raw material acquisition to disposal.

*8) Material Flow Analysis (MFA) is a tool used to analyze the flow of material through an organization or system. It helps identify hotspots where a process or product has a high environmental impact.

*9) Life Cycle Assessment (LCA) is a methodology for assessing the environmental impacts of a product or service throughout its entire life cycle, from raw material acquisition to disposal.

*10) Environmental accounting standards: These are sets of guidelines and standards that dictate how environmental data should be collected, analyzed, and reported.
Promoting Environmental Management

The basic policies and measures taken by the Mitsubishi Electric Group regarding environmental problems are finalized by the Environmental Director, and the head office of each business group is responsible for implementation.

Environment Management Cycle
Mitsubishi Electric’s environmental management system can be broken down into two broad classifications, company-wide environmental management and site-specific environmental management (including sites of affiliated companies). The system thus works in two cycles:

1. Company-wide Environmental Management
Mitsubishi Electric Group policies such as the Environmental Plan and related matters are broken down into two broad classifications, company-wide environmental management and site-specific environmental management. Over 300 engineers are currently participating in this group’s activities, including lectures on environmental technologies, tours of related facilities, and presentations of R&D results.

2. Business Site Environmental Management
The business sites of the Mitsubishi Electric Group, including those of affiliated companies, each pursue their own efforts for environmental protection using environmental management systems based on the international environmental management system standard; ISO 14001. Each business site, in addition to being subject to internal audits called for by the ISO 14001 standard, is also able to continuously improve its environmental efforts through regular evaluations by outside auditors. In fiscal 1998, all manufacturing sites, the plant construction division and research facilities (28 sites in all) received ISO 14001 certification, and the sites of all major affiliated companies, both domestic and international, received certification by fiscal 2000. (Domestic: 32 companies, 35 sites; International: 10 companies, 10 sites)

Introduction of the "ECOrates"; Integrated Environmental Information System
As Mitsubishi Electric expands its environmental efforts, improving administrative efficiency and managerial control over related programs becomes more vital. Although we have already introduced a Chemical Substance Control System and a Manifest System for Industrial Waste1, we are also moving forward with the development of an integrated environmental information system in order to make environmental management even more efficient and effective. After its introduction, the system is expected to make a large contribution to increasing the administrative efficiency of the Mitsubishi Electric headquarters for matters such as production of the Environmental Sustainability Report and the efficiency of environmental management at business sites by allowing joint access to and unified control over a variety of MET environmental information. This system is scheduled to be introduced company-wide by the end of fiscal 2001.

Note 1: Manifest System for Industrial Waste is a Japanese regulation established to ensure that each organization that discharges industrial waste maintains a strict record of its flow. The regulation also works to prevent illegal dumping and maintains adequate handling and treatment methods by such organizations.
Results and Highlights of Fiscal 2000

The highlights of our environmental activities to date are listed below. Detailed accounts of each item are provided on the pages specified in parentheses. For information regarding affiliated companies, see page 37.

Effective Use of Resources
Establishment of "Green Procurement Standards Guide" (page 10)
Through partnerships with suppliers, we began green procurement of materials used in the manufacture of semiconductors, communications equipment and computer terminals.

Efforts to Comply with the Home Appliances Recycling Law (page 10)
We built the Higashihama Recycle Center, which began full-scale operations in May 1999, the world's most advanced recycling technology center. We are working to create environmentally friendly product designs by fostering strong communication between the areas of recycling and product design.

Energy Conservation in Air Conditioners
Energy Conservation in Refrigerators

Environmental Account

<table>
<thead>
<tr>
<th>Resource Input &amp; Output to the Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN</td>
</tr>
<tr>
<td>Water: 15.71 million cubic meters</td>
</tr>
<tr>
<td>Electricity: 1.7 billion kWh</td>
</tr>
<tr>
<td>Gas: 33.0 million cubic meters</td>
</tr>
<tr>
<td>Natural gas: 3.10%</td>
</tr>
<tr>
<td>Oil (trade-oil conversion): 22.00%</td>
</tr>
<tr>
<td>Chemical substances: 2.70%</td>
</tr>
<tr>
<td>OUT</td>
</tr>
<tr>
<td>Water: 12.4 million cubic meters</td>
</tr>
<tr>
<td>C02: 640,000</td>
</tr>
<tr>
<td>Waste: Disposal volume: 50,100</td>
</tr>
<tr>
<td>Recycled resources: 78,100</td>
</tr>
<tr>
<td>Waste disposal volume: 10,200</td>
</tr>
<tr>
<td>Internal waste treatment: 4,100</td>
</tr>
<tr>
<td>Chemical substances: 906°</td>
</tr>
</tbody>
</table>

Efficient Use of Energy

This area includes various activities such as improving the ease of product disassembly, reducing packaging, and encouraging the reuse of resources and reducing the amounts used. From elevators without machine rooms to semiconductors, we are making efforts in all areas of business.

Avoiding Substances that Cause Environmental Damage
We have implemented measures to reduce the use of lead, vinyl chloride, greenhouse gases, mercury, chromium 6, cadmium, and brominated flame retardant, and promote the collection of residual substances from used products as well as reduce their emissions. We are also working toward making our semiconductors and home appliances lead-free.

Efforts in Manufacturing Processes

In order to improve "eco-efficiency," we are working to use resources efficiently and save energy. In addition, we are also applying thorough and appropriate controls in the handling of chemical substances.

ISO 14001 Certification
All of our manufacturing sites have received ISO 14001 certification. Among our affiliated companies, 35 sites of 32 domestic companies and 10 sites of 10 overseas companies have also received certification.

Communication
At the same time as the release of the Environmental Sustainability Report, we conducted a briefing for the media and members of relevant non-government organizations. During this briefing, as in the report, we presented the environmental activities of each of our business sites.
Environmental Accounting

How much does it cost to protect the environment, and to what degree are positive results achieved through such expenditures? Environmental accounting provides quantitative answers to these questions. By understanding quantitatively the costs of environmental efforts, we are able to proactively advocate planning the environment within the context of the entire company’s activities and encourage management practices that consider the environmental impact of actions.

Environmental Accounting Standards of the Mitsubishi Electric Group

Mitsubishi Electric received an official set of draft guidelines for environmental accounting from the Environmental Agency in March 1999. Soon after, in December 1999, the company adopted a set of environmental accounting standards that include clear definitions of the expenditure items to be calculated and the range to which the standards are to be applied. Among the basic principles adopted, the most important four are as follows.

1. The revenues and expenditures of environmental businesses and products that are designed to reduce negative environmental impact are not included. Although the costs of lowering the negative impact on the environment (particularly those involving manufacturing activities) are included in our calculations, the costs of R&D and production as well as income from individual products with superior energy-saving functions or environmental businesses such as photovoltaic power generation or water purification systems are not included. However, we do include the costs of research and development involving basic technologies that will be used in multiple products, such as work related to the development of HCFC® refrigerant substitutes.

2. Coverage is limited to activities whose main purpose is to reduce negative environmental impact. Although there are many activities with the compound objectives of increasing production efficiency and reducing environmental impact, in our environmental accounting, the basic policy is to isolate and count only the portion intended to reduce the burden on the environment. When it is impossible to make clear distinctions, the entire amount is counted in cases where activities were initiated mainly for their environmental benefit and the entire amount is excluded if the case is otherwise.

3. The entire value of a capital investment is included in the total of the year in which it was actually implemented. We have decided to include the entire value of a capital investment in the year in which the investment is implemented and do not make calculations relating to depreciation. In addition, in cases where the results of a particular investment will continue to provide returns over multiple years, estimates of the expected results for up to a maximum of three years will be added to the total of the first year in which such a result is realized.

4. Revenues are limited to those that can be calculated on the basis of reliable supporting data. In figuring results, we do not hypothesize calculations of risk avoidance effects such as estimates of the compensatory value of not pursuing a particular environmental policy. Instead, we only include the results that are actually achieved, such as savings from energy conservation activities or sales profits achieved due to the reuse of resources. In addition, we will provide other kinds of quantitative measures for environmental protection activities that cannot be expressed in monetary terms, such as reductions in CO₂ emissions.

Environmental Account for Fiscal 2000

The cost of the environmental protection activities of Mitsubishi Electric and its 45 major domestic and international affiliated companies was 18.81 billion yen in fiscal 2000 (a 12% increase over the previous year). The primary reason for the increase was the economic effect was 6.77 billion yen (a 6% decrease compared to the previous year). These figures were calculated based on the classifications in “Developing an Environmental Accounting System” (2000), which was published by then Environmental Agency (now Ministry of the Environment) in May 2000. The details are shown in the graph to the right.

Environmental Protection Expenditures

The company invested a total of 5.07 billion yen for energy-saving equipment such as micro-gas-turbines and photovoltaic power generation and preparations for the mass production of an HCFC substitute (22% year-on-year increase). A total of 3.37 billion yen (a 48% year-on-year increase) was also made in R&D investments related to the development of substitutes for used plastics, SF₆ gas substitute insulation technology, lead replacement technology, and other energy-saving technologies. In addition, 10.37 billion yen (a 1% year-on-year decrease) was spent for continuing the implementation of our environmental management system, maintenance and operation of environment-related facilities, expansion of green areas within company sites, and environmental education.

Effects of Environmental Protection

Profits from the recycling of waste materials such as scrap metal were 1.1 billion yen (an 11% year-on-year increase), while savings from such areas as energy conservation and water reuse reached 5.67 billion yen (an 11% year-on-year increase). In addition, although the absolute quantities of energy consumption (CO₂ emissions), water used and waste produced, all increased with the increase in sales, they all decreased as a percentage of total sales on a year-on-year basis. Thanks to resource reuse, waste handled by disposal services fell by 3,400 t (a 17% year-on-year decrease). Chemical emissions were also reduced by 47% (a 37% year-on-year decrease) through efforts to minimize the release of specified chemicals.

Environmental Protection Expenditures

<table>
<thead>
<tr>
<th>Item</th>
<th>Capital Investment</th>
<th>R&amp;D Costs</th>
<th>Operational Expenditure</th>
<th>Total</th>
<th>Compared to Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business area activities</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pollution prevention</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Global environmental conservation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Resource circulation</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
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<tr>
<td>Total</td>
<td>-</td>
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</tr>
</tbody>
</table>

Compared to last year the total of the year in which it was actually implemented. The differences in savings and profits generated from the sales of scrap metal are shown in the following table.

