Environmental Responsibility

Promotion of Environmental Management

“Environmentally conscious corporate management” is one of the priority initiatives of our medium-term business plan “Global K.” This is our determination to commit ourselves to the betterment of the environment in every aspect of our business activities through conducting business with a focus on reducing the environmental impact of both our products and our production activities.

Furthering “Environmental Management” under the Medium-Term Business Plan “Global K”

In 2003, Kawasaki established the 2010 Environmental Vision: “What Kawasaki Should Be in the Year 2010” as guidelines for seeking the improvement of environmental management. In pursuit of this vision, we undertake environmental activities under our Environmental Management Activities Plan, which is set with specific details every three years.

The 2010 Environmental Vision: “What Kawasaki Should Be in the Year 2010”

| Environmental Philosophy | • Actions by all employees are taken with concern for the environment, not only at work, but also in their local communities and homes, in accord with our Environmental Philosophy, which declares our commitments to the realization of a sustainable society. |
| Environmentally Conscious Products | • Design for Environment (DFE) is used for all products to enhance their environmental efficiency. • Products are offered that help protect the environment, thus contributing to the environment, society and businesses. |
| Environmentally Conscious Production | • Administrative penalties and administrative measures are avoided, and voluntary control standards based on the needs of society are established to improve environmental control levels. • Every production activity is free of irrationality and waste to enhance the efficient utilization of resources and energies. • Total greenhouse gas emissions in FY2010 are reduced by 6% relative to the FY1990 level. • Total waste production in FY2010 is reduced by 10% relative to the FY2000 level. • Maintenance of zero emissions (recycling rate 100%) is realized in all works. • The use of hazardous chemical substances is reduced. |
| Environmental Communication | • Kawasaki Environmental Reports that comply with the needs of society are published. • Communication with stakeholders is promoted. • The entire corporation and all employees are committed to environmental improvement in local communities. |

In order to realize our vision of What Kawasaki Should Be in the Year 2010, we began the 6th Environmental Management Activities Plan in FY2008. In this, we have included systems that allow follow-up with effective efforts to further promote environmental management based on the medium-term business plan “Global K.” For example, we have incorporated policies related to reducing the amount of greenhouse gas emissions and reducing environmental risks into the business plan.

Environmental Management System

<table>
<thead>
<tr>
<th>President</th>
<th>Chief Environmental Officer</th>
<th>Environmental Management Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Protection Officers</td>
<td>Senior managers responsible for environmental protection</td>
<td>Managers responsible for environmental protection</td>
</tr>
<tr>
<td>(Internal companies and three main subsidiaries*)</td>
<td>*Three main subsidiaries: Kawasaki Shipbuilding Corporation, Kawasaki Precision Machinery Ltd. and Kawasaki Plant Systems, Ltd.</td>
<td></td>
</tr>
</tbody>
</table>

Yasuo Murata
Senior Manager of General Affairs

May, the Toyako Summit in July and other international forums started this year, increasing the opportunity to reduce greenhouse gas emissions, and we are also focusing on strengthening Activities by Coordinating and Enhancing Environmentally Conscious Plants, without energy waste or toxic emissions, is to surely contribute to the prevention of global warming and to the advancement of environmental management in both domestic and overseas operations. We are also continuously educating employees to increase their awareness of the importance of environmental protection and promote the use of cooling and heating energy by wearing clothes that support environmental protection, as well as promoting the reduction of administrative penalties and administrative measures when we deploy our business activities.

To manufacture Kawasaki products in our environmentally conscious plants, without energy waste or toxic emissions, is to surely contribute to the prevention of global warming and to the advancement of environmental management in both domestic and overseas operations. We are also continuously educating employees to increase their awareness of the importance of environmental protection and promote the use of cooling and heating energy by wearing clothes that support environmental protection, as well as promoting the reduction of administrative penalties and administrative measures when we deploy our business activities.

*Three main subsidiaries: Kawasaki Shipbuilding Corporation, Kawasaki Precision Machinery Ltd. and Kawasaki Plant Systems, Ltd.
Establishing Internal Systems for the Reduction of Greenhouse Gas Emissions

We also continue to encourage employees to reduce the use of cooling and heating energy by wearing clothes that are appropriate to the season (so-called, Warmbiz, Coolbiz). Moreover, we are continuously educating employees to increase their awareness of the importance of their individual behavior for the prevention of global warming not only at work but also at home.

