

# **Environmental Sustainability Report 2005**



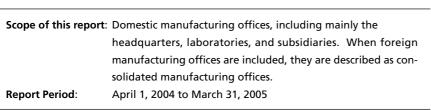
Victor Company of Japan, Limited

# **Company Outline**

| Company Name:    | Victor Company of Japan, Limited (JVC)                                 |
|------------------|--|
| Head Office:     | 3-12, Moriya-cho, Kanagawa-ku, Yokohama, Kanagawa, 221-8528, Japan     |
| President:       | Masahiko Terada  |
| Established:     | September 13, 1927   |
| Paid-in Capital: | 34,115 million (March 31, 2005)  |
| Sales Amount:    | Consolidated 840,590 million (March 31, 2005)                          |
|                  | Non-consolidated 448,781 million (March 31, 2005)                      |
| Number of        | Consolidated 34,493 (March 31, 2005)                                   |
| Employees:       | Non-consolidated 7,399 (March 31, 2005)                                |
| Business Lines:  | Research, development, manufacturing and sales of audio, visual,       |
|                  | computer-related consumer, professional electronics, media products,   |
|                  | electromagnetic tapes, disks, and electronic devices etc.              |
| Main Products:   | Consumer Electronics   |
|                  | VCRs, video cameras, color TVs, stereos and other related electronics, |
|                  | car audio, DVD players, CD/stereos, etc.                               |
|                  | Professional Electronics   |
|                  | Professional and educational electronics, information devices, karaoke |
|                  | systems, projectors etc.   |
|                  | Electronic Devices   |
|                  | Display components, high-density multi-layered circuit boards, motors, |
|                  | optical pick-ups   |
|                  | Software/Media   |
|                  | Music, image software and recording media such as CDs, DVDs and video  |
|                  | tapes  |
|                  |  |

Other

Interior furniture, production equipment etc.



#### Inquiries -

#### **Environmental Group**

3-12, Moriya-cho, Kanagawa-ku, Yokohama, Kanagawa, 221-8528, Japan Tel: 045-450-2512 Fax: 045-453-1406 Country code: 81 Inquiries also accepted through our Web page or through the questionnaire at the end of this report.

Issued:January, 2006Issuing Section:Environmental Administration, Victor Company of Japan, Limited

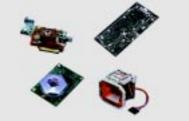
Our Web page: http://www.jvc-victor.co.jp/







Tape/disc media

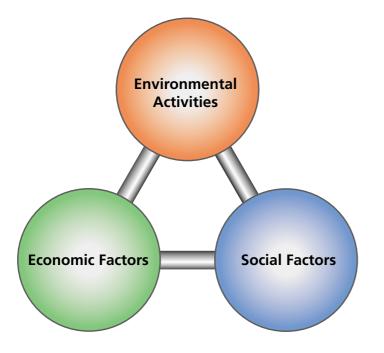


Industrial parts/devices



# 目次

F



# Publication of Environmental Sustainability Report

The activities of our company are sustained through the use of the limited resources and energy on our planet. Therefore, we feel that it is our obligation to use these resources with the least amount of waste and in the most sustainable way possible. Further, not only will we focus on our own economic activities but, at the same time, make meaningful and multifarious contributions to the world. However, these contributions must not be temporary ad hoc measures, but rather be sustained in the long term by our economic performance.

Using the above perspective, the JVC Environmental Sustainability Report 2004 was created with the intention to clearly establish the objectives, accomplishments, aims and concepts of those activities within the three aspects of Environmental Activities, Economic Factors and Social Factors. In the creation of this report, we used the Environmental Reporting Guidelines issued by the Ministry of the Environment, but this report may still be insufficient for the reader. A questionnaire was included at the end of this report to facilitate reader feedback. JVC's Web page also offers a mail form for readers that wish to make comments online.

We view this report as a valuable tool for communication, and we would be grateful to receive any comments and suggestions.

# Preface Company Outlin

| Company Outline              | 1 |
|------------------------------|---|
| Contents                     | 2 |
| Greetings from the President | 3 |
| nvironmental Report          |   |
| Pasic Environmental Policy   | л |

Preface

| Basic Environmental Policy                       | 4  |
|--|----|
| Environmental Activity Promotion<br>Organization | 5  |
| Environmental Audits                             | 6  |
| Promoting the Voluntary                          |    |
| Environmental Action Plan                        | 7  |
| Environmental Accounting                         | 9  |
| Measures for the Discontinued                    |    |
| Use of Poisonous Chemicals                       | 10 |
| Measures towards Recycling                       |    |
| Used Products                                    | 12 |
| Customer Satisfaction(CS)/Eco-                   |    |
| Product Development                              | 14 |
| Green Logistics                                  | 15 |
| Measures for Energy Conservation                 |    |
| and Global Warming Prevention                    | 16 |
| Measures for Waste Reduction                     | 17 |
| Reduction of Environmentally-Harmful             |    |
| Substances and Appropriate Management            | 18 |
| Air Conservation                                 | 19 |
| Soil and Water Conservation                      | 20 |

# **Economic Report**

| Economic Report   | 22       |
|---|----------|
| Social Report   |          |
| Employee Relations                                      | 24       |
| Customer Relations                                      | 26       |
| Regional/Civil Relations                                | 28       |
| References<br>Questionnaire<br>History of Environmental | 30<br>32 |
| Conservation Activities                                 | 34       |
| <b>Columns</b><br>Trends in Environmental Regulations   |          |
| and Laws Concerning Our Products                        | 11       |
| Recycle Rate and Recovery Rate                          | 12       |
| Dumping of Container/Wrapping Waste                     | 13       |
| Utilizing MSDS  | 18       |

# **Greetings from the President**

The Kyoto Protocol came into force February 16th of this year. In order to fulfill commitments made to the international community to achieve the planned reduction in green house gases, Japan is continually making various proposals for policies and measures, which include the strengthening of regulations, such as the plan to achieve the goals of the Kyoto Protocol and revision of the laws for energy conservation. In addition to this, the collection and recycling of scrapped products based on the WEEE Directive began in the EU on August 13th; and the July 1st, 2006, enforcement of the RoHS Directive will close the EU market to any products that contain specific toxic chemical substances. The US and China among other countries are examining similar restrictions on toxic chemical substances in products and regulations for collection/recycling of spent products as this phenomenon spreads throughout the world. Further, environmental regulations for products also include the draft proposal of the EuP Directive (environmentally-friendly design of products), as well as the draft proposal of REACH (Registration, Evaluation and Authorisation of Chemicals) currently under evaluation in the EU. The demands for environmentally-friendly products are growing ever more stronger and diverse; efforts towards acquiring information on toxic chemical substances through the supply chain, designing power-saving products, and orienting product design around the 3Rs (reduce, reuse and recycle) are becoming the top priority for manufacturers.



Victor JVC has formulated our very own environmental plan to be reached by FY2011 (Green Plan 2010) and we have worked to promote environmentally-sound activities meant to fulfill the promises that we have made to the world. Just several examples of those activities are as follows. We reported last year that we had, with the cooperation of our affiliates, introduced lead-free solder in all of our facilities around the world at the end of FY2004. Additionally, we reviewed our Green Procurement Guidelines to respond to the RoHS in the EU and attempted to add them to a data base to be completed by the end of March; however, we experienced delays in our change-over operations and, unfortunately, this prevented us from achieving our goal. We have set the end of October as our goal to review the system of these unfinished components.

This year, we have introduced and are employing GP-Web, a work-in-progress of Panasonic; a system where data for toxic chemical substances is input online by cooperating manufacturers and can be obtained from the Web. In terms of power-saving products, we have conceptualized ourselves as the original top runner as we have developed our product line-up.

We have also been working towards creating low-power consuming factories, zero emission operations, and reductions in the use of chemicals; in the zero emission operations field we have achieved a 99% recycling rate.

We aim to provide our customers, through music and images, with services, content, and products imbued with our very own Only 1-philosophy. This is based on our brand statement: The Perfect Experience (Leaving the customer with the best impression and 100% satisfaction).

Under the banner of our management slogan 'faster, stronger; adapt and attack,' we are working to become a true customer valuesoriented company that inspires and moves all of our customers. We are accomplishing this with high value-added management that creates dignified and high-value added products made with the combined strength of Victor JVC's two strongest fields, hard and soft technology. This operates in tandem with high-revolution management, which pursues merit in quality, rather than scale, while aiming for a high returns system.

In conclusion I would like to express my sincerest gratitude to all of our customers and cooperating manufacturers for their efforts in supporting our environmental conservation activities; and, I extend my wishes for their further support and understanding in the future.

We would greatly appreciate everyone's frank opinion regarding this report.

M. Jerada

Masahiko Terada President

# **Basic Environmental Policy**

### **Corporate management philosophy**

# Contributing to culture and serving society through our products and business practices

### **Basic Philosophy**

With our corporate management philosophy as our cornerstone, JVC is committed to the preservation of the global environment. We will strive in all of our business activities to be a good corporate citizen that enjoys the trust of the international community, as we help to create a society that can enjoy sustainable growth.

# **Basic Policy**

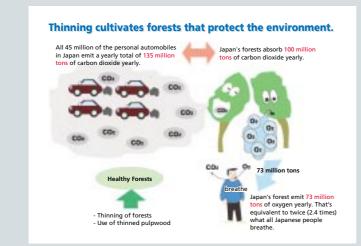
In full recognition of the fact that wide-ranging preservation of the natural environment is the social responsibility of every company, we will promote the following environmental preservation activities to the greatest technological and economical extent possible:

- 1. We will always consider the environmental effects of our business activities and ensure the continuous reduction of their impact on the environment.
- 2. We will strive to observe all laws, ordinances and other requirements regarding the environment, while also setting autonomous standards according to their need and working towards improvement in the quality of management of those standards.
- 3. We will pursue manufacturing that limits environmental impact centered on energy, resources and chemicals.
- 4. We will work towards more efficient use of the earth's resources by minimizing the amount of input and spent materials in our production and marketing activities so that we may coexist harmoniously with the environment and the world community in general.
- 5. We will establish an organization and system devoted to promoting our environmental conservation activities, and work to maintain constant awareness of the status of our activities to continuously improve our environmental management system.
- 6. We will expect our employees always to be environmentally conscious and see to it that all safeguard the environment.
- 7. We will also endeavor to conduct our foreign business activities in keeping with this policy, and protect the environment as a member of the local community.

Establish: April 27, 1992 Revised: May 24, 2005

# **Use of Thinned Pulpwood Printing Paper**

Starting with the issuing of this Environmental Sustainability Report 2005, we have begun to use paper made from Japanese thinned pulpwood (10%) and recycled pulp (90%). What follows is a short introduction on thinned pulpwood and an explanation of our mindset on the issue.



Thinned pulpwood refers to trees, such as cedars, cypresses and red pines that have been cut down while they are still immature. By suitability thinning out forests, other trees can grow larger, grass can grow because it is brighter, and soil is conserved. Should thinning not be done in forest

areas in Japan, the above would no longer occur, the growth of trees would be stunted, and the earth would be bare in the dark forest, which would cause problems like landslides in rain.

Healthy forests also aid the environment by absorbing expelled carbon dioxide. Japanese forests absorb 100 million tons of carbon dioxide yearly, while they emit 73 million tons of oxygen. This not only roughly equals twice the amount (260 million people's worth) of oxygen that all Japanese citizens breathe every year, but the forests are also a valuable contributor to the prevention of global warming.

We are in favour of protecting our environment through the cultivation of healthy forests, which is why we chose to add this topic to our Environmental Sustainability Report 2005.

Source: Japan Forestry Agency

In order for a company to promote continuous and effective environmental activities, not only are the proper promotional organization and systems required, but also management mechanisms. There must also be rules established to continuously review the organization, systems and mechanisms. We review these systems, mechanisms and organization to reflect the changing world, as we constantly strive to make our environmental activities more effective.

# Promotion of Our Environmental Conservation Activities

Our promotion system for our environmental conservation activities is composed of the Environmental Congress, the highest decision-making body headed by the President, and the various special committees.

After the Environmental Congress decides on the policies and measures, the policies and measures are explored more specifically according to their theme in the various special committees. All related offices and divisions are then made thoroughly familiar with these policies and measures. In order to accelerate efforts towards discontinuing the use of environmentallyharmful chemicals, we created the Project for Discontinued Use of Environmentally-Harmful Chemicals last year. The various committees promoted the measures don't buy (Green Procurement Promotion) don't use (Product Assessment) and don't ship (Environmental Quality Assurance), which lead to their company-wide adoption and successful results.

Under the supervision of the Environmental Management Representative, effective promotional organizations are being established at all offices, and efforts are constantly being made in both Japan and abroad to achieve the Voluntary Environmental Action Plan.

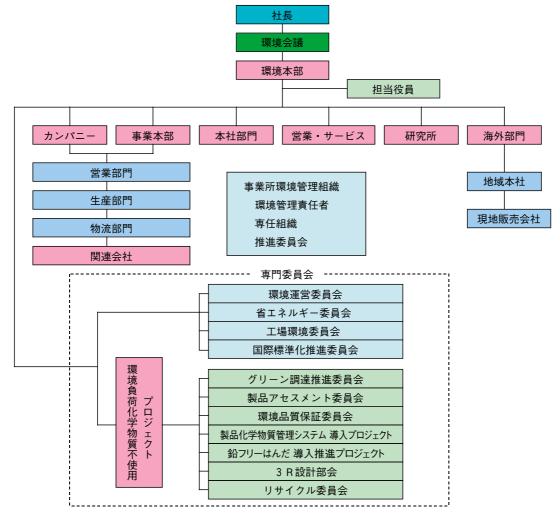
# Measures to Acquire ISO 14001 Certification –

We are proceeding with the acquisition of ISO 14001 certification to construct an environmental management system which promotes on-going environmental conservation activities.

We first acquired certification in our Hachioji Plant in January 1997; after that all our offices around the world also acquired certification.

Apart from our production facilities, we obtained certification within the realm of the Environmental Management System starting with our headquarters, laboratories, as well as all our domestic sales offices and service depots. We are also methodically moving towards acquisition of certification for our affiliates and overseas offices.

The office Environmental Management Representative convenes the Environmental Management Committee, and makes level adjustments for each site in order to facilitate continuous improvement of the Environmental Management System.



Starting with our Hachioji Plant in 1997, we have obtained certification for ISO 14001 and constructed an Environmental Management System. We have continued to effectively improve this through PDCA (Plan, Do, Check, Action), striving to bring our constructed system to the next level.

# Formulation of Environmental Policy

Based on JVC's company-wide fundamental environmental policy, managers at all our sites give consideration to the sitespecific business, products, and services while formulating a unique site environmental policy and clarifying the priorities for our environmental conservation activities. The Environmental Manager at headquarters then confirms the compatibility of this policy with the entire Company's environmental policy.

# Development of Goals and Objectives

In addition to the activities directly related to lessen environmental impact, such as reduced energy consumption and reduction of waste materials, we are reviewing the operational mission of every division from an environmental standpoint and forming environmental goals and objectives unique to each division. Activities such as the development and sales of products of low environmental impact and other services friendly to the environment are our top priorities.

### Adherence to Environmental Laws and Regulations

We gather information on all applicable laws and regulations in our business activities and the regions we operate in, sift through the various regulations and stipulations, and implement stringent selfregulating standards according to the set standards. All the latest information on environmental laws and regulations is assembled at headquarters, released on our Web site, and system that can cope with these laws and regulations are constructed for all offices.

# **Continuous Improvement**

If there are any infractions of environmental laws or regulations or the standards set internally, the cause and effects are investigated, appropriate corrective and preventive actions are taken, and the efficacy of those actions are confirmed. Thus, we can prevent recurrences, and strive for continuous improvement. In addition, should our actual performance supersede our original goals and objectives for either the entire Company or within a specific work site, a review is conducted by managers and goals for the next fiscal year are adjusted upwards so that we may work towards continuous improvement.