Revenues from Environmental Protection Activities

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Compared to Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Savings</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost (100 million yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper row: Mitsubishi Electric Group Lower row: Mitsubishi Electric (non-consolidated)</td>
<td>-</td>
</tr>
</tbody>
</table>

Economic Efficiency

The economic efficiency of business group activities (non-consolidated) was 170 million yen. Upper row: Mitsubishi Electric Group Lower row: Mitsubishi Electric (non-consolidated)
Environmental Objectives and Results

The end of fiscal 2000 marked the beginning of the 3rd Environmental Plan as well as the end of the last year of the 2nd Environmental Plan. The results of the 2nd Environmental Plan are provided in the following.

### Environmental Management System Structure

<table>
<thead>
<tr>
<th>Tangible Targets</th>
<th>Results</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive certification at domestic manufacturing sites by the end of fiscal 1998.</td>
<td>Received ISO 14001 certification at domestic manufacturing sites as well as the plant construction division and research facilities (28 sites).</td>
<td>Extremely Good</td>
</tr>
<tr>
<td>Receive certification at the main manufacturing facilities of affiliated companies by the end of fiscal 2000.</td>
<td>Received ISO 14001 certification at main affiliated companies (domestic: 32 companies, 35 sites; international: 10 companies, 10 sites).</td>
<td>Very Good</td>
</tr>
</tbody>
</table>

### Manufacturing Processes

<table>
<thead>
<tr>
<th>Tangible Targets</th>
<th>Results</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce the total amount of waste handled by waste treatment services by 30% as of the end of fiscal 2000 (compared with 1995 levels).</td>
<td>Reduced waste handled by waste treatment services by 64%.</td>
<td>Very Good</td>
</tr>
<tr>
<td>Reduce total amount of waste generated to less than 100,000/yr by the end of fiscal 2000.</td>
<td>Reduced waste generated to below 100,000/yr from fiscal 1998 onwards.</td>
<td>Must Try Harder</td>
</tr>
<tr>
<td>Increase resource reuse rate to more than 75% by the end of fiscal 2000.</td>
<td>Achieved a resource reuse rate of 85% by fiscal 2000.</td>
<td>Extremely Good</td>
</tr>
</tbody>
</table>

### Resource Conservation / Recycling & Waste Reduction

<table>
<thead>
<tr>
<th>Tangible Targets</th>
<th>Results</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce greenhouse gas emissions by 25% by fiscal 2010 (compared to fiscal 1990 levels of carbon-equivalent energy consumption to net sales).</td>
<td>Reduced CO2 emissions by 4% compared with fiscal 1990 levels and 17% when expressed as a percentage of net sales.</td>
<td>Very Good</td>
</tr>
<tr>
<td>Measure the amounts of chemicals used in manufacturing processes and set reduction targets.</td>
<td>Set categories for chemical substances to be controlled and promoted reductions in the use of substances with high environmental impact. Reduced emissions into the atmosphere by 18% compared with fiscal 1997 levels.</td>
<td>Very Good</td>
</tr>
<tr>
<td>Eliminate the use of organic chlorine solvents at all sites, including those of affiliated companies, by fiscal 2000.</td>
<td>Eliminated the use of organic chlorine solvents at all Mitsubishi Electric facilities in the end of fiscal 1999 and at all domestic affiliated companies in April 2001.</td>
<td>Must Try Harder</td>
</tr>
<tr>
<td>Reduce the use of volatile organic solvents in open-air environments and promote their recovery and recycling.</td>
<td>Instituted innovative methods for limiting the use of harmful solvents through the use of water-soluble paints, spray/powder painting, thin-film technologies, etc.</td>
<td>Must Try Harder</td>
</tr>
</tbody>
</table>

### Control of Chemical Substances

<table>
<thead>
<tr>
<th>Tangible Targets</th>
<th>Results</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce the amount of packaging by 20% by the end of fiscal 2000 (compared with 1995 levels).</td>
<td>Reduced packaging materials amount by 21%, meeting target.</td>
<td>Very Good</td>
</tr>
<tr>
<td>Provide as much content information as possible on products with plastic components by fiscal 2000.</td>
<td>Provided content information for a wide variety of product categories.</td>
<td>Must Try Harder</td>
</tr>
</tbody>
</table>

### Products

<table>
<thead>
<tr>
<th>Tangible Targets</th>
<th>Results</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve energy efficiency and reduce power consumption in the active and standby modes of products in order to reduce environmental burden</td>
<td>Established targets for a wide variety of product categories; worked to reduce power consumption in the active and standby modes of products.</td>
<td>Extremely Good</td>
</tr>
<tr>
<td>Maintain thorough control of all chemical substances used in our products; make progress in the reduction/substitution of substances that pose risk to the environment.</td>
<td>Worked to reduce the emission of substances harmful to the environment, beginning with heavy metals.</td>
<td>Must Try Harder</td>
</tr>
<tr>
<td>Eliminate the use of HCFC (hydrochlorofluorocarbon) as a refrigerant in air-conditioning equipment by the end of 2010 and as a foaming agent by the end of 2004.</td>
<td>Will change refrigerant from HCFC to HFC (hydrofluorocarbon) in air-conditioning products during the fiscal 2001 season.*1</td>
<td>Extremely Good</td>
</tr>
</tbody>
</table>

*Season in the air-conditioning industry; a sales year beginning in October. The fiscal 2001 season runs from October 2000 to September 2001.

[See details beginning on page 15.]
Mitsubishi Electric is now working to create products for which environmental impact has been considered for the entire lifecycle (procurement, design, manufacture, use, recycle and disposal). In addition, green procurement and the rationalization of distribution systems can serve to lower environmental burden; thus we are working together in partnerships with our suppliers to reduce the environmental impact of our businesses.
Effective Use of Resources
A total of 321 alternations were made in 87 product categories in order to improve disassembly ease (e.g., disassembly time, number of parts and/or number of fastenings reduced*2), simplify packaging (reduced use of corrugated cardboard, styrofoam, etc.), increase use of recycled materials (use of reused materials) and reduce product weight. Examples include a Lossnay central ventilation fan, for which disassembly time was reduced by 43%, a fiber-optic transmitter/receiver, the weight of which was reduced by 53%, and a rooftop security camera, in which the number of parts was reduced by 30%.

Efficient Use of Energy
A total of 85 alterations were made in 76 product categories in order to reduce power consumption in active and standby modes. Examples of reductions in active-use power consumption include a 67% improvement in one of our electric water heaters and a 65% improvement in a cooling system for machinery. In addition, a 60% reduction in standby power consumption was achieved for televisions and a 50% reduction for a low-power satellite communications terminal.

Avoiding Use of Substances that Cause Environmental Damage
Chemical substances evaluated in this area include lead, vinyl chloride, greenhouse gases, mercury, chromium 6, cadmium, and brominated flame retardant among others. For 420 items in 61 product categories, we have achieved positive results, reducing the use and/or emission of substances and avoiding their residual traces in our products. Examples include a digital wireless telephone, in which the use of lead was reduced by 50%, the production process for room air conditioners, in which HFC emissions were reduced by 92%, and programable logic controllers, in which the use of vinyl chloride was reduced by 20%.

*1) Four items counted here were related to information disclosure.
*2) Includes nut-and-screw fastenings, snapfits, etc.
Reducing Environmental Burden through Partnerships

On April 1, 2001, the national and local governments in Japan launched the policy of “Green Purchasing.” In parallel with this policy, Mitsubishi Electric promotes the successive registration of its products’ environmental information in the “Special Procurement Information System” of the Ministry of the Environment.

As customers actively adopt and use Mitsubishi Electric products that lessen environmental burden, we are contributing to the reduction of society’s overall impact on the environment. In fiscal 2000, we published the “Green Procurement Standards Guide” in an effort to promote the procurement of environmentally friendly materials throughout the group.

Disclosure of Product Environmental Information

To encourage the adoption of our environmentally friendly products, we are actively promoting the disclosure of product environmental information. In fiscal 1999, using the 12 ISO (International Organization for Standardization) criteria for self-advocacy, we set and began implementation of internal guidelines regarding the standards and procedures for the disclosure of quantitative data.

Moreover, we promote individual products by awarding our “environmental mark” (shown at lower right) for remarkable design features that meet the top standards in industry. Use of the environmental mark is allowed only after an internal committee has inspected each candidate product and confirmed its worthiness.

Green Procurement

Focusing mainly on office supplies, we are encouraging the purchase of products that have minimal environmental impact. We are also adding environmental considerations to our other standard procurement criteria—quality, cost and delivery time—when purchasing parts and materials. In fiscal 2000, the company drafted the “Green Procurement Standards Guide,” and we now request suppliers to give careful consideration to MET. As a follow-up, we individually inspect supplier progress in meeting these considerations, provide feedback, and promote these activities through partnerships with relevant parties.

(http://www.melco.co.jp/green-p/index_e.htm)

Examples of Major Activities in Fiscal 2000

- Mitsubishi Electric’s Semiconductor Group set standards for green procurement and conducted inspections of 555 major suppliers to evaluate their environmental protection activities. Moreover, beginning in June 2001, the Semiconductor Group will introduce a system that prioritizes the materials of suppliers that meet its green procurement standards. In the future, the group will move forward with an inspection for substances harmful to the environment contained in procured materials.

- The Communications System Group created an “Environmental Protection Substance Control System” in order to verify improvements without difficulty. The system makes possible the most appropriate design giving consideration to the amount of substances that could cause environmental risk in a given product. In the future, the group plans to expand its database, a move which will allow it to respond rapidly to customer requests for information (see graphic below) regarding potential environmentally harmful substances contained in products they have purchased.

Disclosure of Product Environmental Information

We have disclosed the following information regarding our High Efficiency Oil-immersed Transformer and Super-high Efficiency Oil-immersed Transformer, products that make possible large energy savings through reductions in operating losses.