To manufacture Kawasaki products in our environmentally conscious plants, without energy waste or toxic emissions, is to surely contribute to the prevention of global warming also to achieve high levels of customer satisfaction, which is the essence of our business. We will continue to endeavor for the advancement of environmental management in both our production activities and in our products and technologies themselves, because the reduction of CO2 emissions is one of the most important issues for our management.

Yasuo Murata
Chief Environmental Officer
Senior Manager of General Administration Department
(executive officer)

Environmental Charter (Established in 1999)

**Environmental Philosophy**

As a company in key industries related to land, sea and air, Kawasaki is deploying its business activities globally in pursuit of reducing environmental impact and creating a sustainable society. This makes us to commit ourselves to contribute to the sustainable development of society through our environmentally conscious business activities, technologies and products that preserve the global environment.

**Conduct Guidelines**

1. Recognizing that global environmental protection is a common and serious issue for humankind, Kawasaki will positively volunteer to engage itself in harmonizing with the environment globally. We shall regard this as one of the most important strategies when we deploy our business activities.
2. During its production stages, Kawasaki will endeavor to conserve resources, to save energy, to recycle resources and to reduce industrial waste and will promote the reduction of environmental impact.
3. In the new product planning (i.e. research and development) and designing stages, Kawasaki will render careful attention throughout the procurement, production, distribution, utilization and material disposal stages in order to minimize the environmental impact.
4. In seeking solutions to global environmental issues, Kawasaki will do its best to develop and provide new technologies and new products that contribute to environmental protection, energy saving and resource conservation.
5. Notwithstanding its compliance with environmentally related institutional laws, regulations and agreements and voluntary action plans of each industry concerned, Kawasaki will voluntarily institute its own environmental control standards as an appropriate and necessary action in order to strive to improve environmental control levels.
6. Through environmental training and public awareness activities, Kawasaki will strive to enlighten all its employees on global environmental issues and will support individual views, lifestyles and will encourage their participation in the social activities and services.
7. Kawasaki will implement an environmental management system to promote environmental preservation and conservation, and hold regular conferences to review management systems and maintain continual improvement.
### Environmental Responsibility

**Environmental Management**

**Achievements and Appraisal of Environmental Management Activities**

**Toward Our Environmental Vision: “What Kawasaki Should Be in the Year 2010”**

In 2003, Kawasaki established the 2010 Environmental Vision: “What Kawasaki Should Be in the Year 2010” as guidelines for pursuing the improvement of environmental management. As 2010 approaches, we have set the 6th Environmental Management Activities Plan (for FY 2008 to 2010), and we are working to strengthen and advance activities to achieve targets.

### 5th Environmental Management Activities Plan (FY 2006 to 2007)

#### Environmental Philosophy

- Promoting the construction of an environmental education system through the use of IT
- Promoting risk review activities to reassess environmental risks
- Understanding of environmental risk and EMS review based on that viewpoint
- Establishing an environmental risk management system

#### Environmental Management

- Promoting the development of EMS among our subsidiaries around the globe
- Promoting risk review activities to reassess environmental risks
- Understanding of environmental risk and EMS review based on that viewpoint
- Establishing an environmental risk management system

#### Action

- Evaluation of environmental impact throughout the Kawasaki Group
- Increased effort to achieve zero emissions and expansion of green products
- Promotion of communication with stakeholders
- Continuous improvement of social credibility toward sustainable growth under the viewpoint of corporate social responsibility (CSR)

### 6th Environmental Management Activities Plan (FY 2008 to 2010)

#### Environmental Philosophy

- Promoting the construction of an environmental education system through the use of IT
- Promoting risk review activities to reassess environmental risks
- Understanding of environmental risk and EMS review based on that viewpoint
- Establishing an environmental risk management system

#### Environmental Management

- Promoting the development of EMS among our subsidiaries around the globe
- Promoting risk review activities to reassess environmental risks
- Understanding of environmental risk and EMS review based on that viewpoint
- Establishing an environmental risk management system

#### Action

- Environmental Management
  - Evaluation of environmental impact throughout the Kawasaki Group
  - Increased effort to achieve zero emissions and expansion of green products
  - Promotion of communication with stakeholders

### Priority Initiatives in FY2008

- Environmental Management
  - Promotion of environmental management to increase the social trust of the Kawasaki Group

<table>
<thead>
<tr>
<th>(Evaluation Criteria)</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority Initiatives in FY2008</td>
<td>1) Efforts to reduce CO2 emissions reduction</td>
<td>a. Implement thorough independent reduction effort in every division through energy saving diagnosis</td>
<td>b. Set targets based on basic unit per net sales</td>
</tr>
<tr>
<td></td>
<td>2) Disclose information on CO2 emissions to stakeholders</td>
<td>c. Assess the environmental impact of the Kawasaki Group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) Actively cooperate in community environmental activities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Environmental Management 2008