# **Environmental Education**

#### ① Internal Auditors' Development Course and Training

In order for the internal environmental auditors to perform their duties, training is offered that develops their understanding of the standards and practices of internal auditing as well as actual auditing skills through on-the-job auditing training. When conducting the training, we take factors into consideration such as previous experience and previous coursework undertaken to improve abilities to form the appropriate teams. We are planning to conduct training in production facilities abroad in FY2006.

#### ② General Environmental Training

In order to facilitate our environmental policy, training is implemented to deepen the understanding of the importance of environmental activities, as well as everyone's roles, responsibilities and activities in the workplace. This training is implemented for all employees and those that work within each site.

#### ③ Environmental Training for New Management

We also provide environmental training for new management personnel. We aim to place the core role of facilitating our environmental activities on our managers.

### Correspondence to ISO14001: 2004

ISO14001 was revised in 2004 to include expanded required standards and strengthened adaptation to legal and other requirements. We have previously taken the initiative and expanded the range of required standards when constructing our system, therefore, there has been no need to make any large changes. However, we are progressing forward preparations to adapt our system to these

| 1                 | - 199 E  | 100   |        |
|-------------------|--|---|--------|
| - E               | 産斗用 戸  | 48 10   | him    |
| 10.000            |  | 19 m 19   | 013    |
| A - 2 - 1 10000   | the section of the se | All other Constants   | 1907.5 |
| - LOS DESCRIPTION | and it was a support to the other  | CONTRACTOR, A   |        |
| 1000 000 000      | 11.000   | Contract table of the   | -      |
| CONTRACTOR OF A   |  | a destruction of the second   |        |
| TRACE OF CASES    |  |   |        |
| interested.       |  | And a second second   |        |
| The second second | and the local division of  | 1000  |        |
| CORPORE STATES    |  |   |        |
| DISCOUNT OF A     | interior and in  | -   |        |
|                   | and an other states  |   |        |
| 0.01              | 1.000  | Concession in the state   |        |
| STATUT INC.       |  | and being story   | _      |
| Automation        | and the second se  | ALCONOMIC A   |        |
| A sublimited open | and the second sec   | and the second se |        |
| distant and the   | ALC: NOT THE OWNER OF THE OWNER OWNER OF THE OWNER  |   |        |
| 10444041404       | -  | 1 1010 101000   |        |
|                   |  |   |        |
| CONTRACTOR OF     | 100  |   |        |
| ALC: 10.00        | and the second se  | 1   |        |
|                   |  | NUMBER OF STREET  |        |
|                   |  |   |        |
| 100000            | 140  |   |        |

revisions, and we shall undergo auditing by a third party in the future.

### **Internal Environmental Audits**

Environmental audits are performed in order to gauge the efficacy and performance of our environmental management system. Audits include voluntary audits performed by our on-site environmental auditors (primary auditors), mutual environmental auditing conducted by auditors from other sites (secondary auditors), and audits conducted by approved external organizations (tertiary auditors).

#### 1) Internal Environmental Audits

We perform internal environmental audits once a year at all of our sites to confirm there are no problems with the system or its application and to fix any poor areas so that we may improve the overall level of quality. Recently we have been receiving less and less point deductions due to the depth of our experience with sys-



Training for Internal Auditors

tem application and in the understanding of our employees towards our environmental activities. When we conduct audits at our sites, we focus on the good points of our activities in the divisions undergoing audits. We develop the strong points of our activities horizontally throughout the audited site to increase our system competency, and this leads to continuous improvement.

#### 2 Audits Conducted by External Organizations

At sites that have acquired certification, an external accredited organization carries out observation every year, or administers a renewal audit every three years; this involves an external specialist evaluating whether the system is functioning or not. In 2004 all sites received passing marks or were permitted to continue holding their accreditation.

# **Monthly Environmental Reports**

To monitor management system application and confirm activities, the performance of environmental activities of the sites with accreditation are organized every month and issued as a monthly environmental report within a site, for headquarters and to other sites. Sharing environmental conservation information within the Company contributes to increasing the level of our activities.

 Monthly Environmental Report of the Yamato Plant

# Promoting the Voluntary Environmental Action Plan

We have formulated the Voluntary Environmental Action Plan as a specific means of contributing to and ensuring our activities towards creation of a sustainable society and are aggressively taking steps to implement this plan.

We have set annual numeric targets in order to achieve our designated goals by fiscal year 2011 and are making concerted efforts to make this possible through coordination with the activities of our individual offices.

# **Voluntary Environmental Action Plan**

As a member of the Matsushita Electric Industrial Group, we have worked in tandem with Matsushita and set joint goals. Along with furthering our compliance with the WEEE & RoHS directives in the

EU, we are also considering the regulations of other regions as we move forward with our efforts to promote recycling and the discontinued use toxic chemical substances in our products. In addition, we are also promoting energy saving measures to achieving the goals of the Kyoto Protocol, and moving forward to reducing VOC and waste products in production facilities.

| 活動項目  | 2010年度目標  | 2005年度目標   |
|---|---|--|
| <ul> <li>製品関係(グリーンプロダクツ)</li> <li>1.製品の省エネ</li> <li>2.有害化学物質<br/>鉛、カドミウム、水銀<br/>六価クロム、塩ビ樹脂<br/>臭素系・塩素系難燃剤<br/>&lt;製品への使用排除&gt;</li> <li>3.資源・リサイクル性(3R)<br/>①解体性の改善</li> <li>4.LCAの導入</li> <li>5.グリーン調達</li> <li>6.対外訴求(エコラベル)</li> </ul> | <ul> <li>・エネルギー利用指標50%向上</li> <li>・特定臭素系難燃剤即時禁止<br/>(PBB、PBDE)</li> <li>・2005年4月出荷製品から禁止<br/>(鉛、カドミウム、水銀、六価クロム)</li> <li>・2006年3月までに禁止<br/>(塩ビ樹脂使用制限)</li> <li>・資源利用指標70%向上</li> <li>・LCA評価の精度向上</li> <li>・化学物質のDB活用評価</li> <li>・GP開発商品90%以上</li> </ul> | <ul> <li>・エネルギー利用指標30%向上<br/>(2000年度比)</li> <li>・特例部品の鉛フリー実施</li> <li>・グリーン調達データベース<br/>DB運用実施</li> <li>・RoHS対応代替の完了</li> <li>・資源利用指標50%向上<br/>(2000年度比)</li> <li>・LCA評価の拡大</li> <li>・化学物質DB化</li> <li>・GP開発商品70%以上</li> </ul>                           |
| <ul> <li>工場関係 (クリーンファクトリー)</li> <li>1. 省エネルギー</li> <li>2. CO2排出量削減</li> <li>3. 化学物質 ①PRTR法対応 ②排出・移動量等削減</li> <li>3. 廃棄物の削減 ①総発生量の削減 ②ゼロエミッション化</li> <li>5. 環境リスク</li> </ul>   | <ul> <li>・10%削減(2000年度比)</li> <li>・10%削減(2000年度比)</li> <li>・情報公開</li> <li>・使用量及び排出・移動量</li> <li>60%削減</li> <li>・前年比2%削減</li> <li>・ゼロエミッションの維持</li> </ul>  | <ul> <li>前年比1%削減</li> <li>前年比1%削減</li> <li>1998年度比56%削減<br/>(海外)2000年度比<br/>アジア、オセアニア45%削減<br/>その他の地域33%削減</li> <li>前年比2%削減</li> <li>前年比2%削減</li> <li>一前年比2%削減</li> <li>一時資源化率99%</li> <li>管理レベル向上</li> <li>土壌地下水汚染監視強化</li> <li>PCB機器集中保管の継続</li> </ul> |
| 環境活動関係<br>1. ISO14001<br>2. 環境会計  | ・業績評価への反映   | ・グローバルでISO体制維持向上<br>・環境会計制度の強化   |

※廃棄物総発生量は目標の設定値を前年比削減に変更しました。

# **Results of the Voluntary Environmental Action plan for FY 2005**

We conducted a self-evaluation regarding the results in achieving the targets for fiscal year 2005.

In terms of products we implemented measures for the discontinued use of toxic chemical substances. We promoted manufacturing that complies with WEEE starting in August 2005, and with RoHS directives starting in July 2006.

In terms of production facilities, by introducing lead-free soldering we reduced the number of sites requiring PRTR by one down to three, but the amount of waste increased. Waste production was reduced by 3.75% over the previous year on a global scale, and we are moving towards actual reduction. We also improved our recycling rate up to 99.2%. In terms of risk management, we have completed an investigation of insulating oil that contains trace amounts of PCB.

| 活動項目  | 2004年度目標   | 評価  | 取組み結果  | 参照頁        |
|---|--|-----|--|------------|
| 製品関係 (グリーンプロダクツ)<br>1. 製品の省エネ                                       | ・エネルギー利用指標24%向上<br>(2000年度比)                               | 0   | ・全開発製品中、58%で達成   | P14        |
| 2. 有害化学物質<br>鉛、カドミウム、水銀、<br>六価クロム、塩ビ樹脂<br>臭素系・塩素系難燃剤                | ・特例部品の鉛フリー実施<br>・グリーン調達データベース<br>DB運用実施<br>・RoHS対応代替の実施    | 0   | ・一部の部品など例外的使用を<br>残して完了<br>・RoHS指令対応の代替推進                      | P10<br>P11 |
| <ol> <li>資源・リサイクル性(3R)</li> <li>①解体性の改善</li> </ol>                  | ·資源利用指標40%向上<br>(2000年度比)                                  | 0   | ・全GP開発製品中、72%で達成   | P12        |
| 4. LCAの導入<br>5. グリーン調達  | ・LCA評価の拡大<br>・化学物質DB化                                      |     | ・全商品・部品に拡大中<br>・全部品のデータベース化推進中                                 | P12<br>P11 |
| 6. 対外訴求(エコラベル)  | ·GP開発商品56%以上   | 0   | ·実績72.6%   | P14        |
| 工場関係(クリーンファクトリー)  |  |     |  |            |
| 1. 省エネルギー<br>2. CO2排出量削減<br>3. 化学物質                                 | ・年1%以上の削減<br>・年1%以上の削減                                     | 000 | ·前年比2.2%削減<br>·前年比2.4%削減                                       | P16<br>P16 |
| ①PRTR法対応<br>②排出·移動量等削減  | <ul> <li>・1998年度比50%削減または</li> <li>2000年度比31%削減</li> </ul> | ×   | ·1998年度比88%<br>2000年度比27%削減                                    | P18<br>P18 |
| <ul> <li>4. 廃棄物の削減</li> <li>①総発生量の削減</li> <li>②ゼロエミッション化</li> </ul> | ·前年比2%削減<br>·再資源化率98%                                      | 00  | ·前年比3.75%削減<br>·全社平均99.2%                                      | P17<br>P17 |
| 5. 環境リスク  | ・管理レベル向上   | 0   | 達成は14サイト中10サイト<br>・土壌地下水汚染監視対策の実施<br>PCB集中管理の継続と微量PCB<br>汚染の調査 | P20<br>P21 |
| 環境活動関係  |  |     |  |            |
| 1.ISO14001  | ・グローバル推進体制の強化  | 0   | ・日本レコードセンター(株)(関係会社)   | P5         |
| 2. 環境会計   | ・環境会計制度の強化   | 0   | で認証取得<br>・2004年度集計及び解析の実施                                      | P5<br>P9   |

○:目標達成 △:ほぼ目標達成 ×:目標未達

# **Environmental Accounting**

There is no simple solution as to how to evaluate the costs versus environmental conservation activities for a company; in fact, it is a difficult problem. We introduced environmental accounting in fiscal year 2000 in accordance with guidelines set by the Ministry of Environment and with the aim of ensuring transparent business management through the active disclosure of information. We cannot convert all of performance into monetary terms yet, but our precision grows with every year.

# Analyzing Environmental Conservation Costs

The domestic and foreign environmental conservation costs for fiscal year 2005 amounted to 2,220 million yen for expenses and 1,035 million yen for capital investment, for a total expenditure of

3,250 million yen. Capital investment increased greatly due to a concentration of investment in the elimination of lead soldering during fiscal 2004; however, expenses increased even further in fiscal 2005 over fiscal 2004. This was due primarily to the increase in investments in the introduction of measuring equipment as

| 環境保        | 全コスト                                    | 環境保全活動のための設備投資と経費(単位:百万円)          |       |       |       |
|------------|---|------------------------------------|-------|-------|-------|
| 項          | 目                                       | 内容                                 | 費用    | 投資    | 合計    |
|            | 公害防止                                    | 公害防止のために必要な費用及び投資                  | 273   | 140   | 413   |
| 事業<br>エリア内 | 地球環境<br>保全                              | 温暖化防止、オゾン層保護等                      | 139   | 470   | 610   |
|            | 資源循環                                    | 廃棄物削減、リサイクル、適正処理等                  | 471   | 60    | 530   |
|            |   | 小計                                 | 883   | 670   | 1,552 |
| 上・下涼       | 1コスト                                    | エコ商品やグリーン購入のコスト 廃家電対策、容器包装リサイクル等   | 550   | 18    | 569   |
| 管理活動コスト    |   | 環境に係わる管理コスト ISO取得・維持、研修、スタッフコスト    | 425   | З     | 427   |
| 研究開発コスト    |   | エコ商品開発、省電力、鉛フリーはんだ等の環境負荷低減の研究開発コスト | 328   | 344   | 672   |
| 社会活動       | カコスト                                    | アメニティ対策、寄付・支援金や情報公開、環境広告、環境展示等コスト  | З     | 0     | З     |
| 環境損傷       | 環境損傷等コスト 土壌汚染等の修復費、補償金、罰金等 その他のコスト 30 0 |                                    | 30    |       |       |
|            |   | 合 計                                | 2,218 | 1,035 | 3,253 |

注)・経費には人件費を含んでいますが、設備投資の減価償却費は含んでいません。

| 環境効果 | 環境保全活動により電気使用量及び廃棄物処理費用の削減等、<br>確実な根拠に基づき算出される金額を計上。(単位百万円) |     |        |
|------|---|-----|--------|
|      | 分類  | 効果  | 金額     |
|      | 分 類   | 単年度 | 3年間の累計 |
|      | 事業場省エネルギー   | 69  | 197    |
| 和学生由 | 廃棄物処理費用の削減  | 43  | 67     |
| 削減効果 | 上下水費用の削減  | 1   | 4      |
|      | 包装材および物流費用の削減   | 38  | 54     |
| 収益   | 工場廃棄物のリサイクルに関わる有価物売却益                                       | 13  | 35     |
| 収 益  | 使用済み製品のリサイクルに関わる有価物売却益                                      | (   | )      |
|      | 合 計   | 286 | 457    |

注) 3年間の累計効果金額は過去2年間の設備投資による累計効果を計上しています。

・リスク回避等のみなし効果に基づく金額は計上していません。

| Primary Environmental Performance Effects Overseas plants not included. The amount of total packaging<br>materials and styrofoam used in wrapping parts is not included. |               |              |                |
|--|---------------|--------------|----------------|
| Category   | FY 2004       | FY 2005      | Reference page |
| Amount of reduced energy (kiloliters)  | ▲1,731        | ▲ 836        | P16            |
| Amount of reduced CO2 emissions (tons)   | ▲2,127        | ▲ 946        | P16            |
| Amount of reduced industrial wastes generated (tons)   | ▲549          | +1,585       | P17            |
| Amount of reduced industrial wastes finally disposed of (tons)   | +5            | <b>▲</b> 108 | P17            |
| Amount of reduced hazardous air pollutants used (tons)   | +1            | +4           | P19            |
| Amount of reduced PRTR substrates used (tons)  | +124          | +49          | P18            |
| Amount of reduced PRTR substrates generated (tons)   | +8            | ▲ 3          | P18            |
| Amount of reduced total packaging materials used (tons)  | <b>1</b> ,397 | +581         | P15            |
| Amount of reduced styrofoam used (tons)  | <b>▲</b> 186  | +51          | P15            |

Numeric values are compared with those of the previous year: The "D" marks indicate the amount reduced compared with the previous year.

measures for the discontinued use of toxic chemical substances in products in accordance to RoHS, as well as measures to curb energy consumption in production facilities. We foresee investment in these areas to grow in the future.