<table>
<thead>
<tr>
<th>Item</th>
<th>Displayed Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global warming (energy conservation)</td>
<td></td>
</tr>
<tr>
<td>Active mode power consumption</td>
<td>Operating loss rating at three-phase 1000kV: 10.2kW (6.3kW)</td>
</tr>
<tr>
<td>Standby mode power consumption</td>
<td>NA</td>
</tr>
<tr>
<td>Total loss</td>
<td>Total loss reduction of approximately 25% at a 60% load factor (Total loss reduction of approximately 60%)</td>
</tr>
<tr>
<td>Body mass</td>
<td>2.800kg (4.150kg)</td>
</tr>
<tr>
<td>Recycled plastic</td>
<td>None</td>
</tr>
<tr>
<td>User’s manual, etc.</td>
<td>Paper, about 50g (100% recycled paper)</td>
</tr>
<tr>
<td>Battery type</td>
<td>None</td>
</tr>
<tr>
<td>Resource exhaustion/ circulation (product body)</td>
<td></td>
</tr>
<tr>
<td>Breakdown by mass of key component materials</td>
<td>The mass of component materials marked with a □ = 10% of total weight</td>
</tr>
<tr>
<td>Recycled materials used</td>
<td>None</td>
</tr>
<tr>
<td>Lead, vinyl chloride, specified flame retardant</td>
<td>None</td>
</tr>
<tr>
<td>ISO 14001 certification</td>
<td>Received November 1997</td>
</tr>
</tbody>
</table>

Figures in parentheses () are for the Super-high Efficiency Oil-immersed Transformer.
In order to ensure that our products are environmentally friendly, we made the basic philosophy of “Design for the Environment” an internal regulation in fiscal 1999. We have since made progress with various products based on DFE*1 guidelines that require consideration of the environmental impact of the entire lifecycle of a product, from procurement through development, design, manufacture, distribution, reuse, recycling and disposal.

**Introduction of DFE Guidelines**

Mitsubishi Electric's Core Environmental Philosophy requires the improvement of environmental protection activities to be a part of all business operations and employees’ actions. In addition, the Environmental Action Policy, by calling for the evaluation of operations and products with regard to their environmental impact and the development and introduction of environmentally friendly manufacturing technologies, expresses the company's commitment to minimizing environmental burden.

In 1999, the Design for the Environment Subcommittee of the Environmental Technologies Committee drafted the “DFE Guidelines,” and introduced methods to assess a product’s entire lifecycle in terms of the effective use of resources and energy and the avoidance of contamination by substances harmful to the environment. Although conventional assessments of this kind focus on EOL*2 issues such as resource conservation and recycling, the DFE guidelines expand the range of evaluation to include all stages of a product’s lifecycle, including procurement, manufacture, transport, use and disposal, and subject each stage to MET assessments. The guidelines stipulate quantitative evaluative methods for 12 large (see graphic below) and 45 intermediate categories. We are working to apply these methods at all of our business sites, thereby raising the level of our product assessment activities. In fiscal 2000, the Home Appliances Group implemented the following measures regarding “resource reuse” and “ease of disassembly.”

- Started purchasing standard plastic resins (PS resins, PP resins and ABS resins) as unified 3-grade resin (representing 80% of the total amount of resin purchased).
- Expanded labeling of the contents of plastic parts (contents labels placed on parts show 95% or more of total weight of plastics employed).
- Made content labels for plastic parts out of recyclable plastic parts (recyclable labels (see below) to promote recycling.
- Added “recyclable” labels (see below) to recyclable plastic parts and “disassembly instruction” labels (see below) to ease the removal of parts for recycling.

*1) DFE: Design for the Environment—the design of products and services that reduce the negative impacts on the environment.
*2) EOL: End of Life

**12 Categories for Quantitative Evaluation**

- Manufacturing process
- Packaging
- Logistics
- Weight reduction
- Increased service life
- Energy conservation/Expansible materials conservation
- Resource reuse
- Information disclosure
- Safety
- Recovery/Transport
- Disassembly potential
- Crusing process potential

**Evaluation Flow for DFE Guidelines**

1. Selection of standardized products
2. Evaluation of individual items
   - Change design, etc.
   - Consideration of countermeasures
3. Total point evaluation
4. Final decision
   - Improvement required
   - Improvement not required
5. Drafting of record and confirmation

**Structure of DFE Guidelines**

- Mitsubishi Electric & DFE philosophy
- DFE evaluation points: implementation schedule, evaluation categories, evaluation standards, MET assessment
- Guide to select Eco-materials
- DFE rules and organization
- Mitsubishi Electric & chemical substance control
- Successful case examples

**Developing Technologies for DFE**

(Lead-free Solder Mounting)

The problem of lead leaking into the soil from landfills containing crushed circuit boards with lead soldering from disposed electronics products has recently received much attention, and efforts to reduce the amount of lead used in products are gaining momentum.

At Mitsubishi Electric, we are working to develop technologies that will allow the elimination of lead from our products and conversion to lead-free solder. Because the melting point of lead-free solder is higher than conventional solder, problems related to the heat resistance of parts, temperature control during soldering, and the maintenance of product quality have arisen.

However, through improvements to facilities and soldering techniques, we have applied lead-free soldering to products such as refrigerators and packaged air-conditioners. Moreover, through the cooperation of parts manufacturers, we have begun lead-free plating of parts surfaces.
Applying the Results of Employee Education to Product Design

In order to create environmentally friendly products, it is necessary for engineers to have an awareness of the importance of environmental protection and to learn particular design methods. To attain these requirements, we are implementing an internal course designed to inculcate and improve on the knowledge and methods of the most advanced environmental and recycling technologies. By emphasizing practical exercises such as actual product disassembly, the course enables engineers to apply what they learn to product development. We are promoting the creation of better products by connecting the worlds of product development and employee education.

Lifecycle Assessment (LCA)
Drafting the Implementation Manual
At Mitsubishi Electric’s Advanced Technologies Laboratory, researchers analyze both the results of testing on the effects of product improvements and data regarding the environmental burden of waste disposal provided by the Higashihama Recycle Center. Through the accumulation of this kind of internal data, they are preparing the technological foundation for the practical use of LCA. In fiscal 2000, as part of our efforts to increase the quality of product assessment, we created an LCA manual (“LCA Evaluation Guidelines”) for those responsible for conducting LCA. This manual is being used to verify the effects of our environmental policies on our products.

Product Planning from Technology Seminars

- Suggestions for improvement feedback
- Product planning suggestions

Mitsubishi Electric Technology Seminars
Mitsubishi Electric has established two internal courses designed to improve engineers’ skills and knowledge regarding advanced environmental and recycling technologies. The number of engineers who have taken these courses now exceeds 400.

- In the three-day “Design for the Environment Course,” which was first offered in fiscal 1997, employees learn the fundamentals of how to create environmentally friendly products, covering topics such as new laws and regulations, social trends, and the latest recycling technologies. In addition to disassembling Mitsubishi Electric products, engineers in the course also use the “cDFE” Design Support System developed by our Industrial Electronics & Systems Laboratory to practice verifying the ease with which designed products can be recycled or disassembled. In addition, the program includes lectures by experts from the Higashihama Recycle Center and a tour of the center itself. Through this tour, product designers receive feedback from those recycling their products and are able to pass on the suggestions for improvement that come out of this experience to their respective business divisions to be used in future product development.

- The advanced skills course (“LCA Evaluation Technology”), which was first offered in fiscal 2000, allows engineers to acquire the knowledge necessary for LCA analysis and familiarize themselves with LCA software. In this course, designers bring their own product design data and verify the effects of suggested improvements. The results are then provided as feedback to the teams involved in the actual design projects.
In order to achieve even higher recycling rates for our products, it is necessary to improve recovery rates through separating recyclable materials from items that are difficult to process or contain impurities. At Mitsubishi Electric, through operations either contracted or subsidized by the New Energy and Industrial Technology Development Organization (NEDO) (see chart on right), we are working to commercialize and promote research and development in recycling technologies through partnerships with a variety of companies. New technologies are emerging from the Higashihama Recycle Center, our main facility dedicated to the research and development of recycling technologies. We are planning to improve the recycling potential of our products by transferring the know-how attained at the Higashihama operation to our product design groups, where efforts are being made to develop new products that are easy to recycle.

R&D Facility with the Most Advanced Recycling Technology

At the Higashihama Recycling Center, we are working to emphasize disassembly potential when designing our products (see pages 21-22). In order to make manual disassembly efficient, we are working to develop new disassembly technologies that will enable us to remove components that can be reused or cannot be crushed easily in a compactor. In the first stage, components that can be reused or cannot be crushed easily in a compactor are removed by manual disassembly. After manual disassembly is completed, the components are crushed, and metals, such as high quality iron, stainless steel, copper and aluminum are recovered.

Collaboration in Establishment of Home Appliances Recycling System

Mitsubishi Electric, Hitachi, Sanyo, Sharp, Sony and Fujitsu General Ltd. have joined together to establish an advanced home appliance recycling system. With the synergy from the interaction of new recycling plants operated by each company at its core, this system exploits technological advances to enable high-grade recycling at low cost. The system is comprised of 15 recycling plants strategically located throughout Japan (see map on right).

2) Season Fiscal Year: In the air-conditioning industry, a sales year begins in October.

COP: Co-efficient Of Performance energy efficiency

Reduced disassembly time by utilizing

Cabinet construction

Water valve

Styrene foam

Reduction Example

(0.690% of total product weight expected for fiscal 2000; compared with fiscal 1995: 0.214%; fiscal 1999: 0.285%).

Along with reducing the volume and mass of the external unit by 7 and 11%, respectively, the amount of cardboard packaging and styrene foam materials used with our air conditioners has been reduced by 22 and 14%, respectively (compared to previous year).

Reduced use of styrene foam by 25% in the packaging of our 21-inch television (compared with 1997 levels).

Reduced the number of parts by 15% through higher integration of the control board of the external unit. Reduced use of solder by 33% (compared to previous year).

Utilized recycled plastic for nine plastic parts outside the unit (compared to 1999 level) through a review of the specifications and simplification of internal packing cardboard.

Utilized recycled styrene foam.

Utilized recycled materials for condenser net in external unit. Reduced the use of styrene foam in packaging by 12% (compared to fiscal 1999 level) through size reductions in the entire lineup of fully automatic washing machines.

Water valve

Styrene foam

Reduced the number of screws in top cover from four to two, reduced the types of screws and made disassembly possible using only standard tools; reduced disassembly time by 10% by redesigning the structure of the spin tub.

Utilized recycled plastic and recycled materials in packaging (parts in which metals and resins are molded).

Reduced types of plastic used, and added contents and screw position labels in order to reduce manual disassembly time.

Utilized recycled materials for condenser net in external unit (30% of total product weight), utilized recycled paper in product and installation instruction manuals.

21-inch television (compared with 1997 levels).

Reduced the number of screws in top cover from four to two, reduced the types of screws and made disassembly possible using only standard tools; reduced disassembly time by 10% by redesigning the structure of the spin tub.

Reduced the number of parts by 15% through higher integration of the control board of the external unit. Reduced use of solder by 33% (compared to previous year).

Utilized recycled materials for condenser net in external unit. Reduced the use of styrene foam in packaging by 12% (compared to fiscal 1999 level) through size reductions in the entire lineup of fully automatic washing machines.