**Promotion of environmental management to increase the social trust of the Kawasaki Group**

1. **Follow-up incorporated in business plan**

   - 1) Efforts to reduce greenhouse gas emissions
     - a. Total quantity reduction target: 6% reduction compared to FY1990 total
     - b. Establish evaluation by basic unit per net sales
     - c. Announce Green Products
     - d. Establish basic unit per net sales evaluations
   - 2) Reduce latent risks through environment-related equipment plan
     - a. Determine latent risk measures and budgeting plan
     - b. Determine plan for renewal of specific environmental equipment
     - c. Rank the degree of danger in target equipment through latent risk evaluations (Reflect in environment-related equipment plan)
   - 3) Environmental risk management systems
     - a. Conduct environmental conservation activities and risk management based on EMS
     - b. Determine plan for renewal of specific environmental equipment
     - c. Announce Green Products
     - d. Establish basic unit per net sales evaluations

### Environmental Communication

- Efforts to improve mutual trust with stakeholders
- **Internal environmental education and awareness-raising efforts**
  - Improve the environmental consciousness for Kawasaki Group employees as a whole through E-learning
  - Disclose information to stakeholders
  - Make corporate stance showing the contribution to the global environment available in a report
  - Activity cooperate in community environmental activities

*Three main subsidiaries: Kawasaki Shipbuilding Corporation, Kawasaki Precision Machinery Ltd. and Kawasaki Plant Systems, Ltd.*
Environmental Management Activities

Further Development of EMS

All the production bases of Kawasaki Heavy Industries and our three main subsidiaries1 in Japan have acquired ISO14001 certification. Now, we are promoting the development of EMS at our subsidiaries in Japan and abroad.

ISO 14001 Certification Acquisition

<table>
<thead>
<tr>
<th>Internal Company</th>
<th>Date acquired</th>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stock Division</td>
<td>2000</td>
<td>LRQA</td>
</tr>
<tr>
<td>Construction Machinery Division</td>
<td>2000</td>
<td>JICQA</td>
</tr>
<tr>
<td>Industrial Facilities and Tunneling Equipment Division</td>
<td>1999</td>
<td>JICQA</td>
</tr>
<tr>
<td>Aerospace Company</td>
<td>2002</td>
<td>BSK</td>
</tr>
<tr>
<td>Gas Turbine &amp; Machinery Company</td>
<td>2000</td>
<td>LRQA</td>
</tr>
<tr>
<td>Machinery Division</td>
<td>2000</td>
<td>NK</td>
</tr>
<tr>
<td>Consumer Products &amp; Machinery Company</td>
<td>2000</td>
<td>DNV</td>
</tr>
<tr>
<td>Kawasaki Shipbuilding Corporation</td>
<td>2002</td>
<td>NK</td>
</tr>
<tr>
<td>Kobe Works</td>
<td>2002</td>
<td>DNV</td>
</tr>
<tr>
<td>Sakaide Works</td>
<td>2002</td>
<td>NK</td>
</tr>
<tr>
<td>Kawasaki Precision Machinery Ltd.</td>
<td>1998</td>
<td>DNV</td>
</tr>
<tr>
<td>Kawasaki Plant Systems, Ltd.</td>
<td>2001</td>
<td>NK</td>
</tr>
</tbody>
</table>

1 LRQA: Lloyd’s Register Quality Assurance, JICQA: JIC Quality Assurance, NK: Jippon Kajii Kyokai (ClassNK), BSK: Bouei Choutatsu Kiban Seibi Kyokai (Defense Procurement Framework Establishment Association of Japan), DNV: Det Norske Veritas

By the end of FY2007, 46 of our 59 subsidiaries in Japan had completed the development of EMS.

Status of EMS Development at Japanese Subsidiaries2

(End of FY) | Developed | Not yet developed
--- | --- | ---
2005 | 32 companies | 28 companies
2006 | 38 companies | 22 companies
2007 | 46 companies | 13 companies
2010 (Scheduled) | 52 companies | 3 companies

Of the 13 overseas companies where we are seeking to develop EMS, one more company, Kawasaki Precision Machinery (Suzhou) Ltd., completed EMS development in FY2007. For the remaining seven companies that do not yet have an EMS, based on local laws and regulations, we will clarify objectives according to business conditions and scale and set timeframes and otherwise implement incremental efforts for EMS development.