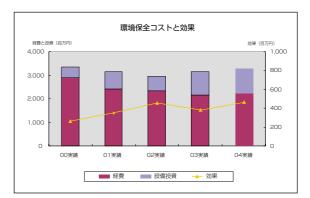
# Analysing Environmental Effects

Environmental effects for the fiscal year have somewhat fluctuated up and down, but there has been an overall increase. Through various efforts, most particularly in FY2005, we were able to drastically work towards improving industrial waste, the amount of PRTR material used, and packing material used which saw inactivity during fiscal 2004. We were also able to produce large results in low energy consumption and CO2 emission reduction. These efforts have contributed greatly to increasing our environmental effects. We will employ environmental accounting in the future as an indicator of environmental management, and use invest-

ment effects as an objective to continuing the implementation of clear measures. We shall also aim at further improvement of our environmental performance through the implementation of more effective trials.

# Scope of Environmental Accounting

Period: 1 April 2004 to 31 March 2005 Scope: Domestic main offices (11 plants), domestic subsidiaries (5 companies) and foreign subsidiaries (16 companies) The scope is the same as that for environmental performance data.



# Measures for the Discontinued Use of Hazardous Chemicals

JVC is pre-empting the start of the RoHS directive (directive limiting the use of toxic chemical substances) within EU member countries on July 1, 2006 and has moved towards discontinuing the use of specified toxic chemical substances within shipped goods since April 2005. Our activities are comprised of explaining to and requesting the cooperation of our client companies regarding the formulation of a Green Procurement Standards Manual, the introduction of GP-Web, the substitution of parts that use specified toxic chemical substances, and the construction of a product quality system.

### **Promoting Green Procurement**

In December 1998 we formulated the Green Procurement Guidelines and asked our suppliers for their understanding of our mindset regarding the environment as we requested that they contribute efforts towards reducing their impact on the environment and the provision of environmentally-friendly materials. Due to the heightened demands placed on corporations for social responsibility and ethics towards the environment, we went onestep further in April 2003 and created the Green Procurement Standards Manual based on the Green Procurement Guide-



**Green Procurement Standards** 



Certificate of Green Procurement Partnership

lines that we had utilized up to that point. In April 2005, we then made new adjustments to incorporate the differing trends in countries, most notably the RoHS directive in the EU limiting the use of toxic chemical substances.

### Partners in Green Procurements —

We ask our suppliers to fill out self-assessment questionnaires or we conduct onsite environmental audits to check the status of their environmental conservations efforts; we also request improvements when required. In conjunction with the above we recognize suppliers who fulfill certain conditions as our partners in green procurement. We plan on pushing our green procurement activities even further in the future.

Pre-empting the start of the RoHS directive within EU member countries on July 1, 2006 we have moved towards discontinuing the use of specified toxic chemical substances within shipped goods since April 2005. Our activities are comprised of explaining to and requesting the cooperation of our client companies regarding the formulation of a Green Procurement Standards Manual, the introduction of GP-Web, the substitution of parts that use specified toxic chemical substances, and the construction of a product quality system.

# **Environmentally-Friendly Design and Substitution of Parts**

We call products created with environmentally-friendly design 'green products.' We design and develop products with three issues in mind; the prevention of global warming, discontinuing the use of toxic chemical substances and recycling. After receiving the RoHS directive in 2003, we investigate all purchased products and promote the substitution of parts. As a result of these efforts, we were able to complete the substitution of 29,000 pieces at the part level, and 25,000 devices at the product level in FY2005. We have displayed the original material and the substitute material used in the substitution of parts in the graph on the right.

To give a specific example of our efforts, we gradually adopted the use of materials that do not contain lead or cadmium in electrical cable insulation. We are also working to adopt PVC-free and chromefree steel plates so that we may reduce halogen compounds that are said to emit

dioxin during incineration.

| Lead       | Product/Use                | Substance                     | Alternative Technology                   |
|------------|----------------------------|-------------------------------|--|
|            | Power cords/cables         | PVC stabilizer, lead          | Organic Ca etc.                          |
|            | Thermostats                | Elements                      | Sn-Bi etc.                               |
|            | Switches                   | Sn-Pb                         | Sn-In etc.                               |
|            | Electrical part terminals  | Sn-Pb                         | Sn, Pd, Au etc.                          |
|            | Manganese dry batteries    | Zinc can additives            | Reduced amount                           |
|            | Paints                     | Lead oxide, lead sulfate etc. | Lead-free paint                          |
|            |                            |                               |  |
| Cadmium    | Product/Use                | Substance                     | Alternative Technology                   |
|            | Relays, switches           | Copper-cadmium alloy etc.     | Sn-In etc.                               |
|            | Thermostats                | Elements                      | Sn-Bi etc.                               |
|            | Cables                     | Coloring agent                | Cadmium-free                             |
|            | Brush motors               | Brush- cadmium alloy          | Cadmium-free                             |
|            | Florescent indicator tubes | Phosphor                      | SrTiO3 etc.                              |
|            |                            | 1                             | 1  |
| Hexavalent | Product/Use                | Substance                     | Alternative Technology                   |
| chromium   | Screws                     | Sexivalent chromate plating   | Trivalent chrome                         |
|            | Paints                     | Chromate                      | Chrome-free                              |
|            | Zinc plating sheets        | Sexivalent chromate plating   | Hexavalent chromium-free plating         |
|            |                            |                               |  |
| Mercury    | Product/Use                | Substance                     | Alternative Technology                   |
| •          | LC backlight               | Mercury                       | Reduced amount (below 5mg)               |
|            | Manganese dry batteries    | Additives (mercury)           | Mercury-free batteries                   |
|            |                            |                               |  |
| PBB, PBDE  | Product/Use                | Substance                     | Alternative Technology                   |
|            | Fire retardant             | PBB, PBDE                     | Alternative fire retardant (Mn, Ca etc.) |

Alternatives for Parts

# System for the Discontinued Use of Specified Toxic chemical substances

In order to thoroughly implement the system for discontinued use of specified toxic chemical substances we have introduced a massive database, the GP-Web system, both domestically and overseas to manage data on chemical amounts, and we aim for its full application during FY 2005. This system involves the supplier companies utilizing the Web to input the composition of raw materials for each part, so that the information can be made public and utilized in environmentally-friendly design. As the cooperation of supplier companies is necessary for the utilization of this system, explanatory sessions have been held both domestically and overseas, and the cooperation of suppliers has been requested.

| Not to<br>purchase | Promotion of Green Procurement<br>(Purchasing/Outsourcing Division)<br>- Promotion of guarantee of discontinued use of<br>poisonous chemicals substances in purchased goods<br>- Strengthening of partnership with suppliers |
|--------------------|--|
| Not to<br>use      | Promotion of environmentally-friendly design<br>(Technical Division)<br>- Promotion of part replacement<br>- Strengthening of product assessment system<br>(Q+C+D+E Optimum balancing)                                       |
| Not to<br>ship     | Establishment of shipment guarantee system<br>(Quality Assurance Division)<br>- Establishment of system to adhere to laws and<br>regulations<br>- Guarantee environmental guality of shipped products                        |

Details of Discontinued Use of Toxic chemical substances

Explanatory session for supplier company in Guangzhou, China

# Environmental Quality Assurance

Quality assurance is a very important field that is directly linked to end users. Due to this fact, we have created an environmental quality assurance committee, we have added an environmental aspect to our original quality assurance system after considering the idea of environmental quality assurance, we have also clarified the roles and responsibilities required of every step from product development to end product service and we have made efforts towards the construction of a new environmental quality assurance system that can assure environmental quality.

To make sure that management of this system is sound, we plan to conduct audits of the environmental quality assurance system and to maintain and manage the system in the future.

# Column

# **Trends in Environmental Regulations and Laws Concerning Our Products**

Environmental laws and regulations such as the WEEE/RoHS established in the EU are expanding on a global scale. There are countries that have already formulated and are applying environmental laws such as Japan, and there are also countries that are examining this. World environmental law in the future is certain to expand outward from Europe in the future.

One of those environmental laws, the REACH directive (Registration, Evaluation and Authorisation of Chemicals) is currently under examination in the European Parliament and EU Commission. The REACH directive makes it obligatory for businesses that manufacture or import 1 ton or more of chemical substances each year to register those substances, and for businesses that handle 10 tons or more to undergo a chemical safety evaluation. This allows the authorities of the member countries to evaluate the registered data, and to demand information or additional tests of the registered businesses. This also introduces an approval system for the separate uses of material that may be considered carcino-

#### genic in nature.

In addition the EuP directive is a proposal directive from the European Parliament and EU Commission regarding the establishment of a framework to set requirements for eco-design for products that use energy. The directive sets requirements of specific eco-design or comprehensive ecodesign for products that use energy such as electrical/electronic appliances and gas/oil heaters, and makes it obligatory for businesses that market those products within the EU to make those products fulfill either one or both of the requirements in the future.

As outlined above, new directives concerning products are currently under review in the EU, and to fail to adapt to these new steps would preclude exporting all products to the EU. These regulations will not be just limited to the EU, they will expand throughout the world, including Japan. The world expects corporations to put forth a sincere effort towards the protection of the environment and the health of the human race.

# **Measures towards Recycling of Used Products**

In February 2003 the Waste from Electrical and Electronic Equipment directive became effective in the EU, and in August 2005 the directive that requires the collection or disposal of discarded electrical and electronic equipment by manufacturers in all countries in the EU, with partial exceptions, took effect as planned. Moreover, this has spurred the start of similar actions in the US and China, and is an unavoidable issue for all manufacturers. Our main activities include the promotion of recycling-oriented 3R design and the construction of recycling systems that match the local areas where they are instituted.

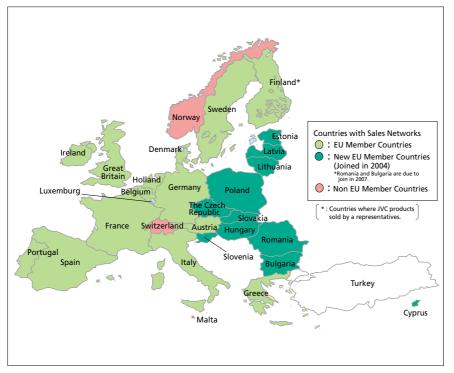
### **European Recycling**

The Waste from Electrical and Electronic Equipment directive (WEEE directive) became active in the EU starting in August



Mark indicating a product is WEEE compliant

2005. There are some disparities as to when the law will be enforced in the 25 EU countries, however, to create a highefficiency low-cost collection/recycling mechanism, we formed a comprehensive agreement with Thompson and Panasonic in the field of collection/recycling in May 2005 and formed a new recycling management company ENE Ecology Net Europe, Ltd. We also worked to construction an information forum for our end users and recyclers. For our end users we made products that complied with the WEEE directive and not only provided an explanation in our catalogues and manuals that the product must be properly disposed of in accordance to local laws, we also printed a mark on the product itself that indicates



Countries of the EU and the JVC European Sales Network

that it is compliant with WEEE. For our recyclers we are currently creating an information forum over the Web that provides information such as how to best disassemble our products.

### Efforts towards 3R Design

3R refers to the three first letters of the words; Reduce, Reuse and Recycle. Reduce refers to the reduction of resources used to create products, reuse refers to the reusing of parts removed from expended products, and recycle refers to the recycling of expended products to form the raw materials of new products. We are then faced with the two major issues of how to go about recycling and how to go about incorporating the 3Rs into design. In short, the recycle rate and recovery rate set by the WEEE directive are not the only important factors; recycle cost also has a large effect on this. We have become aware of this, and we have made efforts towards the promotion of 3R design. Specifically, we have worked to improve this by creating a Company-wide 3R design section that sets standards to evaluate the recycle rate, recovery rate and recycle cost of products for every division.

#### Column

# Recycle Rate and Recovery Rate

Recycle rate is the rate of the gross weight of a material that can be reused or recycled, versus the gross weight of a product. Recovery rate is the rate of the gross weight of the material that can be reused or recycled added to the gross weight of the material that can be used to produce heat energy through incineration. According to the EU WEEE directive, our products in the category of electronic products meant for consumers are to have a recycle rate of 65% or more and a recovery rate of 75% or more.

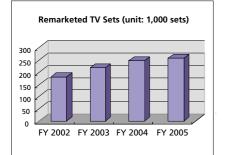
# Home Appliance Recycling Results

The Home Appliance Recycling Law, enacted in April of 2001, in Japan, was the first recycling system of its kind in the world.

End users, retailers (municipalities) and manufacturers all play their part in contributing to the wise use of the earth's limited natural resources in a recycling-based society. Despite several issues that have arisen, the fifth year since the enactment has passed smoothly as a whole.

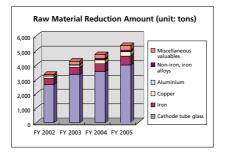
Our products subject to the Home Appliance Recycling Law are televisions, and in FY 2004 255 thousand sets were collected at 190 designated locations all across Japan. This is approximately 111.2% of the sets collected in 2003.

The trends of collection numbers for the past four years are displayed on the graph below.



The glass, steel, aluminium and other metals as well as resins of the collected TV sets were dismantled and separated at the 22 remarketing facilities all across Japan, and were recycled as new materials. The total amount of material that was remarketed in FY2005 was 5,410 tons (114% greater than the previous year). The remarketing rate standard in the Home Appliance Recycling Law is 55%, but the gross weight of the recycled material surpasses this at 72%.

Next, the following graph gives us a glimpse of the fiscal year trends for the reduction of raw materials.



# Recycling Rechargeable Batteries

We have established a contract with the Japan Battery Recycling Center (JBRC), established by the Battery Association of Japan, and we are promoting the collection and recycling of portable used rechargeable batteries.

According to the Japan Battery Recycling Center there are approximately 38,000 collection centers throughout Japan, and over 1,000 tons of rechargeable batteries are collected and recycled every year, reclaiming precious resources. This passes the recycling rates prescribed by the law with 60% for NiCd, 55% for nickel metalhydride, 30% for lithium ion and 50% for small seal lead batteries. For more information visit JBRC's Web site.

http://www.jbrc.com

We have registered 11 sites among nationwide sites of Victor Service & Engineering Co., Ltd. which contributes to the collection of used portable rechargeable batteries.

# Recycling Containers and Packaging

When the Japan's Law for Recycling of Containers and Packaging was passed in April 2000 recycling became required for four items; glass bottles, PET bottles, plastic/paper containers and packaging.

Being a specified manufacturer, we calculate the estimated amount of wasted containers and packaging that are used within Japan and apply to the Japan Containers and Packaging Recycling Association to outsource our recycling. We conclude an outsource recycling contract every year, thus fulfilling our social responsibilities.

We are also further working to reduce the amount of packaging material we use. The Promotion Council for Paper Container & Packaging Recycling of Japan states that the amount of paper collected and the rate are not rising, and that the outsourcing price of plastic to recyclers is extremely high. For more information visit the Promotion Council's for Paper Container & Packaging Recycling of Japan Web site.

http://www.jcpra.or.jp

### Recycling Personal Computers

Based on the Japan's Law for the Promotion of Effective Utilization of Resources, computer manufacturers started collection and recycling in October 2003.

Our products, the previously sold MSXPC and the currently marketed mobile PC fall into this category.

In spring of the year before last we joined the Japanese Electronics and Information Technology Industries Association (JEITA) Computer 3R Promotion Activities, and currently collect computers through the JEITA established routes through Japan Post, and we are aiding in the recycling process at four recycling plants across the nation. Though we can only provide minor results for our used computer collection because it has only been a short period since we started marketing our mobile PCs, the statistics can be accessed at the Web site below.