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Utilized recycled plastic for nine plastic parts outside the unit (compared to 1999 level) through a review of the specifications and simplification of internal packing cardboard.
Activities for Products Other than Home Appliances

At Mitsubishi Electric, all of our Business Group—Energy and Electric Systems, Industrial Automation Systems, Information and Communication Systems, Electronic Devices, and Home Appliances—are involved in activities that promote the group’s environmental policies. This page introduces our efforts to reduce the negative environmental impact of products other than home appliances by applying MET.

**Industrial Automation Systems MESELQ-S Series PLC**
A PLC is a device that controls machine tools on an automatic production line. At present, PLCs are used over a wide range of areas, particularly in factory automation.

**Effective Use of Resources**
We have realized resource conservation by reducing the volume of our MESELQC-S Series PLCs; they are 50% smaller in overall volume compared to our conventional QASH model and weigh 40% less. The system features label elements and an easy-to-dismantle structure that makes recycling easier. In addition, we are also instituting various printing such as using printer’s manuals on recycled paper and issuing them on CD-ROMs.

**Efficient Use of Energy**
With the smaller dimensions of the product, the effect of heat generated during operation became more apparent and a further reduction in power consumption became necessary. The MESELQ-S Series utilizes a low-voltage drive IC and a MOS-FET™ that allow operation with low power in the output element of the output unit in order to cut power consumption. Compared with the conventional QASH, power consumption has been lowered by more than half, from 25 to 12W.

**Avoid Use of Substances that Cause Environmental Damage**
Neither nickel cadmium batteries nor mercury relays that include mercury and cadmium are utilized in MESELQ-S Series PLCs.

**Semiconductor Industry**

**2.5W LD Excitation YAG Laser Oscillator for Welding Applications (255L0)**
The model 255L0 laser diode (LD) excitation YAG laser oscillator is the core machine tool for laser welding. With conventional lamp excitation YAG lasers, key topics were reductions in power consumption through improvements in excitation efficiency and longer light source (lamp) life. We realized resource and energy savings through the development of a laser oscillator that utilizes a laser diode as the light source.

**Effective Use of Resources**
Compared with the 1,000W life of a conventional lamp, the LD excitation YAG laser has a life of approximately 10,000W. This long life reduces the number of replacements necessary, maintenance costs, and the amount of waste in the form of exhausted units.

**Avoid Use of Substances that Cause Environmental Damage**
We are conducting product assessments and strictly checking substances that present environmental risk in order to prevent their emission and reduce their use.

**Semiconductor Industry**

**Energy and Electric Systems ELEPAQ+ Machine-room-less Elevator**
The ELEPAQ+ machine-room-less elevator realizes the industry’s smallest installation space among standard elevators and considerable energy savings.

**Effective Use of Resources**
Power consumption has been reduced by about 60% compared to our 1983 model. With the aim of further reducing power consumption, we plan to market the ELESAVE Elevator Power Regeneration and Storage System beginning in October 2001. The system stores the regenerative power normally released as heat when the elevator is operating in a “nickel by recycled battery” for later use.

**Avoid Use of Substances that Cause Environmental Damage**
Although we use solder (Sn-Pb) on the terminals and for part of the interior of our semiconductors (connection between chip and frame) to allow customers to easily insert them onto circuit boards, we are working to make our products lead-free in recognition of the environmental risk of lead. We will begin successive efforts to make our ICs, high frequency and optical devices, low-power devices (SCR-LM) and hybrid ICs lead-free in fiscal 2001. We are also experimenting with potential substitutes for solder in medium-power devices (I/P,MSCR) and high-power devices.
Logistics Activities

When creating a more efficient distribution system for the transport of materials and products, one consideration that cannot be left out is the need to minimize the exhaust emissions (CO₂, NOₓ) produced during transport. In addition to reducing the use of packaging materials, we at Mitsubishi Electric are working to lessen the environmental burden of our activities through logistical innovations that reduce the number of vehicles utilized for shipping, such as encouraging direct transport of materials and products, shifting to rail transport and introducing large freight trucks.

Reducing Packaging Materials

Although packaging is a necessary part of product shipment, it is also necessary to use packing materials efficiently if a sustainable society is to be achieved. We are making large reductions in the use of packaging materials while aiming to maintain or improve upon the performance of materials when it comes to protecting products. We are actively promoting a reduction in the use of packaging materials as well as improvement in packaging methods by developing and introducing lightweight packaging, use of packaging made from one material only, etc.

At Mitsubishi Electric, we set the goal of reducing packaging materials by 20% by fiscal 2000 (compared to fiscal 1995 level) and by 10% by fiscal 2002 (compared to fiscal 1998 level). In fiscal 2000, we used about 45,000t of packaging materials, 21% less than in fiscal 1995 and 7% less than in fiscal 1998.

Container and Packaging Recycling Law

The “Container and Packaging Recycling Law” requires that paper and plastic packaging containers be labeled as such as of April 1, 2001. We are labeling our containers based on the mandatory standards set by the Japanese electronics industry. In addition, the Paper Drinking Container Recycling Association and the Japan Cardboard Industry Association have set voluntary labeling standards for paper cups and cardboard containers, which are not covered by the “Container and Packaging Recycling Law.” For example, the Japan Cardboard Industry Association has created a recycle mark for cardboard. Mitsubishi Electric has adopted these additional, voluntary standards.

2000 Logistics Grand Prize from the Japan Institute of Logistics Systems

The Air-conditioning and Refrigeration Systems Works received this award as a result of its efforts in realizing a summarized distribution system on a production site through supply-chain management, which covered, with production at its core, all logistical considerations such as distribution and customer service.

Reducing Environmental Impact by Increasing Shipping Efficiency

We are striving to reduce the environmental impact of our shipping activities by reducing emissions of CO₂ and NOₓ. Efforts include the use of JR Railways (JR) container shipping, efficient use of large trucks, the use of sea shipping and joint shipping.

Expanding Modal Shift* to JR Container Shipping

Although trucking is the main means of shipping in Mitsubishi Electric’s distribution system, we are expanding efforts to switchover to JR container shipping, mainly for long-distance transport (more than 400km). Using the 3t container as the main basic measure, we have increased shipping volume from 6,050 containers in fiscal 1998 to 6,648 containers in fiscal 1999, and 12,686 containers in fiscal 2000.

Use of Large Trucks (more than 10t)

The key to controlling CO₂ and NOₓ emissions is reducing the number of trucks used. In order to limit the number of trucks used and increase load efficiency, we are promoting direct transport routes for trucks larger than 10t. Our use of large trucks (10t or more) was 44,000 in fiscal 1998, 41,000 in fiscal 1999, and 41,000 in fiscal 2000.

Use of Sea Shipping

We use domestic sea shipping for large products such as power generators and transformers. We shipped 22,500t by sea in fiscal 1998, 19,500t in fiscal 1999, and 21,600t in fiscal 2000, for an average of 20,000t per year over the period.

We are also promoting reforms in work activities and reductions in CO₂ and NOₓ emissions through such activities as joint transport arrangements with other companies and changing the battery type in the forklifts utilized in loading at our business sites and warehouses.

Increased Shipping Efficiency through Product Size Reduction

By reducing the size of our gas-insulated transformers, it is now possible to ship products on trucks that formerly required the use of trailers as well. In order to increase shipping efficiency, we are working to reduce environmental impact by reviewing product shape and size.
Water and Greenery Protection Activities

We are working to conserve water resources and protect the greenery of the planet. In order not to waste the Earth’s precious water resources, we are endeavoring to conserve and reuse water. In addition, we are expanding activities that raise employee awareness such as tree planting projects and setting up biotopes on the grounds of our facilities.

Water Usage
In fiscal 2000, Mitsubishi Electric used 15.71 million cubic meters of water resources, up 0.19 million cubic meters from the previous year. Of that used, we recycled and reused 5.84 million cubic meters. Recycled water thus came to 27% of the total water used by Mitsubishi Electric in fiscal 2000, 21.55 million cubic meters.

Biotope Natural Habitat
A biotope natural habitat (affectionately named “Dragonfly Pond”) has been created within the premises of the Transmission & Distribution, Transportation Systems Center. At the water’s edge, we planted asaka, cattails, and water lilies. Killifish swim in the pond, and little birds and dragonflies dance about. Along the street from the main gate, various plants are flourishing, including large cypress trees, azaleas, and Japanese cheery trees.

Mitsubishi Medaka—Friends of the Community
Formerly known as the Matsumoto River, the waterway that crosses the Fukuoka Works complex is derived from rainwater runoff and water expelled from the factory. However, the expelled water is processed so thoroughly that the waterway maintains a purity sufficient to support killifish (known as “medaka” in Japanese). These fish are called the “Mitsubishi Medaka” and are adored as the seed fish for the zoological/botanical gardens and schools in Fukuoka City.

Conservation of Forest Resources
We are involved in efforts to reduce our use of paper by utilizing alternatives such as e-mail and Intranet/Internet services. In addition to using high-percentage recycled paper for photocopying, catalogs, pamphlets, business cards and toilet paper, we also separate and collect paper for recycling. In fiscal 2000, our efforts resulted in the preservation of the equivalent of approximately 370,000 trees*1.

On a divisional basis, Electronic Devices used the largest amount of water over the year. This is because large quantities of water are used to wash parts and to serve as coolant water in machines. However, this division has also made the most progress in recycling water, and recycled water now makes up 97% of its total water use.

Recycling Waste PET Bottles into Uniforms
Fukuyama Works
Our work to conserve resources includes efforts on a more personal level as well. In April 2000, the Fukuyama Works introduced polyester work uniforms made from recycled PET bottles. One of the aims of this action is to increase employee awareness regarding recycling.

*1) One ton of used paper is equivalent to 20 logs (14 cm in diameter, 8 m long) as per the Green Procurement Network Guidelines.

Committee for the Cherry Blossoms of Zugaike Park
As part of the Kita-Itami Administration Center’s efforts to protect and expand the greenery of Itami City, since 1986, we have maintained (cleaning/weeding) approximately 700 Japanese cherry trees in Zugaike Park. For this activity, the center received a certificate of appreciation for “perennial contributions to building a better city through efforts with the environment and greenery” at a ceremony celebrating the city’s 60th anniversary.