1 Three main subsidiaries: Kawasaki Shipbuilding Corporation, Kawasaki Precision Machinery Ltd. and Kawasaki Plant Systems, Ltd.
2 Excluding three main subsidiaries

Environmental Risk Management

Environmental Risk Review

We undertook environmental risk reviews for wastewater treatment facilities and drainage channels, for example. At each plant, we evaluated risks and investigated measures from every perspective including manufacturing, occupational safety and environmental conservation. We also shared this information throughout our companies and summarized points for improvement. In addition to incorporating measures into our business plan based on evaluation results, we also expanded the scope of risk reviews to promote the reduction of environmental risks.

Strict Compliance with Environment-Related Standards

We defined a “compliance standard value” as the strictest value among the values set by legal standards, regulations, and agreements. In addition to conducting thorough compliance based on our compliance standard values, we also set even more strict “internal management standard values,” and have developed management systems to take preventative measures before exceeding compliance standard values.

Compliance with Laws & Regulations

Violations and Accidents during the Past 5 Years

<table>
<thead>
<tr>
<th>FY</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Judicial/Administrative Penalties</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Administrative Measures</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Administrative Warnings</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

- Judicial/Administrative Penalties: Punishment by judicial or administrative authorities
- Administrative Measures: Receiving instructions for improvements, etc. in written form
- Administrative Warnings: Receiving verbal directives concerning business practices

Administrative Warnings:
- Exceeded regulated value for the total quantity of COD emitted into the public water (two incidences at the Banshu Works)
- During waterway cleaning accumulated sludge was washed into the sea (Akashi Works)
- Oil that leaked from a pipe flowed through a rainwater drainage gutter into a canal (Hyogo Works)
Conducting Environmental Education for All Employees by E-Learning

In January 2008, we began to provide environmental E-learning that can be distributed to every employee directly through the corporate intranet. In addition to explaining our organized activities, we are also emphasizing contents that encourage all our employees to understand the importance of putting behavior that is considerate of the environment into practice in their work.

Environmentally Conscious Behavior by Each Employee in Their Work and for the Company

Making the most of the advantages of E-learning, we are implementing it for all employees, from the chairman, the president and other managers to temporary workers. Course participants respond to questionnaires, and their responses are used to improve later steps.

As of June 2008, about 7,700 employees, 65% of the total, had been offered E-learning and 94% of those had taken a course. During FY2008, we plan to have every employee at Kawasaki Heavy Industries and our three main subsidiaries complete a course.

With environmental E-learning as a starting point, we continue seeking to increase the consciousness of every employee and striving to fulfill the Kawasaki Group Mission Statement goal of contributing to the environment through business activities and the creation of products that are friendly to the environment.

Encouraging Further Awareness

During Environment Month every June, a “Message from the President” about the environment is sent to all employees. In FY2008, it was about the importance of preventing global warming and called for further cooperation in greenhouse gas reduction efforts. Moreover, to give all employees direct opportunities to think about the environment, we ask them to make Environment Month Slogans. We also undertake continuous efforts through encouraging further awareness, including the Environmental News, which introduces environmental activities and improvement examples from every plant, and “Eco Mind,” a part of our in-house magazine Kawasaki, which educates about environmental consideration in the local community and at home.

Cultivation of Qualified Managers

Since 1997, we have continuously held ISO 14001 internal environmental auditing training for all of Kawasaki. In FY2007, 156 auditors were certified, including staff at our subsidiaries, bringing the total since 1997 to 1,800 or more. Moreover, we are also making efforts to cultivate the qualified managers that are required by environment-related laws and regulations.

### Number of Newly Registered ISO 14001 Auditors (including subsidiaries)

<table>
<thead>
<tr>
<th>Year</th>
<th>Air</th>
<th>Water</th>
<th>Noise, Vibration</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>137</td>
<td>169</td>
<td>160</td>
<td>116</td>
<td>239</td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Number of Qualified Pollution Control Managers

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>81</td>
</tr>
<tr>
<td>Water</td>
<td>85</td>
</tr>
<tr>
<td>Noise, Vibration</td>
<td>56</td>
</tr>
<tr>
<td>Others</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>239</td>
</tr>
</tbody>
</table>

### Number of Qualified Energy Manager

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>60</td>
</tr>
</tbody>
</table>
Environmental Accounting Calculations for FY2007

These figures were compiled in accordance to the Environmental Accounting Guideline released by the Ministry of the Environment. Coverage: Kawasaki Heavy Industries, Ltd., and our three main subsidiaries. 1
Period: April 1, 2007 to March 31, 2008