(HP affiliated address)

http://www.victor.co.jp/interlink/xp/recycle/index.html

#### Column

# Dumping of Container/ Wrapping Waste

51.61 million tons (2002) of garbage is thrown out from houses each year. This is the equivalent of 25.8 million trucks with a capacity of two tons. In terms of volume, 60% of this is estimated to be containers and packaging.

Source: Press Release from the Japan Containers and Packaging Recycling Association

# Customer Satisfaction(CS)/Eco-Product Development

JVC makes various CS/Eco-Product products possible taking concern for people and the environment to heart. For example, we have developed a television with an easy-listen function that can allow the viewer to hear an announcer's voice slowly and clearly; we have also applied a hard disk to recording media so that we could develop a digital video camera capable of recording video equivalent to 22 DVDs. Here are some of those products below.

# Making Eco-Products Fit for JVC

Up to now in this report we have covered our efforts towards environmentallyfriendly design in our products through the discontinued use of poisonous chemical substances, substitution and the recy-

[Terrestrial/BS/110 degree CS Digital Hi-vision Hybrid Projection TV] HD-61MD60



Consumes less than 50% of the power of a 50-inch plasma TV (among JVC brands). Specific areas of the screen can be adjusted either darker or lighter, in what is called a 'genessa' function; and, sound can be heard slower and clearer with an easy-listen function.

### [Hard Drive Camcoder] GZ-MG70



7 hours and 10 minutes of record time at DVD-quality movie picture (at highest picture quality); total movie taking time of 22 8cm DVDs. No need to worry about changing an 8cm DVD disk or tapes, and there is no need to continue buying media, which can be quite economical. cling of used products.

In August of this year, the recycling system for electrical and electronic equipment (the WEEE directive) started in Europe. Also, starting next year regulations against the inclusion of specified poisonous materials in products (RoHS directive)

# [Digital Headphone Audio] XA-AL55-S



These light-to-wear headphones have 256MB flash memory player and lack a connecting arm making them all the more attractive. Commands from power on and off, to play/stop, and from song skip to mode settings are all available through voice recognition.

[HDD Spindle Motor] EC37 Series



Low noise and low amperage have been made possible through optimum magnetic circuit design and the application of FDP. A further shock resistance up to 1500 Gs is guaranteed. The uses of this product are varied as it is often used in cars and notebook computers among others. will be enforced. These trends will not currently only stop in Europe, they are spreading throughout the world, including Japan.

We are trying to pre-empt these world trends within our abilities. We would like everyone in the world to feel at ease using JVC products. While at the same time, taking concern for people and the environment to heart, we intend on providing products that customers of any age can take pleasure in using. Below are a portion of the products that we have excluded hazardous chemical substances from and that we have worked to improve their recycling ability

### [Headphones] HP-DX1000



We first used all natural wood in the housing. It is only wood that allows sound's natural attenuation and reverberations to reach the listener's ear thus producing a rich acoustic environment.

[Optical Pickup for Car CD Player] OPTIMA726



This is a Optical Pickup for Car CD Player made compact and light (9.8 grams) through the use of a hologram device. It can operate anywhere between -30 and 85 degrees Celcius.

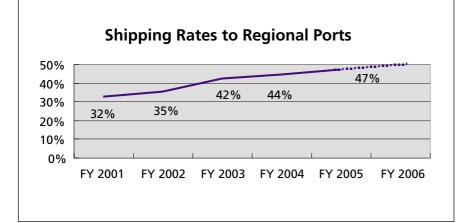
# **Green Logistics**

Environmental Report

With the implementation of the Kyoto Protocol in February of this year, and the scheduled enforcement of the revision of the Law Concerning the Rational Use of Energy, our efforts towards conserving the environment have become more of a corporate social responsibility, with particular high demands for the reduction of CO<sub>2</sub> in the area of logistics. We are actively striving for a reduction of CO<sub>2</sub> in the logistics field as a member of the Matsushita Electric Industrial Group, and we are working towards green Company-external information collection schemes and benchmarks, such as the green logistics partnership council.

# 1. Reduced Truck Shipping Through a Review of Shipping Methods

**1) Reduction through direct shipping** In the past, products from other countries were distributed to six logistics centers nationwide (Sapporo, Sendai, Nagoya, Osaka, Hakata) by truck after being imported to Tokyo Port or Yokohama Port.



However, to decrease transportation by truck as much as possible, we decided to ship from overseas and go straight to the ports near the six logistic centers and reduce number of trucks and the distance the trucks were required to travel. As a result of that, we were able to reduce 1,173 tons of CO<sub>2</sub> in fiscal 2005. This is a 103% reduction compared to the previous year. In addition, almost half, or 47%, of our imported volume was shipped directly to the local ports. We are aiming to surpass 50% in fiscal 2006.

#### 2) Reduction through joint shipping



We ship our products by truck with other companies between logistic centers and from logistic centers to purchasing points. Using this method we can increase the load per truck which reduces the amount of trucks used for both us and other companies.

# 2. Reduced Truck Shipping Through an Improvement of Load Rate

### (Make compact to carry more)

We have worked to reduce the packing size through a review of the packing design of our products. To secure the reliability of our previous shipping methods, we changed our product packing methods from a wooden packing box to a safe and space-conserving sheet palette. By doing this we were able to conserve the amount of area used in our trucks and thus we were able to reduce the amount of trucks we used.

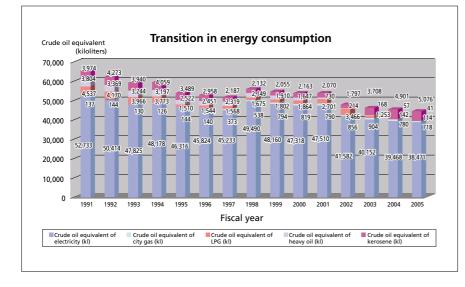
Through these efforts we were able to reduce the amount of overall distance traveled by our trucks, thus reducing CO2 emissions by 36 tons in FY 2005, 150% less tan the previous year's level. We intend on expanding our sights to further models in FY2006 in our efforts to become more 'green minded.'



By adopting sheet palettes we were ale to maintain previous shipping reliability while lessening load weight and conserv-

# Measures for Energy Comservation and Low Energy Consumption

We are continuing our efforts to reduce emissions of green house gases as we move to attain the goals of the Kyoto Protocol. In FY2001 we achieved a reduction of 17.5% compared to FY1991, but we have set goals for a 10% reduction of FY2001 year levels by FY2011 and we are working towards conservation of energy. However, by FY2005 we have already achieved reductions of 16%. Even should the structure of our business change, we will remain vigilant towards achieving our goals. We will not only focus on CO<sub>2</sub> from the consumption of energy, we will also continue our reduction strategy for the emissions of other green house gases.



### **Measures for Energy Conservation**

The graph at left shows the transition of energy consumption of 14 sites including domestic subsidiaries.

Our Company is reliant on electricity for 87% of our energy needs. This graph uses a crude oil equivalent form of energy based on the Law Concerning the Rational Use of Energy.

In FY 2005 we were able to make reductions of 2.2% compared to the previous year. These are 17.6% reductions over FY 2001, and 32% of FY 1991. We had used heavy oil prior to FY 2001, but we were able to clean up our fuel use through the elimination of boilers among other methods. Additionally, the drop in LPG after FY 2003 is a result of our substitution of kerosene of LPG to obtain improved heating efficiency.

Domestically, we have accomplished much in terms of energy conservation.

While strengthening energy conservation measures in production overseas, we shall also move further towards energy conservation in our domestic operations with a shift towards high-efficient equipment and promotion of improved productivity.

### **Control of CO2 Emissions**

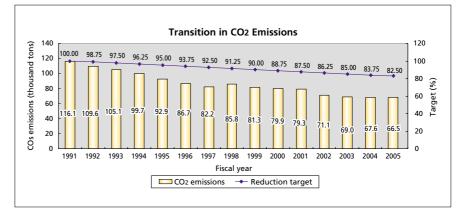
The graph at right shows a transition of CO<sub>2</sub> equivalent to energy use. CO<sub>2</sub> calculation formulas supplied by the Ministry of the Environment were used to calculate for electricity, heavy oil, kerosene, and city gas.

In FY 2005 we were able to achieve our goal with a 1.8% reduction over the previous year. This meant a large-scale decrease with a 15.8% decrease over FY 2001 and a 42.8% decrease over FY 1991.

Looking at these reductions in terms of continuous sales, there was a 7.7% increase over the previous year, a 6.5% decrease over FY 2001, and a 37% decrease over FY 1991.

Due to reforms to our business structure,

our production division is shifting to overseas locations, and our technology and development divisions are mainly remaining. Looking at global performance, actual emissions for FY 2005 were 7.8% less than FY 2001, and 1.9% less than FY 2004.



### Green house gases other than CO2

CFC gases are much more powerful green house gases than CO<sub>2</sub> and should not be allowed to be emitted into the environment. They are used to clean electronic parts and precision devices. We use small amounts of 1,1,1,2tetrafluoroethane to confirm quality and as a quenching agent for electronic parts in the technology development process, but we aim to introduce a substitute and completely phase out this gas. We used 21kg in FY2005, 75% of what we used during the previous year.

It is our corporate responsibility to effectively use resources through the recycling of wastes while at the same time reducing the amount of waste that is generated. The target for FY 2005 was a 2% reduction rate over the previous year and we boasted a 98% recycling rate. Changes in production items and business structure, as well as the packing material used in imports from overseas, account for difficulty in reductions and recycling.

### **Achievements for FY2005**

The total amount of waste generated among all of our domestic affiliates rose

to 966 tons compared to the previous year. We achieved a 6.5% reduction over the

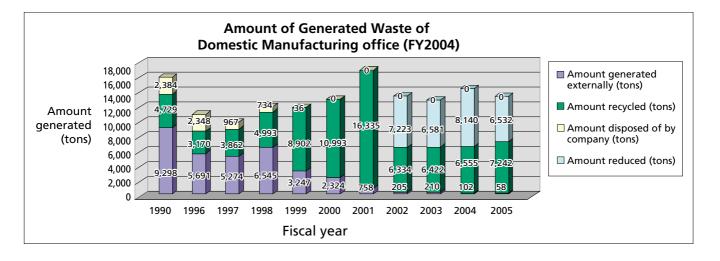
#### FY 2005 Amount of Generated Waste

|                               | Domestic consolidated | Foreign subsidiaries | Global total |
|-------------------------------|-----------------------|----------------------|--------------|
| Total amount generated (tons) | 13,832                | 10,496               | 24,329       |
| Amount recycled (tons)        | 7,242                 | 9,865                | 17,107       |
| Amount reduced (tons)         | 6,532                 | 0                    | 6,532        |
| Amount outsourced (tons)      | 58                    | 631                  | 690          |
| Recycle rate (%)              | 99.2                  | 94.0                 | 96.1         |

previous year. This can be mainly attributed to the reduction of approximately 840 tons of generated acids and alkaline wastes in the multi-layered circuit board process of our Headquarters' and Yokohama plants. We have improved our recycling rate to 99.2%.

However, we have had a light increase of 18 tons in our overseas operations. This increase can be attributed to an expansion of our overseas production and a change to the specifications of our products as well as an increase of discarded packing material. However, with the inclusion of the waste generated abroad, the calculations have increased in precision.

Overall there was a 948 ton reduction globally compared to the previous year, and we have greatly improved our recycle rate to 96.1%.



### **Breakdown of Wastes and Recycle Rates**

The following table lists a breakdown of wastes generated at all domestic plants, including subsidiaries, and the transition of the recycle rate.

Waste paper and waste wood generated

increased 1.4% from the previous year, but it did not largely change in terms of composition. By promoting a shift to zero emission, we were able to achieve a recycle rate of 99.6% for waste plastics and 100% for scrap metal. We reached a total of 99.2% and we largely reduced the need to bury waste at a landfill. We shall continue to pour our energy into reducing the amount of waste generated.

|  | Amount              | Composition |         | Red     | ycle rate ( | %)      |         |
|--|---------------------|-------------|---------|---------|-------------|---------|---------|
|  | generated<br>(tons) | (%)         | FY 2001 | FY 2002 | FY 2003     | FY 2004 | FY 2005 |
| Sludge (inorganic, organic, and mixed)                 | 292                 | 2.1         | 75.0    | 81.0    | 97.0        | 97.2    | 95.6    |
| Waste paper and waste wood                             | 3,220               | 23.3        | 92.0    | 98.0    | 98.0        | 98.8    | 99.4    |
| Waste plastics   | 2,496               | 18.0        | 95.0    | 98.0    | 99.0        | 99.2    | 99.6    |
| Waste liquid (waste oil, waste acid, and waste alkali) | 7,285               | 52.7        | 99.0    | 94.0    | 96.0        | 92.6    | 98.5    |
| Scrap metal (ferrous and nonferrous)                   | 444                 | 3.2         | 98.0    | 96.0    | 85.0        | 99.5    | 100.0   |
| Other (animal wastes and other material)               | 94                  | 0.7         | 65.0    | 92.0    | 93.0        | 95.7    | 90.3    |
| Total  | 13,832              | 100.0       | 96.0    | 97.0    | 97.0        | 98.5    | 99.2    |

# Reduction of Environmentally-Harmful Substances and Appropriate Management

Since 1997, we have participated in a PRTR project in which the Japan Federation of Economic Organizations has taken the initiative and we have issued reports to the Ministry of Economy, Trade and Industry from each place of business via the relevant prefectural governor since the enforcement of the PRTR Law in 2001. Last year four sites that handled one ton or more of harmful substances submitted a report, but this year it was only three.