Shin*1 Zendo*1—Fukuyama Works

Our work to conserve resources includes efforts on a more personal level as well. In April 2000, the Fukuyama Works introduced polyester work uniforms made from recycled PET bottles. One of the aims of this action is to increase employee awareness regarding recycling.
Actions to Reduce the Negative Environmental Impact of Production Processes

From materials procurement to waste disposal, we are considering the environment in our manufacturing processes through measures to procure environmentally friendly materials, reduce/eliminate the use of substances harmful to the environment, conserve energy, reuse resources, and reduce waste.

**Material**
- Effective use of resources—Resource conservation/recycling, reduction waste

**Procurement**
- Purchase environmentally friendly materials
- Reduce and eliminate use of substances harmful to the environment during production
- Switch to safe substances

**Manufacture**
- Reduce waste and promote resource reuse
- Conserve energy at production and administrative facilities
- Use natural energy sources

**Disposal**
- Reduce emissions and maintain control over substances harmful to the environment
- Recover, reuse, and/or neutralize greenhouse gases

**Energy**
- Efficient use of energy—Prevention of global warming

**Toxicity**
- Avoid use of substances that cause environmental damage—Chemical substance control
Preventing Global Warming through Energy Conservation

Although the objective of our energy conservation activities is the reduction of CO2 emissions, the main cause of global warming, these efforts are also financially sound activities that reduce costs. We are actively moving forward from the dual perspective of reducing environmental burden and cutting costs.

Results of Fiscal 2000 Activities
We are moving forward with voluntary efforts to conserve energy in order to reduce CO2 emissions. In fiscal 2000, total CO2 emissions came to 840,000t-CO2. Although this represents a 6% increase over the previous year, due to an 8% increase in sales, energy use decreased by 2% in terms of (carbon-equivalent) energy consumption to net sales.

Energy Use by Business Group
Although we manufacture a variety of electronic products, analysis of the company’s energy use by business group reveals that the Electronic Devices Group, which includes semiconductors, represents 59% of our total energy consumption, and the Industrial Automation Systems Group, which includes factory automation, ranks second at 14%.

Introduction of Photovoltaic Power Generation
Communications Systems Center
A 40kW photovoltaic power generation system was installed on the southern wall of a building at the Communications Systems Center to provide electricity for the compound.

Energy Conservation Efforts at a 24hr Factory
Kumamoto Factory
Because the Kumamoto Factory produces integrated circuits 24-hours a day, consuming about 200 million kilowatt-hours of electricity a year, the entire facility is dedicated to energy conservation. In recognition of this achievement, the Kumamoto Factory received the Kyushu Bureau of Economy, Trade and Industry Chief’s Prize for Excellence in Energy Management at a Production Facility. The major measures taken and their results are as follows:

Reduction of Production System Emissions
Reduced the load on exhaust treatment equipment and refrigeration machinery by returning heat exhaust from production equipment to the production area.

Introduction of Low-pressure Demineralized Water to Production System
Reduced the load on water pumps through the introduction of a low-pressure reverse-osmosis filter.

Introduction of Winter Cold Water System
Reduced the load on refrigerating machinery by pre-cooling water with cold air from outside.

Energy Conservation through Introduction of Micro-gas Turbine
Transmission & Distribution, Transportation Systems Center
A micro-gas turbine that is a version of an extremely compact, highly efficient co-generation system commercialized by Mitsubishi Electric has been introduced at Transmission & Distribution, Transportation Systems Center.

Company-wide Activities
All Mitsubishi Electric business sites are conducting energy conservation plans in accordance with their environmental management systems. In terms of company-wide activities, we have established an “energy conservation database” by compiling the results obtained from checking and reviewing energy conservation. We plan to make this information available to all business sites for the purpose of identifying and encouraging the spread of successful energy-saving measures.
Preventing Global Warming Caused by Greenhouse Gases other than CO₂

HFC (hydrofluorocarbon), which is used as a refrigerant in room air-conditioners and refrigerators, PFC (perfluorocarbon)*1, which is used in the manufacture of semiconductors, and SF₆ (sulfur hexafluoride), which is used as an insulator in electronic devices, are three gases with global warming effects that are hundreds to many thousand times greater than that of CO₂. Accordingly, the Kyoto Protocol included measures to reduce the emission of these gases. Mitsubishi Electric has been working to minimize the emissions of these gases since 1996 by means such as limiting their areas of use, promoting recovery, reuse and breakdown and conducting R&D to create substitute substances/technologies.

Reduction of HFC

Although CFC (chlorofluorocarbon) and HCFC (hydrochlorofluorocarbon) have been used widely as refrigerants in air-conditioning equipment, both are substances that are harmful to the ozone layer. Accordingly, Mitsubishi Electric eliminated the use CFC in 1995 and began a shift from HCFC to HFC (which is not harmful to the ozone layer) in 1998. This shift is scheduled for completion in major products by 2005 and in all products by 2010. However, because HFC is also a greenhouse gas, our long-term plan is the development of a substitute refrigerant technology that has less of an impact on global warming. Considering the shift from HCFC to HFC and the fact that HFC is a greenhouse gas of the same level as HCFC, Mitsubishi Electric expresses its emission reduction targets as indexed figures that combine HFC and HCFC. The following lists our emission reduction targets.

Reduction of PFC

Fluorine gases such as PFC, HFC, SF₆, and NF₆ (trifluoride nitrogen) are used widely in semiconductor manufacturers to clean production equipment. Mitsubishi Electric is conducting the following voluntary activities to reduce the use of PFC:

- Considering reductions in the amount of PFC used (through efficiency and process condition improvements).
- Considering the introduction of a PFC neutralization device (improve neutralization efficiency, evaluate test models).
- Considering substitute gases and PFC recovery/recycling methodologies (consideration, basic evaluation, test model evaluations).

Our PFC emission reduction targets and fiscal 2002 results are listed below.

Reduction of SF₆

SF₆ is used as an insulating gas in electronic devices and along with PFC in the production of semiconductors and liquid-crystal devices. In order to reduce the amount of SF₆ released into the atmosphere, we are working to improve the efficiency of our use of the substance, shift to a substitute substance, and develop new chemical solution techniques. We established the SF₆ Emissions Suppression Committee and are currently working to reduce and control the emission of SF₆ gas used for electrical insulation. Furthermore, an SF₆ gas recovery device is being introduced in order to collect SF₆ gas for reuse. The company’s SF₆ emission reduction targets and results are listed below.

[Examples of Gas Reductions]

Cyclopentane Foam

In the past, urethane foam was used in the insulation of refrigerators, with HFC used as a foaming agent. HCFC has been used as a replacement for chlorofluorocarbon substances banned by the Ozone Layer Protection Law in 1995. However, although HCFC has a low impact on ozone depletion, its effect is not zero. Mitsubishi Electric is gradually switching from HCFC to a cyclopentane foaming agent, a substance that is not only safe for the ozone layer, but also has an extremely small greenhouse effect in comparison with HCFC. The switchover in major products was completed by February 1999 and will be completed in all products by the end of 2004.

HFC and HCFC Emission Reduction Targets and Results

Maintain plant emissions below 0.2% of total amount handled by fiscal 2002.

<table>
<thead>
<tr>
<th>Year</th>
<th>Fiscal 1999</th>
<th>Fiscal 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions</td>
<td>2.280 t/yr</td>
<td>2.777 t/yr</td>
</tr>
<tr>
<td>As percentage of total amount handled</td>
<td>3.8%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Fiscal 1999</th>
<th>Fiscal 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions</td>
<td>85.1 t/yr</td>
<td>26.9 t/yr</td>
</tr>
<tr>
<td>As percentage of total amount handled</td>
<td>0.7%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

SF₆ Emission Reduction Targets and Results

Reduce plant emissions of PFC gas by 8% by fiscal 2002 (compared with fiscal 1998 levels); reduce plant emissions of liquid PFC (total greenhouse effect value) by 10% (compared with fiscal 1999 levels).

CVD *“Cleaning Gas Neutralization”

SF₆- (Perfluorobutane), a type of PFC, is being utilized as a cleaning gas to remove the film coating inside of the CVD equipment used in the manufacture of semiconductor devices. Part of the C.F₆ within the CVD equipment breaks down in the process of removing the film while the remainder is expelled through the use of a vacuum pump. We have reduced gas emissions by installing a neutralization device to breakdown the remaining C.F₆ following the use of the vacuum pump. *1 : A VFD Chemical Vapor Deposition

Establishment of Global Warming Business Promotion Committee to Pursue Business Opportunities Related to the Prevention of Global Warming

The effort to create international regulations to clean development mechanism projects, we established an internal global warming business promotion committee and are moving forward with planning.

We have already conducted a feasibility study for a joint project regarding a molten bus system in Mexico (AJZ), and are now investigating clean development mechanism opportunities in power generation plants, highly efficient fluorescent lighting, lighting fixtures, and creating energysaving model plants for developing countries through organizations such as the BeSeTo International Meeting between Japan, China and South Korea.

*1 : Emission Trading: An arrangement allowing for the sale of permits of greenhouse gas emissions reduction targets (emission permits) between national industrial facilities.
*2 : Joint Implementation: An arrangement allowing an industrial facility in one country to acquire additional emissions permits by participating in joint projects that reduce emissions in developing countries.
*3 : Clean Development Mechanism: An arrangement allowing advanced industrial countries to acquire additional emission permits by participating in joint projects that reduce emissions in developing countries.
Waste Reduction and Recycling Promotion Activities by Team of Internal Waste Management Experts

In order to make further advances in waste reduction efforts conducted independently at each business site in the past, a team of waste management experts from different business units was formed. This team investigates successful precedents within and outside of the company, tours business sites, and works with local managers to reach solutions to waste management problems. Cases and results from the team's activities have been compiled into a waste reduction case database that is available to all business sites and affiliated companies. The database currently contains 100 registered cases, and plans are to expand it through the successive registration of more results and cases.

As an example of activity results, along with strict separation efforts to reduce waste paper, the Shinsaiko Works asked a paper manufacturer to recycle waste paper (e.g., colored paper, heat-sensitive paper, paper cups, shredded paper) that was thought too difficult to recycle or incinerate in the past. This arrangement has resulted in 130t of waste paper being recycled into toilet paper each year.

Award for Distinguished Service in Recycling Promotion

Working to recycle calcium fluoride sludge as a basic material for cement since 1983, our five semiconductor facilities were jointly awarded the Mitsubishi Electric Semiconductor Group's Chairman's Prize for Distinguished Service in Recycling Promotion from the Council for Promotion of Recycling.