<table>
<thead>
<tr>
<th>Item</th>
<th>Total Investments</th>
<th>Environmental Costs</th>
<th>Economic Effects</th>
<th>Environmental Preservation Effects: Reduction as compared with previous FY</th>
</tr>
</thead>
</table>
| Global warming prevention | 300 | 1,968 | Reduction of energy costs 317 | Energy consumption 6,745 TJ
| | | | | Greenhouse gas emissions Reduction 312.567 t-CO2
| Efficient use of resources | 18 | 156 | Reduction of materials costs 46 | Materials input Reduction 604.224 TJ
| | | | | Water consumption Reduction 334,000 m3
| Resource recycling activities | 24 | 922 | Income from recycling 2,251 | Waste emissions Reduction 75,148 t
| | | | | Amount of waste recycled Recycling ratio 72,228 t
| Waste disposal costs | 19 | 204 | Reduction of waste disposal costs 99 | 
| Environmental risk control | 529 | 979 | SOx emissions Reduction 14 t
| | | | | NOx emissions Reduction 181 t
| | | | | COD emissions Reduction 13 t
| Subtotal | 889 | 4,229 | 2,713 | 
| Comparisons w/ previous FY | 157% | 118% | 138% | 
| Upstream/downstream costs | 172 | 3,939 | 0 | 
| Management activity costs | 0 | 461 | 
| R&D costs | 475 | 4,188 1 | 
| Social activity costs | 12 | 142 | 
| Environmental damage compensation costs | 101 | 58 | 
| Total | 1,649 2 | 13,017 | 2,713 | 
| Comparisons w/ previous FY | 263% | 126% | 138% | 

<table>
<thead>
<tr>
<th>Item</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total investments in FY2007</td>
<td>27,592 2,298</td>
</tr>
<tr>
<td>Total R&amp;D costs in FY2007</td>
<td>35,002 2,298</td>
</tr>
<tr>
<td>Percentage of investments (Environmental investments 2/Total investments 1)</td>
<td>6%</td>
</tr>
<tr>
<td>Percentage of R&amp;D costs (Environmental R&amp;D costs 2/Total R&amp;D costs 1)</td>
<td>12%</td>
</tr>
</tbody>
</table>

1 Three main subsidiaries: Kawasaki Shipbuilding Corporation, Kawasaki Precision Machinery Ltd. and Kawasaki Plant Systems, Ltd.
2 TJ: terajoules (10^12 J)
Material Balance of Business Activities

We produce various products used on land, at sea and in the air. Raw materials, energy and water are input to those business activities, from which a variety of substances are emitted to the air or waters. We are trying to reduce environmental impact by those business activities by monitoring input and output.

Summary of Environmental Impact in FY2007

**INPUT**

<table>
<thead>
<tr>
<th>Raw materials</th>
<th>Energy</th>
<th>Water resources</th>
<th>PRTR regulated substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel, aluminum, copper, plastic, etc.</td>
<td>Converted to crude oil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Output**

- **Emissions to Air**
  - Greenhouse gases: 313,000 t-CO₂
  - SOx: 14 t
  - NOx: 181 t
  - Soot and dust: 7 t
  - PRTR regulated substances: 1,500 t

- **Emissions to Water Area**
  - Drainage: 4,300,000 m³
  - COD: 13 t
  - Nitrogen: 36 t
  - Phosphorus: 1 t
  - PRTR regulated substances: 4 t

- **Emissions of Wastes**
  - Total wastes: 75,000 t
  - Final disposal wastes: 900 t
  - PRTR regulated substances: 241 t

**Top Topics**

Ranked 14th for Return on Carbon (ROC) among the 100 Manufacturing Businesses with the Highest Consolidated Net Sales

In the material balance of our business activities, we seek to create the maximum profit with the least amount of CO₂ emissions. A management index called return on carbon (ROC) focuses on this goal. Considering the possibility that the amount of CO₂ emissions could be calculated as a cost in the future, we believe that ROC is not merely an environmental index, but rather that it will eventually become an important management index related to earnings. When the Boston Consulting Group calculated the FY2006 ROC for the 100 manufacturing businesses with the highest consolidated net sales and ranked them, our ROC was 208, earning us the 14th highest ranking and high praise.

**Return on carbon (ROC) calculation**

\[
\text{ROC} = \frac{\text{Operating income in Japan (millions of yen)}}{\text{Amount of CO₂ emissions (thousands of tons)}}
\]

From Nikkei Business (July 7, 2008 edition)