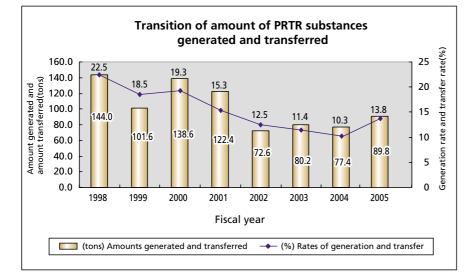
Te following table indicates the PRTR subject chemicals chiefly used by our Company. The amount consumed is chiefly the amount contained in products, the amount neutralized through a chemical reaction or broken down is the amount removed, and the amount transferred refers to the amount of waste shipped to

|  |                     |        | Achieven | nent for F  | 7 2005 |             |                   |                       |                    | Achievement for FY 2004 |                       |  |
|--|---------------------|--------|----------|-------------|--------|-------------|-------------------|-----------------------|--------------------|-------------------------|-----------------------|--|
| Substance                                      | Number of places of | Usage  | Em       | ission (tor | ns)    | Consumption | Amount<br>removed | Amount<br>transferred | Amount<br>recycled | Usage                   | Emission and amount   |  |
| Substance                                      | business            | (tons) | Air      | Water       | Soil   | (tons)      | (tons)            | (tons)                | (tons)             | (tons)                  | transferred<br>(tons) |  |
| Toluene  | 7                   | 290.22 | 82.40    | 0.00        | 0.00   | 0.00        | 0.00              | 0.02                  | 207.80             | 377.57                  | 69.43                 |  |
| Soluble copper salts<br>(except complex salts) | 1                   | 176.14 | 0.00     | 0.02        | 0.00   | 109.26      | 0.00              | 0.00                  | 66.86              | 193.52                  | 0.01                  |  |
| Cobalt and compounds thereof                   | 1                   | 136.88 | 0.00     | 0.00        | 0.00   | 17.70       | 0.00              | 0.00                  | 119.18             | 143.40                  | 0.00                  |  |
| Formaldehyde                                   | 2                   | 11.80  | 0.00     | 0.24        | 0.00   | 7.16        | 0.00              | 4.40                  | 0.00               | 12.79                   | 5.03                  |  |
| Manganese and<br>compounds thereof             | 3                   | 10.02  | 0.00     | 0.00        | 0.00   | 0.14        | 0.00              | 0.01                  | 9.87               | 7.99                    | 0.03                  |  |
| Bisphenol A epoxy resin                        | 5                   | 4.51   | 0.00     | 0.00        | 0.00   | 4.38        | 0.00              | 0.13                  | 0.00               | 4.99                    | 0.15                  |  |
| Nickel   | 4                   | 3.10   | 0.00     | 0.00        | 0.00   | 1.87        | 0.00              | 0.00                  | 1.23               | 3.08                    | 0.00                  |  |
| Lead and compounds thereof                     | 3                   | 0.08   | 0.00     | 0.00        | 0.00   | 0.05        | 0.00              | 0.00                  | 0.03               | 2.43                    | 0.00                  |  |
| Chrome and trihydric<br>chrome compounds       | 1                   | 1.10   | 0.00     | 0.00        | 0.00   | 1.05        | 0.00              | 0.00                  | 0.05               | 2.08                    | 0.00                  |  |
| Silver and soluble<br>compounds                | 6                   | 2.28   | 0.00     | 0.00        | 0.00   | 0.28        | 0.00              | 0.15                  | 1.85               | 1.93                    | 0.00                  |  |
| Other  |                     | 16.92  | 0.61     | 0.20 0.00   |        | 12.92       | 0.12              | 1.63                  | 1.44               | 3.13                    | 2.73                  |  |
| Total  |                     | 653.05 | 83.01    | 0.46        | 0.00   | 154.81      | 0.12              | 6.34                  | 408.31             | 752.91                  | 77.39                 |  |

#### PRTR Survey Results (achievements for FY 2005 and 2004: main chemical substances heavily used=substances managed as Panasonic's G chemical substances)

#### an outside facility.

The amount of substances we handled in FY 2005 decreased by 13% over the previous year, the amount transferred increased 10% from the previous year. Toluene, a substance used in abundance, is used in the manufacturing process for magnetic tape. The amount we used has reduced by 23%, but the amount we transfer has increased by 19%. The use of other substances has, overall, remained the same as the previous year; however, lead has been reduced significantly as the abolishment of lead solder (lead solder has only been allowed for special cases) has moved forward. Looking at the use and transfer amounts of FY2005, the amounts and the rates have increased. This is attributable to the increase in atmospheric emission of toluene. This has occurred



because we have altered the operating status of our facilities and this has reduced our ability to recover the substance.

#### Column

### **Utilizing MSDS**

·What poisonous raw materials are used in the production process and in the product? How can these poisonous materials be made safe? Let's supply MSDS to the purchasing side. When a company ships a specified chemical substance or a product contains a specified chemical substance to another company, the shipping company is required to issue a chemical substance safety data sheet (MSDS) (www.env.go.jp/chemi/prtr/ about/yougo6.html) to the receiving party that supplies information related to the composition, qualities and handling methods. (Article 14 Law Concerning Management of **Chemical Substances**)

Based on the Voluntary Management Plan for Hazardous Pollutants, formulated by the electrical and electronics industry in response to a new policy issued by the Ministry of Economy, Trade and Industry, we have identified the status of using the 13 subject substances and releasing them into the atmosphere, and we are promoting the prevention of their release. In addition, we have begun to work to decrease the amount of volatile organic compounds released as specified by a revision made to the Air Pollution Control Law in May 2004.

As has been the case up to this point with factories with boilers, we have set voluntary standards for exhaust gases and we perform regular measurements and inspections.

# **Voluntary Management for** Hazardous Air Pollutants

The electrical and electronics industry has goals to reduce the atmospheric emission of 13 poisonous pollutants. We use small amounts of dichloromethane and chloroform for quality management and research and development purposes. We also use formaldehyde and nickel sulphate in our production processes, but neither of these substances is released into the air. The chart below shows the transition of

actual use and emission of air pollutants in FY1999 and beyond. We do not use any substances other than the four previously mentioned.

### **VOC Atmospheric Emission Control Plan**

In March 1994, we abolished the use of ozone depleting substances such as specified chlorofluorocarbons (CFCs) and alternatives for chlorofluorocarbons (HCFCs), in addition to 1,1,1-trichloroethane from

#### production processes.

The electrical and electronics industry is moving towards setting a goal to reduce atmospheric emissions by 30% of the control year (FY2001) by FY2011 for 20 substances. This plan corresponds to the demands made by government calculations for a 30% reduction in emissions of VOC (Volatile Organic Compounds) from fixed emission sources. We utilize some of the substances listed; therefore, we are working to reduce their emission. The chart below uses FY 2001 as the control year and indicates the performance during FY 2005 and the reduction goals for FY 2011. Emissions increased during FY 2005; however, this is due to the increased use of isopropyl alcohol (IPA) as a substitute for chlorine-based organic solvents. IPA use is expected to increase in the future, but we shall be careful not to allow it to be released into the atmosphere. Further, we are propelling plans to reduce the amount toluene that we use and that is emitted into the air.

| Transition of the us     | se of poisonous air      | r pollutants              | Unit: [t                | ons/year] Values wit     | hin parentheses ind     | icate the amount rel    | leased into the air |
|--------------------------|--------------------------|---------------------------|-------------------------|--------------------------|-------------------------|-------------------------|---------------------|
| Substance                | FY 1999                  | FY 2000                   | FY 2001                 | FY 2002                  | FY 2003                 | FY 2004                 | FY 2005             |
| Dichloromethane          | 0.695 (0.399)            | 0.114 (0.102)             | 0.073 (0.057)           | 0.041 (0.036)            | 0.035 (0.030)           | 0.004 (0.003)           | 0.003(0.003)        |
| Chloroform               | 0.009 (0.003)            | 0.010 (0.005)             | 0.012 (0.007)           | 0.005 (0.004)            | 0.008 (0.006)           | 0.001 (0.0001)          | 0.0001(0.0001)      |
| Formaldehyde             | 6.521 (0.000)            | 10.129 (0.000)            | 13.580 (0.000)          | 8.194 (0.000)            | 8.830 (0.000)           | 12.788 (0.000)          | 11.802(0.000)       |
| Nickel sulphate          | 0.026 (0.000)            | 0.018 (0.000)             | 0.019 (0.000)           | 0.017 (0.000)            | 0.017 (0.000)           | 0.016 (0.000)           | 0.003(0.000)        |
| 13 substances other than | above 4: Trichloroethyle | ene, tetrachloroethylene, | benzene, acrylonitrile, | acetaldehyde, vinyl chlo | ride monomer, 1,2-dichl | oroethane, 1,3-butadien | e, nickel disulfide |

#### Voluntary Action Plan for VOC Atmospheric Emission Control Plan

Unit: tons/vear FY 2001 FY 2005 FY 2009 FY 2011 VOC Amount used Amount emitted Amount used Amount used Amount emitted Amount emitted Amount used Amount emitted Isopropyl alcohol 31.55 26.63 100.62 79.26 131.27 85.19 130.62 72.18 90.38 32.78 Toluene 361.89 119.78 288.79 82.33 168.90 48.90 Acetone 3.66 2.09 5.76 7.88 4.27 3.99 3.31 7.47 Butyl acetate 2.88 2.88 4.00 4.00 3.20 3.20 2.80 2.80 Methyl ethyl ketone 368.00 91.37 280.68 79.38 165.10 47.10 112.05 32.05 Ethanol 3.24 3.24 3.09 3.09 2.13 2.13 1.94 1.94 1-methoxy-2-propanol 22.00 6.60 6.80 2.00 6.80 2.00 5.00 1.50 methyl isobutyl ketone 20.48 5.08 0.00 0.00 0.00 0.00 0.00 0.00 Butyl acetate 0 94 0.94 1.30 1.30 1 04 1.04 0.90 0.90 cyclohexanone 28.33 7.03 38.68 10.92 22.00 7.00 15.00 5.00 Total 153.14 842.97 236.24 729.72 265.59 508.32 200.83 395.56 Reduction goal compared 100.00 100.00 86.56 112.42 60.30 85.01 46.92 64.82 with control year

20 substances other than above 10: methanol, xylene, dichloromethane, styrene, ethylbenzene, tetrahydrofuran, n-butanol, chloroform, n-heptane, trichloroethylene

# **Transition in Air Pollutant Emissions from Boilers**

This graph indicates the transition of NOx and SOx emissions from the boilers that we use. Upon switching from burning gas to kerosene to improve energy efficiency, we saw an increase in NOx starting in FY 2003. When we abandoned the use of heavy oil in FY 2004, SOx emission completely dropped out of sight.

The graph at right indicates the measured amounts of exhaust gas from the boilers we use at our Headquarters' and Yokohama plants. There was no sign of exceeding the voluntarily set standard, even in FY2005.

| Amount of atmos | pheric pol | lutants (to | otal of 14 sit | es within Ja | pan)    | Un      | it: tons/year |
|-----------------|------------|-------------|----------------|--------------|---------|---------|---------------|
|                 | FY 1999    | FY 2000     | FY 2001        | FY 2002      | FY 2003 | FY 2004 | FY 2005       |
| NOx             | 23.4       | 18.9        | 12.6           | 4.1          | 9.1     | 10.6    | 11.3          |
| SOx             | 3.7        | 4.2         | 1.8            | 0.5          | 0.5     | 0.0     | 0.0           |

Measured amounts of exhaust gas from boilers at the Headquarters and the Yokohama Plant for FY2400

| Maagur   | ement standards        | Reg                  | gulated val             | ues                   | Measurement results |         |         |         |  |  |  |
|----------|------------------------|----------------------|-------------------------|-----------------------|---------------------|---------|---------|---------|--|--|--|
|          | l conditions 0, 1 atm. | National<br>standard | Prefectural<br>standard | Voluntary<br>standard | FY 2002             | FY 2003 | FY 2004 | FY 2005 |  |  |  |
| Yokohama | NOx (ppm)              | 180                  | 75                      | 60                    | 53                  | 59      | 58      | 58      |  |  |  |
| boiler   | smoke and soot(g/Nm3)  | 0.3                  | 0.3                     | 0.15                  | 0.007               | 0.005   | 0.007   | 0.007   |  |  |  |
| Moriya   | NOx (ppm)              | 180                  | 70                      | 70                    | 59                  | 58      | 57      | 43      |  |  |  |
| boiler   | smoke and soot(g/Nm3)  | 0.300                | 0.300                   | 0.150                 | 0.004               | 0.004   | 0.003   | 0.003   |  |  |  |

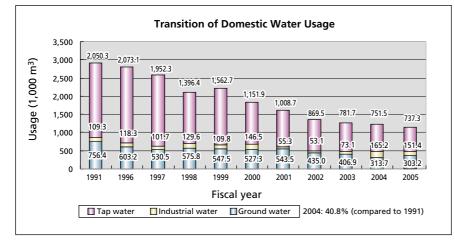
# Soil and Water Conservation

Water is also an important resource and we are taking measures to reduce our use of it. Moreover, we manage factory waste water with voluntary standard values that are stricter than either national or municipal regulatory standard values. If contamination exceeding the environmental quality standard is found, we take action to report the situation to the responsible local government agency immediately and restore the normal status and take permanent countermeasures as quickly as possible.

# **Reduced Use of Water**

The Matsushita Electric Industrial Group has set a goal to reduce the use of water

by 10% of FY 2001 levels by FY 2011. In the premises of our factories, we use tap



water, industrial water and ground water. Water use has largely been on the decline since 1990 due to improvements in the production process, not to mention the integration and abolishing of some facilities.

There were no large changes in FY 2005; however, due to educated conservation of water we were able to reduce water consumption by 1.4% over the previous year. This is 26% over FY 2001.

We shall promote further effective use of our water resources through various methods in the future, including recycling water.

### Investigation of Contamination of Soil and Ground Water

Since we began testing in 1996, we have never found any chlorinated organic compound pollution in the soil or ground water of our factories.

We conducted an investigation of the soil of the empty lots where we had closed down production and office facilities last year. There was low-level lead pollution in the lot where the service center was located. The lot was used to store discarded materials and it is believed that soldering from parts had fallen off and on to the ground. The pollution was only in the superficial layers and did not reach into the ground water. We immediately took action by removing the polluted soil and cleansing the area.

We will take further action in the future should any pollution to soil or ground water be detected in our facilities.



Removing polluted soil

### **Management of Plant Wastewater**

Wastewater from manufacturing sites consists of household wastewater and process wastewater, and both are either dumped into the sewer system or purified before being allowed to flow into the natural river system. We have determined the items to be measured according to the types of wastewater and the substances used in processes at all sites nationwide, so that we may perform periodic measurements.

We have also set voluntary standard values that are stricter than the national or municipal regulatory standard values to manage plant wastewater.

The following table lists the measurement

items and measured values at the Headquarters' and Yokohama Plants. The biochemical oxygen demand value in FY2004 and 2005 surpassed our voluntary standards, but this was rectified with a clean tank which immediately yield steady test results of less than 1ppm.

#### 工場排水の測定実績(本社・横浜工場No.3排水口の主な測定項目)

|         |   | 項目               |               |         | 規制値     |         | 実測地〈最大値) |         |         |         |         |  |  |  |
|---------|---|------------------|---------------|---------|---------|---------|----------|---------|---------|---------|---------|--|--|--|
|         |   | 点 日              |               | 国の基準    | 県の基準    | 自主基準    | '00年度    | '01年度   | '02年度   | '03年度   | '04年度   |  |  |  |
|         | 主 | 水素イオン濃度(PH)      | mg / <b>l</b> | 5.8-8.6 | 5.8-8.6 | 6.0-7.8 | 6.6-7.7  | 6.3-7.8 | 6.8-7.7 | 7.0-7.4 | 6.7-7.7 |  |  |  |
| -       | な | 生物化学的酸素要求量 (BOD) | ) mg / l      | 60      | 60      | 7       | 7        | 5       | З       | 10      | 11      |  |  |  |
| $\perp$ | 生 | 化学的酸素要求量 (COD)   | mg / l        | 60      | 60      | 20      | 15       | 17      | 11      | 14      | 13      |  |  |  |
| 場       | 活 | 浮遊物質(SS)         | mg / l        | 90      | 90      | 30      | 14       | 13      | 16      | 21      | 13      |  |  |  |
| 排       | 環 | n-ヘキサン抽出物質       | mg / l        | 5       | 5       | 2       | ND       | 1       | ND      | 2       | 2       |  |  |  |
| ъĸ      | 境 | 大腸菌              | 個 / l         | 3000    | 3000    | 100     | ND       | ND      | ND      | ND      | ND      |  |  |  |
| 71      | 項 | 全窒素(※)           | mg / l        | 60      | 60      | 30      | 29       | 18      | 16      | 17      | 21      |  |  |  |
|         | 目 | 全燐 (※)           | mg / l        | 8       | 8       | 4       | 2.2      | 1.6     | 1.4     | 1.1     | 1.2     |  |  |  |

注)(※):2001年4月1日より法の基準値改訂

ND:不検出

### Augmented Management of PCB Using Devices

In accordance to the official notice from the Ministry of Economy, Trade and Industry, we are continuing strict management of equipment to maintain safe handling and protect from accidents such as leakages from or losses of PCB using devices in storage. We have intensive storing at two of our facilities; our Yokohama factory and our Yamato factory. Additionally, in FY 2005 we conducted an on-the-spot check into the situation of trace amounts

# **Violation of Legal Standards**

When we had excessive levels of zinc in rainwater runoff at our Kurihama Technical Center, we immediately notified the authorities, investigated to identify the cause and installed a permanent observation device to prevent any recurrence. At the same plant our processed water was

Foreign energy usage

Crude oil equivalent (kiloliters)

lots, we discovered that there were 54 (as of March 2005) that contain trans oil with 0.5ppm. We are taking countermeasures in addition to renewing the products in use when required, and we are planning on how to further protect the environment.

leaking due to an abnormality into the

water processing device, we received guid-

ance from the authorities, and we re-

In our JCT facilities in Thailand, we had

an excessive amount of biological oxygen

demand which stemmed from a leak in

FY 2004

46,281

120,490

FY 2005

44,526

116,436

newed our safety devices.