Measures for PCBs

In the aftermath of the 1968 KanemI cooking oil poisoning incident, when the effects of PCB on living organisms and the environment became clear, the Japanese Diet enacted the Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances in 1974. This law banned the production, importation, use of PCB. In addition, in 1992, national standards for the storage requirements of equipment containing PCB and PCB-contaminated materials were established under the Waste Disposal and Public Cleansing Law. Every year, Mitsubishi Electric and its affiliated companies make certain of the status of stored waste PCB materials (listed in the chart below) through environmental audits. Moving forward with efforts to appropriately breakdown the material as quickly as possible, we are cooperating in a plan proposed by national and local governments to establish a facility for the breakdown and neutralization of PCB over the next five years.

In recent years, it has become clear that dioxins are released from incineration facilities as a result of incineration. Accordingly, the Waste Disposal and Public Cleansing Law and the Law Concerning Special Measures against Dioxins have been established and provide strict standards for the building and maintenance of incineration facilities. There are 12 incineration facilities in active operation at Mitsubishi Electric sites, and all satisfy these legal standards. In addition, we are working to develop incineration and dioxin emission control and removal technologies.
Many chemical substances of various forms are utilized during the manufacturing process, and how best to control the environmental risks presented by these substances and maintain safety are important topics. The Special Measures to Promote the Improvement of Control/Measurement of Chemical Substance Emissions was added to the Environmental Law (Chemical Substance Control Law) and went into effect in April 2001. With this, the Pollutant Release and Transfer Register (PRTR): a registry that accounts for the release of chemical substances into the environment as well as the transport of chemicals) became a legal system and the first measurements of the quantities of targeted chemical substances began. In addition to the “first category chemical substances” targeted for PRTR by the new law, Mitsubishi Electric is controlling and measuring other substances on a voluntary basis.

Review of Chemical Substances Controlled by Law
Since fiscal 1997, Mitsubishi Electric has prohibited the use of 27 types of chemical substances and targeted 488 other chemical substances for the company’s voluntary control system. In addition to the first category chemical substances announced for the PRTR in the Chemical Substance Control Law of September 2000, a Mitsubishi Electric Chemical Substances Control List was drafted. It includes alternate CFCs and SF₆ (sulfur hexafluoride), substances that place a considerable burden on the environment if released in large quantities. The new classification system is shown in the accompanying chart.

Our selection and classification of chemical substances for control reflects the requirements of the Chemical Substance Control Law, other national and international laws, voluntary industrial control plans, and Mitsubishi Electric Group's own position regarding the emission of substances into the environment. The Chemical Substances Subcommittee of the Environmental Technologies Committee, an internal group of chemical substance experts, debates and determines standards in this area.

Chemical Substance Control System
Mitsubishi Electric calculates chemical substances from data regarding the types of substances in purchased materials and their content percentages by combining EDI (Electronic Data Interchange) transaction data for materials purchased at operations sites and MSDS (Material Safety Data Sheet) information received from chemical manufacturers. Our chemical substance control system is also capable of automatically determining the release and waste transfer amounts based on past results.

Appropriate Control of Chemical Substances

Mitsubishi Electric PRTR
Mitsubishi Electric utilized a total of 53 chemical groups (81 different types) in fiscal 2000. With the exception of the greenhouse gases introduced on page 31, the material balance of controlled substances is as follows.

In the Home Appliances Group, the urethane used in refrigerators and air-conditioners makes up a majority of all substances handled. In terms of the amount released into the environment, the Industrial Automation Systems and Energy and Electric Systems groups combined represent 72% of the total. For the Electronic Devices Group, where removal treatment and recycling amounts are high, the amount of substances released into the environment is smaller than the amount of quantities handled.

Fiscal 2001 Plan for Reduction in Toluene and Xylene Group Substances
Toluene and xylene group substances, two materials released into the environment in great quantities, have the following properties:

- Breakdown and dispersal in the open atmosphere within a few days to a few months
- Easily broken down by microbes
- Low potential to concentrate in living organisms
- Inexpensive
- Superior performance (corrosion resistance, coloring, etc.) when used in paint

While having many advantages as industrial substances, these materials have also been reported to have a negative effect on the central nervous system and kidneys. While always giving sufficient care to the handling of these substances, we are using innovative techniques to reduce their uses and find substitutes for them. Activities include switching to water-soluble paints and spray/powder painting, using thin films, using paints containing limited amounts of toluene and xylene group substances (slurry), etc.

By combining the above efforts, we will reduce the emission of toluene and xylene group substances into the environment.

Actions Related to Groundwater Issues
In June 1998, Mitsubishi Electric responded to the then Ministry of International Trade and Industry’s request to the electrical and electronics industries to conduct individual surveys of groundwater contamination levels. As a result of investigating all sites, we confirmed that organic chloride compounds were detected in the groundwater at nine (Koriyama, Sagami, Kyoto, Kita Imai, Amagasaki, Himeji, Wakayama, Fukuoka, and Nagasaki) out of 29 sites in Japan. We immediately reported the contamination to local authorities in the vicinity of each site, and proceeded with clean-up procedures with their guidance.

In December 2000, while conducting an environmental assessment of a lot previously used for the old Kumamoto No.1 Plant (closed in 1999) in accordance with company rules in order to reuse the land, we detected contaminated groundwater and immediately reported it to the Kumamoto City government. Here too, we are proceeding with clean-up procedures under the guidance of the local government.

By the end of fiscal 1999, Mitsubishi Electric eliminated the use of organic chloride compounds that cause groundwater contamination. For further information regarding the efforts of our domestic affiliated companies in managing groundwater issues, please refer to page 38.

Materials Balance

Change in Release and Transfer of Chemical Substances Targeted for Control

Mitsubishi Electric PRTR

Quantities Handled and Emitted by Business Group

In the accompanying chart, the amount of chemical substances released into the environment amounted to 755 t, or 27% of the total 2,761 t of chemical substances purchased in the year. Of this, 73% (552 t) was released into the atmosphere. Of the materials released into the atmosphere, 71% was toluene and xylene group substances utilized in paint solvents.

The total amount of chemical substances released into the environment in fiscal 2000 fell by 18% compared to the fiscal 1997 level. The two main emission routes were release into the atmosphere and transfer as waste.

<table>
<thead>
<tr>
<th>Business Group</th>
<th>Quantity Handled and Emitted (Fiscal 2000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emitted into atmosphere</td>
</tr>
<tr>
<td>Home Appliances</td>
<td>687 t</td>
</tr>
<tr>
<td>Electronic Devices</td>
<td>490 t</td>
</tr>
<tr>
<td>Industrial Automation Systems</td>
<td>374 t</td>
</tr>
<tr>
<td>Systems</td>
<td>250 t</td>
</tr>
<tr>
<td>Energy and Electric</td>
<td>172 t</td>
</tr>
<tr>
<td>Home Appliances</td>
<td>155 t</td>
</tr>
<tr>
<td>Electronic Devices</td>
<td>107 t</td>
</tr>
<tr>
<td>Industrial Automation Systems</td>
<td>81 t</td>
</tr>
<tr>
<td>Systems</td>
<td>62 t</td>
</tr>
<tr>
<td>Energy and Electric</td>
<td>44 t</td>
</tr>
</tbody>
</table>

Trend in Trichloroethylene Emitted into the Atmosphere and Amount Purchased
M Effective Use of Resources
A total of 102 alterations in 19 product categories were made related to improving ease of disassembly, reducing packaging, encouraging resource reuse, reducing product weight, etc. Through structural innovations, we improved the ease of disassembly for the Tankuro packaged air-conditioner (Tada Electric Co., Ltd.) and a communications cubicle (Ryoden Electronics & Machinery Co., Ltd.) by 20 and 10%, respectively.

E Efficient Use of Energy
A total of 13 alternations in 18 product categories were made for improvements such as reducing power consumption in active and standby modes. We achieved zero standby mode power consumption for our microwave oven ranges (Home Appliances Group).

T Avoid Use of Substances that Cause Environmental Damage
Chemical substances evaluated in this area include lead, vinyl chloride, mercury, chromium 6, greenhouse gases, and brominated flame retardant. A total of 53 alternations covering reductions in the use of substances in manufacturing processes and products were made. We reduced the use of lead in the manufacturing process of refrigerated showcases (Nihon Kentetsu Co., Ltd.) by 30% and the use of mercury in circular fluorescent lamps (OSRAM-MELCO Co., Ltd.) by 50%.

Groundwater-related Activities
From fiscal 1999 to fiscal 2000, all affiliated companies conducted voluntary groundwater testing based on the then-Environmental Agency’s Environmental Quality Standards for Soil/Groundwater Pollution. Companies that detected contamination in the test results reported the pollution to relevant authorities and proceeded with clean-up efforts. Our affiliated companies have also set the goal of eliminating the use of organic chloride compounds, the major cause of groundwater pollution, by the end of fiscal 2001. The five companies that continued to use these substances moved ahead with substitution plans, and as a result, utilization of the substances was halted by the end of April 2001.

Elimination of Organic Chloride Compounds (Introduction of Device to Remove Oils without the Use of Organic Solvents)
Mitsubishi Electric METECS Co., Ltd.
Mitsubishi Electric METECS Co., Ltd. (METECS) produces copper alloys such as phosphor bronze and nickel silver used in connecters in electric products, lead frames, etc. In order to meet customer demand regarding the length and width of sheets made from these copper alloys, after melting and casting, METECS had to roll them, subjecting it to repeated heat treatment. In order to obtain pure surface quality, after the last rolling, the alloy was treated with an organic solvent of the chloride family and residual oils from the rolling mill were removed. In March 2001, METECS introduced new equipment enabling the use of a basic aqueous solution to remove the residual rolling mill oil. This enabled elimination of the use of organic chloride compounds while maintaining product quality.
ISO 14001 Certification
In fiscal 2000, 14 sites of 14 domestic affiliated companies and 2 sites of 2 overseas affiliated companies received ISO 14001 certification. In total, 35 sites of 32 domestic affiliates and 10 sites of 10 overseas affiliates have received certification.