FY 2003

44,905

of PCB that had been mixed with trans oil

and other insulating oil. After testing all

of our domestic factories, facilities and



Sampling for PCB check

our waste water piping. We repaired the pipe and began regularly monitoring water quality to prevent a recurrence. In our JIM facilities in Mexico drain water from a compressor was seeping into the water supply and dirtying water quality. We installed a oil/water separator device to prevent a recurrence.

### **Energy Conservation**

There have been no major changes in energy consumption since FY2001. Despite having shift work overseas, energy use is remaining stable.

#### Waste Products -

We have reviewed the data, and revised past data. Total waste generated has grown 9.5% over FY 2001, but the recycle rate has improved over FY 2005 at 94%. However, there are some data which cannot be precisely determined due to local issues; we are working for better precision.

# CO2 emissions (tons)121,129120,828115,692Wastes in other countries

| mastes in other countries         |         |         |         |         |         |
|-----------------------------------|---------|---------|---------|---------|---------|
|                                   | FY 2001 | FY 2002 | FY 2003 | FY 2004 | FY 2005 |
| Total amount generated (tons)     | 9,587   | 8,887   | 9,653   | 10,478  | 10,496  |
| Amount recycled (tons)            | 4,283   | 3,935   | 4,490   | 5,724   | 9,865   |
| Amount reduced (tons)             | 840     | 981     | 1,113   | 1,165   | 0       |
| Amount finally disposed of (tons) | 4,464   | 3,972   | 4,051   | 3,589   | 631     |
| Recycling rate (%)                | 49.0    | 49.8    | 52.6    | 61.5    | 94.0    |

**Environmental Impact on Foreign Subsidiaries** 

FY 2002

47,139

FY 2001

47,335

# **Economic Report**

At JVC we always want to leave the customer with the best impression and with 100% satisfaction. When we put that policy into words we came up with 'The Perfect Experience,' our brand statement. JVC promises to carry out this brand statement for our customers in displaying the power of our hard and soft media, our quintessential strong-points. Our management environment, will supervise our continuing growth and development, permeated by this philosophy, the Only 1 philosophy, which presents newer and richer lifestyle ideas for our customers through music and images in only the ways that JVC can.

### Harsher Market Environment with the Digitalization of Products

Harsher Market Environment with the Digitalization of Products FY 2004 was the initial year of our new mid-term plan, the Genesis 21 Plan. Over

the course of the 3-year management re-

form, we have propelled our business forward aiming at the augmenting of the management to the next level, through acceleration of our growth strategy and the instalment of permanent structural

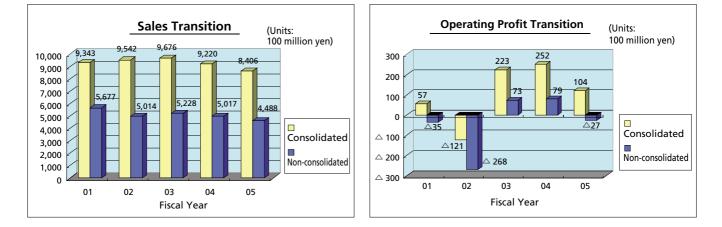
#### reforms

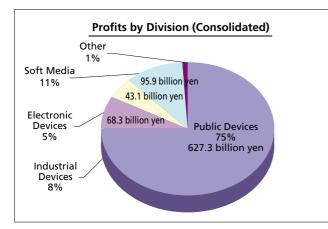
However, our continuous performance for FY 2005 has largely sank below our business plan, yielding a very disappointing result of 91% sales for the first term and 41% sales profit also for the first term. We never could have foreseen our worsening performance and we feel that adjusting performance twice is a serious problem. Despite the harsher market environment that accompanies a digitalization of products, the reason behind our worsening performance was the inability of the management to respond quickly enough to the flow of the digital era.

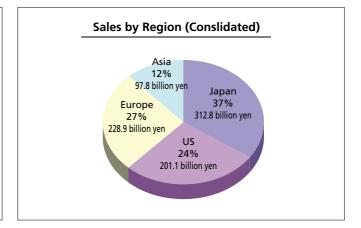
### A Combination of 'High Value-added Management' and 'High-speed Management'

In FY2006, we shall reflect on the previous year while placing the recovery of the Company's performance as our top priority while we work to rebuild our personal electric appliance market. We will aim to shorten the lead time leading up to and for the actual introduction of new products into the market, augment our soft development capacity, and move towards product selection and concentration. In order to beat out the ever-growing market competition we will not only put in place constant structural reforms such as management operation reform and production facility/employment structure review, but also strengthen a stand-alone concentrated strategy with "Only 1" products.

We will also strengthen profit through structural reforms to our ailing music software business, while selling albums of the leading artists and supporting and strengthening new up-and-coming artists to recover our performance.







In FY2006 we will espouse two fundamental policies; all employees will return to their origin, and internal causes will be swept away with full devotion paid to performance recovery. The first policy is the combination of 'high value-added management' and 'high-speed management.'

In high value-added management, Only 1 products unique to JVC that precede the competition will be launched repeatedly and this shall lead to increased profit. We shall make use of our core competence, audio-video technology, and introduce new high value-added products of high quality to the market.

We will not only understand the needs of our customers, but their wants as well; and, we shall create high value-added products that reflect those wants, while identifying the main battleground, the home. In addition, the products will be of high audio and picture quality, easier to use, more fun, and more refined. The products will give the customers' new ideas about how to live their lives comfortably. In short, JVC's originality will permeate the product.

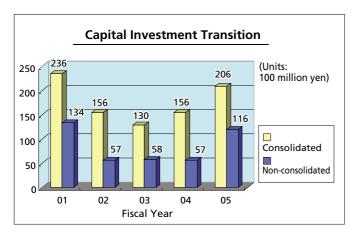
High-speed management involves the management returning to their origins. They will make use of the Company's strong point; our size and agility. The management will aim for operations that lead to development, production and sales as being global and complete from the customer's perception. High-speed management also aims to speed-up the marketing of products and the accumulation of leading technology through collaboration with partners, and for a highprofitability system that pursues the merit of quality rather than scale.

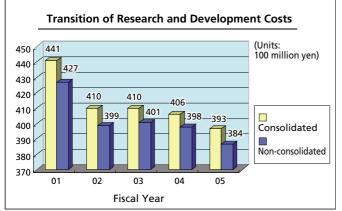
# Aspiring to Be'a True Customer Values-Oriented Company'

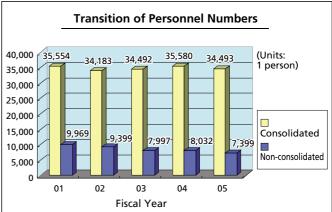
The two base policies of FY 2006 are to adapt to the coming high-definition age, and to go beyond hardware quality and pursue the DNA of our Company, sensibilities. The concept of sensibility is not only about numbered product specifications, it is about appealing to the human senses, and demonstrating more human high-quality pictures and sound. We shall pursue sensibilities, and inspire and move our customers, as we aim to become 'a true customer values-oriented company.'

# Inspiring and Moving Customers

It is are more ardent resolution in FY 2006 that in combining high-value added management and high-speed management, we will not only aim to recover our performance, but also to inspire and move our customers by presenting the finest video and sound.







# **Employee Relations**

People are seen as the most previous management resource, and the organized carrying out of hiring, placement, evaluation, remuneration, and skill development from a long-term perspective to comply with management strategy -- this is the way a personnel system should be. Put in other terms the personnel system should fully develop, foster and make use of an employee's talents, and while establishing motivation towards work in every employee by fair and accurate evaluation, work to improve the company's performance and fulfill the corporate infrastructure through the effective use of personnel.

# Personnel Policy

The policy is as follows; the basis of the personnel department is to fully understand the management policy of JVC, and to always make the policy central in training personnel that will strive to carry out their mission. Based on this basic personnel policy, we decide upon the ideal employee and the basis for the managers that will take-in and train these personnel, and we place this as the foundation of our personnel system.



Training New Recruits

# An Image of the Ideal Employee (An Outline)

• A person who strives to practice the basic management policy

The basic requirement for our employees is a person who learns the basic of their job, and through the carrying out of the basic management policy most appropriate to the times, betters oneself and strives to meet the expectations of society.

• An independent and ambitious person A free-thinking and creative spirit, confidence in not fearing failure and a strong will to meet new challenges are the source of personal growth.

• A specialist that is adept at changing with the times

It is important that each employee uses

their job to strive to become a specialist with skills applicable to society is a very important resource.

- A person with an international outlook A person who aims to gain the skills and presence required to understand, trust, work and develop together with people from other countries is valuable to the company.
- A creative person with original ideas

When an employee correctly understands their own individual traits and respects the traits of others, those traits will integrate to make possible a system blessed with a rich creative potential.

# • Individuals with that respect the company's social responsibility

We value employees that are well disciplined, highly ethical, always act with a conscience based on correct corporate ethics and fulfill their missions as global citizens.



Vocational Training

# **Personnel Training**

The basic thinking of personnel training based on the personnel policy is 'respect individuality.' We are making efforts with the following four major themes;

- Fostering of business leaders that will promote business strategy
- Fostering of professionals that will be



Vocational Training

essential to business strategy

- The development of personnel that will respond to the globalization and multinational trends of business
- The development of personnel that will respond to changes in business structure and social environment

Additionally, the diagram below displays the six fields in which personnel development is actually practiced.



Six fields of personnel development

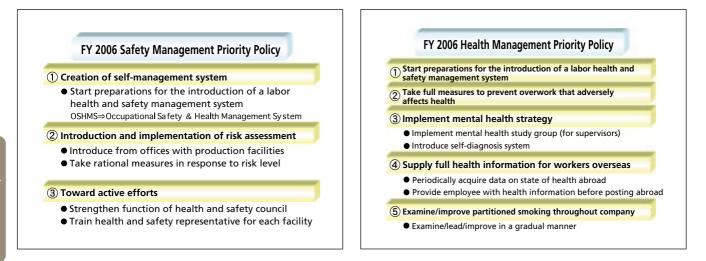
With 'self-improvement,' or wishing to develop yourself, being the foundation, the mainstay of the above diagram is OJT (On the Job Training), or the employee being developed by his or her boss or superior while on the job. In contrast 'organizational development' strives to create an active group in the workplace and increase collective power, while 'career development' conducts transfers, over the course of time, from a corporate future and personal growth perspective. To further heighten the effects of these, 'tier training' and 'vocational training' are offered on a supplemental basis.

### **Measures for Health and Safety Management**

We place the following values as key to our activities: the creation of a corporate culture of health and safety, the core value of respect for human life, law compliance, the maintenance of a healthy labor force, formation of an enjoyable working environment, the improvement of service, and placing safety and health within the realm

#### of CSR.

Among these, with regards to a labor health and safety management system, we place priority on and begun, this year, specific actions towards introducing a company-wide health and safety committee. It is a critical issue as to whether knowledge about health and safety issues will be passed down as there is a diversity of workers in terms of age and job type; therefore, we have the mindset that zero danger starts from zero accidents, so we are working to reduce risks to health and safety and to prevent on-the-job accidents from occurring.



# **Health Building Activities**

The primary supporting factor for personnel, the most valuable management resource, is building sound mental and physical health. We are actively making efforts to give our people motivation, present them with information, and give them support so that they may be able to help themselves.

#### • Measuring Health

Other than the health checkup designated by law, we carry out this health exam to cover all employees once every five years. It is not only to gauge a person's physical



A Health Exam (Standing on one foot with one eye closed)

health, but also to encourage them to start exercising. Additionally, we carry out dental consultation for preventing periodontal disease and, for female employees, bone density measurements once every five years.

#### • Health Building Seminar

Lifestyle related diseases can affect any employees at any age. This seminar, carried out in conjunction with the JVC



Health Building Seminar (Medical Check-up)

Health Insurance Union, breaks through conventional health maintenance instruction by granting the participants motivation through the knowledge and learned experience of the importance of a balance between exercise, nutrition and rest.

#### • Mental Health Care Training

Being right in the middle of the a high level IT society can bring about a lot of stress for our employees; this training shows the employees the correct mindset and that it is best to seek help early when small changes are detected. We also invite an outside instructor to give regular seminars to not only regular personnel but managers on how to correctly confront mental health.



Mental Health Care Training

# **Customer Relations**

At JVC we formulated the quality policy, "Working to improve customer satisfaction through the presentation of high-quality products and service," and we are promoting company-wide activities to aim for the creation of quality products to keep our customers satisfied. Though quality management is important at the design and production levels, it is also important that a customer through the use of our product is thoroughly satisfied and has a richer and more fulfilled life because of it.

### Contact with the Customer Determines Future Management

In order to present and improve products and services that satisfy the customer, we have created and employ the below diagram to channel customer opinions to the correct places.

Through this structure quality information, repair information, customer service center information, sales surveys, CS survey information and Web site information are analyzed and organized into a database at each division in charge, then given as feedback to the related divisions and managers. This information is used effectively for product, service and process improvement and development.

To ensure better customer satisfaction, we are engaging in efforts towards user-centered product development (User's Eye Product Creation) based on the philosophy of the ISO 13407 international standard, Human-Centered Design Process.

### **User's Eye Product Creation**

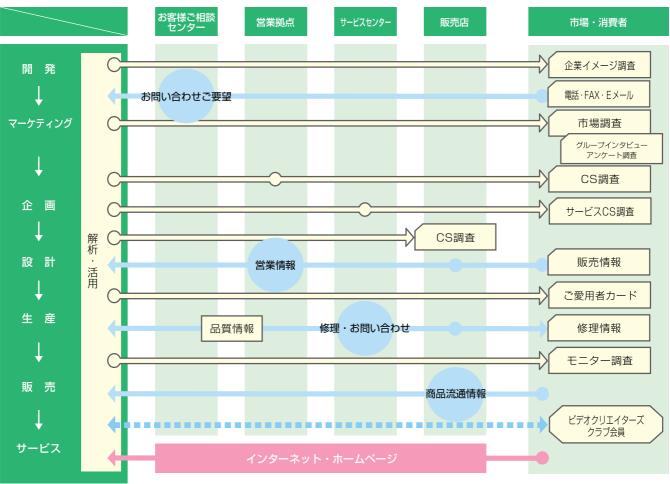
By conducting marketing surveys like group interviews and questionnaires, as

well as actual product control operation tests to test for usability, we can garner frank user opinions and actions as well as conduct verifications. In the product development process usability evaluation methods like task analysis and the Heuristic method are employed to develop products that can further satisfy the customer.

# Development Perception is on Universal Design

Universal design is meant to present easy to use and pleasant products, services and lifestyles to all people, regardless of age or physical ability. Along with aiming to produce more pleasant products based on the wishes and opinions of customers, we are also engaged in efforts towards an easy to use universal design for our products.

For instance, we believe it is necessary to design appropriate size and shapes of buttons so that people that have little



**Customer Opinion Flow Chart** 

strength or cannot dexterously move their fingers can operate the products with ease. Additionally, not only should functions and operations be apparent on sight, but also through touch or sound and various other ways of expression.

The diagram to the right breaks down the points of special consideration for universal design into four groups, with clear and easy to understand explanations on the content and objectives. Some of the products developed with universal design are introduced here. The points of special consideration for each product are indicated by the marks. The technology developed and employed in the TV/FM/AM3 Band Radio RA-BF1, installed with the world's first hearing aid system, received high reviews, and was popular with the mass media. The new plasma televisions and liquid crystal televisions are also outfitted with this technology (see p.13).



This is a radio installed with the slow, clear and easy to hear hearing aid system. Even fast-talking announcers will be easy to understand. You can even rewind and playback parts that you missed.

UX-Z7MD



Operations are expressed through sound. Time is also announced through sound which enables the blind to set the timer. Comes with an audio instruction manual.

# GR-DVP9

Ambidextrous digital video camera. Control functions are focused in the center of the device. Flat design with very few protrusions.

Due to an increase in customer inquiries in recent years, we are making serious efforts to improve the precision, friendliness and speediness of our responses to our customers so that we may increase their satisfaction. Moreover, the center handles the organization, analysis and feedback to the related company divisions of customer inquiries and wishes so that we may reflect this on our products and services.

# Satisfaction to Each and Every Customer

Included in after service is repair work performed at the retailer, and parts and technical leadership supplied by JVC. When products cannot be repaired at retailers because they are gifts or for some other reason, Victor Service Engineering Co., Ltd.(VSE) offers support to retailers. VSE offers fast, accurate and friendly service to satisfy every customer; and provides complete and comprehensive service that includes everything from before service to after service at branch repair cen-



RM-A202 RM-A302

RA-BF3

Easy-to-use channel and volume buttons. Button shape is designed to allow the user to know what function is represented with large symbols used on keys.



Branch Repair Center

ters and 88 service locations across Japan. Even in countries outside of Japan, JVC, under the supply chain management principle, effectively links supply points around the world and works to streamline the production process, while also improving human resources to achieve a higher level of product quality. Further, in overseas sales and service affiliates, we are developing sales and service activities related closely to the various regions; through these integrations of manufacturing and sales, we are pushing forward activities to secure constant customer satisfaction.

# Social Repor

### Service System

The wishes of our customers are retrieved through our Customer Service Center. It receives over 200 thousand customer opinions and inquiries a year which consist of inquiries regarding use, purchases, AV equipment combinations and repairs. Its primary functions are 1) the presentation of information and advice for customers, 2) reception and response measures for customer wishes, 3) sorting, analysis and company-internal feedback on customer opinions, 4) public relations for municipal administration and consumer advocacy groups.



Customer Service Center

# **Regional/Civil Relations**

It is now more important than ever for companies to have regional and civil links; without the understanding and cooperation of public companies they may not be able to survive. JVC does not engage in simple commercialism, we consider the real meaning of the relations between us and the public, and we put those relations to practice. Our activities are not limited to Japan, they stretch to our production offices around the world. We currently make a wide variety of efforts; from contributions to the arts and culture through music, images and sports to our role as a corporate citizen in the various activities closely linked to region and society.

# Social Welfare Activities

#### ⊖Scholarship

On May 14 of this year JCT, which produces optical amplifiers in Nakhon Ratchasima Province, Thailand, a second 'Scholarship Awards Ceremony' was given for local underprivileged children. The scholarship is equivalent to one year's tuition at an elementary school in the Kingdom of Thailand. This system was started last year, and 24 students have been selected from elementary schools in the five cities around JCT.



Taking a commemorative photo with the children and JCT staff

At the request of our employees, a fundraising box was placed in our factory and, along with the Company, our Japanese employees also donated money after learning of this activity through a Company newsletter. On the day of the ceremony members of the board of education, teachers and families, 80 people in all, attended; JCT president, Mr. Numakura gave all the children, standing in line, encouraging words as he presented them their scholarships. For a Company to carry out this kind of social aid program is to respect the will of the employees; we will certainly carry on with this JCT Scholarship Drive in the future.

#### ○Visiting Homes for the Elderly

Mr. Morita, the president of JSC, the manufacturer of primarily DVD players



JSC members visiting the elderly

and audio in Shanghai, China, along with other management executives and employee representatives visited the Shanghai Pudong Linqiao Home for the Elderly on November 18th of last year. This is an old practice that happens every year. Apart from an informal meeting, the management also gives the elderly residents gifts useful for their daily lives and snacks. Despite the elderly being infirmed, they always say goodbye to the JSC management from the door, leaving the management moved.

#### **Oschool Support**

JDC, a production facility in Tuscaloosa, Alabama, USA that produces CD/DVD packaging software, is taking part in an aid program called Cartridges For Kids. This is part of the Adopt-A-School pro-



The children of Arcadia Elementary

gram which pairs public schools, from kindergartens to high schools, with local business to help aid their activities, while the Tuscaloosa Board of Commerce acts as the program organizer. JDC has been involved in this program since 1992, and Cartridges For Kids was started as a part of that program. The teachers and children hand out flyers and posters asking for the collection of spent laser printer, fax, copier and ink jet cartridges as well as mobile phones. There are collection boxes in not only the school but in JDC and the employees, their families all work towards collecting the cartridges. The collected cartridges are sent from JDC to the Cartridges for Kids company and are redeemed for money which goes help run the costs of the school. Through the Cartridges for Kids project JDC has been able to support local schools while also showing the children and community in general the importance of protecting the environment in which we live.

# **Regional Social Activities**

On June 30th of last year the good people of the Owatari Municipal Office visited the Maebashi plant in Gunma Prefecture, which produces and develops audio equipment, to help aid communication with the outside community. Apart from receiving a lecture on the business and a



People from the Owatari Municipal Office visiting the Maebashi plant facilities

description and demonstration of the products, as part of the factory's efforts to protect the environment, the visitors also saw the abandoned subterranean heavy oil tank and incinerator, as well as the waste storage facility. Similar activities routinely take place to help build bridges with the local community and to help everyone understand what we are doing to protect the environment.

#### $\bigcirc$ Forestation

JVL, a sales office in Vietnam, takes part in forestation activities every year as part of its service to society. Last year, under the slogan 'JVC grows up together with green' the local office helped with forestation activities in the old city of Phe, the south central resort of Ngachan and Phan teet. The people that took part in the forestation were not only JVL employees but also regional dealers and the mayor, while the event was broadcast on television.



Vietnam JVL staff do clean up and tree planting

#### **Oclean Strategy**



Yamato plant staff clean up the area around the factory

In May and again in December, the Yamato plant, which is a production plant for DVD packaging software and a development site for components, took part in a clean up together with a neighboring company. The plant has also joined the Yamato City Clean Campaign and has had synergy effect by calling on the local community to help reduce illegal dumping on local roads.

#### **ORiver Protection and Conservation**

JEM, an audio equipment developer and manufacturer in Malaysia, takes part in the full protection and conservation of 10,080m<sup>2</sup> of a river bed, working towards securing the safety of the people from water damage so that the people may live in comfort. While at the same time these activities allow JEM to provide the local community with a familiar space in they can relax and promote beautification.



JEM staff have contributed to safety and beautification

# Art and Cultural Activities

#### **OVideo Festival**

The announcements and awards ceremony for the Tokyo Video Festival 2005, hosted by JVC, took place in Ebisu Garden this year with approximately 500 people in attendance, including award nominees and the press. A total of 2,605 videos were submitted, and there were 30 chosen for the superior prize, while 70



The American journalist Mr. Craig Renaud, receives the JVC Award

were chosen for the encouragement award. The people's award, a high-vision movie award, JVC award, announcements and conferment for the top video award, video screenings, and a talk forum between the judges and the nominees all took place. This is international video contest, which makes no distinction between amateurs and professionals, was held for the 27th time this year. This long established event was finally recognized in December of last year when it received the Video Pioneering Award at the Bureau of Culture-backed Mesena Awards 2004 hosted by the Mesena Conference.



We provided the most moving experience through the best performance

#### **○Jazz Festival**

The 20th anniversary of the JVC Jazz Festival in TOKYO was held on November 3rd of last year at the Tokyo Kosei Nenkin Hall. Izanami, paris match, Nettai JAZZ Gakudan, Al Dimeora and His Band, the Marcus Miller Band performed live for around five and a half hours in front of 1,900 jazz fans. After the show was finished the Marcus Miller Band held a hastily planned autograph signing which drew a long line, but Marcus Miller stayed until the last person received an autograph. There was photo display at the entrance of the hall display the last 20 years of the JVC Jazz Festival which attracted a lot of attention.

### Communication

The largest environmental exhibition in Japan, Eco-Products 2004, took place at Tokyo Big Site between December 9th and 11th, and we also participated. We displayed and demonstrated environmentally-friendly products under this year's theme was 'the creation of products that are good to people and the environment.'



We received many visitors

# References

# This page lists main information regarding the environment of all of JVC's Japanese manufacturing sites.

| _        |   |   |   |                              |                       | ,                |                  |                  |                                     |                            |                 |                     |                         |                             |                      |                          |                    | 5                                 |            |
|----------|---|---|---|------------------------------|-----------------------|------------------|------------------|------------------|-------------------------------------|----------------------------|-----------------|---------------------|-------------------------|-----------------------------|----------------------|--------------------------|--------------------|-----------------------------------|------------|
| Ŀ        | Site                                    | Location  | ISO 14001<br>Certification                  | er                           | Amo                   | ount of          | Energy           | y Use            |                                     | Industrial Valuable        |                 | enerated            | /ater                   | W                           | ater                 | Vater                    |                    | ance                              |            |
| Domestic | Designation                             | Main Business   | Acquired Acquired<br>Most Recent<br>Renewal | Electric Power<br>(1,000kWh) | Town Gas<br>(1,000m³) | LPG<br>(1,000kg) | Fuel Oil<br>(KL) | Kerosene<br>(KL) | CO <sup>2</sup><br>Emissions<br>(t) | Amount<br>Generated<br>(t) | Disposal<br>(t) | Recycle Rate<br>(%) | Municipal Water<br>(m³) | Industrial<br>Water<br>(m³) | Ground Water<br>(m³) | Circulated Water<br>(m³) | Amount Used<br>(t) | Released and<br>Transfered<br>(t) | Compliance |
| 1        |   | Kanagawa-ku, Yokohama-city,<br>Kanagawa<br>High-density multi-layer printed                 | 1998.11<br>JACO                             | 50,791                       | 28                    | 1                | 0                | 506              | 19,472                              | 7,633                      | 1               | 100                 | 176,615                 | 151,400                     | 0                    | 0                        | 206.3              | 6.2                               | 0          |
| 0        | Headquarters<br>Yokosuka Plant          | High-density multi-layer printed<br>wiring boards, D-ILA devices<br>Yokosuka-city, Kanagawa | 2004. 6<br>1997. 9                          |                              |                       |                  |                  |                  |                                     |                            |                 |                     |                         |                             |                      |                          |                    |                                   |            |
|          | Yokosuka                                | Camcorders, TVs, ILAs,<br>DVD recorders   | JQA<br>2003. 9                              | 6,199                        | 0                     | 15               | 0                | 70               | 2,434                               | 1,052                      | 27              | 97                  | 35,540                  | 0                           | 0                    | 0                        | 0.9                | 0.0                               | 0          |
| 3        | Kurihama<br>Technical Center            | Yokosuka-city, Kanagawa   | 1998.11<br>JACO                             | 8,293                        | 471                   | 12               | 0                | 0                | 4,108                               | 164                        | 0               | 100                 | 25,606                  | 0                           | 0                    | 0                        | 0.2                | 0.1                               | *1         |
|          | Kurihama                                | Research and Development  | 2004. 6                                     |                              |                       |                  |                  |                  |                                     |                            |                 |                     |                         |                             |                      |                          |                    |                                   |            |
| 4        | Yamato Plant<br>Yamato                  | Yamato-city, Kanagawa<br>Parts/information relay devices                                    | 1998. 8 JACO                                | 12,774                       | 0                     | 13               | 0                | 0                | 4,600                               | 1,781                      | 0               | 100                 | 0                       | 0                           | 217,880              | 0                        | 0.4                | 0.0                               | 0          |
| (5       | Rinkan Plant                            | Yamato-city, Kanagawa   | 1997. 4<br>JACO                             | 18,273                       | 0                     | 0                | 0                | 1,060            | 9,184                               | 451                        | 3               | 99                  | 0                       | 0                           | 79,437               | 497,104                  | 0.8                | 0.0                               | 0          |
| 6        | Rinkan<br>Tsurugamine Plant             | CDs, DVD (packaged software)<br>Asahi-ku, Yokohama-city,                                    | 2003. 3                                     |                              |                       |                  |                  |                  |                                     |                            |                 |                     |                         |                             |                      |                          |                    |                                   |            |
| 0        | Tsurugamine                             | Kanagawa<br>FA equipment, Mechanical parts  | 2004. 6 JACO                                | 3,664                        | 0                     | 2                | 0                | 5                | 1,327                               | 78                         | 0               | 100                 | 18,178                  | 0                           | 0                    | 0                        | 0.1                | 0.1                               | 0          |
| Ĩ        | Hachioji Plant<br>Hachioji              | Hachioji-city, Tokyo<br>Professional system equipment                                       | 1997. 1                                     |                              |                       |                  |                  |                  |                                     |                            |                 |                     |                         |                             |                      |                          |                    |                                   |            |
|          | Victor Data Systems<br>Co., Ltd.        | Yamato-city, Kanagawa   | JACO<br>2003. 1                             | 4,157                        | 105                   | 20               | 0                | 0                | 1,792                               | 252                        | 0               | 100                 | 20,184                  | 0                           | 0                    | 0                        | 0.0                | 0.0                               | 0          |
|          | VDS<br>Maebashi Plant                   | Information devices<br>Maebashi-city, Gunma   | 1998. 8                                     |                              |                       |                  |                  |                  |                                     |                            |                 |                     |                         |                             |                      |                          |                    |                                   |            |
| (8       | Maebashi                                | Audio equipment   | JACO<br>2004. 7                             | 3,682                        | 0                     | 12               | 0                | 0                | 1,351                               | 207                        | 0               | 100                 | 0                       | 0                           | 46,700               | 0                        | 0.1                | 0.0                               | 0          |
| 9        | Victor Isesaki<br>Electronics Co., Ltd. | Isesaki-city, Gunma   | 1998.12<br>JQA                              | 3,920                        | 0                     | 1                | 41               | 0                | 1,516                               | 63                         | 0               | 100                 | 5,040                   | 0                           | 0                    | 0                        | 1.5                | 0.2                               | 0          |
|          | Isesaki Electronics                     | Video and related equipment   | 2004.11                                     | 0,0-0                        |                       |                  |                  |                  | .,                                  |                            |                 |                     | -,                      |                             |                      |                          |                    |                                   | Ŭ          |
| 10       | Mito Plant                              | Mito-city, Ibaraki  | 1998. 3<br>JACO                             | 29.282                       | 0                     | 0                | 0                | 3.558            | 19,384                              | 853                        | 25              | 97                  | 804                     | 0                           | 392.166              | 0                        | 443.5              | 81.6                              | 0          |
| _        | Mito                                    | Recording media products  | 2004. 2                                     | 20,202                       | 5                     |                  | 5                | 0,000            | .0,004                              | 000                        |                 |                     |                         |                             | 002,100              | 0                        | 0.0                | 01.0                              |            |
| U        | Fujieda Plant<br>Fujieda                | Fujieda-city, Shizuoka<br>Parts (motors)  | 1999. 1<br>JACO<br>2004. 6                  | 2,105                        | 0                     | 10               | 0                | 77               | 975                                 | 78                         | 0               | 100                 | 13,521                  | 0                           | 0                    | 0                        | 0.2                | 0.2                               | 0          |
| (12      | -                                       | Asaba-cho, Iwata-gun,<br>Shizuoka   | _   | 1,040                        | 0                     | 0                | 0                | 0                | 371                                 | 1,000                      | 0               | 100                 | 5,191                   | 0                           | 0                    | 0                        | 1.9                | 1.6                               | 0          |
|          | Interior                                | Interior furniture  |   | .,040                        | 5                     | 5                | 5                | 5                | 0/1                                 | .,500                      | Ŭ               |                     | 0,.01                   | 5                           | 5                    | 0                        |                    |                                   | 0          |

This chart is abbreviated for lack of space. For more information visit JVC's Web site.

\*1…Standard value of density of fluorine excess of discharge water to drainage.