### Certification Results of Plan-drafting Companies

<table>
<thead>
<tr>
<th>Country</th>
<th>Company Name</th>
<th>Certification Date</th>
<th>Certifying Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Nihon Keizai Shimbun Co., Ltd.</td>
<td>May 24, 2000</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Taku Electric Co., Ltd.</td>
<td>May 24, 2000</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Taku Industrial Corporation</td>
<td>August 9, 2000</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Sonne Technica, Inc.</td>
<td>October 6, 2000</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Shinyo Electronics Co., Ltd., Kamakura Factory</td>
<td>November 24, 2000</td>
<td>JACO</td>
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<tr>
<td></td>
<td>SPC Electronics Corporation Shitamata Factory</td>
<td>November 25, 2000</td>
<td>JACO</td>
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<tr>
<td></td>
<td>Advanced Display Co., Ltd.</td>
<td>December 27, 2000</td>
<td>JACO</td>
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<tr>
<td></td>
<td>Koyo Electric Co., Ltd.</td>
<td>January 29, 2001</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Sumo Electric Co., Ltd.</td>
<td>March 9, 2001</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Mitsubishi Electric Systems Service Co., Ltd.</td>
<td>March 14, 2001</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Nihon Kontetsu Co., Ltd., Headquarters/Facility</td>
<td>March 19, 2001</td>
<td>JACO</td>
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<tr>
<td></td>
<td>Mitsubishi Electric Micro-Computer Application Software Co., Ltd., Headquarters</td>
<td>March 23, 2001</td>
<td>JACO</td>
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<tr>
<td></td>
<td>Ryuden Electro Mechanics Corporation.</td>
<td>March 28, 2001</td>
<td>JACO</td>
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<tr>
<td></td>
<td>Miyoshi Electronics Corporation, Hiroshima Headquarters</td>
<td>March 28, 2001</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Higashihama Recycle Center</td>
<td>April 18, 2001</td>
<td>JACO</td>
</tr>
<tr>
<td>China</td>
<td>Mitsubishi Electric Oriental Industrial Products Co., Ltd.</td>
<td>November 21, 2000</td>
<td>*4</td>
</tr>
</tbody>
</table>

### Certification Results for Companies Other Than Plan-drafting Companies

<table>
<thead>
<tr>
<th>Country</th>
<th>Company Name</th>
<th>Certification Date</th>
<th>Certifying Authority</th>
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</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Mitsubishi Electric (China) Co., Ltd.</td>
<td>November 24, 2000</td>
<td>JACO</td>
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<tr>
<td></td>
<td>Tajiri Museum Co., Ltd.</td>
<td>March 9, 2001</td>
<td>JACO</td>
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<tr>
<td></td>
<td>BCC Corporation</td>
<td>March 14, 2001</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Mitsubishi Electric Osman Co., Ltd.</td>
<td>March 19, 2001</td>
<td>JACO</td>
</tr>
<tr>
<td></td>
<td>Munsu Electric Co., Ltd.</td>
<td>March 19, 2001</td>
<td>JACO</td>
</tr>
</tbody>
</table>

ISO 14001 Certification

Mitsubishi Electric Systems Service Co., Ltd. received ISO 14001 certification at all 170 of its sites across Japan. This was in response to rising demand for a selection of environmentally friendly parts from companies conducting maintenance checks as a result of the enactment of laws such as the Home Appliance Recycling Law. Having eliminated the use of surface-active agents used in cleaning and packing materials that generate dioxins when incinerated, the company has established a system to select and utilize components and materials with low impact on the environment.

Examples of Affiliated Companies’ Environmental Activities

**Achieving Zero Emissions Mitsubishi Electric Kumamoto Semiconductor**

Mitsubishi Electric Kumamoto Semiconductor, together with six partners, received ISO 14001 certification in July 1998 and achieved zero emissions (100% resource reuse rate for industrial waste) in February 2001. Beginning with the setting up of a waste collection area, the company then established strict waste collection and separation, a waste measurement system, and finally a recycling certification system. In July 2000, the company began providing its waste plastic (embossing tape, dialing tape, etc.) to the steel industry as starter material for electric furnaces and other residual plastics as material for roadbed construction. In January 2001, the company began treating nitric acid, fluoride plating liquid, and wastewater from the plating process and reused this liquid as cooling water for incinerators. In addition, lead is recovered from inorganic sludge and re-used as basic material for steel by companies. As a result of these efforts, the factory has achieved a 100% resource reuse rate. For the future, in addition to maintaining zero emissions, the factory is also working to reduce the total emissions of industrial waste.

**Introduction of Micro-gas Turbine Co-generation System Mitsubishi Electric Osram Co., Ltd.**

At the Kakegawa Factory of Mitsubishi Electric Osram, employees have united in energy conservation activities, an important part of the plant’s environmental management system. As a result, the factory has achieved a 30% reduction in CO2 emissions per lamp produced (compared to the 1993 level). In fiscal 2000, the factory introduced a micro-gas turbine co-generation system with the aim of reducing CO2 emissions through improved energy efficiency. This system, which has a maximum output of 28kW, is capable of recovering 47Mcal/hr of thermal energy and improves energy efficiency by a maximum of 75%. Japan’s first LFG model, the system, which internalizes the heat recovery equipment, is compact, low-noise and low-vibration. The power generated can be used to light busy production lines, and the system produces sufficient heat to meet the demands of kitchens, baths, etc. during high modes of operation.

**Steam Boiler Drain Water pH Neutralizer Toyo Takasago Dry Battery Co., Ltd.**

Toyo Takasago Dry Battery received ISO 14001 certification in November 1998. In November 2000, the company installed a pH neutralizer when sewage water testing revealed pH readings below but close to the regulation level, even though overall water quality was found to be acceptable. The introduced device reduced the pH level from 8.5 to less than 7.5. In addition, the company began recycling rubber (20%), paper and cardboard (10.2%), and wood (5.7%), which were previously discarded as waste. Promoting the use of recycled materials, the company is utilizing recycled material in its TPU (thermoplastic polyurethane) resin (0.8t, recyclable resource percentage of 3.5%).

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**Examples of Affiliated Companies’ Environmental Activities**

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Environment-related Business

In addition to the numerous activities that focus on reducing environmental impact, Mitsubishi Electric is active in environment-related businesses. We believe that environmental gains from our activities to lessen environmental burden and our efforts to commercialize newly developed environmentally friendly technologies can support the environmental policies of our customers as well. Here, we introduce topics in our environment-related businesses for fiscal 2000.

Compact, High-performance Photovoltaic Power Generation System

This system supplies power through the conversion of DC (direct-current) power generated by solar cells into AC (alternating current) power. As a new energy source, this system is not only environmentally friendly, but in combination with a storage cell it can also function as an emergency power supply during times of natural disaster. We have marketed various systems including one for residential homes, one for use in public buildings such as schools and community centers and one for use in factories and offices, among others. With these new systems, we have improved the basic functionality of the solar cell module and expanded the variations available.

Avoiding Residual Plastics

Waste with Electrostatic Separation

Although residual plastics generated in the recycling process can be used in materials recycling and as blast furnace refractory, this is not feasible if vinyl chloride is mixed into the plastic. An electrostatic separation device can sort materials using a dry process in the place of the conventional wet separation process that utilizes liquid densities. Capable of removing 99.9% of metal and vinyl chlorides and improving material purity by accurately separating 95% of the subject plastics, the system enables the recovery of 99% of recyclable plastics. With a processing capacity of 4000 kg/hr, the unit is also capable of continuous operation.

Ultracompact Incinerator with Ash-melting System with Resource-saving Design

This incinerator ash-melting system, which reaches the melting point rapidly through the use of high-power density radiation, breaks down dioxins. Its special characteristics include a resource-saving, compact design, elimination of the need for exhaust treatment since burning is not involved, and ease of maintenance. The system has a processing capacity of 100 kg of incinerator ash per day (1st capacity), and its volume has been reduced to one-fourth of its original size.

Energy Information Management Service

The Diamond Solution Plaza has begun operations that allow the easy incorporation of the electronic "manifest" developed by the Japan Waste Network with a client’s individual waste management database. Using the Environmental Information Management Service, which contains the manifest data, customers can improve administrative efficiency by communicating with registered waste transport and disposal service providers electronically. The service has been updated to handle changes made to the "Waste Management Law" enacted on April 1, 2001.

ESS (Energy Solution Service) - Applying Energy-saving Know-how to Business

Mitsubishi Electric is developing an ESS that realizes energy-saving and cost-cutting measures without sacrificing comfort or convenience. This is being done by fusing information technologies (IT) with developments on highly efficient co-generation systems, miniature micro-gas turbines that can be positioned in dispersed patterns, and various other power generation systems (e.g., fuel cell, photovoltaic, wind power). Mitsubishi Electric guarantees cost reduction and since the savings recovers capital investment costs, there is no need for further investment on the customer’s part during the early stages of the service agreement. Our integrated consulting service also frees customers from bothersome work related to installation and operation, such as the initial energy conservation inspection and follow-up activities. This service also has the environmental merit of advancing energy conservation policies at more companies. In September 2000, we began the operation of an ESS verification plant that serves as a storage facility for all types of related data and know-how (see page 30) at our Transmission & Distribution, Transportation Systems Center.

PFC (perfluorocarbon) Gas Neutralizer for Neutralizing Greenhouse Gases

Fluoride gases such as PFC (e.g., C2F6, C3F8) HFC, SF6, and NF3 are widely used for dry etching and cleaning production equipment in semiconductor manufacturing processes. As PFC is designated as a greenhouse gas, Mitsubishi Electric is working on ways to reduce the use of, create a substitute for and recover/recycle this gas (see page 31). We are currently studying the introduction of a PFC neutralizer and commercialization of the technology. This device utilizes a discharge breakdown method under atmospheric pressure and there is no combustion involved, thus the generation of NOx is limited. With few parts being subject to wear, maintenance is easy. In addition, as the use of heating is unnecessary, the resultant ability to respond instantaneously to starts and stops on the production line lowers operating costs.
Improving employee awareness about the environment is indispensable to corporate efforts for creating environmentally friendly products and operations. Mitsubishi Electric is promoting technological education through technology seminars as one means of realizing the creation of environmentally friendly products. Additionally, we broadcast seminars via satellite to impart basic knowledge of environmental problems to all employees.

**Employee Education**
Mitsubishi Electric conducts the following programs to educate employees regarding the environment.

**Technology Committee**
In 1997, we established the Environmental Engineers Society, a group created to promote the voluntary development and storage of environmental technologies through employee interaction. The society is also working to strengthen the company’s technological efforts such as Design for the Environment (DFE).

**Mitsubishi Electric Technology Seminars**
The company holds a variety of technical seminars ranging from lectures for trainees by guest speakers at training facilities to in-house satellite broadcasting of lectures company-wide. In addition to themes like ISO 14001, among others, seminars focusing on DFE began in 1997 (see page 18 for details).

**Lectures via Satellite Broadcast**
Utilizing a satellite communications system has increased the effectiveness of giving lectures by enabling us to reach an increasingly larger number of employees. Communication links connecting many locations allow interactive, informative discussions between lecturers and trainees.