It exceeds it BOD standerd value by the processing water leak due to abnormality of the wastewater treatment equipment.



| SE       | Site                     |  | Location                          | ISO 14001<br>Certification             | -                            | Am                    | ount of          | Energy           | Use              |                                     |                            | Wastes Ger<br>Wastes Ger | nerated             | ater                    | Water<br>อั                 |                      | Water                | Bal                | Material<br>ance<br>ບ             |            |
|----------|--------------------------|--|-----------------------------------|--|------------------------------|-----------------------|------------------|------------------|------------------|-------------------------------------|----------------------------|--------------------------|---------------------|-------------------------|-----------------------------|----------------------|----------------------|--------------------|-----------------------------------|------------|
| Overseas | Designation              | Main Business  |                                   | Acquired Acquired Acquired Institution | Electric Power<br>(1,000kWh) | Town Gas<br>(1,000m³) | LPG<br>(1,000kg) | Fuel Oil<br>(KL) | Kerosene<br>(KL) | CO <sup>2</sup><br>Emissions<br>(t) | Amount<br>Generated<br>(t) | Disposal<br>(t)          | Recycle Rate<br>(%) | Municipal Water<br>(m³) | Industrial<br>Water<br>(m³) | Ground Water<br>(m³) | Circulated V<br>(m³) | Amount Used<br>(t) | Released and<br>Transfered<br>(t) | Compliance |
| 1        | JVC Video Manu<br>JVE    | ufacturing Europe GmbH<br>VCRs, camcorders, DVD players/n        | Berlin, Germany<br>ecorders       | 1999.12<br>2002.12 TÜ V                | 2,546                        | 0                     | 0                | 0                | 0                | 1,415                               | 1,090                      | 28                       | 97                  | 4,574                   | 0                           | 0                    | 0                    | 0.0                | 0.0                               | 0          |
| 2        | JVC Manufactur           |  | Scotland                          | 1998. 3<br>2003. 4 SGS                 | 4,520                        | 456                   | 0                | 0                | 0                | 3,566                               | 1,523                      | 79                       | 95                  | 4,345                   | 0                           | 0                    | 0                    | 0.4                | 0.0                               | 0          |
| 3        | JVC Disc America         |  | Alabama, USA                      | 2000. 8<br>2003. 2 AWM                 | 30,287                       | 457                   | 0                | 0                | 0                | 22,545                              | 1,352                      | 195                      | 86                  | 4,174                   | 0                           | 0                    | 0                    | 2.0                | 0.0                               | 0          |
| 4        | JVC Industrial de        | e Mexico S.A de C.V<br>TVs, projection TVs                       | Tijuana, Mexico                   | 1997. 4<br>2003. 2 BSI                 | 9,080                        | 0                     | 387              | 0                | 0                | 7,897                               | 2,345                      | 150                      | 94                  | 20,321                  | 0                           | 0                    | 0                    | 1.1                | 0.0                               | *2         |
| 6        | JVC Electronics S<br>JES | Singapore Pte.Ltd.<br>Car audio, Audio equipment                 | Singapore                         | 1998.12<br>2005. 1 PSV                 | 1,835                        | 0                     | 0                | 0                | 0                | 1,182                               | 76                         | 0                        | 100                 | 8,106                   | 0                           | 0                    | 0                    | 0.1                | 0.0                               | 0          |
| 6        | JVC Electronics N<br>JEM | Malaysia Sdn. Bhd.<br>Components (motors, video drums),          | Malaysia<br>Audio equipment       | 1999. 5<br>2005. 1 KEMA                | 19,516                       | 0                     | 0                | 0                | 0                | 10,597                              | 929                        | 85                       | 91                  | 85,877                  | 0                           | 0                    | 0                    | 0.0                | 0.0                               | 0          |
| 7        | JVC Video Malay<br>JVM   | ysia Sdn.Bhd.<br>VCRs, Camcorders, Set top boxes                 | Malaysia                          | 1999. 5<br>2004.12 LRQA                | 14,755                       | 0                     | 0                | 240              | 0                | 8,677                               | 51                         | 0                        | 100                 | 84,156                  | 0                           | 0                    | 0                    | 9.5                | 0.0                               | 0          |
| 8        | JVC Manufactur<br>JMT    | ring(Thailand)Co. Ltd.<br>Components (fly-back trans), TVs       | Thailand<br>5, CCTV cameras       | 1999. 4<br>2002. 6                     | 13,065                       | 0                     | 0                | 0                | 0                | 8,976                               | 390                        | 0                        | 100                 | 0                       | 65,769                      | 0                    | 0                    | 2.5                | 0.0                               | 0          |
| 9        | JVC Component<br>JCT     | t (Thailand) Co. Ltd.<br>Components (deflection yokes, motor     | Thailand<br>rs, optical pick ups) | 2000. 1<br>2003. 1 SGS                 | 33,002                       | 0                     | 38               | 0                | 0                | 22,787                              | 465                        | 1                        | 100                 | 0                       | 290,588                     | 39,544               | 89,030               | 16.4               | 5.3                               | *3         |
| 10       | PT. JVC Electron<br>JEIN | iics Indonesia<br>Components (drums), Audio equip                | Indonesia<br>oment, car audio     | 1999. 5<br>2002. 5                     | 13,145                       | 0                     | 0                | 0                | 0                | 10,385                              | 532                        | 84                       | 84                  | 0                       | 110,850                     | 0                    | 0                    | 0.5                | 0.3                               | 0          |
| 1        | JVC Vietnam Ltd<br>JVL   | d.<br>TV, Audio components                                       | Vietnam                           | 2001. 4<br>2004. 2 TÜ V                | 786                          | 0                     | 0                | 0                | 0                | 417                                 | 222                        | 5                        | 98                  | 9,166                   | 0                           | 0                    | 0                    | 4.8                | 0.0                               | 0          |
| 12       | JVC Beijing Elec<br>BJVC | tronics Industries Co., Ltd.<br>DVD recorders, Digital Video Car | Beijing, China<br>meras           | 1999. 8<br>2002.12 BVQI                | 6,138                        | 0                     | 53               | 50               | 0                | 6,332                               | 329                        | 0                        | 100                 | 57,886                  | 0                           | 0                    | 0                    | 3.1                | 0.0                               | 0          |
| 13       | JVC Shanghai El<br>JSC   | lectronics Industries Co., Ltd.<br>DVD players, Audio components | Shanghai, China<br>, car audio    | 1998. 6<br>2004. 9 CCEMS               | 3,531                        | 0                     | 0                | 0                | 0                | 3,471                               | 698                        | 413                      | 41                  | 22,682                  | 0                           | 0                    | 0                    | 0.8                | 0.0                               | 0          |
| 14       | Fujian JVC Elect<br>FJE  | ronics Co., Ltd.<br>Components (deflection yokes)                | Fujian, China                     | 2003. 8 JQA                            | 6,288                        | 0                     | 23               | 0                | 0                | 5,758                               | 415                        | 5                        | 99                  | 66,685                  | 0                           | 0                    | 0                    | 23.5               | 0.0                               | 0          |
| 15       | JVC Guangzhou<br>GJVC    | Electronics Co., Ltd.<br>Components (motors)                     | Guangzhou, China                  | 1999. 7<br>2004. 3 CEPREI              | 1,971                        | 0                     | 0                | 0                | 0                | 1,938                               | 80                         | 0                        | 100                 | 40,885                  | 0                           | 0                    | 0                    | 0.9                | 0.0                               | 0          |

# This page lists main information regarding the environment of all of JVC's international manufacturing sites.

This chart is abbreviated for lack of space. For more information visit JVC's Web site. \*2…BOD standerd value excess because wastewater from F2 piping leak into gutter. \*3…Water COD measure was excess. Agreemant with city authority to fix ASAP.



# 日本ビクター環境経営報告書2005

アンケート協力のお願い

日本ビクター環境経営報告書2005に関心をお寄せいただき、ありがとうございます。 今年度の「環境経営報告書2005」は、従来の報告書より更に一つ脱皮し、環境活動のみならず 人事・教育・安全衛生等も開示しさらに地域社会との関わりなどもご報告申し上げております。 環境活動重視は、当然のことながら「人間への優しさ・思いやり」に繋がり、又地域・社会とも 密接にかかわって来る問題です。

今後さらに充実した環境活動等を推進していく為に、是非とも皆さまのご意見、ご感想を 裏面のアンケートに記載いただきまして下記宛、fax にて送信頂きますようお願い申し上げます。

#### お客様の個人情報のお取り扱いについて

このアンケートでお客様に記入いただきました個人情報につきましては、日本ビクター株式会社、 およびビクターグループ関連会社(以下、当社)にて、下記の通り、お取り扱いいたします。

<情報の利用目的>

・今後の環境経営の参考
 ・統計資料の作成

<情報の保管>

cut here

お客様の個人情報は、適切に管理し、当社が必要と判断する期間、保管させていただきます。

<情報の提供・開示>

- 下記の場合を除き、お客様の同意なく個人情報を第三者に提供または開示することはありません。 ・上記利用目的のために、協力会社に業務委託する場合。
  - 当該協力会社に対しては、適切な管理と利用目的以外の使用をさせない措置をとります。 ・法令に基づいて、司法、行政、またはこれに類する機関から情報開示の要請を受けた場合。

<お問い合せ窓口>

日本ビクター株式会社 環境本部

環境経営報告書作成係

〒221-8528 横浜市神奈川区守屋町3-12 tel:045-450-2512

# fax:045-453-1406

| ご意見、ご感想をお聞かせ下さい。  | 環境経営報告書2005                                       |
|---|---|
|   | ×関係 □ 環境NP0<br>D他(   _ )                          |
| Q2、どのようにしてビクター環境経営報告書をお知りになり<br>□ 日本ビクター関係者 □ 日本ビクターホームページ □ 新聞・<br>□ お取引先 □ インターネット □ その他(   |   |
| Q3、全体的な評価をお願い致します。<br>● わかりやすさ<br>□ とてもわかりやすい □ わかりやすい □ わかりにくい<br>● 内容の充実度<br>□ とても充実している □ 充実している □ 少々もの足りない  |   |
| Q4、印象に残った項目、興味の持てた項目はどれでしたか?<br>□ 環境基本方針 □ 環境活動の推進体制 □ 環境監査 □ 環境<br>□ 環境会計 □ 有害化学物質不使用の取り組み □ 使用済み製品<br>□ CS/エコ製品づくり □ 物流のグリーン化 □ 省エネルギー・サ<br>□ 廃棄物削減への取り組み □ 環境化学物質の排出削減と適正管理<br>□ 土壌・水質の保全 □ 経済性報告 □ 従業員との関わり □<br>□ 地域社会との関わり □ 資料集 □ 環境保全活動のあゆみ | 意自主行動計画の推進<br>リサイクルの取り組み<br>地球温暖化への取り組み<br>□ 大気保全 |
| Q5、これまで当社環境経営報告書は <ul> <li>はじめて読む</li> <li>過去に読んだ事はある</li> <li>毎回読んて</li> </ul>   | - CC  |
| Q6、もっと詳しく知りたい項目、又は追加すべきテーマがあ  | ればお聞かせ下さい。  |
| Q7、その他ご意見・ご要望など、自由にご記入下さい。  |   |
| お差支えない範囲でご記入をお願いいたします。  |   |

| お差支えない範囲でご記入をお願いいたします。 |
|------------------------|
|                        |

| _お名前                          |        | 性別       | 年齢           | <br>      |
|-------------------------------|--------|----------|--------------|-----------|
| ご住所 □ご自宅 <sup>〒</sup><br>□勤務先 |        |          |              | <br> <br> |
|                               | - 33 - | te       | el :<br>IX : |           |
|                               |        | ご協力大変ありな |              | ました。      |

# 環境保全活動のあゆみ

| 年         | 日本ビクター  | 社 会(国内外)   |  |
|-----------|---|--|--|
| 1991(H 3) | 環境管理部設立<br>第1回環境会議開催  | オゾン層保護法('88)<br>経団連「地球環境憲章」<br>再生資源有効利用促進法   |  |
| 1992(H 4) | 製品アセスメント活動開始<br>環境基本憲章制定<br>ビクター環境ロゴマーク制定   | 国連環境会議(地球サミット)<br>リオ宣言、アジェンダ21<br>通産省「地球にやさしいボランタリープラン」                                |  |
| 1993(H 5) | 第 I 期環境ボランタリープラン策定<br>社内環境監査開始  | 環境基本法  |  |
| 1994(H 6) | 特定フロン等工程から全廃  | 環境基本計画<br>気候変動枠組み条約  |  |
| 1995(H 7) | 社内環境監査一巡(国内)  | 容器包装リサイクル法   |  |
| 1996(H 8) | 環境基本方針制定(憲章を改定)<br>第Ⅱ期ボランタリープラン策定   | 経団連「環境自主行動計画」<br>国際環境規格ISO14001発効  |  |
| 1997(H 9) | バ王子地区ISO14001認証取得(国内初)<br>ジクロロメタン社内使用全廃<br>メキシコTV工場JIM ISO14001認証取得(海外初)  | 気候変動枠組み条約京都会議(COP3)  |  |
| 1998(H10) | 環境本部設立<br>商品リサイクルプロジェクト発足<br>グリーン調達ガイドライン制定   | 省エネ法改正(トップランナー方式導入)<br>家電リサイクル法<br>地球温暖化対策推進法  |  |
| 1999(H11) | 国内14事業所ISO14001認証取得<br>第10回環境会議開催<br>(2001年度以降の環境活動の方向付け)   | 土壌・地下水汚染調査対策指針<br>ダイオキシン対策法<br>化学物質管理促進法(PRTR法)  |  |
| 2000(H12) | リサイクル事業推進室設置<br>環境会計実績集計(1999年度)<br>ビクター・グリーン大賞制度開始<br>第11回環境会議開催(製品アセスメント指針)   | 容器包装リサイクル法完全施行<br>循環型社会形成促進基本法<br>グリーン購入法<br>資源有効利用促進法(3R法) 等々                         |  |
| 2001(H13) | 使用済みテレビの回収・リサイクル開始<br>全世界の生産拠点でISO14001認証取得完了<br>グリーン購入法適合商品の登録<br>鉛フリーはんだ導入推進プロジェクト設置<br>環境業績評価開始(松下電器産業との協業)<br>小形二次電池回収・再資源化プログラムに参加<br>国内の営業・サービス拠点でISO認証取得 | グリーン購入法基本方針<br>フロン回収・破壊法<br>PCB処理特別措置法<br>家電リサイクル法施行<br>COP7で京都議定書合意<br>アメリカ水銀規制法      |  |
| 2002(H14) | 第13回環境会議開催<br>(2002年度の環境活動確認)<br>リサイクル事業推進室の機能を環境本部に移設<br>エコプロダクツ2002出展   | 日本京都議定書を批准<br>地球温暖化大綱<br>建設資材リサイクル法完全施行<br>地球温暖化対策推進法改正<br>持続可能な開発に関する世界首脳会議(環境開発サミット) |  |
| 2003(H15) | グリーン調達基準書作成/説明会開催<br>第14回環境会議開催<br>第15回環境会議開催<br>エコプロダクツ2003出展  | WEEE・RoHS指令官報告示<br>土壌汚染対策法施行<br>改正省エネ法施行<br>家庭用PCリサイクル法施行                              |  |
| 2004(H16) | 第16回環境会議開催<br>第12回横浜環境保全活動賞受賞<br>第17回環境会議開催<br>エコプロダクツ2004出展  | POPs条約発効<br>ロシア京都議定書批准<br>大気汚染防止法改正  |  |
| 2005(H17) | 第18回環境会議開催<br>欧州環境会議開催  | 京都議定書発効<br>WEEE指令スタート<br>EuP指令発効   |  |
|           |   |  |  |

本報告書をご高覧戴き誠に有り難うございます。

まだまだ不十分な内容ではありますが、これからもより一層内容の充実を図る努力をしてまいりますので、 - 34 -関係各位の忌憚のないご意見・ご要望をお寄せ戴きますよう宜しくお願い申し上げます。