**Mitsubishi Business Seminars**

**MBS Courses**
On Environment Day (June 5th) every year, a program entitled "Mitsubishi Electric's Concept for the Environment - A Challenge for the Future" is broadcast throughout company sites in Japan via an internal satellite communication network.

**Regional Activities**
Mitsubishi Electric has sites in every region of Japan and we are participating in various regional activities designed to deepen environmentally themed exchanges with local citizens. A few of these activities are introduced below.

**Participation in Shizuoka Prefecture Environmental/Social Welfare/Technology Fair**
The Shizuoka Works participated in the Shizuoka Prefecture Environmental/Social Welfare and Technology Fair that was held over three days beginning on November 23, 2000. Based on the concept of “Harmonizing the environment, social welfare and technology,” the fair offered proposals for fostering personal lives and societies that are friendly to the environment through universal designs and environmental considerations. Beginning from the 1st Environmental Fair, the Shizuoka Works has exhibited environmentally friendly air-conditioners and refrigerators.

**Participation in Recycling Fair**
The Kitaitami Administration Center participated in the “Recycling Fair” held at Itami’s Koyaike Park on October 14, 2000. The Semiconductor Division exhibited reusable tube trays, recyclable isopropyl alcohol and calcium fluoride sludge.

**Roadside Cleanup by Factory**
The employees of the Nagoya Works are involved in cleaning activities that emphasize the importance of living together with the Earth. In addition to cleaning a 1km stretch of walkway everyday, ten times a year, employees volunteer to pick up trash at the nearby Nagoya Dome on mornings following professional baseball games. In recognition for these steady activities, Nagoya City awarded the works the Nagoya City Award for Distinguished Efforts in Road Care Management in August 2000.

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**Environment-related Education**

**Company-wide Activities**
- Technology subcommittees
- Technology seminars
- Lectures via satellite broadcast
- General training
- MBS (Mitsubishi Business Seminar) courses
- Sales courses

**Individual/Site Activities**
- Development of managerial staff responsible for anti-pollution and energy issues
- Education of internal auditors
- Separate training
- New employees, group leaders
- Training for new managers, new supervisors, newly appointed department heads, new section managers, and new group leaders
Mitsubishi Electric has issued an environmental report annually since 1998 for the purpose of informing the public about the environmental activities of the Mitsubishi Electric Group. We recently began expanding our communication activities, including a briefing on the environmental report and participating in various exhibitions.

Environmental Communication
Publication of Annual Environmental sustainability Report
An environmental sustainability report is published annually in both Japanese and English. The report, concentrating on the company's Environmental Plan, also introduces various corporate activities related to the environment. The corporate website also includes information about our environmental activities.

Semiconductor Division Issues Its Own Environmental Report
We are promoting information disclosure, not only at the Mitsubishi Electric Group level, but also at the business group and individual site levels.

Environmental Report Briefing
On June 30, 2000, Mitsubishi Electric held a briefing on the 1999 environmental report for members of the press and representatives from non-governmental agencies, etc. In addition to providing an overall outline of the document, presenters reported on individual activities. The assembly of individuals from various sectors of society produced a wide range of questions. Although this was a first-time experience for the Mitsubishi Electric Group, a favorable reception was received from those who attended. It is planned to continue this event in the future as part of expanding our environmental communication activities.

Opinion Mailbox Created
We set up an e-mail address (eqd.eco@hq.melco.co.jp) to receive opinions about our environmental activities from both inside and outside the company. Most of the messages received so far have been requests for copies of our environmental report. As of this writing, we have also received 67 messages regarding requests for Mitsubishi Electric surveys and questions about products.

Eco-Products 2000 Exhibition
Mitsubishi Electric has participated in "Eco-Products," a trade show designed to raise the environmental awareness of manufacturers and consumers and to promote the spread of eco-products (environmental consious products) since December 1999. At Eco-Products 2000 (December 14-16, 2000), we exhibited our efforts related to the recycling of home appliances and the DFE activities of the Mitsubishi Electric Group.

Towards Drafting the Next Report...
Efforts to Improve the Environmental Sustainability Report

Mitsubishi Electric incorporates the opinions expressed by people who read the previous year’s report into new reports. This year, we have gathered experts involved in the environmental field and asked their opinions regarding what our environmental report should be as well as what is expected from our environmental activities. Below is an excerpt from a 2-hour discussion regarding our environmental report at the headquarters of Mitsubishi Electric Corporation on February 7, 2001. (A complete version will be posted on the corporate website at a later date.)

[Participants]
Mr. Itaru Yasui, Professor, Production Technology Research Center, University of Tokyo
Mr. Masaru Nakagawa, Assistant Manager, Environmental Management Promotion Department, Japan Management Association
Ms. Toshie Inoue, Manager, Environmental Audit Department, Chuo Aoyama Audit Corporation
Mr. Ikuo Sugimoto, Chief Coordinator, Environmental Citizen Group
Mr. Wataru Minami, Managing Director, LCA Applied Technology Research Center/Graduate Student, Toyohashi Technology University

A More User-friendly Environmental Report

It has been pointed out that our 2000 report “has an abundance of good information, but is not easy to read” and is “difficult for the average person to understand.” Mr. Minami commented, “You will probably distribute this report to job seeking college students, but I wouldn’t want to have to read something this thick. (laugh) Please create a report that maintains a level of detail but has fewer pages and is easier to read.”

This year, we have organized the information systematically and created headers on each page summarizing the goals of each activity. However, we still need to work on the problem of the information being too specialized since many products are industrial equipment. Mr. Yasui pointed out that, “If Mitsubishi Electric’s position was indicated relative to other companies’ positions in the electric industry, the listed data would be easier to understand.” Currently, it is difficult to compare our efforts with other company’s efforts, but we will bear this issue in mind.

Mr. Sugimoto pointed out that, “Even though the report uses 100% recycled paper, because of the whiteness of the paper, it looks too luxurious.” Starting with the 2001 report, we will use 70% whiteness, 100% recycled paper.

Ms. Inoue rated our “explicit disclosure of groundwater pollution” quite highly. We will continue to disclose as much information (even negative information) regarding groundwater pollution.

Does Our Environmental Report Have Personality?

Mr. Nakagawa, who through his work reads other companies’ reports, answered, “I’d like to read something more interesting.” Mr. Yasui also suggested, “In addition to improving the style of the current report, what about developing a unique style?”

We have noticed that the role of environmental reports is shifting from an information disclosure tool to a communication tool. We believe that we can also use the report more as a communication tool if we can incorporate our views regarding what should be done for the environment. We believe that people want to know the everyday efforts of each individual employee’s environmental protection activities.

Dilemma of Using Forest Resources in Printing the Report

Mr. Nakagawa pointed out, “Is it even necessary to distribute the environmental report using valuable forest resources?” We have also received opinions such as “It’s wasteful to use so much paper and such high-quality paper. Some people will argue that it is bad for the environment. Future environmental reports should be distributed electronically and information printed on paper should be limited to the most important information. Printed reports should be given to people that are interested in the environment or Mitsubishi Electric.” In this regard, we believe that it is an issue that needs to be actively pursued since information technology (IT) is one of our operations. Mitsubishi Electric is making every effort to continue to provide a valuable environmental report. Please send us your opinions and requests using the attached survey sheet or by email.

Questionnaire Mailing Address:
Corporate Environmental Management Planning Department
Mitsubishi Electric Corporation
Mitsubishi Electric Building
2-2-3 Marunouchi, Chiyoda-ku,
Tokyo 100-8310, Japan
Int’l Fax: 81-3-3218-2465
E-mail: eqd.eco@hq.melco.co.jp
Safety Measures regarding the Use of PCB (polychlorinated biphenyl) in Ballast Devices for Industrial/Commercial Fluorescent Lighting

In Japan, the production of ballast devices that use PCB for industrial/commercial fluorescent lighting was terminated in 1972, yet some facilities continue to use them. Last fall, there was an incident where a ballast device using PCB exploded because it was being used beyond its lifecycle capacity. Due to this accident, the Japan Lighting Industry Association began a PCB Lighting Equipment Check & Change Movement to facilitate and advocate information disclosure and information exchange. Mitsubishi Electric Lighting Corporation is actively participating in this movement through its public relations activities, providing information to teacher associations and personnel involved in the installation, distribution and retail of lighting equipment at all levels across the nation.

Lighting devices with PCB ballast devices include industrial/commercial fluorescent lighting equipment, mercury lighting equipment, and sodium vapor light equipment produced between 1957 and 1972. The model names of the applicable equipment can be found on the website of Mitsubishi Electric Lighting Corporation. Please note that PCB is not used in household fluorescent lighting fixtures since the production process differs from industrial/commercial lighting.

For further questions, please contact:
Mitsubishi Electric Lighting Corporation, Lighting Technology Center
Tel: 0120-384-027 (toll free within Japan)
Homepage: http://www.lsg.melco.co.jp/mlf/ (in Japanese)

Collection and Recycling of Used Computers*

Mitsubishi Electric Information Technology Corporation has joined forces with Green Cycle Systems Co., Ltd. of the Mitsubishi Electric Group and four other recycling companies in Japan to create a collection and recycling system for used computers. We are currently developing a system where recyclable parts are utilized as spare components and the remaining material is crushed, separated and processed through material or thermal recycling, thereby nearly eliminating the need for landfill disposal.

For further questions, please contact:
Diamond PC Corporation, Information Processing Systems Recycle Center
Int’l Tel: 81-3-5487-4639 (Japan time zone: 9:00-17:00, closed Sat/Sun/Holidays)
Int’l Fax: 81-5487-4852
Homepage: http://www.diapc.co.jp/user/solution/diarcs/recycle.html (in Japanese)

Collection & Recycling of Small Auxiliary Batteries

Mitsubishi Electric is participating in the creation of a sustainable society through partnerships with battery manufacturers. We are working together to establish processing facilities and appropriate treatment for used small auxiliary batteries (e.g., nickel-cadmium, nickel-hydrogen, lithium, small capsule-type lead storage) used in our products after they are collected at the Small Auxiliary Battery Center*.

For further questions, please contact:
Mitsubishi Electric Corporation, Corporate Environmental Management Planning Department
Int’l Tel: 81-3-3218-9024
Int’l Fax: 81-3-3218-2465
Homepage: http://www.melco.co.jp/kankyo/battery/ (in Japanese)
E-mail: eqd.eco@hq.melco.co.jp

* For additional information, please visit the Mitsubishi Electric website.